Money Talks: Organized Interests, Public Opinion, and Policy Change in the American States

Takuma Iwasaki* † Eric A. Baldwin‡ § John J. Donohue¶ Tai Markman‖

July 21, 2026

Abstract

Returns to interest group spending are highly conditional. Using a 25-year panel of state campaign finance records, a novel Gun Law Index, and the first state-year estimates of constituent gun sentiment, we find that pro-gun contributions produce deregulatory change under Republican trifectas while gun safety contributions generate regulatory tightening under Democratic trifectas. The same dollar of investment produces no detectable policy change under divided government but drives substantial statutory change under unified government. An instrumental variable design reveals that constituent sentiment does not cause statutory change. We conclude that gun interest groups drive policy independent of constituent preferences.

Keywords: gun violence, policy change, interest groups, campaign finance

JEL Classification: D72, D78, P10, C23, C36, H70

*Takuma Iwasaki is a doctoral candidate at Stanford University and a doctoral researcher at Stanford Data Science.

†Baldwin and Iwasaki are co-first authors.

‡Eric A. Baldwin is Postdoctoral Research Fellow, Stanford University.

§Corresponding author: Eric A. Baldwin, 559 Nathan Abbott Way, Crown Quadrangle, Stanford, CA, 94305. Email: ericbaldwin@stanford.edu.

¶John J. Donohue is the C. Wendell and Edith M. Carlsmith Professor at Stanford, Senior Fellow at the Stanford Institute for Economic Policy Research, Elected Member of the American Academy of Arts and Sciences, and Research Associate at the National Bureau of Economic Research.

‖Tai Markman is Predoctoral Research Fellow, Stanford University.

I. Introduction

A conventional expectation of American democracy holds that elected officials respond to constituent preferences, enacting popular policies and avoiding unpopular ones. Yet, few issues reveal the gap between majority preferences and policy outcomes as sharply as gun regulation in the United States. Gun violence remains a persistent public crisis that claimed 47,000 lives in 2024, has been the leading cause of death among children in each of the last five years, and burdens Americans with a homicide rate that is dramatically higher than in any other industrialized democracy, all of whom regulate firearms far more stringently (Centers for Disease Control and Prevention 2025; Goldstick et al. 2022; Wintemute 2015).

During the 1990s, the Clinton Administration advanced a number of federal measures designed to reduce firearm violence, but by 2004 the restrictions on assault weapons and high-capacity magazines that had been adopted a decade earlier were gone. Moreover, the federal background check system that was put into place was incomplete since it allowed criminals, drug dealers, the mentally ill, convicted felons, and domestic batterers to avoid the system if they purchased their weapons from private sellers. Since the 1990s, there has been virtually no federal firearm legislation.[1] At the same time, states have a decidedly mixed record, with a limited number adopting an array of legislative measures to curtail gun violence, even as other states have pushed in the opposite direction to greatly expand the unrestricted presence of guns in American life. Moreover, since the 2008 *Heller* decision, which for the first time created a private right to have guns, the U.S. Supreme Court has repeatedly chosen to strip states of their ability to regulate firearms.

In this paper, we study the factors that have shaped legislative action—and inaction—across all 50 states by examining constituent gun preferences in each state, as well as the campaign contributions of groups opposing or supporting various state gun policies. To do this, we build a state-year panel linking 25 years of state campaign finance records from gun-related interest groups to a new Gun Law Index. We also construct, to our knowledge, the first state-year estimates of constituent gun sentiment derived from the Cooperative Election Study (CES). The resulting panel lets us compare whether statutory change follows organized contributions, constituent sentiment, and the institutional conditions that mediate both.

At the same time, we identify the political institutional context within each state by identifying which party holds control in each of the legislative chambers as well as the governorship, and identify one important institutional feature: when one party controls

1. During the Biden Administration, Congress passed a relatively modest law, the Bipartisan Safer Communities Act, in the wake of the Buffalo and Uvalde mass shootings in 2022.

all three of these power centers—a political trifecta. We employ two designs: first, a two-way fixed effects panel estimating whether contributions move policy differently under trifectas versus divided government; second, an instrumental variable design testing whether constituent sentiment causally predicts policy change. Together, these designs allow for a direct comparison of organized contributions and constituent sentiment as drivers of statutory change under different institutional regimes.

The results reveal that our index of state gun policy responds to interest group contributions rather than constituent preferences, but only under trifectas. Under Republican trifectas, pro-gun contributions drive deregulatory changes. Under Democratic trifectas, gun safety contributions drive regulatory tightening. A one million dollar increase in pro-gun contributions under a Republican trifecta removes roughly 3.2 laws, while one million dollars from gun safety contributions under a Democratic trifecta adds roughly 3.7 laws. Observed contributions fall well below this benchmark, so the annual effect is modest but accumulates across the multi-year span of a typical trifecta. Constituent sentiment does not predict policy change under either regime. Under divided government, neither contributions nor preferences predict change.

Importantly, the deregulatory effect under Republican trifectas is robust across all specifications, while the tightening effect under Democratic trifectas, although present, is more sensitive to controls for state-specific trends. This asymmetry, which takes the form of a reliable one-way ratchet toward deregulation under Republican control combined with less consistent tightening under Democratic control, means that state gun law drifts toward looser regulation over time even when public preferences do not move.

The conditionality of these effects helps reconcile a long-standing puzzle in the study of money in politics, where contributions often appear to have small or inconsistent effects (Ansolabehere et al. 2003). Estimates that pool across institutional contexts average the large returns available under unified control against the negligible returns under divided government, attenuating the measured effect toward zero. Recovering the effect requires conditioning on the institutional environment that determines whether spending can convert into law.

This study makes five contributions. Methodologically, we develop a novel Gun Law Index measuring regulatory stringency across all 50 states from 1990 to 2024. We also develop, to our knowledge, the first state-year estimates of constituent gun sentiment in the United States. Substantively, we provide the first causal evidence that organized interests drive state gun policy under unified partisan control while having no effect under divided government. We also find that constituent sentiment does not cause policy change under any institutional configuration. We further show that this influence is structurally asymmetric:

Republican trifectas function as a reliable deregulatory ratchet, translating pro-gun investment into statutory loosening against constituent preferences, while Democratic trifectas produce regulatory tightening that, though real, is less mechanically consistent.

The paper proceeds as follows: Section II situates our argument within the literature on interest groups and the political economy of campaign finance. Section III presents the empirical strategy and data. Section IV presents results and robustness checks. In Section V we discuss the implications of the findings for democratic accountability and conclude.

II. Interest Groups, Institutions, and Policy Change

Traditional accounts of representation rely on electoral accountability, assuming the threat of the ballot box keeps officeholders tied to constituent preferences (Dahl 1971; Downs 1957a; Erikson et al. 1993; Page and Shapiro 1983; Stimson 2004). This expectation underlies both normative accounts of democratic responsiveness and empirical studies of policy congruence (Bartels 2008; Caughey and Warshaw 2022; Erikson et al. 1993; Gilens 2012; Page and Shapiro 1983). Yet a large empirical literature shows that policies in American states often diverge from constituent preferences and move toward ideological extremes even when public opinion remains moderate (Fiorina et al. 2005; Grumbach 2018; Lax and Phillips 2012; Levendusky 2009; McCarty et al. 2006).

The gun domain makes this divergence especially difficult to explain. Widely supported firearm restrictions, including universal background checks and assault weapons bans, have repeatedly failed to secure adoption, while many states have moved toward more permissive gun laws. This pattern is difficult to explain solely through standard accounts of unequal responsiveness to affluent citizens. Support for many gun safety measures is often strongest among highly educated and affluent Americans, groups one might otherwise expect to exercise disproportionate policy influence (Gilens 2012). The central puzzle is about how broad support for regulation fails to produce statutory change even when conventional accounts would indicate that these constituencies would be sufficiently influential to bring about such change. In that light, a plausible account is that organized interests opposed to regulation exert influence that outweighs broad but diffuse support for moderation.

We explain this failure with a theory of conditional influence: organized interest groups' returns depend on whether institutional conditions allow investments to be converted into statutory change. In capture and influence models, organized transfers are investments, with equilibrium policy reflecting competing interests' strength (Becker 1983; Peltzman 1976; Stigler 1971). Menu-auction models formalize this exchange, showing organized actors can use political investment to secure policy influence (Bernheim and Whinston 1986). In elections,

contributions are investments whose returns depend on the probability of enacting favorable statutes (Grossman and Helpman 1994, 2001; Snyder 1990).

A. The Conditional Returns to Organized Spending

Contributions are a central mechanism through which organized interests seek to convert resources into policy. Contributions secure access, support allied candidates, shift incentives, and provide the resources for lawmakers to pursue legislative goals (Bernheim and Whinston 1986; Grossman and Helpman 1994, 2001; Hall and Deardorff 2006; Hall and Wayman 1990; Jacobson 1980; Kalla and Broockman 2016; Lowry 2013; Powell 2012; Snyder 1990). Their effects, however, are not always captured in visible roll-call voting. Even where studies find limited effects on final votes (Ansolabehere et al. 2003), organized actors can still shape outcomes through agenda setting, committee activity, bill drafting, and amendments (Baumgartner et al. 2009; Hall and Wayman 1990). The legislative subsidy model captures this logic especially well: contributions are most effective not when they convert opponents, but when they expand the capacity of allied lawmakers to pursue shared goals (Hall and Deardorff 2006).

Whether such subsidies produce statutory change depends on institutional context. Under divided government, policy change must survive multiple veto points controlled by opposing actors, including committees, floor schedules, amendment processes, bicameral bargaining, and gubernatorial review (Binder 1999; Krehbiel 1998; Tsebelis 2002). These constraints reduce, or even eliminate, the expected returns to organized political investment. Groups may still spend under divided government, but the institutional environment makes it difficult for spending to effectuate desired legislative action. Under unified partisan control, by contrast, one party holds the governorship and legislative majorities, lowering coordination costs and concentrating agenda power. Unified control therefore increases the likelihood that interest groups and their legislative allies can convert political resources into binding law (Binder 1999; Hall and Deardorff 2006). The same dollar of political investment should therefore have a higher policy return under trifecta than under divided government.

The policy effects of contributions should thus be conditional rather than constant: organized interest groups' investments should have their largest effects when partisan control gives allied lawmakers the authority to act. In the gun domain, this implies deregulatory effects from pro-gun spending under Republican trifectas and regulatory effects from gun safety spending under Democratic trifectas. Under divided government, both sides confront institutional barriers that lower the expected return to political investment.

The expected returns to spending may differ across the two coalitions because they face distinct organizational and legislative constraints. Deregulatory coalitions may face fewer internal bargaining costs, while gun safety coalitions must often assemble new regulatory regimes, specify enforcement mechanisms, and hold together a more heterogeneous set of allies (Grossman and Hopkins 2016). These differences make pro-gun influence under Republican trifectas likely to be more consistent and durable than gun safety influence under Democratic trifectas. State gun policy may therefore move through an asymmetric ratchet, with deregulatory changes more reliably enacted during Republican trifectas than regulatory tightening during Democratic trifectas.

B. Asymmetry in Political Influence

If institutional conditions help explain when organized interests matter, they do not by themselves explain why broad constituent preferences so often fail to constrain policy. In the gun domain, that failure reflects persistent asymmetries between organized interests and the diffuse public that bears the costs of gun violence. Democratic theory predicts electoral punishment when politicians stray far from voter preferences (Arnold 1990; Downs 1957a, 1957b). Yet on state gun policy, standard mechanisms of electoral accountability fail. Existing research demonstrates that state-level policy frequently diverges from moderate majority views (Barry et al. 2018; Lax and Phillips 2012). That divergence is sustainable because organized actors possess political advantages that mass publics typically do not.

The first asymmetry is intensity. Median voters hold moderate views on gun regulation, but their preferences are typically less intense than those of organized activists and single-issue voters who place gun policy above other concerns (Arnold 1990; Olson 1965). Relatedly, gun policy is only one issue among many for most citizens, but it is central to organized groups on both sides. Legislators therefore face a predictable asymmetry: concentrated minorities are more likely than diffuse majorities to monitor behavior closely, reward allies, and punish defections at the margin (Arnold 1990; Schattschneider 1960). Under those conditions, politicians can depart from aggregate constituent preferences without incurring equivalent electoral costs.

The second asymmetry is organizational capacity. Interest groups possess technical expertise, legal knowledge, and legislative experience that most voters, and even many legislators and their staff, cannot match (Hall and Deardorff 2006; Wright 1996). Organized actors, therefore, often shape which policy options appear feasible, how bills are drafted, and which implementation details receive emphasis (Baumgartner et al. 2009; Drutman 2015). This dynamic can separate broad public support for moderate reforms from the actual

statutory language that reaches the floor. For example, support for background checks can be translated into narrow or expansive regulatory designs depending on which actors supply expertise, model language, and enforcement ideas.

Finally, policy feedback locks in changes once enacted (Campbell 2003; Pierson 1993). For example, expanding concealed carry creates a mobilized group of permit holders invested in defending the policy. More permissive gun laws can also strengthen aligned constituencies, including dealers, advocacy networks, and newly armed citizens, making later reversal more difficult. These feedback effects help explain why organized interests can secure policy change during periods of unified government and then defend those gains when institutional conditions become less favorable.

These asymmetries clarify why democratic responsiveness can break down even when public support for moderate regulation is broad. In this policy domain, broad constituent preferences face organizational disadvantages that organized interests do not.

Building on this framework, we have three empirical expectations. Pro-gun spending should move policy in a deregulatory direction under Republican trifectas, while gun safety spending should move policy in a regulatory direction under Democratic trifectas. Under divided government, neither side should reliably translate spending into statutory change. Constituent gun sentiment should have little independent relationship with policy change once institutional context and organized spending are considered.

III. Empirical Strategy

We develop an empirical strategy that directly compares the influence of special interest contributions and constituent gun sentiment on state gun policy, conditional on partisan control of government. The analysis has two components. First, we estimate how pro-gun and gun safety contributions drive changes in our Gun Law Index, under Republican trifectas, Democratic trifectas, and divided government, using a TWFE panel design. Second, we examine whether constituent gun sentiment causally affects state gun policy, using an instrumental variable approach that addresses potential endogeneity between policy and public opinion. Together, these designs allow us to assess the conditional responsiveness framework we laid out.

A. Special Interest Contributions and Gun Policy

1. Data and Measurement

Our analysis of special interest influence uses a state–year panel that combines annual information on state gun laws, contributions from gun interest groups, partisan control of state government, and demographic and economic covariates. The main sample covers the 50 states from 2000 to 2024, the period for which we have consistent data on both firearm statutes and campaign finance.

Our outcome is the change in the Gun Law Index, which measures the regulatory stringency of state gun policy in each state–year. The index is constructed from the RAND State Firearm Law Database as a base (RAND Corporation 2025). We then comprehensively update the database with an original coding scheme to determine whether the restriction applies to handguns, long guns, or both, and code variables on a $0/1/2$ scale accordingly. We cross-check the statutory record against Giffords Law Center summaries (Giffords Law Center 2025) and in records of state statutes as found in Westlaw, and treat changes in our indicators as arising only from changes in state statutes, rather than federal law. We then sum across laws to obtain an overall Gun Law Index, which increases as a state adopts more comprehensive and restrictive regulations.[2] Due to RAND data availability, we code each statutory change in the Gun Law Index according to the year the provision takes legal effect rather than the year it was passed, ensuring the index captures when policies are actually enforceable.

The key explanatory variables are contributions from gun-related interest groups. We collect state-level campaign finance data from OpenSecrets regarding organizations whose primary mission is to advocate for gun rights or gun safety, based on their stated mission and legal filings (OpenSecrets 2025). For each state–year, we aggregate all contributions to candidates for state legislative office who ultimately hold state office, successful gubernatorial candidates, to state party committees, and ballot measure committees. We measure annual pro-gun and gun safety contributions as the total real dollars contributed in each state–year.[3]

Institutional context is captured with indicators for partisan control of state government. We measure gubernatorial party from David Leip's United States Election Data, supplemented with hand-coded information for earlier elections and midterm successions when governors resigned, were impeached, or died in office (Leip 2025). State legislative party composition is drawn from Klarner's State Partisan Balance Data (1990–2008) (Klarner 2013) and the National Conference of State Legislatures State Partisan Composition series (2009–2023)

2. Appendix A provides additional details on the construction and coding of the Gun Law Index.

3. Nominal dollars are converted to real values by dividing by the CPI, where the base year is defined by the BLS as $1982 - 1984 = 100$.

(National Conference of State Legislatures 2025), from which we identify the party controlling each chamber. For Nebraska, because it has a unicameral, formally nonpartisan legislature, we code senators' party registration using Nebraska Blue Books (Nebraska Legislature 2025). From these data, we classify each state–year into one of three regimes: Republican trifecta (Republicans control the governorship and both chambers), Democratic trifecta (Democrats control the governorship and both chambers), and divided government (all other configurations).[4]

In addition to the trifecta classification, we construct two complementary measures that capture the degree of partisan control within each state–year. First, the Majority Score is a discrete variable ranging from 0 to 3, which shows how many of the three political institutions, that is, the governorship, the state senate, and the state house, are controlled by the same party. Second, the Ratio Score offers a continuous measure of partisan strength. We construct this score by summing the party's share of the gubernatorial vote in the most recent election, the party's seat share in the state's upper legislature, and the party's seat share in the lower legislature. Each component ranges from 0 to 1, and the resulting score ranges from 0 to 3.[5] Together, these measures allow us to capture the intensity of partisan control.

We supplement the law and contribution data with covariates that capture demographic and economic conditions, including estimated household firearm rate (HFR) (RAND Corporation 2020), incarceration rate (Bureau of Justice Statistics 2023a, 2023b, 2024), metropolitan residence (Kaplan 2025), population (U.S. Census Bureau 2011, 2019, 2024), racial composition (U.S. Census Bureau 2012, 2020, 2025), unemployment rates (Bureau of Labor Statistics 2025b), and real per capita personal income (Bureau of Economic Analysis 2025; Bureau of Labor Statistics 2025a). They help account for confounding changes in the social and economic environment that could independently shape both contributions and gun policy.[6]

4. Appendix A provides full details on the construction of the partisan control and trifecta indicators.

5. This measure uses components similar to the Ranney Index (gubernatorial vote share and legislative seat shares) (Ranney 1965) but computed annually rather than as multi-year averages, with unified control measured separately via trifecta indicators.

6. Appendix A provides full details on how covariates were constructed.

2. Identification Strategy

Our baseline TWFE models estimate within-state changes in the Gun Law Index as a function of lagged contributions interacted with partisan control of government. Our baseline specification for contribution is:

$$\begin{aligned} Y_{st} = \beta_1 \,\text{Contrib}_{s,t-1:t-2} + \beta_2 \,\text{Trifecta}_{s,t-1} + \\ \beta_3 \,\text{Contrib}_{s,t-1:t-2} \times \text{Trifecta}_{s,t-1} + \mathbf{X}_{s,t-1}\gamma + \alpha_s + \delta_t + \varepsilon_{st}. \end{aligned} \tag{1}$$

where Y_{st} denotes the annual change in the Gun Law Index in state s from year $t-1$ to year t; $\text{Contrib}_{s,t-1:t-2}$ is the average of total contributions in year $t-1$ and $t-2$ from either pro-gun or gun safety interest groups in state s, winsorized at the 99th percentile.[7] $\text{Trifecta}_{s,t-1}$ is a dummy variable equal to one when the aligned party (Republicans for pro-gun, Democrats for gun safety) controls the governorship and both legislative chambers in year $t-1$ and zero otherwise; $\mathbf{X}_{s,t-1}$ includes lagged demographic and economic covariates along with contributions from interest groups on the opposing side of the gun policy discussion; α_s and δ_t denote state and year fixed effects; and ε_{st} is the error term. We estimate separate specifications for pro-gun and gun safety contributions. Our estimation uses population weights, and standard errors are clustered at the state level.

The main coefficient of interest is the interaction term between $\text{Contrib}_{s,t-1:t-2}$ and $\text{Trifecta}_{s,t-1}$, which captures how the marginal effect of interest group contributions on changes in gun law stringency depends on unified partisan control. We believe there is a direct, one-way relationship between special interest group contributions and changes in gun legislation. Our identification strategy relies on a lagged specification and fixed effects that mitigate standard endogeneity concerns. Moreover, our hypothesis that contributions matter only under a unified government provides an internal validity check. If groups merely donated in anticipation of policy changes, we would not see heterogeneity in results based on institutional conditions. Our robustness checks support a causal interpretation to these findings.

7. We use the average of contributions in $t-1$ and $t-2$ as the treatment variable because we assume that legislative proposals influenced by interest groups' activity typically require one to two years to be drafted, introduced, and enacted after contributions are made. As a robustness check, we also estimate specifications using only the $t-1$ lag of contributions, and the results remain largely unchanged.

B. Constituent Gun Sentiment and Gun Policy

1. Data and Measurement

To compare with special interest influence, we want to estimate the effect of constituent sentiment regarding gun control on changes in gun laws. However, there is no existing dataset that tracks constituent sentiment over time on the state and party level. While an individual's sentiment for gun control is not directly observable, it can be approximated by examining their responses to questions about various gun-related policies.

In order to estimate gun sentiment over time, across states, and between political parties, we use data from the CES from 2006–2024 (Schaffner et al. 2025). This survey is the most comprehensive nationwide study that collects party information, state of residence, and responses to questions related to gun policy. We use these questions to estimate an individual's gun sentiment, then fit a model based on demographic information to produce state–year–party estimates of gun sentiment, where a higher value indicates higher preference for gun control.[8]

Item Response Theory (IRT). The first step is to gather information on questions related to gun sentiment. The CES does not ask a consistent sample size of individuals or identical questions over time. We identify questions solely related to gun policy in each year of the survey, as well as relevant demographic variables.[9]

From the gun-related questions, we estimate a latent "gun sentiment" using a unidimensional Item Response Theory (IRT) model to link this unobservable attribute with the observed responses. Given the mix of binary and ordinal questions, we use a combination of two-parameter logistic (2PL) and graded response (GRM) models to estimate gun-policy sentiment. We fit the IRT model using survey weights in the estimation process to approximate nationally representative estimates of gun sentiment scores Sent_{ist}. These scores are on a standardized scale with a mean of zero and a standard deviation of one relative to the weighted sample distribution.[10]

8. Appendix B provides additional details on the gun sentiment estimation strategy.
9. Table B1 in Appendix B details the gun-related questions selected.
10. We estimate gun sentiment using multiple specifications (see Figure C11 in Appendix C), and results are robust to the choice of questions.

Fixed-Effects Model-Based Poststratification. To create our state–year–party estimates of support for gun regulation, we utilize a fixed-effects model-based poststratification technique. We estimate the following model:

$$\begin{aligned}\text{Sent}_{ist} = \beta_1 \text{Party}_i + \beta_2 \text{State}_s + \beta_3 \text{Year}_t + \beta_4 (\text{Party} \times \text{Year})_{it} + \beta_5 (\text{Party} \times \text{State})_{is} + \\ \beta_6 (\text{State} \times \text{Year})_{st} + \mathbf{X}_i \gamma + \varepsilon_{ist},\end{aligned} \tag{2}$$

where Sent_{ist} is the estimated sentiment for gun control for the individual i, who lives in state s in year t. The controls used to create these estimates are based on what CES consistently collects and uses year to-year to develop their population weights.[11]

We then create a stratified dataset from the CES, using every combination of demographic groups (and average age within those groups). We estimate each group's relative population using their survey weights. This provides an approximation of how represented that group is in its bin.

Once we fit our regression to the individual-level survey data, we predict the gun sentiment values for every group in our stratified data set. We then create state–year–party estimates by taking a weighted mean of the stratified predictions, with weights equal to the estimated proportion of individuals in each stratum within the state–year–party group. Figure 1 displays these estimates over time for each party. The CES questions change significantly in 2013 and as a result we restrict our analysis to 2013-2024.[12]

Our poststratification approach generates gun sentiment estimates ranging from -1.06 to 0.81, with a standard deviation of 0.38. As expected for highly polarized gun policy, variance decomposition reveals that party affiliation explains 83.6% of variation, validating that our measure captures genuine partisan divides. State and year explain only 1.7% and 0.2% of variation, respectively, with the remaining 14.4% reflecting interactions among these dimensions. We believe this decomposition demonstrates meaningful and sufficient variation for our analysis, as the 14.4% residual is precisely what our interaction terms exploit for identification.

As a robustness check, we construct alternative gun sentiment measures by excluding gun ownership questions and by restricting to questions consistently asked after 2013; these produce nearly identical scores to our baseline measure.[13] We also re-estimate our main results

11. These include gender, race, education level, marital status, family income level, employment status, and age.

12. We detail these changes in Table B1 in Appendix B. As a robustness check, we also run our analysis on the entire time frame, and our results are not sensitive to the years selected.

13. See Figure C11 in Appendix C.

using gun sentiment constructed via multilevel regression with poststratification (MRP) with state random effects and find consistent results.[14]

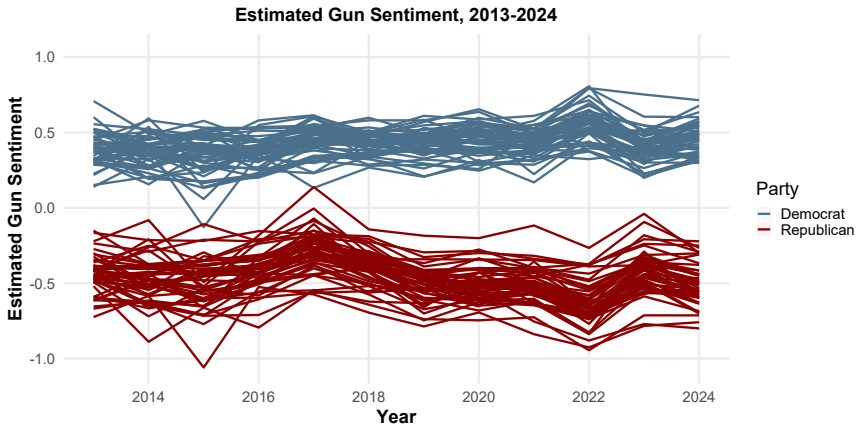


Figure 1: Gun Sentiment Estimates, 2013–2024. Lines show each party within each state.[15]

To validate our estimates, we analyze how estimated gun sentiment varies with the state's HFR (Figure 2). The HFR series plays no role in constructing our sentiment estimates, so agreement between the two measures provides an external validity check. The two align as expected: the within-party correlation between average estimated sentiment and 2006 HFR is $r = -0.81$ for Democrats and -0.80 for Republicans. The pattern is parallel across the two parties: within each party, average pro-regulatory sentiment declines with the state's firearm prevalence. Were the sentiment estimates merely a proxy for party affiliation, the ordering of states within each party would be uncorrelated with an external state characteristic; instead, it tracks HFR strongly in both parties.[16] This provides evidence that we can rely on these estimates. Through this method, we have created novel gun sentiment estimates on the state-year-party level, an important contribution as surveys do not directly measure it at this level of granularity over time.

14. See Table E3 in Appendix E for regression output.

15. See Figure C12 in Appendix C for sentiment scores in the full time frame (2006-2024). Our results are not sensitive to the time frame specification.

16. Our sentiment-HFR correlations are consistent when recomputed with sentiment measures that exclude gun-ownership, reported in Figure C11 ($r = -0.77$ for Democrats and -0.78 for Republicans).

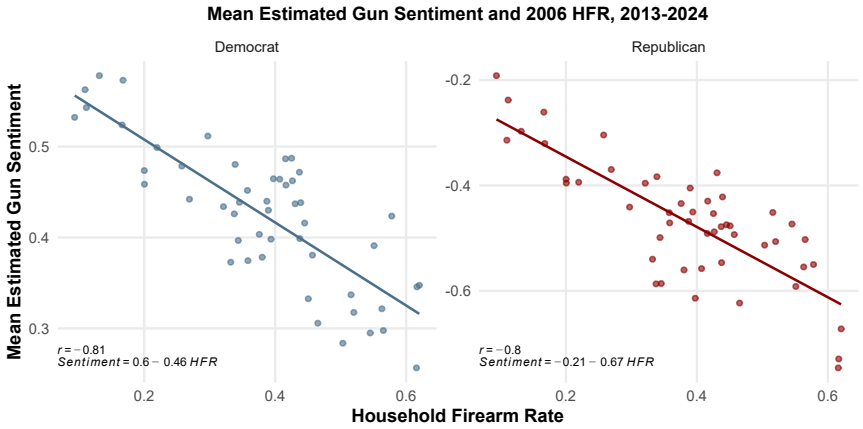


Figure 2: Mean Estimated Gun Sentiment and 2006 HFR, 2013-2024. Each point denotes an individual state. Statewide HFR values are for 2006. The HFR values are highly stable over time: the correlation coefficient between the 2006 and 2018 values is 0.999. Fitted lines are OLS; each panel reports the within-party correlation and slope.

2. Identification Strategy

To model the effect of estimated gun sentiment on changes in gun laws, we start with a TWFE model of the following format:

$$Y_{st} = \beta_1 \text{Sent}_{st-1} + \mathbf{X}_{st-1}\gamma + \text{State}_s + \text{Year}_t + \epsilon_{st} \tag{3}$$

where Y_{st} denotes the change in the Gun Law Index in state s and year t, and Sent_{st-1} represents gun sentiment in the previous year. Because gun law implementation is often not instantaneous, we lag our sentiment measure and control variables by one period to allow for the delayed response of legislative processes to public opinion. We use the same set of covariates and state gun laws as our analysis on special interest group spending.[17] We cluster standard errors at the state level.

However, several endogeneity concerns threaten causal identification. First, dynamic reverse causality remains problematic despite the lag structure: laws enacted in period $t-1$ may influence sentiment in that same period, which then appears as a predictor of subsequent legislative changes in period t. Second, unobservable time-varying state characteristics that are not captured by our fixed effects may jointly determine both sentiment and legislative outcomes. For example, shifts in the intensity of gun culture, changes in lobbying activity, or the political salience of gun issues within a state evolve over time and affect both public

17. Our covariates include estimated household firearm rate (HFR), incarceration rate, metropolitan residence, population, racial composition, unemployment rates, real per capita personal income, beer consumption (Slater and Alpert 2024) and Republican Majority Score (except when examining trifectas).

opinion and legislators' willingness to enact gun laws. Finally, because our sentiment measure is estimated from the CES, measurement error may arise if expressed opinions are particularly vocal during periods of active legislative debate, correlating the measurement error with the policy process itself.

To mitigate these issues, we employ an instrumental variable, constructed in a quasi shift-share manner, leveraging cross-state variation in exposure to national partisan trends in gun sentiment. For each state s, party p, and year t, we construct:

$$Z_{spt} = \text{National}_{-s,pt} \times \text{Proportion}_{sp} \tag{4}$$

where $\text{National}_{-s,pt}$ is defined as:

$$\text{National}_{-s,pt} = \frac{\sum_{j \neq s} (\text{Sent}_{jpt} - \text{Sent}_{jp,t-1}) \cdot P_{jt} \cdot R_{jpt}}{\sum_{j \neq s} P_{jt} \cdot R_{jpt}} \tag{5}$$

where P_{jt} is the population of state j in year t, and R_{jpt} is the estimated proportion of individuals identifying with party p in state j in year t. This represents the population weighted average change in gun sentiment among party p members across all states except s, to make sure the national sentiment is not mechanically related to state s's sentiment.

The share component captures baseline exposure to party p's national trends. Proportion_{sp} is defined as:

$$\text{Proportion}_{sp} = P_{s2006} R_{sp2006} \tag{6}$$

States with larger baseline populations of a party receive greater weight from that party's national sentiment shifts. By creating separate instruments for each party within each state, we allow differential responses to partisan sentiment trends and a method to study both parties' changes separately.

In order for this to be a valid instrument, we must satisfy key assumptions. To ensure valid causal identification, we implement a quasi-shift-share instrument following standard practices in the literature (Borusyak et al. 2025; Goldsmith-Pinkham et al. 2020). First, national partisan sentiment trends predict state-level gun sentiment. Gun attitudes tend to be highly polarized along partisan lines, and national political discourse has an effect on individual state gun sentiment. When national sentiment shifts, due to events such as a mass shooting, these changes affect individuals in individual states through shared media consumption, social networks, and partisan information channels. States with larger baseline populations of a given party are more exposed to that party's national sentiment shifts. We verify relevance empirically through first stage F-statistics that are greater than 10.

Our instrument must also satisfy monotonicity: increases in national partisan gun sentiment must shift state-level partisan gun sentiment in the same direction for all states. This assumption is plausible because the mechanism operates through shared partisan identity, rather than cross-partisan reaction. When national Democratic gun sentiment becomes more pro-gun control, Democrats in all states are exposed to similar partisan messaging, increasing their sentiment for gun control. This works similarly for shifts in Republican gun sentiment. Because our instrument is constructed party-specifically, this rules out "defier" states where partisans would respond opposite to national sentiment of their same party, which is implausible given shared partisan identity. Because the overwhelming majority of our survey questions are pure policy position questions, with one "importance of gun control" question appearing in only two years, our sentiment scores exhibit clear partisan balance, making defiers implausible. As a robustness check, we estimate sentiment using only consistent questions, which are pure policy questions, and results remain stable.

Next, the instrument is uncorrelated with unobserved determinants of state s's gun laws. The two sources of variation within our instrument make sure this is true. Our exposure is at a baseline before the period of analysis, so it is predetermined relative to current gun law changes. As well, in our creation of the national sentiment component, we explicitly leave out state s so there is no direct link between state s's policy and social environment to unobserved characteristics.

Finally, our instrument must satisfy the exclusion restriction: national sentiment shifts can only affect state s's gun laws through state s's gun sentiment. We acknowledge that national sentiment shifts may correlate with various political developments, including nationally-coordinated advocacy by organizations like ALEC and the NRA, or media-driven shifts in elite preferences. These could potentially affect gun laws through channels that bypass public opinion. However, any direct effects would need to systematically vary with states' 2006 baseline partisan composition, conditional on current political party control, state fixed effects, and year fixed effects. This specific conditional correlation is what our identification requires to fail, not merely the existence of alternative channels.

This is implausible for several reasons. First, year fixed effects absorb the common national component of advocacy campaigns. Any state-specific targeting must vary with our instrument (2006 composition interacted with current national sentiment) conditional on current controls to violate exclusion. Second, state fixed effects similarly absorb any time-invariant differences in a state's susceptibility to such coordination. Third, advocacy organizations target states based on current political opportunities, not decade-old demographic baselines. Conditional on current institutional configurations, a state's 2006 partisan composition provides no additional strategic value for targeting gun policy campaigns. Fourth, to the extent that

organizations do target specific states differentially, such targeting reflects those states' current political receptivity. When this receptivity derives from constituent preferences, it is captured by our sentiment measure. When it derives from institutional factors or party control, it is absorbed by our political controls and fixed effects. Our identifying variation isolates changes in the political environment that advocacy organizations cannot systematically anticipate or target based on historical demographics alone. For a violation to occur, organizations would need to condition their state-level strategies on the interaction of decade-old partisan composition with contemporaneous national sentiment trends in other states, independent of current political conditions, which is an implausible and strategically irrational targeting mechanism.

Critically, our second-stage estimates are null, indicating that even if such direct channels exist and correlate with our instrument, they do not generate policy change independent of our measured mechanisms. Moreover, any such violations would bias our estimates toward finding a sentiment effect on policy, making our null second-stage results a conservative test.

While our instrument is constructed from CES data, the aggregation method across states substantially reduces measurement error. State-specific factors that generate measurement error, such as heightened engagement during local legislative debates, are diminished when averaged across the 49 states. Critically, the leave-out construction ensures state s's own measurement error cannot contaminate its instrument. The national partisan sentiment shifts we capture reflect genuine changes in gun attitudes driven by national political discourse.

We implement our IV estimation strategy for two subsets of our data: the majority and minority party sentiment. We define the majority party to be the party that has control of at least two of three of the governorship, upper legislature, and lower legislature. If neither party has this control (such as a split in a legislature), the party with the higher estimated proportion of constituents is the majority. The minority party is the other party in each state–year.[18] Thus, both of our analyses are on the state–year level, and encapsulate the full environment of constituents. To test heterogeneity in the impact of constituent gun sentiment, we also run this analysis interacting estimated gun sentiment with the presence of a trifecta in government. We instrument this endogenous regressor with the interaction of our instrument and the trifecta indicator.

18. Although one might prefer targets such as the statewide median voter or "single-issue" gun voters, our CES-based approach identifies state–year–party mean sentiment only. It cannot recover the within-state distribution or consistently isolate decisive gun voters across states and years without additional assumptions. We therefore focus on majority and minority party mean sentiment.

IV. Results

We evaluate whether state gun policy responds to organized interests or to constituent sentiment. First, descriptively, the Gun Law Index reveals substantial partisan divergence in state gun laws, with policy trajectories increasingly separating along party lines (Figure 3).[19] Then, through two different models, we examine if and how organized interest contributions and constituent sentiment cause changes in our Gun Law Index under different partisan control of state government.

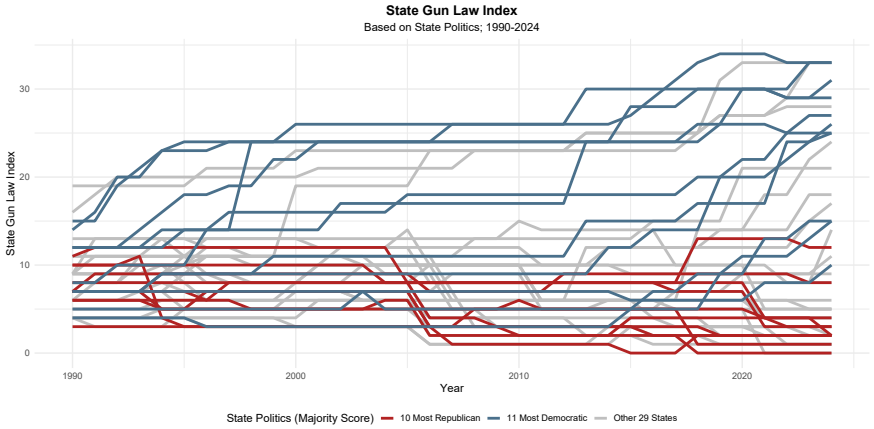


Figure 3: Gun Law Index trajectories by state Majority Score, 1990–2024. The figure plots the Gun Law Index for each state, categorized as the top 10, bottom 11 (the 11th tied with the 10th), and other middle 29 states by state Majority Score across 1990–2024.

A. Contribution Effects and Party Control

1. Descriptive Patterns in Organized Interests' Contributions

Before turning to the regression analysis, we briefly illustrate the patterns of gun-policy organized interest contributions in two figures. Each plots every state's annual contributions on a log scale from 2000 to 2024, Figure 4 for pro-gun SIGs and Figure 5 for gun safety SIGs, with each state's line colored by its Republican Majority Score, where 0 denotes full Democratic control and 3 denotes full Republican control. The colors are thoroughly intermixed in both figures, indicating that Republican-controlled and Democratic-controlled states receive broadly similar contribution levels from both sides. Pro-gun money does not

19. We provide additional descriptive statistics regarding state politics and campaign finance patterns at the state level in Appendix C.

concentrate in Republican trifecta states, and gun safety money does not concentrate in Democratic ones.[20]

Although contribution levels are similar across state political groupings, with no visible sorting by partisan control, the two sides follow different time profiles. Pro-gun contributions hold steady across the full 2000–2024 window. Gun safety contributions are sparse before roughly 2013–2015 and then rise sharply, reflecting the institutionalization of the gun safety side after Sandy Hook through organizations such as Everytown and Giffords.

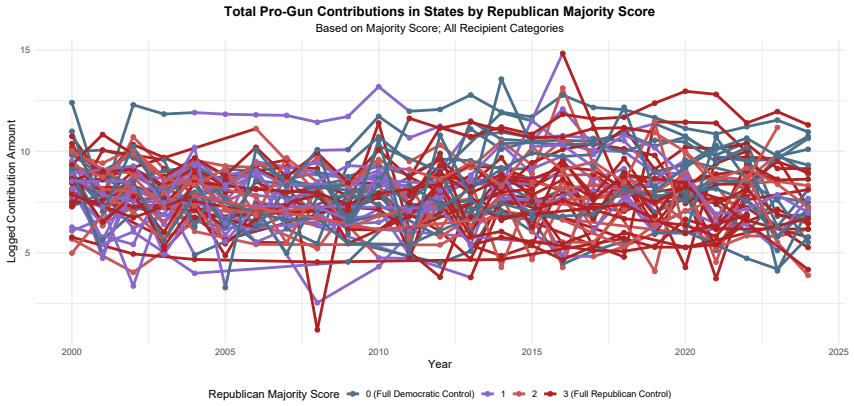


Figure 4: Total pro-gun SIG contributions by state political Majority Score, 2000–2024. Lines show each state's annual log contributions, colored by Majority Score.

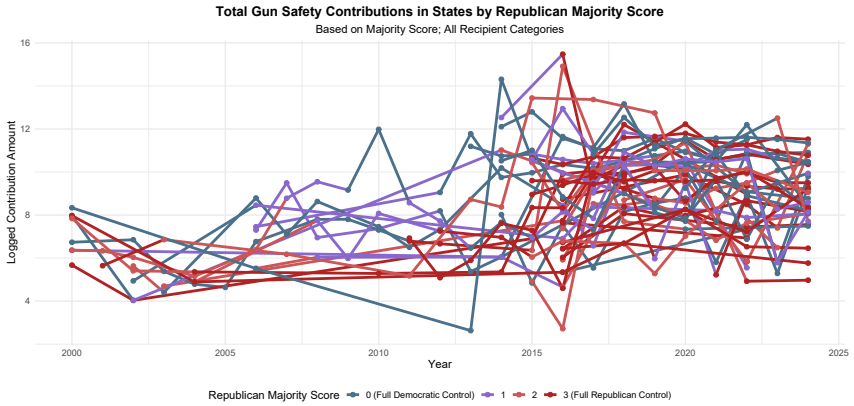


Figure 5: Total gun safety SIG contributions by state political Majority Score, 2000–2024. Lines show each state's annual log contributions, colored by Majority Score.

20. For the correlation between the contribution amounts of pro-gun and gun safety interest groups and partisan control, see Figure C7–Figure C10 in Appendix C.

2. Gun Interest Group Contributions Drive State Gun Policy Under Trifectas

Table 1a illustrates how pro-gun contributions impact the level of state gun regulation with three different regressions using different measures of the extent of Republican political control. The first column estimates Equation 1, which is our baseline TWFE model in which we use a dummy variable to identify a Republican political trifecta. Column 2 runs the same regression but using the Republican Majority Score, the discrete 0–3 count of how many of the three institutions Republicans control. Column 3 runs the same regression while using the Republican Ratio Score, the continuous 0–3 measure built from gubernatorial vote share plus seat shares in each chamber, thereby capturing partisan strength rather than mere possession. Importantly, to determine the full impact of pro-gun contributions, one must consider both the main effect and the interaction term reflecting the level of Republican control.

The main effect of pro-gun SIG contributions is positive and statistically significant across all three models. Considered in isolation, this would be an anomalous finding, because it suggests that pro-gun contributions elevate a state's gun regulation stringency as reflected in our Gun Law Index. The sign and magnitude of the interaction terms resolve the anomaly by revealing a critical conditional relationship: the interaction between pro-gun contributions and Republican political control is negative and statistically significant across all specifications. In other words, the deregulatory impact from pro-gun SIG contributions is critically influenced by Republican control.

Notably, the magnitude of the interaction effect is substantially larger for Republican trifectas (-9.121) compared to Republican Majority Score and Republican Ratio Score, producing a net negative relationship that leads to deregulatory shifts in the Gun Law Index.[21] This means that $1 million in pro-gun contributions under a Republican trifecta is associated with the removal of approximately 3.2 gun laws.[22] Annual pro-gun contributions range from around $100 in South Dakota to approximately $162,000 in California.[23] For a state that has had a Republican trifecta, such as Nevada, whose annual pro-gun contribution is approximately $113,000, pro-gun contributions in that state would translate to roughly 0.36 fewer gun laws per year.[24]

21. Arizona in 2009–2010 is removed from the analysis using the Ratio Score because the governor was not elected, and thus the Ratio Score cannot be calculated. More information on this can be found in Appendix A.

22. This is calculated as the addition of the coefficients under a Republican trifecta: $5.968 - 9.121 = -3.153$.

23. Although California never experienced a Republican trifecta from 2013–2024.

24. Nevada is the state with the highest annual average of pro-gun contributions that also experienced a Republican trifecta over the years of this study. This is calculated by multiplying Nevada's pro-gun contributions ($113,000) with the estimate of the coefficient under a trifecta (-3.2 gun laws per $1 million): $0.113 \times -3.153 = -0.36$. See Appendix C for information on contribution amounts.

A parallel pattern emerges on the gun safety side, as shown in Table 1b. Gun safety SIG contributions do not seem to have a statistically significant impact in the absence of Democratic political control. However, the interaction term for the Democratic trifecta is positive and significant, indicating that gun safety SIG contributions cause more restrictive state gun laws during periods of unified Democratic government. The Democratic Majority Score interaction is also positive and significant, but with a substantially smaller magnitude, and the Democratic Ratio Score interaction is insignificant. Under Democratic trifectas, each additional $1 million is associated with approximately 3.7 new gun laws.[25] With states such as Nevada, the recipient of the greatest dollar amount of gun safety SIG contributions, receiving $230,000 annually, this translates to roughly 0.85 additional gun laws per year under unified Democratic control, which they experienced between 2019–2022.[26]

Taken together, these results suggest that when partisan control removes institutional veto points, gun interest group money translates more easily into shifts in the Gun Law Index, and the direction of change aligns with the dominant party's aligned interest groups. Under Republican trifectas, the impact of pro-gun contributions increases and leads to deregulatory shifts in state gun policy, as reflected in a decreased value of the Gun Law Index. Analogously, under Democratic trifectas, the impact of gun safety contributions increases and leads to regulatory tightening. This pattern is consistent with the conditional influence of organized interests operating through unified control of all veto points.

25. This is calculated as the addition of coefficients under a Democratic trifecta: $-2.048 + 5.734 = 3.686$.

26. This is calculated by multiplying Nevada's gun safety contributions ($230,000) with the estimate of the coefficient under a trifecta (3.7 gun laws per $1 million): $0.230 \times 3.686 = 0.848$.

Table 1: Impact of Contributions on Change in Gun Law Index, 2000–2024: Interaction with State Politics Variables

(a) Pro-Gun

	Rep. Trifecta	Rep. Majority Score	Rep. Ratio Score
Pro-Gun SIG Contribution (in $millions)	5.968 (2.253) $p = 0.011$	4.471 (2.040) $p = 0.033$	10.612 (3.840) $p = 0.008$
State Politics	−0.191 (0.101) $p = 0.064$	−0.094 (0.085) $p = 0.275$	−0.668 (0.217) $p = 0.003$
Interaction with State Politics	−9.121 (2.600) $p = 0.001$	−1.906 (0.761) $p = 0.016$	−6.044 (2.805) $p = 0.036$
Num. Obs.	1150	1150	1148
R^2	0.197	0.192	0.194
Adj. R^2	0.135	0.130	0.132

(b) Gun Safety

	Dem. Trifecta	Dem. Majority Score	Dem. Ratio Score
Gun Safety SIG Contribution (in $millions)	−2.048 (2.074) $p = 0.328$	−3.149 (2.225) $p = 0.163$	−8.695 (5.184) $p = 0.100$
State Politics	0.112 (0.156) $p = 0.479$	0.127 (0.082) $p = 0.130$	0.467 (0.219) $p = 0.038$
Interaction with State Politics	5.734 (2.542) $p = 0.029$	2.156 (0.950) $p = 0.028$	5.493 (3.489) $p = 0.122$
Num. Obs.	1150	1150	1148
R^2	0.189	0.193	0.188
Adj. R^2	0.126	0.131	0.125

*The outcome is the change in the Gun Law Index across fifty states (2002–2024). The treatment, "SIG Contribution" is mean special interest group contributions from the prior two years across fifty states (2000–2023), in millions of USD. Standard errors are state-clustered. The linear combination test confirms the significant net effects (Pro-Gun, Rep. Trifecta: -3.15, SE = 0.99, p = 0.003; Gun Safety, Dem. Trifecta: 3.69, SE = 1.44, p = 0.013).

3. Robustness Checks for Contribution Effects

We next assess whether the effects of organized interests from our baseline TWFE model are robust to alternative specifications and to potential violations of the identifying assumptions.

Placebo Analysis Using Future Treatment and Past Outcome. Our placebo analysis addresses concerns about reverse causality by examining whether future contributions from organized interests affect the Gun Law Index. Specifically, we replace past (or lagged) contributions with future (or lead) contributions in years $t + 1$, $t + 2$, as well as averages over $t + 1$ and $t + 2$. Across these placebo specifications, the coefficients on interactions

between future contributions and partisan trifectas are not statistically significant (Table 2a and Table 2b).[27] The absence of systematic effects based on future placebo treatment refutes the claim that organized interests just respond to previous statutory changes, and instead supports our interpretation that contributions operate predominantly as a driver of subsequent legal change rather than the reverse.

Table 2: Impact of Future Contributions on Change in Gun Law Index, 2000–2024

(a) Pro-Gun

	Future (t+1)	Future (t+1 ∼ t+2)	Future (t+2)
Future Pro-Gun SIG Contribution (in $millions)	−2.544 (1.733) $p = 0.149$	−3.610 (2.919) $p = 0.222$	−1.278 (2.353) $p = 0.590$
Republican Trifecta	−0.316 (0.082) $p = 0.000$	−0.307 (0.083) $p = 0.001$	−0.310 (0.080) $p = 0.000$
Interaction with Republican Trifecta	1.990 (3.332) $p = 0.553$	1.233 (4.386) $p = 0.780$	−0.254 (3.756) $p = 0.946$
Num. Obs.	1200	1150	1150
R^2	0.205	0.210	0.207
Adj. R^2	0.146	0.150	0.146

(b) Gun Safety

	Future (t+1)	Future (t+1 ∼ t+2)	Future (t+2)
Future Gun Safety SIG Contribution (in $millions)	0.634 (1.805) $p = 0.727$	2.312 (2.531) $p = 0.365$	0.702 (2.209) $p = 0.752$
Democratic Trifecta	0.010 (0.144) $p = 0.944$	−0.044 (0.131) $p = 0.739$	2.11×10^{-3} (0.121) $p = 0.986$
Interaction with Democratic Trifecta	6.626 (4.134) $p = 0.115$	8.517 (4.406) $p = 0.059$	5.714 (2.479) $p = 0.025$
Num. Obs.	1200	1150	1150
R^2	0.207	0.213	0.206
Adj. R^2	0.148	0.152	0.145

*The outcome is the change in the Gun Law Index across fifty states (2000–2023). The treatment "SIG Contribution" is mean special interest group contributions for the year(s) indicated in the column header, in millions of USD. Standard errors are state-clustered. "t+1 ∼ t+2" refers to the mean of special interest group contributions in times t+1 and t+2.

State–Specific Time Trend. To address potential concerns about differential preexisting state-level trends, we re-estimate our models with state-specific and group-specific time trends.

27. The single statistically significant result in the $t + 2$ gun safety model lacks robustness across all other lead periods, and thus does not constitute systematic evidence of an anticipatory effect. Results remain unchanged when extending the placebo period to year $t + 3$, seen in Table D1a and Table D1b in Appendix D.

Our models include state–specific linear trends, as well as group–specific trends that vary by baseline firearm prevalence or by state partisan control (Table 3a and Table 3b).[28] In all three models, the interaction between pro–gun contributions and Republican trifectas remains significantly negative. These models indicate the robustness of the main results in that they are not generated by differential preexisting trajectories in gun laws across states or groups. For gun safety contributions, the interaction with Democratic trifectas remains positive in all three specifications. Unlike the pro-gun results, which remain significant across all trend specifications, the gun safety contribution effects become statistically insignificant in one of three models when we control for state-specific trends. This pattern suggests that some states receiving more gun safety contributions may have already been trending toward stricter gun laws, making it harder to isolate the causal impact of the money itself.

28. We use household firearm estimate in 1990 to show baseline firearm prevalence at each state, and Republican Ratio Score to denote state partisan control.

Table 3: Impact of Contributions on Change in Gun Law Index, 2000–2024: Unit/Group-Specific Trend

(a) Pro-Gun

	State-Specific Trend	HFR-Group Trend	State-Politics-Group Trend
Pro-Gun SIG Contribution (in $millions)	5.979 (2.551) $p = 0.023$	5.905 (2.242) $p = 0.011$	5.845 (2.256) $p = 0.013$
Republican Trifecta	−0.120 (0.094) $p = 0.207$	−0.186 (0.102) $p = 0.075$	−0.191 (0.100) $p = 0.063$
Interaction with Republican Trifecta	−10.058 (3.383) $p = 0.005$	−9.563 (2.520) $p = 0.000$	−9.513 (2.504) $p = 0.000$
Num. Obs.	1150	1150	1150
R^2	0.231	0.198	0.199
Adj. R^2	0.131	0.134	0.135

(b) Gun Safety

	State-Specific Trend	HFR-Group Trend	State-Politics-Group Trend
Gun Safety SIG Contribution (in $millions)	−3.767 (2.495) $p = 0.138$	−2.264 (2.079) $p = 0.281$	−1.935 (2.125) $p = 0.367$
Democratic Trifecta	0.068 (0.196) $p = 0.729$	0.114 (0.155) $p = 0.468$	0.122 (0.152) $p = 0.428$
Interaction with Democratic Trifecta	4.698 (3.052) $p = 0.130$	5.917 (2.519) $p = 0.023$	5.437 (2.646) $p = 0.045$
Num. Obs.	1150	1150	1150
R^2	0.226	0.189	0.190
Adj. R^2	0.125	0.124	0.125

*The outcome is the change in the Gun Law Index across fifty states (2002–2024). The treatment, "SIG Contribution" is mean special interest group contributions from the prior two years across fifty states (2000–2023), in millions of USD. Standard errors are state-clustered. States were binned by 1990 HFR into top 10, bottom 10, and middle 30, and by Republican Ratio Score into top 10, bottom 11 (due to ties), and middle 29.

Control For Time-Varying Gun Violence. A remaining concern is that unobserved, time-varying shocks, most obviously high-profile shootings, could drive both interest group contributions and statutory change. To address this, we re-estimate our models adding controls for gun violence exposure, drawn from three sources: annual fatalities from school shootings in the K-12 School Shooting Database (Riedman 2025), and annual fatalities from mass shootings as recorded in the Mother Jones database (Follman et al. 2025) and the Violence Prevention Project database (Violence Prevention Project 2024). Table 4a and Table 4b report the results, entering each measure separately. The resulting estimates are

essentially identical to our baseline models in Column 1 of Table 1a. These results suggest that our findings are not driven by differential exposure to high-profile gun violence events.[29]

Table 4: Impact of Contributions on Change in Gun Law Index, 2000–2024: Shooting Covariates

(a) Pro-Gun

	Riedman Dataset	MJ Dataset	VPP Dataset
Pro-Gun SIG Contribution (in $millions)	5.982 (2.305) $p = 0.012$	5.921 (2.208) $p = 0.010$	5.870 (2.186) $p = 0.010$
Republican Trifecta	−0.190 (0.103) $p = 0.070$	−0.184 (0.103) $p = 0.080$	−0.178 (0.103) $p = 0.090$
Interaction with Republican Trifecta	−9.165 (2.739) $p = 0.002$	−9.462 (2.796) $p = 0.001$	−9.730 (2.849) $p = 0.001$
Num. Obs.	1150	1150	1150
R^2	0.197	0.198	0.200
Adj. R^2	0.134	0.136	0.138

(b) Gun Safety

	Riedman Dataset	MJ Dataset	VPP Dataset
Gun Safety SIG Contribution (in $millions)	−1.965 (2.076) $p = 0.349$	−1.990 (2.150) $p = 0.359$	−1.866 (2.166) $p = 0.393$
Democratic Trifecta	0.111 (0.156) $p = 0.479$	0.101 (0.151) $p = 0.508$	0.084 (0.152) $p = 0.583$
Interaction with Democratic Trifecta	5.681 (2.557) $p = 0.031$	5.953 (2.443) $p = 0.018$	6.330 (2.557) $p = 0.017$
Num. Obs.	1150	1150	1150
R^2	0.189	0.189	0.191
Adj. R^2	0.126	0.126	0.129

*The outcome is the change in the Gun Law Index across fifty states (2002–2024). The treatment, "SIG Contribution" is mean special interest group contributions from the prior two years across fifty states (2000–2023), in millions of USD. Standard errors are state-clustered. "Riedman" refers to the K-12 School Shooting database (Riedman 2025). "MJ" refers to the Mother Jones database (Follman et al. 2025). "VPP" refers to the Violence Prevention Project (Violence Prevention Project 2024).

4. Impact on State Elections.

To examine the mechanisms through which interest group money affects gun laws, we estimate additional TWFE models with electoral outcomes as the dependent variables and SIG contributions as the treatment. This approach allows us to assess whether the estimated policy effects reflect SIGs' direct influence on policymaking or instead operate indirectly

29. For additional robustness checks, including alternative treatment and covariate specifications, see Table D2a–Table D3b in Appendix D.

through elections. Specifically, we test whether SIG contributions predict the emergence of unified partisan control (trifectas), institutional control measured by the Majority Score, or the relative prevalence of party captured by the Ratio Score. The results in Table 5 and Table 6 reveal the same basic pattern: both pro-gun and gun safety SIG contributions do not significantly predict trifecta formation or majority control, indicating that special interest money does not systematically determine which party controls state government. By contrast, SIG contributions significantly predict the more granular Ratio Score, suggesting that interest group spending may modestly shift electoral balances without altering overall control. In sum, these results suggest that SIG contributions do not determine partisan control, reinforcing our interpretation of the main estimates: SIGs primarily shape policy once partisan control, especially trifecta control, is in place.

Table 5: Impact of Pro-Gun Contributions on Elections, 2000–2024: Three Different Outcome Patterns

	Rep. Trifecta	Rep. Majority Score	Rep. Ratio Score
Pro-Gun SIG Contribution (in $millions)	−0.507 (0.585) $p = 0.391$	−0.444 (1.675) $p = 0.792$	0.703 (0.309) $p = 0.027$
Num. Obs.	1150	1150	1148
R^2	0.726	0.787	0.860
Adj. R^2	0.705	0.771	0.849

*Outcome variables are Republican Trifecta, Republican Majority Score, and Republican Ratio Score (2002–2024). The treatment, "SIG Contribution" is mean special interest group contributions from the prior two years across fifty states (2000–2023), in millions of USD. Standard errors are state-clustered.

Table 6: Impact of Gun Safety Contributions on Elections, 2000–2024: Three Different Outcome Patterns

	Dem. Trifecta	Dem. Majority Score	Dem. Ratio Score
Gun Safety SIG Contribution (in $millions)	0.758 (0.889) $p = 0.398$	1.650 (1.701) $p = 0.337$	1.316 (0.392) $p = 0.002$
Num. Obs.	1150	1150	1148
R^2	0.550	0.788	0.844
Adj. R^2	0.516	0.772	0.833

*Outcome variables are Democratic Trifecta, Democratic Majority Score, and Democratic Ratio Score (2002–2024). The treatment, "SIG Contribution" is mean special interest group contributions from the prior two years across fifty states (2000–2023), in millions of USD. Standard errors are state-clustered.

B. Constituent Sentiment and Gun Policy

Having shown in Table 1a–Table 6 that organized money moves the Gun Law Index conditionally on trifectas, we now address the parallel question for public opinion: does

a state's gun sentiment in year $t-1$ predict the change in its gun laws in year t?[30] The gun-related content of the CES varies considerably across survey years. Between 2006 and 2012, the CES asked at most one gun-related question per year, and none at all in 2008 and 2011, whereas from 2013 onward it fielded a consistent multi-item battery covering background checks, assault weapons, and concealed carry (see Table B1). However, because sentiment estimates based on a single item are substantially noisier and less comparable over time, our main analysis restricts attention to 2013–2024, where the richer and more stable question set yields the most reliable estimates. Our results do not find support for a causal link between constituent gun sentiment and changes in gun policy, giving evidence that politicians are unresponsive to the behavior and sentiment of their constituents on gun-related issues.

1. Constituent Gun Sentiment Does Not Predict Policy Change

Table 7 provides our baseline estimates of the impact of public opinion on gun policy, running that test over 2013–2024, separately for majority-party and minority-party sentiment. In essence, we ask two questions: first, when the governing party's own voters become more or less supportive of gun control, do the state's laws move? Second, does a change in the sentiment of opposition-party voters influence gun policy? Because we condition on partisan control, with a control for the Republican Majority Score, the 0–3 count of how many of the three institutions Republicans control, these regressions ask whether sentiment moves policy holding the governing regime fixed. The influence of opinion through elections is deliberately excluded here but directly addressed above in Table 5 and Table 6.

For each party position, we present a TWFE column and an IV column. The TWFE columns are the naive panel regressions (Equation 3), showing that the change in lagged majority-party gun sentiment has a marginally significant positive association with the Gun Law Index (0.590, $p = 0.083$). Minority-party sentiment has virtually no effect (-0.215, $p = 0.548$).

To address any endogeneity in gun sentiment that remains after lagging the sentiment index by one year, the IV columns re-estimate using the shift-share instrument, national partisan sentiment shifts weighted by 2006 baseline party composition, to isolate movements in state sentiment that come from national partisan swings rather than from anything happening inside the state. Both IV estimates show no impact on gun laws from changes in gun sentiment, and notably, the majority-party coefficient flips sign (-1.127, $p = 0.585$).

30. As shown in Table E4 in Appendix E, SIG funding and constituent gun sentiment are not significantly correlated, allowing us to model their effects on policy independently.

Table 7 tests two distinct theories of responsiveness: if legislators cater to their partisan base, majority-party sentiment should predict policy change, whereas if electoral competition induces the governing party to move toward the center, sentiment shifts by the opposition should matter at the margin as well (Arnold 1990; Downs 1957a). For both the majority and minority party, we fail to find evidence of an effect, and these null results cut against both accounts: legislators appear unresponsive not only to persuadable voters across the aisle, but to their own base as well.

Importantly, these null results are not simply an artifact of inflated standard errors or weak identification. Across our main IV specifications, the weak instrument F-statistics are above the conventional threshold of 10, indicating sufficiently strong instruments. Although the IV estimates have larger standard errors than the TWFE models, the magnitude and direction of these coefficients are consistent across specifications, supporting that our IV estimates are reliable and not driven by statistical noise.

Table 7: Impact of Estimated Gun Sentiment on Change in Gun Law Index, 2013–2024

	Change in Gun Law (Majority Party Sentiment)		Change in Gun Law (Minority Party Sentiment)	
	TWFE	IV	TWFE	IV
Estimated Gun Sentiment	0.590 (0.333) $p = 0.083$	-1.127 (2.064) $p = 0.585$	-0.215 (0.356) $p = 0.548$	1.123 (1.965) $p = 0.568$
Num. Obs.	550	550	550	550
R^2	0.234	0.186	0.229	0.207
Adj. R^2	0.122	0.067	0.116	0.091
Weak Instrument F-Stat		15.55		16.34

*The outcome is the change in the Gun Law Index across fifty states from 2014–2024. Standard errors are state-clustered. Majority party is the party controlling at least two of the three governing bodies (governor, upper legislature, lower legislature) in each state-year. For split governments, majority party is determined by higher relative state-year population.

2. Government Trifecta Does Not Change the Effect of Constituent Sentiment

Similar to our analysis of interest group contributions, we hope to explore if there is a differential impact of estimated gun sentiment under the presence of a trifecta. We replicated our analysis, focusing on Republican, Democratic, or any trifectas, shown in Table 8, Table 9, and Table 10, respectively. Across all analyses, both our TWFE and our IV estimation do not produce a significant effect.[31] Thus, there is no evidence that partisan control differentially

31. In these trifecta-interaction models (Table 8–Table 10), the first-stage F-statistic for the interaction term falls below conventional thresholds in some specifications (ranging from 4 to 9), while the sentiment-level F-statistics remain above 10.

affects the relationship between constituent gun sentiment and changes in policy. Unlike interest groups, the trifecta does not appear to provide a channel for legislative action in response to constituent pressure.

Table 8: Impact of Estimated Gun Sentiment on Change in Gun Law Index, 2013–2024: Republican Trifecta

	Change in Gun Law (Majority Party Sentiment)		Change in Gun Law (Minority Party Sentiment)	
	TWFE	IV	TWFE	IV
Estimated Gun Sentiment	0.660 (0.370) $p = 0.081$	-0.941 (1.506) $p = 0.532$	-0.447 (0.383) $p = 0.249$	0.844 (1.182) $p = 0.476$
Interaction with Trifecta	0.035 (0.728) $p = 0.962$	1.351 (3.037) $p = 0.656$	0.063 (0.912) $p = 0.946$	-2.514 (4.107) $p = 0.541$
Num. Obs.	550	550	550	550
R^2	0.233	0.180	0.227	0.195
Adj. R^2	0.119	0.058	0.112	0.075
Weak Instrument F-Stat		8.29		9.87

*The outcome is the change in the Gun Law Index across fifty states from 2014–2024. Standard errors are state-clustered. Majority party is the party controlling at least two of the three governing bodies (governor, upper legislature, lower legislature) in each state-year. For split governments, majority party is determined by higher relative state-year population. Two endogenous regressors are each instrumented separately, and the smaller first-stage F-statistic is reported.

Table 9: Impact of Estimated Gun Sentiment on Change in Gun Law Index, 2013–2024: Democratic Trifecta

	Change in Gun Law (Majority Party Sentiment)		Change in Gun Law (Minority Party Sentiment)	
	TWFE	IV	TWFE	IV
Estimated Gun Sentiment	0.541 (0.353) $p = 0.132$	-0.075 (1.195) $p = 0.950$	-0.303 (0.342) $p = 0.380$	-0.888 (1.287) $p = 0.491$
Interaction with Trifecta	0.718 (1.354) $p = 0.598$	-7.949 (9.776) $p = 0.417$	-0.157 (0.944) $p = 0.869$	3.766 (3.814) $p = 0.324$
Num. Obs.	550	550	550	550
R^2	0.236	0.103	0.230	0.202
Adj. R^2	0.123	-0.030	0.115	0.084
Weak Instrument F-Stat		3.99		12.29

*The outcome is the change in the Gun Law Index across fifty states from 2014–2024. Standard errors are state-clustered. Majority party is the party controlling at least two of the three governing bodies (governor, upper legislature, lower legislature) in each state-year. For split governments, majority party is determined by higher relative state-year population. Two endogenous regressors are each instrumented separately, and the smaller first-stage F-statistic is reported.

Table 10: Impact of Estimated Gun Sentiment on Change in Gun Law Index, 2013–2024: Any Trifecta

	Change in Gun Law (Majority Party Sentiment)		Change in Gun Law (Minority Party Sentiment)	
	TWFE	IV	TWFE	IV
Estimated Gun Sentiment	0.542 (0.353) $p = 0.131$	-0.335 (1.296) $p = 0.796$	-0.266 (0.330) $p = 0.423$	0.427 (1.247) $p = 0.732$
Interaction with Trifecta	0.255 (0.346) $p = 0.464$	-0.207 (1.148) $p = 0.857$	-0.308 (0.277) $p = 0.273$	-0.010 (0.973) $p = 0.992$
Num. Obs.	550	550	550	550
R^2	0.236	0.205	0.230	0.214
Adj. R^2	0.122	0.087	0.115	0.097
Weak Instrument F-Stat		8.38		14.27

*The outcome is the change in the Gun Law Index across fifty states from 2014–2024. Standard errors are state-clustered. Majority party is the party controlling at least two of the three governing bodies (governor, upper legislature, lower legislature) in each state-year. For split governments, majority party is determined by higher relative state-year population. Two endogenous regressors are each instrumented separately, and the smaller first-stage F-statistic is reported.

3. Robustness Checks for Gun Sentiment Effects

Alternative Time Frame. As a robustness check, we perform the analysis on the entire dataset, 2006–2024. While the TWFE shows moderate statistically significant effects, our IV results are insignificant (Table 11), providing evidence that our results are not specific to the time frame chosen in our main analysis, and the associations displayed are mainly due to the endogeneity of gun sentiment and gun laws.

Table 11: Impact of Estimated Gun Sentiment on Change in Gun Law Index, 2006–2024

	Change in Gun Law (Majority Party Sentiment)		Change in Gun Law (Minority Party Sentiment)	
	TWFE	IV	TWFE	IV
Estimated Gun Sentiment	0.568 (0.213) $p = 0.010$	-0.624 (0.861) $p = 0.469$	-0.433 (0.238) $p = 0.075$	0.685 (0.857) $p = 0.424$
Num. Obs.	850	850	850	850
R^2	0.195	0.159	0.191	0.165
Adj. R^2	0.116	0.076	0.111	0.083
Weak Instrument F-Stat		78.62		110.56

*The outcome is the change in the Gun Law Index across fifty states from 2008–2024. Standard errors are state-clustered. Majority party is the party controlling at least two of the three governing bodies (governor, upper legislature, lower legislature) in each state-year. For split governments, majority party is determined by higher relative state-year population. Because our instrument uses periods $t-1$ and $t-2$ in its construction, we are restricted to years 2008–2024 for our analysis.

Alternative Instrument. A concern could be that relevance of our instrument is driven by the changes in populous states. As an alternative instrument, we redefine our national

sentiment to be weighted not by both population and relative proportion within a state, but just by relative proportion (Table 12). The instrument remains relevant, and we produce similar insignificant results to our main specification.[32]

Table 12: Impact of Estimated Gun Sentiment on Change in Gun Law Index, 2013–2024: Alternative Instrument

	Change in Gun Law (Majority Party Sentiment)		Change in Gun Law (Minority Party Sentiment)	
	TWFE	IV	TWFE	IV
Estimated Gun Sentiment	0.590 (0.333) $p = 0.083$	-1.243 (2.023) $p = 0.539$	-0.215 (0.356) $p = 0.548$	1.207 (1.950) $p = 0.536$
Num. Obs.	550	550	550	550
R^2	0.234	0.179	0.229	0.204
Adj. R^2	0.122	0.059	0.116	0.088
Weak Instrument F-Stat		15.98		16.66

*The outcome is the change in the Gun Law Index across fifty states from 2014–2024. Standard errors are state-clustered. Majority party is the party controlling at least two of the three governing bodies (governor, upper legislature, lower legislature) in each state-year. For split governments, majority party is determined by higher relative state-year population. The IV was adjusted from the main specification, weighing national gun sentiment only by relative population within the state.

V. Discussion

A. The Representation Paradox

Our findings provide systematic evidence that state legislatures are heavily structured partisan institutions in which organized interests exert influence conditionally, with policy returns concentrated in periods of unified partisan control rather than distributed uniformly across institutional contexts. Pro-gun and gun safety groups invest in nearly every state and year, yet their spending translates into policy shifts only during periods of unified partisan control. Under Republican trifectas, pro-gun spending predicts deregulatory shifts. Under divided government, neither side systematically moves statute.

These patterns align with theoretical predictions from legislative subsidy and veto player models (Hall and Deardorff 2006; Tsebelis 2002). Spending functions as subsidies that enable aligned legislators to overcome coordination costs, procedural hurdles, and resource constraints. Unified control concentrates agenda authority and eliminates opposing vetoes, allowing subsidy to convert into drafting support, committee advancement, and floor protection. Divided control fragments authority, forcing the same resources to confront multiple veto points where they achieve little.

32. For additional robustness checks, including using treatment moving-averages and splitting groups based on constituent population, see Table E1 and Table E2 in Appendix E.

The temporal pattern reinforces this mechanism. Annual changes in the Gun Law Index typically cluster near zero (Figure C1), but sharp movements toward permissiveness or restriction occur disproportionately during unified control windows with substantial organized interest spending. Once enacted, shifts persist due to institutional friction and policy feedback, even as money continues to flow. Unified control thus creates episodic opportunities for organized interests to reset statutory baselines, after which reversal becomes difficult despite continued investment from opposing groups.

This dynamic is particularly pronounced under Republican trifectas. The concealed carry wave of the 2012–2022 period illustrates the mechanism vividly (Figure C14): the number of states with permitless carry laws more than tripled during this window, moving in the opposite direction of constituent sentiment in many of the states involved. Our Gun Law Index captures this deregulatory movement, and the robustness of the pro-gun contribution effect across all specifications confirms that organized interest spending, not public preferences, drove it. The analogous tightening effect under Democratic trifectas, while real, is less consistent across specifications, particularly when controlling for state-specific trends, suggesting that some of the observed tightening in Democratic states may reflect pre-existing trajectories rather than contribution driven action. Republican trifectas thus function more reliably as a one-way deregulatory ratchet than Democratic trifectas function as a regulatory one.

The symmetry in mechanism combined with the asymmetry in partisan alignment demonstrates that state legislatures operate as partisan institutions where organized interests gain leverage only when their aligned party controls all veto points. This conditional structure explains why previous studies often find modest contribution effects: estimates pooling across institutional contexts attenuate toward zero by averaging high return trifecta periods with low return divided government (Ansolabehere et al. 2003).

Our findings also rule out strategic giving as the primary driver of these patterns. Figure 4 and Figure 5 show that contributions flow consistently across all institutional contexts and are not related to the presence of a trifecta. Similarly, Table 5 and Table 6 show that contributions do not systematically predict which party gains unified control, confirming that organized interests shape policy after partisan alignment is established, rather than manufacturing favorable institutional conditions. Together, these patterns indicate that the conditional influence of special interest group funding reflects heterogeneity in the effectiveness of contributions, rather than strategic resource allocation.

B. Constituent Sentiment Does Not Move Policy

If organized gun interests reshape policy during unified control, a natural question is whether constituent preferences exert independent pressure. We find that constituent gun sentiment does not causally predict policy change. Our instrumental variable design leverages variation in states' exposure to national partisan sentiment trends; across all IV specifications, results remain insignificant. Yet, across all specifications, including majority party and minority party sentiment and models with and without trifecta interactions, we find effects that are substantively indistinguishable from zero.

These results do not imply that public opinion is irrelevant. Citizens shape which party gains unified control, and that choice drives broad policy trajectories. However, conditional on partisan control and institutional structure, marginal changes in constituent sentiment do not produce measurable statutory shifts, while marginal changes in organized spending do. Institutional openings created by unified control are exploited primarily by organized interests, not voters.

Three policy domains illustrate the depth of this failure. On universal background checks (Figure 6), average state support exceeds 80 percent across virtually all states throughout the 2013–2024 period, yet only 20 states had such laws by 2024, with nearly all adoptions occurring under Democratic trifectas. Even stable and overwhelming support for more than a decade cannot produce statutory change without the right institutional configuration. On assault weapons bans, (Figure C13), 36 states showed average support of at least 55 percent and 23 states at least 60 percent, yet only 10 had bans by 2024, all adopted under Democratic trifectas. The concealed carry case (Figure C14) presents the starkest divergence: despite majority opposition to permitless carry in most states, Republican trifectas systematically eliminated permit requirements against constituent preferences, with Texas adopting permitless carry in 2021 even as 58 percent of its citizens favored tighter restrictions. Taken together, these figures reveal not merely a gap between preferences and policy, but a systematic institutional disconnect that has persisted across more than a decade.

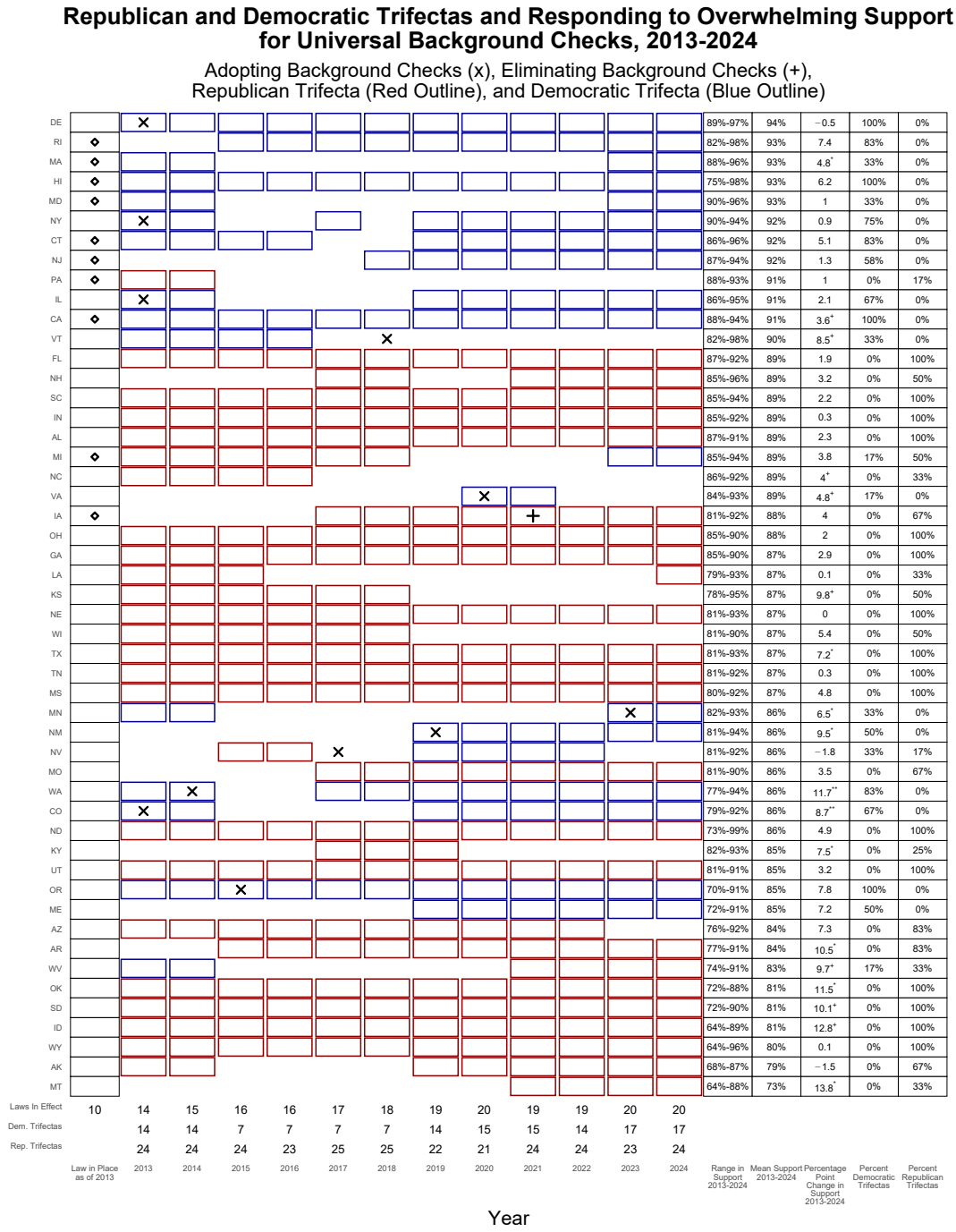


Figure 6: State–Year CES Opinion on Universal Background Checks, 2013–2024. The 10 states that adopted Universal Background Checks prior to 2013 still had them in place at the start of the year. "Support" is the share of CES respondents who supported the statement "Background checks for all sales, including at gun shows and over the Internet." "Percentage Point Change in Support" is the estimated regression coefficient from a model of support on year multiplied by 11; +, *, and ** denote statistical significance at the 10%, 5%, and 1% levels, respectively. For 2020 and 2022, the CES did not inquire about support for background checks. 21 states had a Republican trifecta and 10 states had a Democratic trifecta in at least 8 of the 12 years.

This failure cannot be explained by the standard elite-preferences account (Bartels 2008; Gilens 2012). Survey data show that support for gun safety measures is high and stable for the median voter (Gallup 2022; Parker et al. 2017; Pew Research Center 2023), and even stronger among higher income and college educated Americans, the very groups whose preferences, in Gilens' framework, carry the most weight. The organized gun lobby is thus overriding not just the median voter but also the preferences of economic and educational elites.

The contrast with organized interest spending effects is stark. Within identical institutional settings, gun laws respond to organized spending but not to parallel shifts in constituent attitudes. This divergence reflects systematic asymmetries between organized interests and diffuse publics: preference intensity, sustained attention to narrow domains, technical expertise, capacity for monitoring and attribution, and strategic coordination across institutional venues.

1. Implications of Our Research

Our results clarify who is represented when institutions create opportunities for policy change. Under unified partisan control, contributions translate into statutory change: pro-gun spending under Republican trifectas drives deregulation, gun safety spending under Democratic trifectas drives tightening. Under divided government, the same groups invest heavily but do not systematically move law. This same institutional pattern shapes what empirical designs tend to detect: spending effects appear modest when assessed through roll-call votes (Ansolabehere et al. 2003), which capture only the final stage of a process where organized interests primarily influence agenda setting, drafting, and committee work.

These findings extend work on unequal influence by pinpointing the institutional mechanism: policy is periodically reset during unified control to align with organized interests, then held in place by divided government and feedback effects (Campbell 2003; Pierson 1993). Analyses relying solely on static congruence between mean opinion and law miss the dynamic process through which divergence is produced and sustained. Our state-by-state figures (Figure 6, Figure C13, Figure C14) make this dynamic legible: the states with the highest and most sustained levels of gun safety sentiment are not, in general, the states that have passed the most gun safety laws; they are the states that have had Democratic trifectas. Sentiment is neither necessary nor sufficient for statutory change; institutional configuration is what matters.

This mechanism generalizes to other polarized, high-salience domains where narrow organized interests hold resource advantages and unified partisan control creates periodic windows for statutory action. The parallel is clearest in domains where single issue groups on opposing sides invest heavily, policy feedback locks in changes against reversal, and the

median voter holds moderate views that neither organized coalition fully represents, including reproductive rights, right-to-work legislation, and environmental regulation at the state level. What should vary across domains is the magnitude of organized influence, not its conditional structure: where technical complexity is high and media monitoring is weak, the wedge between constituent preferences and statutory outcomes should be larger; where policy is highly visible and easily attributed, electoral accountability should impose tighter constraints. The gun domain, where salience is high but organized interests nonetheless dominate outcomes, likely represents a lower bound on the responsiveness failure that conditional influence can produce in domains with weaker public monitoring and less vivid feedback to voters.

In practice, state gun policy moves with party control, not with year-to-year changes in constituent sentiment, revealing that electoral accountability on gun policy functions coarsely. Voters influence broad direction through party choice, but organized spending drives statutory change when veto points align. The long-run consequence is a systematic ratchet effect: Republican trifectas reliably loosen restrictions against public preferences, while Democratic trifectas produce tightening that, although real, is less mechanically consistent. Over time, this asymmetry favors the deregulatory agenda.

2. Limitations of Our Research

Two limitations qualify the results. First, our design identifies what drives state gun policy, but it cannot entirely resolve how influence operates inside legislatures. We estimate state–year changes in statutory stringency as a function of aggregate campaign contributions and constituent sentiment, which allows us to test whether enacted law responds to organized money or public preferences conditional on institutional context. However, this approach does not isolate the internal channels through which influence is exercised, such as agenda setting, bill drafting, committee bargaining, amendment activity, or other procedural strategies central to legislative subsidy accounts. Pinning down these mechanisms would require additional data and a different research design, which we pursue in future work.

Second, we focus on a high-salience domain where organized interests are well-resourced and strongly mobilized. Gun regulation is a central partisan issue with unusually well-organized interest group infrastructure and repeated legislative activity, conditions that plausibly amplify the ability of contributions to operate as legislative subsidies. This makes the domain an informative setting for testing conditional influence, but it also means the magnitudes we estimate should not be assumed to carry over to policy areas with weaker mobilization, fewer legislative opportunities, or different institutional incentives, including national institutions.

3. Conclusion

Taken together, our analysis shows that state gun laws are shaped by organized interests under unified partisan control, while constituent preferences exert no detectable effect on statutory change. Pro-gun group spending converts into deregulatory shifts under Republican trifectas. Gun safety group spending converts into regulatory tightening under Democratic trifectas. Under divided government, neither side reliably moves statute.

The representation gap we document reveals a paradox of democratic accountability. Institutions designed to translate constituent preferences into policy instead give organized gun interests their greatest leverage precisely when those institutions have the greatest alignment and fewest barriers to enacting new laws. Given that the deregulatory ratchet under Republican trifectas operates more reliably than the regulatory ratchet under Democratic trifectas, the long-run trajectory is asymmetric rather than neutral, systematically favoring the dismantling of gun safety regulations against majority preferences.

On an issue with direct consequences for public safety, the path from preferences to policy in the states runs disproportionately through well-organized, intensely motivated interests rather than through the broadly moderate views of constituents. That this failure of responsiveness persists even when those broadly moderate constituents include the economically privileged and highly educated, whose preferences are supposed to receive the greatest political weight, makes it difficult to attribute to standard mechanisms of unequal representation. Understanding when and how organized interests override constituent preferences is critical not only for explaining the representation gap in American gun policy, but for evaluating whether state governments remain responsive to their citizens on highly salient issues in a political environment in which the power imbalance between well-resourced organized interests and ordinary Americans is widening.

Institutional Review Board Status

The Stanford University Institutional Review Board has determined that this study does not involve human subjects as defined in 45 CFR 46.102(e) and therefore does not require full review by the Institutional Review Board. This determination was made on December 11, 2025.

Data Availability

This project uses four primary data components to create the analytic panels: (1) SIG-level contribution data obtained from OpenSecrets under an acquisition agreement (OpenSecrets 2025), (2) the RAND State Firearm Law Database (RAND Corporation 2025) for the creation of our Gun Law Index, with supplement from Giffords Law Center (Giffords Law Center 2025) and in records of state statutes as found in Westlaw, (3) constituent gun sentiment measures derived from the Cooperative Election Study (Schaffner et al. 2025), and (4) publicly available state-level covariates (Bureau of Economic Analysis 2025; Bureau of Justice Statistics 2023a, 2023b, 2024; Bureau of Labor Statistics 2025a, 2025b; Kaplan 2025; Klarner 2013; Leip 2025; National Conference of State Legislatures 2025; Nebraska Legislature 2025; RAND Corporation 2020; Slater and Alpert 2024; U.S. Census Bureau 2011, 2012, 2019, 2020, 2024, 2025). All underlying data sources are public except for the SIG contribution data, which will be available within the merged panel.

All code, detailed documentation, and the directory structure required to reproduce every table and figure in the paper will be deposited in an appropriate repository upon publication. We are happy to deposit all of our replication materials in a repository that is convenient to the editors and reviewers.

References

Ansolabehere, Stephen, John M. de Figueiredo, and James M. Snyder Jr. 2003. "Why Is There So Little Money in U.S. Politics?" *Journal of Economic Perspectives* 17 (1): 105–130.

Arnold, R. Douglas. 1990. *The Logic of Congressional Action.* New Haven, CT: Yale University Press.

Barry, Colleen L., Daniel W. Webster, Elizabeth Stone, Cassandra K. Crifasi, Jon S. Vernick, and Emma E. McGinty. 2018. "Public Support for Gun Violence Prevention Policies Among Gun Owners and Non–Gun Owners in 2017." *American Journal of Public Health* 108 (7): 878–884.

Bartels, Larry M. 2008. *Unequal Democracy: The Political Economy of the New Gilded Age.* Princeton, NJ: Princeton University Press.

Baumgartner, Frank R., Jeffrey M. Berry, Marie Hojnacki, David C. Kimball, and Beth L. Leech. 2009. *Lobbying and Policy Change: Who Wins, Who Loses, and Why.* Chicago, IL: University of Chicago Press.

Becker, Gary S. 1983. "A Theory of Competition Among Pressure Groups for Political Influence." *The Quarterly Journal of Economics* 98 (3): 371–400.

Bernheim, B. Douglas, and Michael D. Whinston. 1986. "Menu Auctions, Resource Allocation, and Economic Influence." *The Quarterly Journal of Economics* 101 (1): 1–31.

Binder, Sarah A. 1999. "The Dynamics of Legislative Gridlock, 1947–96." *American Political Science Review* 93 (3): 519–533.

Borusyak, Kirill, Peter Hull, and Xavier Jaravel. 2025. "A Practical Guide to Shift-Share Instruments." *Journal of Economic Perspectives* 39 (1): 181–204.

Bureau of Economic Analysis. 2025. *Annual Personal Income by State.*

Bureau of Justice Statistics. 2023a. *Prisoners Under the Jurisdiction of State or Federal Correctional Authorities, by Sex and Jurisdiction, 2021 and 2022.*

Bureau of Justice Statistics. 2023b. *Prisoners Under the Jurisdiction of State or Federal Correctional Authorities, December 31, 1978–2021.*

Bureau of Justice Statistics. 2024. *Prisoners Under the Jurisdiction of State or Federal Correctional Authorities, by Sex and Jurisdiction, 2022 and 2023.*

Bureau of Labor Statistics. 2025a. *Consumer Price Index for All Urban Consumers.*

Bureau of Labor Statistics. 2025b. *Local Area Unemployment Statistics.*

Campbell, Andrea Louise. 2003. *How Policies Make Citizens: Senior Political Activism and the American Welfare State.* Princeton, NJ: Princeton University Press.

Caughey, Devin, and Christopher Warshaw. 2022. *Dynamic democracy: Public Opinion, Elections, and Policymaking in the American States.* University of Chicago Press.

Centers for Disease Control and Prevention. 2025. *Underlying Cause of Death Database.*

Dahl, Robert A. 1971. *Polyarchy: Participation and Opposition.* New Haven, CT: Yale University Press.

Downs, Anthony. 1957a. *An Economic Theory of Democracy.* New York, NY: Harper and Row.

Downs, Anthony. 1957b. "An Economic Theory of Political Action in a Democracy." *Journal of Political Economy* 65 (2): 135–150.

Drutman, Lee. 2015. *The Business of America Is Lobbying: How Corporations Became Politicized and Politics Became More Corporate.* New York, NY: Oxford University Press.

Erikson, Robert S., Gerald C. Wright, and John P. McIver. 1993. *Statehouse Democracy: Public Opinion and Policy in the American States.* Cambridge, UK: Cambridge University Press.

Fiorina, Morris P., Samuel J. Abrams, and Jeremy C. Pope. 2005. *Culture War? The Myth of a Polarized America.* New York, NY: Pearson Longman.

Follman, Mark, Gavin Aronsen, and Deanna Pan. 2025. *U.S. Mass Shooters, 1982–2023.* Accessed February 1, 2025.

Gallup. 2022. *Guns,* June. https://news.gallup.com/poll/1645/guns.aspx.

Giffords Law Center. 2025. *State Gun Laws.*

Gilens, Martin. 2012. *Affluence and Influence: Economic Inequality and Political Power in America.* Princeton, NJ: Princeton University Press.

Goldsmith-Pinkham, Paul, Isaac Sorkin, and Henry Swift. 2020. "Bartik Instruments: What, When, Why, and How." *American Economic Review* 110 (8): 2586–2624.

Goldstick, Jason E., Rebecca M. Cunningham, and Patrick M. Carter. 2022. "Current Causes of Death in Children and Adolescents in the United States." *New England Journal of Medicine* 386 (20): 1955–1956.

Grossman, Gene M., and Elhanan Helpman. 1994. "Protection for Sale." *American Economic Review* 84 (4): 833–850.

Grossman, Gene M., and Elhanan Helpman. 2001. *Special Interest Politics.* MIT Press.

Grossman, Matt, and David A. Hopkins. 2016. *Asymmetric Politics: Ideological Republicans and Group Interest Democrats.* New York: Oxford University Press.

Grumbach, Jacob M. 2018. "From Backwaters to Major Policymakers: Policy Polarization in the States, 1970–2014." *Perspectives on Politics* 16 (2): 416–435.

Hall, Richard L., and Alan V. Deardorff. 2006. "Lobbying as Legislative Subsidy." *American Political Science Review* 100 (1): 69–84.

Hall, Richard L., and Frank W. Wayman. 1990. "Buying Time: Moneyed Interests and the Mobilization of Bias in Congressional Committees." *American Political Science Review* 84 (3): 797–820.

Jacobson, Gary C. 1980. *Money in Congressional Elections.* New Haven, CT: Yale University Press.

Kalla, Joshua L., and David E. Broockman. 2016. "Campaign Contributions Facilitate Access to Congressional Officials: A Randomized Field Experiment." *American Journal of Political Science* 60 (3): 545–558.

Kaplan, Jacob. 2025. *Summary Reporting System (SRS) - Arrests by Age, Sex, and Race (ASR).* V1. https://doi.org/10.7910/DVN/KFMHQE.

Klarner, Carl. 2013. *State Partisan Balance Data, 1937–2011.* V1. https://doi.org/10.7910/DVN/LZHMG3.

Krehbiel, Keith. 1998. *Pivotal Politics: A Theory of U.S. Lawmaking.* Chicago, IL: University of Chicago Press.

Lax, Jeffrey R., and Justin H. Phillips. 2012. "The Democratic Deficit in the States." *American Journal of Political Science* 56 (1): 148–166.

Leip, David. 2025. *Dave Leip's Atlas of U.S. Presidential Elections.*

Levendusky, Matthew. 2009. *The Partisan Sort: How Liberals Became Democrats and Conservatives Became Republicans.* Chicago, IL: University of Chicago Press.

Lowry, Robert C. 2013. "Mobilizing Money: Political Action Committees and Political Participation." *American Politics Research* 41 (5): 839–862.

McCarty, Nolan, Keith T. Poole, and Howard Rosenthal. 2006. *Polarized America: The Dance of Ideology and Unequal Riches.* Cambridge, MA: MIT Press.

National Conference of State Legislatures. 2025. *State Partisan Composition.*

Nebraska Legislature. 2025. *Nebraska Blue Book.*

Olson, Mancur. 1965. *The Logic of Collective Action: Public Goods and the Theory of Groups.* Cambridge, MA: Harvard University Press.

OpenSecrets. 2025. "Gun Related Interest Group and PAC Donations, Federal and State." Unpublished dataset.

Page, Benjamin I., and Robert Y. Shapiro. 1983. "Effects of Public Opinion on Policy." *American Political Science Review* 77 (1): 175–190.

Parker, K., J. Horowitz, R. Igielnik, B. Oliphant, and A. Brown. 2017. *America's Complex Relationship with Guns.* Technical report. Pew Research Center.

Peltzman, Sam. 1976. "Toward a More General Theory of Regulation." *The Journal of Law and Economics* 19 (2): 211–240.

Pew Research Center. 2023. *Gun Violence Widely Viewed as a Major – and Growing – National Problem,* June.

Pierson, Paul. 1993. "When Effect Becomes Cause: Policy Feedback and Political Change." *World Politics* 45 (4): 595–628.

Powell, Lynda W. 2012. *The Influence of Campaign Contributions in State Legislatures: The Effects of Institutions and Politics.* Ann Arbor, MI: University of Michigan Press.

RAND Corporation. 2020. *State Level Estimates of Household Firearm Ownership.*

RAND Corporation. 2025. *State Firearm Law Navigator.* Gun Policy in America Initiative.

Ranney, Austin. 1965. "Parties in State Politics." In *Politics in the American States: A Comparative Analysis,* edited by Herbert Jacob and Kenneth N. Vines, 61–99. Boston, MA: Little, Brown / Company.

Riedman, David. 2025. *K-12 School Shooting Database.* [dataset].

Schaffner, Brian, Stephen Ansolabehere, Jeremy Pope, Marissa Shih, Lisa Argyle, and Michael Barber. 2025. *Cooperative Election Study.*

Schattschneider, Elmer Eric. 1960. *The Semisovereign People: A Realist's View of Democracy in America.* New York, NY: Holt, Rinehart and Winston.

Slater, Megan, and Hillel Alpert. 2024. *Apparent Per Capita Alcohol Consumption: National, State, and Regional Trends, 1977–2022.* National Institute on Alcohol Abuse and Alcoholism.

Snyder, Jr., James M. 1990. "Campaign Contributions as Investments: The U.S. House of Representatives, 1980–1986." *Journal of Political Economy* 98 (6): 1195–1227.

Stigler, George J. 1971. "The Theory of Economic Regulation." *The Bell Journal of Economics and Management Science* 2 (1): 3–21.

Stimson, James A. 2004. *Tides of Consent: How Public Opinion Shapes American Politics.* New York, NY: Cambridge University Press.

Tsebelis, George. 2002. *Veto Players: How Political Institutions Work.* Princeton, NJ: Princeton University Press.

U.S. Census Bureau. 2011. *Intercensal Estimates of the Resident Population for the United States, Regions, States, and Puerto Rico: April 1, 2000 to July 1, 2010.*

U.S. Census Bureau. 2012. *Intercensal Estimates of the Resident Population by Five-Year Age Groups, Sex, Race and Hispanic Origin for States and the United States: April 1, 2000 to July 1, 2010.*

U.S. Census Bureau. 2019. *Annual Estimates of the Resident Population for the United States, Regions, States, and Puerto Rico: April 1, 2010 to July 1, 2019.*

U.S. Census Bureau. 2020. *Annual State Resident Population Estimates for 6 Race Groups (5 Race Alone Groups and Two or More Races) by Age, Sex, and Hispanic Origin: April 1, 2010 to July 1, 2019.*

U.S. Census Bureau. 2024. *Annual Estimates of the Resident Population for the United States, Regions, States, District of Columbia, and Puerto Rico: April 1, 2020 to July 1, 2024.*

U.S. Census Bureau. 2025. *Annual State Resident Population Estimates for 6 Race Groups (5 Race Alone Groups and Two or More Races) by Age, Sex, and Hispanic Origin: April 1, 2020 to July 1, 2024.*

Violence Prevention Project. 2024. *U.S. Mass Shootings and Shooters.* [dataset].

Wintemute, Garen J. 2015. "The Epidemiology of Firearm Violence in the Twenty-First Century United States." *Annual Review of Public Health* 36 (1): 5–19.

Wright, John R. 1996. *Interest Groups and Congress: Lobbying, Influence, and Money.* Boston, MA: Allyn and Bacon.

Supporting Information – Table of Contents

Appendix A. Data Panel Construction A1
1. Variables for Laws A1
2. Interest Group Variable A2
3. Control Variables A2

Appendix B. Gun Sentiment Measure B1
1. Item Response Theory (IRT) B1
2. Fixed-Effects Model-Based Poststratification B3

Appendix C. Descriptive Statistics C1
1. Gun Policy and State Characteristics C1
2. Ranking Regarding State Politics and HFR C4
3. Organized Interest Contribution C6
4. Gun Sentiment Characteristics C9

Appendix E. Additional Interest Group Analysis D1

Appendix F. Additional Sentiment Analysis E1

Appendix A — Data Panel Construction

1. Variables for Laws

We derived our definitions and codings of state gun laws from RAND's State Firearm Law Navigator (RAND Corporation 2025). This dataset contains comprehensive information on state gun laws over time, including the category of law and enaction date. Using these categories, we defined relevant types of gun laws, displayed in Table A1. Using this data, we handcoded variables representing the status of individual state laws on a 0/1/2 scale, where 0 meant the state did not adopt the restriction, 1 meant the state adopted the restriction for either handguns or long guns, and 2 meant the state adopted the restriction for both handguns and long guns. Laws that always applied to handguns and long guns (for example, stand your ground) were coded as 0/2 binary variables, and laws that could never apply to one type of gun (for example, concealed carry categories) were coded as 0/1 binary variables. When coding, we checked each law with descriptions from Giffords Law Center summaries (Giffords Law Center 2025) and in records of state statutes as found in Westlaw, and supplemented with the most recently updated information when there was a discrepancy. Years were based on the year the law became effective, or the year the law was repealed. All changes in the indicator variables in our data resulted from changes in state statutes, and we do not include federal laws that affected all 50 states, as we are focusing on state government response to pressures.

Table A1: Gun Laws Descriptions

Variable	**Description**
Universal Background Checks	Criminal and mental health checks for nearly all firearm sales and transfers.
Minimum Age 21	Prohibits sale to and purchase of guns by individuals under 21.
Permit to Purchase	Requires license or permit from law enforcement or state agency before firearm purchase.
Waiting Periods	Imposes minimum time sellers must wait before delivering a gun to a purchaser.
Training Requirements	Requires safety training certificate for firearm purchase.
Extreme Risk Protection Orders	Allow officials to petition court to remove firearms from at-risk individuals.
Domestic Violence Protection Orders	Prohibits firearm ownership for individuals served with a domestic violence restraining order.
Mental Health Prohibition	Prohibits the possession of firearms by individuals adjudicated as being mentally incompetent, with a standard more restrictive than established by the Brady Act.
Assault Weapon Sales Ban	Ban on sales of specified weapons or those with features classifying them as assault weapons.
Large Capacity Magazine Ban	Ban on sales of high-capacity magazines.
Ghost Guns	Bans manufacture or sale of privately made firearms lacking serial numbers.
Required Reporting of Lost/Stolen Goods	Mandates reporting of lost or stolen firearms to authorities.
Child Access – Storage	Penalties for storing guns in a manner accessible to minors.
Child Access – Reckless	Prohibits furnishing guns to minors.
Open Carry – Limiting	Either prohibits open carry or allows only with specific limitations or license requirements.
Open Carry – Prohibiting	Prohibits open carrying of guns.
Concealed Carry – Prohibiting	Prohibits concealed carrying of guns.
Concealed Carry – May Issue	Grants discretion to issuing authorities for CCW permits.
Concealed Carry – Permit Required	Requires permits for concealed carry.
Expanded Castle Doctrine	Allows use of deadly force in self-defense without duty to retreat in specified locations outside the home.
Stand Your Ground	Expands castle doctrine to any location.

2. Interest Group Variable

State-level campaign finance data come from OpenSecrets under a data acquisition agreement. The raw files include all contributions made by pro-gun and gun safety SIGs to state-level candidates and committees from 2000–2024. Each record contains an organization identifier and name, recipient identifier, recipient office or committee type, contribution amount, contribution date, and filing jurisdiction.

We first trim and harmonize state identifiers, converted contribution dates to calendar years, parsed contribution amounts into numeric values, and standardized organization identifiers and names to eliminate duplicates created by formatting inconsistencies. We then restricted the data to the time scope of our study.

Contribution records were aggregated to the state–year level. For each state and year, we calculated (1) the total dollar value of contributions by each special interest category, (2), the number of distinct contributing organizations in each category, and (3), an indicator for whether any contributions from that category occurred in that year. States with no contributions from a given category in a given year were coded as zero for contribution totals and as having no contributing organizations in that category.

For the baseline specifications, we aggregate SIG contributions to the state–year level separately for pro-gun and gun-safety groups. We then calculate the 99th percentile of each contribution series over the pooled sample of state–year observations, and cap observations above the corresponding threshold. Thus, winsorization is performed separately for the pro-gun and gun-safety series, but not separately by year or state. Because the contribution variables are nonnegative, the adjustment is one-sided: observations above the 99th percentile are set equal to that threshold, while the lower bound remains zero. After applying this adjustment, we construct the treatment variable as the mean of the winsorized totals in years $t-1$ and $t-2$.

The resulting state–year SIG panel contains four types of variables: (1) annual dollar totals of contributions by category, (2) annual counts of unique contributing organizations by category, (3) state identifiers, and (4) calendar year. These aggregates are merged to the main state–year panel that includes the Gun Law Index, constituent gun sentiment, partisan control, and demographic covariates.

3. Control Variables

1. Population

State population is from the Census Bureau. For each year of data, the Census provides estimates of state populations as of July 1st of that year.

2. Incarceration

Data on incarceration was pulled from the Bureau of Justice Statistics. Specifically, these counts are "Prisoners Under the Jurisdiction of State or Federal Correctional Authorities" in each year of data. Incarceration rates were calculated using population data from the Census Bureau.

3. Unemployment

Data on unemployment rate is compiled from the Bureau of Labor Statistics. Each state's non-seasonally adjusted unemployment rate for each year is directly calculated by the Bureau of Labor Statistics.

4. Per Capita Ethanol Consumption from Beer

This data is pulled from the National Institute on Alcohol Abuse and Alcoholism, a part of the National Institutes of Health (NIH). They report apparent per capita alcohol consumption on the state level from 1977–2022. We specifically use "Gallons of ethanol per capita age 14 and older" from beer as our metric. Because 2023 data is not yet available, we impute 2022 data for 2023.

5. Metropolitan Statistical Area (MSA)

This data is pulled from Jacob Kaplan's concatenated data on Harvard Dataverse. This is a cleaned and aggregated version of the FBI's Arrests by Age Sex and Race yearly data. For each agency, the data contains a variable indicating which MSA a given agency is a part of. Using this, we created an indicator variable if each agency was a part of an MSA. This was then used with the population variable provided by the FBI to compute the number of people living in an MSA in each state–year. Finally, this was divided by the state population variable from this dataset to create the proportion of individuals living in an MSA out of the entire state population.

6. CPI

The yearly CPI data are derived from the Bureau of Labor Statistics (BLS). This data is specifically "All items in U.S. city average, all urban consumers, not seasonally adjusted." This data only varies by year, not by state. CPI is not directly used as a control, but rather used to calculate Real Per Capita Personal Income and convert nominal interest group contributions to real dollars.

7. Real Per Capita Personal Income (RPCPI)

Annual Personal Income is taken from the Bureau of Economic Analysis' (BEA) state-level data. The BEA directly calculates per capita personal income. This was converted from a nominal to real value by dividing this metric by the CPI from the BLS.

8. Demographics

Demographic data is taken from the U.S. Census Bureau. Specifically, these are population estimates done by the Census as of July 1st of the given year, broken down by age, sex, and race. We use this data to create race variables, calculating the proportion of individuals that are white, black, and other in a population, separated by Hispanic and non-Hispanic. It is important to note that "Two or More Races" is a separate category of our data that

was added to the "other races" category. In our analysis, we use the proportion of black individuals and proportion of white non-Hispanic individuals as controls.

9. Household Firearm Rate (HFR)

Household Firearm Rate estimates are taken from RAND. They specifically estimate state-based HFR using FSS (fraction of suicides with a firearm) as a predictor. This data is from 1990-2018, so 2018 data for each state is used as an estimate of HFR for years 2019–2023.

10. Governor

Data on governor election outcomes is derived from David Leip's United States Election Data, downloaded from Stanford Searchworks. This data is from elections 1990–2024. In order to obtain the election data before 1990 (for the state of the political climate in a state in the year 1990), we scraped the data from David Leip's election atlas website directly. For each election, we store the total number of votes in a gubernatorial election, the number of votes for the Democratic candidate, and the number of votes for the Republican candidate. If an independent won the election, we recorded the number of votes they received (this means that the number of votes in each party will most likely not sum up to the "total votes" variable). We also created a variable that indicates which party the governor is based on the party that obtained the maximum amount of votes in a given election. Each election's outcome is populated in the next years' state–year row (for example, if an election happened in Alabama in 2016, the results of that election are in the Alabama 2017 row). If there was no election, results from the previous election are populated. Every state–year is accounted for except for New York's 1986 election, which was obtained through a FOIA request. We also hand-coded the following state–years, as there was a non-elected governor for various reasons:

- Arizona 1988-1990: The Governor was impeached and replaced with a Democrat, who held the position until the 1990 election.
- Alabama 1993-1994: The Lieutenant Governor (Democrat) takes over after the Governor (Republican) was convicted of a felony.
- Arizona 2009-2010: The standing Governor became the U.S. Secretary of Homeland Security, so the Arizona Secretary of State (Republican) came in to the governor position on 1/20/2009.
- Arkansas 1996-1998: In 1996, the standing Governor was convicted of fraud, so the Lieutenant Governor (Republican) was sworn in on 7/15/1996.
- Louisiana 1991: In March 1991, the Governor switched affiliation from Democrat to Republican.
- Vermont 1992: The Governor (Republican) died in office in 8/13/1991, so the Lieutenant Governor (Democrat) took over in 1992.

- Virginia 2010: There was a typo in the original data that has been noted - based on the year definitions the Governor should be Bob McDonnell (Republican), inaugurated on 1/16/2010.

For each of these, there should be missing values for the number of votes for each party, as no election occurred. However, the governing party is recorded. These records were checked with our state legislature data, which contains the party of the governor.

11. State Legislature

Data from 1990–2008 is derived from Dr. Carl Klarner's State Partisan Balance Data, downloaded from the Harvard dataverse. This dataset contains the number of state legislators who are Democrats, Republicans, Independents, and vacant, governor party, as well as measures of a divided government (at least one of upper house, lower house, and governor are a different party) and simple divided government (both chambers of the state legislature are the same party, but the governor is different). We use the number of individuals in each party while in session, rather than what is elected, as this reflects party control for passing legislation. There is also a variable that indicates which party is in control of each chamber.

Data from 2009–2023 is derived from the National Conference of State Legislature (NCSL) State Partisan Composition. For each year, this data contains the number of individuals of each party (Republican, Democrat, Independent, vacancies) in each state, as well as the total number of seats. There is data on years 2009–2011 in both the Klarner data as well as the NCSL. After checking these between each other, there are some single digit discrepancies due to the data being pulled at different times of the year, but this does not seem to change which party is in power. Thus, we use NCSL data for these years. To match the Klarner data, we create variables of which party is in power of the chamber by recording the party with the maximum number of seats in a given chamber (due to independents, the share of this party is not always > 0.5).

Since Nebraska is a unicameral and nonpartisan legislature, these datasets do not record the number of individuals in each party in the Nebraska legislature. Following the advice of Dr. Charlyene Berens of the University of Nebraska – Lincoln, we gather the party registration of the Senators in the Nebraska legislature from Wikipedia. The Wikipedia entry cites the Nebraska Blue Books, which are published by the state. From this page, we counted the number of individuals of each party in the state legislature and recorded these in our columns about the "senate", or upper chamber of the state legislature.

Appendix B — Gun Sentiment Measure

To estimate constituent gun sentiment, we use data from the CES from its creation in 2006 to the latest 2024 data (Schaffner et al. 2025).

1. Item Response Theory (IRT)

After gathering data on all gun-related questions in the CES, items were recoded on a consistent scale where higher values indicate more pro-gun control attitudes. We kept data on individuals that answered at least one gun-related question, which left a total of 646,649 individuals over the 19 years (note that in the years 2008 and 2011, there were no gun-related questions, so we cannot use these survey years for our estimation).

From these questions related to gun control, we want to estimate a latent "gun sentiment" by using a uni-dimensional IRT model to link this unobservable attribute with these observed responses. We consider the assumptions of IRT as follows:

- Monotonicity: As gun sentiment increases, the probability of a higher score on an answer also increases. Because we recoded the questions explicitly, this is held.
- Unidimensionality: We assume the gun control measure is the driving force for the responses to the observed questions. Because the questions selected are fairly explicitly about gun policies, we believe this to be true.
- Local Independence: Conditional on a given gun sentiment, responses given to separate questions are mutually independent. This does not require that items be empirically uncorrelated (gun policy items are highly correlated, as expected when measuring a coherent construct), but rather that correlations operate through the latent trait rather than through direct item-to-item dependencies. This holds because the CES employs standard survey practices that minimize question-order effects, and our questions span distinct policy domains within gun legislation, such as background checks and assault weapons. Conditional on the latent trait, these distinct questions yield independent responses.

In this section, we refer to a "correct" answer as an answer that corresponds to being "pro-gun control". We have a mix of binary and scale questions, so we use a mix of the 2-Parameter Logistics (2PL) and Graded Response (GRM) models to estimate gun-policy sentiment. For binary questions (those for which the responses are just "agree" vs. "disagree" or "for" vs. "against"), we model the probability of a correct answer as:

$$P(Y_{ij} = 1|\theta_i) = \frac{\exp\left[a_j(\theta_i - b_j)\right]}{1 + \exp\left[a_j(\theta_i - b_j)\right]} \tag{7}$$

where Y_{ij} is the response of individual i to question j, θ_i is the gun sentiment of individual i, a_j is the discrimination parameter of question j (how well the question differentiates those with low and high gun-control sentiment), and b_j is the difficulty parameter of question j (the point at which 50% of respondents chose the correct answer)

For questions that have a scale of responses, we model the probability of a certain answer as:

$$P(Y_{ij} \geq k|\theta_i) = \frac{\exp\left[a_j(\theta_i - b_{jk})\right]}{1 + \exp\left[a_j(\theta_i - b_{jk})\right]} \tag{8}$$

where k is a certain score, and the difficulty parameter b_{jk} varies with k.

We then fit the IRT model by weighted marginal maximum likelihood using the Expectation-Maximization (EM) algorithm, incorporating CES survey weights so that estimation reflects the weighted sample. Given the estimated item parameters, we computed respondent gun-sentiment scores θ_i using expected a-posteriori (EAP) scoring. Scores are on a standardized scale with a mean of zero and a standard deviation of one relative to the weighted sample distribution. We also fit the IRT model using several specifications of the questions used in Figure C11, and we find the gun sentiment estimates are not sensitive to the specific questions used.

Table B1: Gun-Related Questions in CES

Question	Answers	Years.Asked
Do you have any guns or revolvers in your home or garage?	(1) Yes (2) No (3) Not Sure	2006, 2007
Do you or does anyone in your household own a gun?	(1) Personally own a gun (2) Don't personally own a gun, but someone in the household owns a gun (3) No one in the household owns a gun (8) Not sure	2020, 2022, 2024
In general, do you agree or disagree that an individual has a right to have a registered handgun at home?	(1) Agree (2) Disagree	2009
In general, do you feel that the laws covering the sale of firearms should be made more strict, less strict, or kept as they are?	(1) More Strict (2) Less Strict (3) Kept As They Are (8) Skipped (9) Not Asked	2010, 2012
Background checks for all sales, including at gun shows and over the Internet.	(1) For (2) Against	2013, 2014, 2015, 2016, 2017, 2018, 2019, 2021, 2023, 2024
Prohibit state and local governments from publishing the names and addresses of all gun owners.	(1) For (2) Against	2013, 2014, 2015, 2016, 2017, 2020, 2022
Ban high-capacity magazines for guns [more than 20 bullets].	(1) For (2) Against	2013, 2014
Ban assault rifles.	(1) For (2) Against	2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024
Make it easier for people to obtain a concealed carry permit.	(1) For (2) Against	2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024
Ban bump stocks (a device attached to a semi-automatic weapon that allows bullets to be fired more rapidly).	(1) For (2) Against	2019
Provide federal funding to encourage states to take guns away from people who already own them but might pose a threat to themselves or others.	(1) For (2) Against	2022
Improve background checks to give authorities time to check the juvenile and mental health records of any prospective gun buyer under the age of 21	(1) For (2) Against	2022
Allow teachers and school officials to carry guns in public schools	(1) For (2) Against	2022
Increase spending on mental health and school safety; allow police to confiscate guns from people deemed to be dangerous by a judge; prohibit people convicted of domestic violence from owning guns; enhance background checks on minors; increase penalties for illegal gun purchases.	(1) For (2) Against	2023, 2024
How important are each of these issues to you? Gun Control	(1) Very Important (2) Somewhat Important (3) Not Important (8) Skipped (9) Not Asked	2015, 2016

2. Fixed-Effects Model-Based Poststratification

Once we created our individual gun sentiment estimates, we utilize a fixed-effects model with poststratification technique to create state–year–party estimates. Using our individual level data, we estimate the relationship between gun sentiment and our demographic variables as follows:

$$\begin{aligned}\text{Sent}_{ist} = \beta_1 \text{Party}_i + \beta_2 \text{State}_s + \beta_3 \text{Year}_t + \beta_4 (\text{Party} \times \text{Year})_{it} + \beta_5 (\text{Party} \times \text{State})_{is} + \\ \beta_6 (\text{State} \times \text{Year})_{st} + \mathbf{X}_i \gamma + \varepsilon_{ist},\end{aligned} \tag{9}$$

where Y_{ist} is the estimated sentiment for gun control for the individual i in state s in year t, Party_i is a categorical variable of party affiliation for individual i, State_s is state fixed effects, Year_t is year fixed effects, and $\mathbf{X}_i$ is a vector of demographic individual-level covariates.

The controls used to create these estimates are based on what CES consistently collects and uses year to-year to develop their population weights. These include gender, race, education level, marital status, family income level, employment status, and age.

We then create a stratified dataset using CES data of demographic groups combination. We estimate each groups relative population in their state–year–party bin as the sum of the weights of the individuals in that group over the sum of all weights within the bin. This allows for a relative approximation of how represented that group is in their bin. For this data, we only keep individuals that do not have missing values for any demographics, so there are individuals not included in this dataset that were used to create the gun sentiment scores (as that was just based on if they answered a gun-related question).

Once we fit our regression to the individual level survey data, we predict values of gun sentiment for every group in our stratified data frame. We then create state–year–party estimates by using a weighted mean of the stratified estimates, with weights relative to the proportion of individuals in that strata within the state–year–party group. Finally, to create 2008 and 2011 estimates, we imputed using the means of each party-year-state cell of the years before and after the year imputed.

We fit this model using survey weights to account for the sampling design of the CES and to produce population-representative estimates. To further improve the validity of these estimates, we use bootstrap estimation to quantify uncertainty. For each of the 1,000 bootstrap samples, we re-fit the model and generate predictions, allowing us to construct confidence intervals that account for sampling variability. Our point estimates are based on the full sample.

Appendix C — Descriptive Statistics

1. Gun Policy and State Characteristics

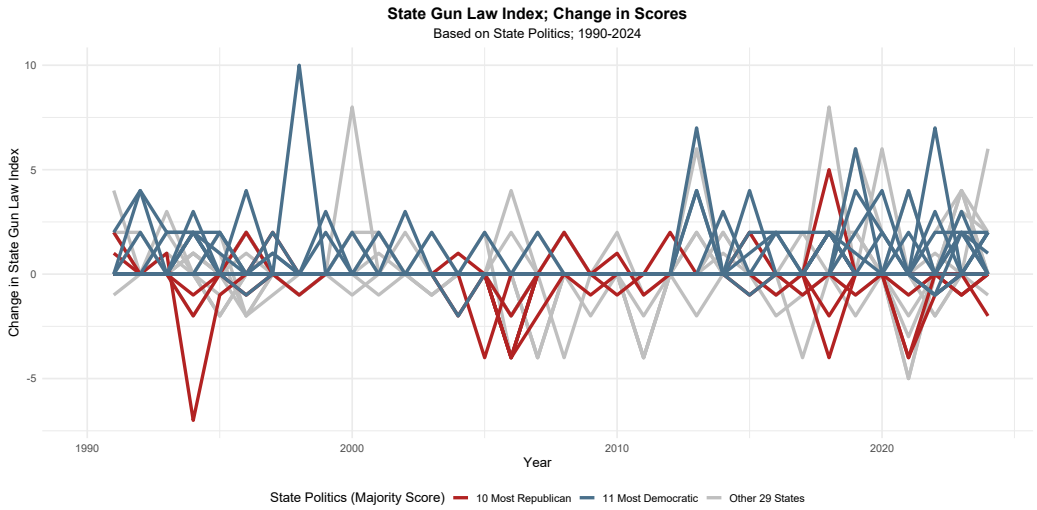


Figure C1: Annual change in the Gun Law Index by state political majority, 1990–2024. State trajectories of yearly changes in the Gun Law Index are grouped into the 10 most Republican states, the 11 most Democratic states, and the remaining 29 states according to the state Majority Score.

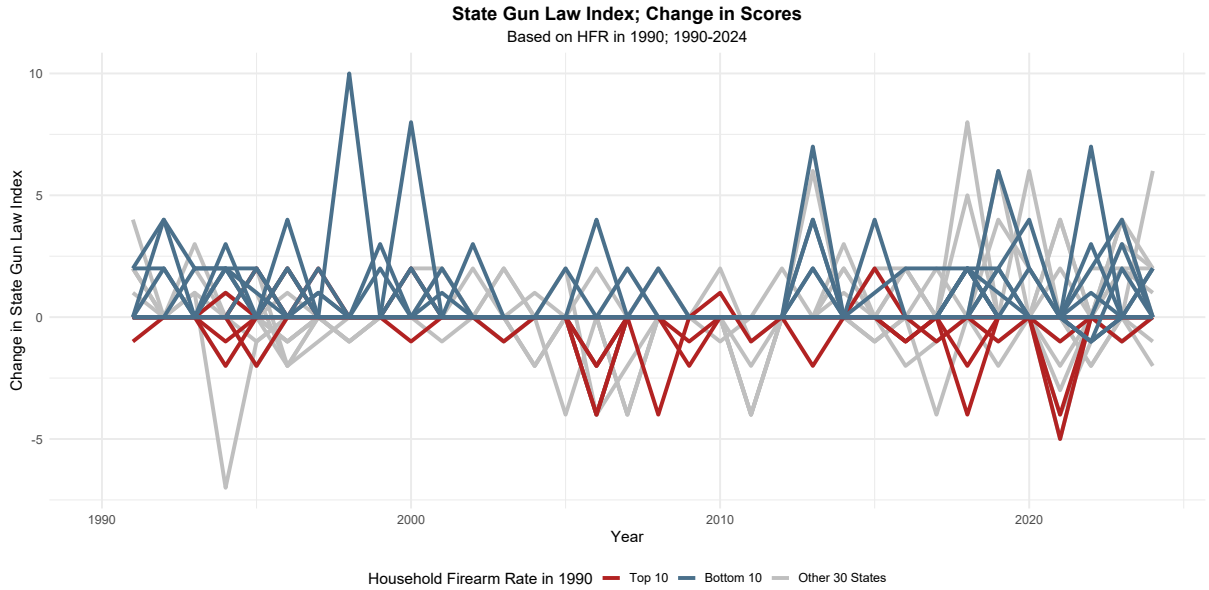


Figure C2: Annual change in the Gun Law Index by baseline HFR, 1990–2024. Each line traces yearly changes in the Gun Law Index for a state, grouped by their 1990 household firearm rate into top 10 (in red), bottom 10 (in blue), and other 30 states (in gray).

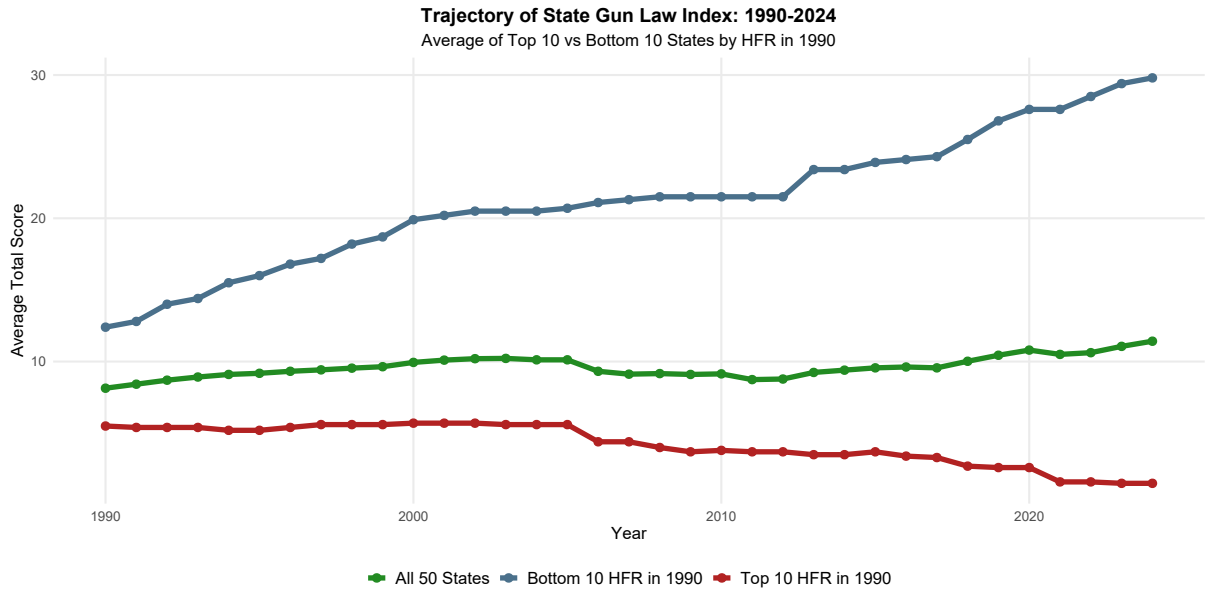


Figure C3: Gun Law Index trajectories by baseline HFR groups, 1990–2024. The figure plots the average Gun Law Index for states in the top 10 (in red), bottom 10 (in blue), and all 50 states (in green) by household firearm rate in 1990.

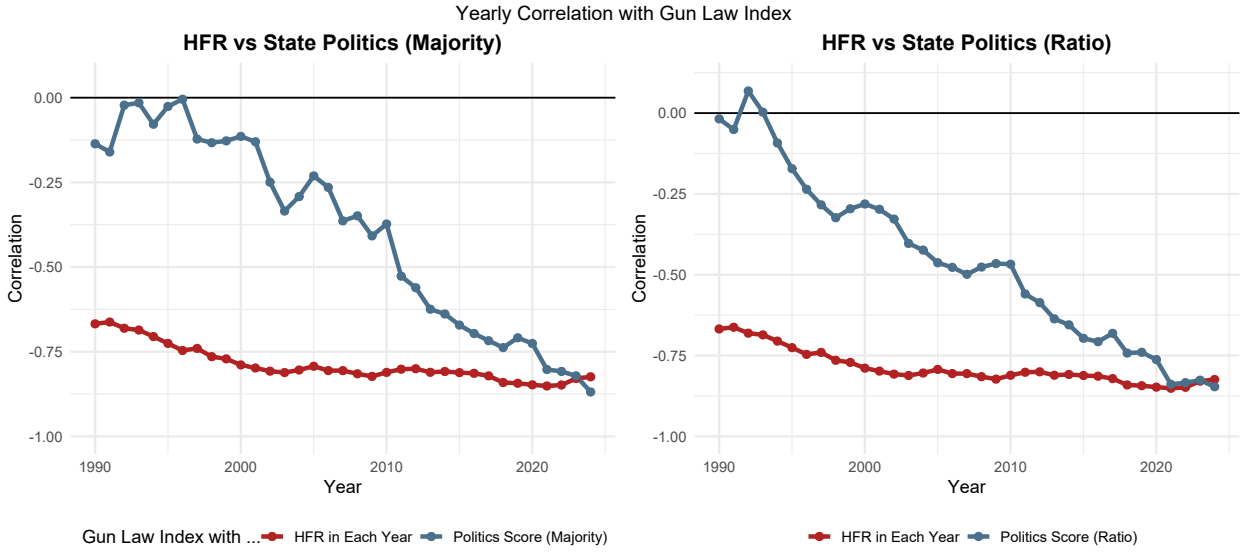


Figure C4: Yearly correlation between the Gun Law Index and state characteristics, 1990–2024. The series plot yearly correlations of the Gun Law Index with HFR (in red) and two variables regarding state politics (in blue): the state political Majority Score (the left plot) and the Ratio Score (the right plot).

Table C1: Descriptive Statistics Table: Based on State Partisanship

Variable	State Republican Majority Score (1990–2024)		
	10 Most Republican	**11 Most Democratic**	**Other 29 States**
	N = 385	N = 385	N = 980
Republican Ratio Score	1.9 (0.3)	1.1 (0.3)	1.5 (0.3)
Republican Majority Score			
0	4 (1.0%)	214 (56%)	221 (23%)
1	20 (5.2%)	146 (38%)	261 (27%)
2	71 (18%)	23 (6.0%)	240 (24%)
3	290 (75%)	2 (0.5%)	258 (26%)
Incarceration Rate per 100k	360.2 (128.1)	342.2 (162.3)	410.1 (163.5)
Police Staff per 100k	309.4 (62.5)	291.4 (65.1)	317.8 (79.3)
Poverty Rate	12.0 (2.7)	11.5 (3.3)	12.9 (3.8)
Unemployment Rate	4.6 (1.8)	5.6 (1.9)	5.4 (1.9)
Ethanol Consumption from Beer	1.2 (0.2)	1.1 (0.2)	1.2 (0.2)
Urban Resident Rate	65.0 (21.8)	82.4 (15.9)	69.3 (18.6)
Income per Capita	17,269.4 (3,271.6)	19,783.7 (4,031.5)	17,719.9 (3,376.5)
Black Resident Rate	7.0 (8.3)	8.5 (8.6)	12.8 (9.7)
White Non-hispanic Resident Rate	78.6 (11.2)	65.5 (20.9)	74.5 (13.4)

*Values are presented as mean (SD). Data do not include Washington DC. Some but not all of these variables are included as covariates in regression models.

Table C2: Descriptive Statistics Table: Based on Household Firearm Rate

Variable	Household Fiream Rate in 1990		
	Top 10	**Bottom 10**	**Other 30 States**
	N = 350	N = 350	N = 1,050
Household Firearm Rate since 1990	58.5 (4.4)	17.4 (5.6)	40.6 (6.1)
Incarceration Rate per 100k	424.8 (171.9)	366.5 (155.5)	376.5 (153.3)
Police Staff per 100k	295.9 (54.9)	344.1 (67.3)	303.5 (77.7)
Poverty Rate	13.8 (3.7)	10.9 (2.5)	12.5 (3.5)
Unemployment Rate	5.2 (1.8)	5.7 (2.0)	5.2 (1.9)
Ethanol Consumption from Beer	1.3 (0.2)	1.1 (0.2)	1.2 (0.2)
Urban Resident Rate	47.0 (14.6)	90.9 (9.3)	72.7 (15.1)
Income per Capita	16,620.9 (3,770.6)	21,306.8 (3,557.0)	17,482.1 (2,907.5)
Black Resident Rate	9.1 (12.3)	13.1 (7.7)	10.2 (8.8)
White Non-hispanic Resident Rate	80.0 (11.7)	61.4 (17.0)	75.2 (14.1)

*Values are presented as mean (SD). Data do not include Washington DC. Some but not all of these variables are included as covariates in regression models.

2. Ranking Regarding State Politics and HFR

Table C3: Top 10 Democrat-Leaning States (1990-2024)

Rank	State	Majority Score	Ratio Score	Rank (Ratio)
1	Hawaii	2.7714	2.2527	1
2	Maryland	2.6571	1.9736	4
3	Washington	2.5429	1.6414	12
4	California	2.4857	1.7699	5
5	New Mexico	2.4571	1.7320	7
6	Rhode Island	2.4000	2.1662	2
7	Delaware	2.3714	1.7214	8
8	Connecticut	2.3143	1.6329	13
9	Massachusetts	2.3143	2.1048	3
10	Oregon	2.2000	1.5641	16
11	West Virginia	2.2000	1.7684	6

*States ranked by average Democrat Majority Score (1990-2024). "Majority Score" is based on binary control of governor, state senate, and state house. "Ratio Score" uses vote share ratios. "Rank (Ratio)" shows ranking based on Ratio Score.

Table C4: Top 10 Republican-Leaning States (1990-2024)

Rank	State	Majority Score	Ratio Score	Rank (Ratio)
1	Utah	3.0000	2.0782	3
2	South Dakota	2.9429	2.0376	4
3	Idaho	2.8000	2.1203	1
4	North Dakota	2.7714	2.0275	5
5	Nebraska	2.7714	1.8164	7
6	Ohio	2.6571	1.7893	8
7	Arizona	2.6286	1.6780	12
8	Wyoming	2.6286	2.0857	2
9	Florida	2.4286	1.7122	10
10	Kansas	2.4286	1.8885	6
11	South Carolina	2.4286	1.6343	16

*States ranked by average Republican Majority Score (1990-2024). "Majority Score" is based on binary control of governor, state senate, and state house. "Ratio Score" uses vote share ratios. "Rank (Ratio)" shows ranking based on Ratio Score.

Table C5: Top 10 High HFR States

Rank	State	HFR (1990)	Average HFR (1990-2024)	Rank (1990-2024)
1	Alaska	70.0349	62.8829	2
2	Wyoming	69.3700	63.2457	1
3	Montana	67.0711	62.7197	3
4	Arkansas	65.2539	57.5201	6
5	South Dakota	65.1373	59.3024	4
6	Idaho	63.7143	56.5979	7
7	Mississippi	63.4147	56.0801	8
8	West Virginia	63.1742	57.6359	5
9	North Dakota	61.0455	55.1089	9
10	Alabama	60.7802	53.5233	10

*States ranked by HFR in 1990. Rank (1990-2024) shows the ranking based on average HFR from 1990–2024.

Table C6: Bottom 10 Low HFR States

Rank	State	HFR (1990)	Average HFR (1990-2024)	Rank (1990-2024)
50	Hawaii	12.0584	10.0336	50
49	Massachusetts	14.9612	11.7761	49
48	New Jersey	15.2488	11.8601	48
47	Rhode Island	17.1708	13.8307	47
46	New York	21.0174	16.9650	46
45	Connecticut	22.4802	17.7627	45
44	Illinois	25.7098	20.9216	44
43	Maryland	27.8443	22.8661	42
42	California	28.1053	21.4056	43
41	Delaware	31.2217	26.8445	41

*States ranked by HFR in 1990. Rank (1990-2024) shows the ranking based on average HFR from 1990–2024.

3. Organized Interest Contribution

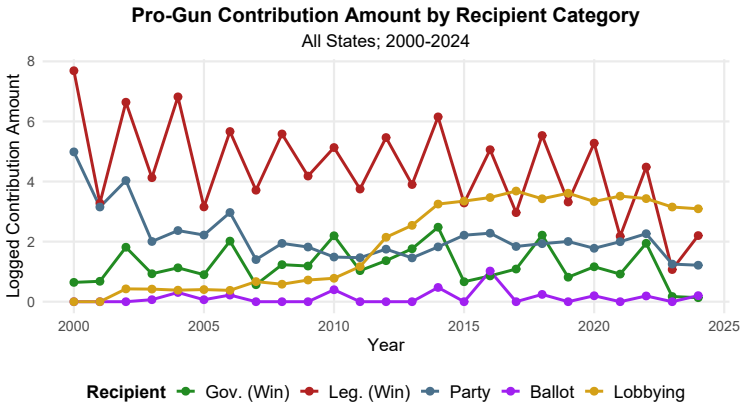


Figure C5: Pro-gun SIG contributions by recipient type, 2000–2024. Five lines show logged annual contributions to winning gubernatorial candidates, winning legislative candidates, party committees, ballot measure committees, and lobbying organizations in each state–year.

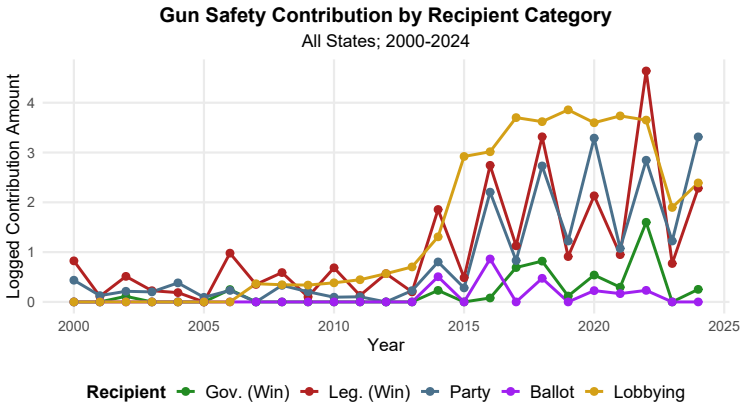


Figure C6: Gun safety SIG contributions by recipient type, 2000–2024. Five lines show logged annual contributions to winning gubernatorial candidates, winning legislative candidates, party committees, ballot measure committees, and lobbying organizations in each state–year.

Table C7: Pro-Gun Contributions: Top 5 and Bottom 5 States by Average Annual Contribution; 2000–2024

Rank	State	Annual Pro-Gun Contribution	Average HFR	Rep. Score (Majority)
1	CA	161,917	21.41	0.51
2	NV	112,912	35.91	1.23
3	TX	84,866	37.39	2.31
4	WA	56,752	35.94	0.37
5	CO	29,364	34.58	1.20
50	SD	101	59.30	2.94
49	MN	304	42.24	1.09
48	WY	494	63.25	2.63
47	AL	535	53.52	1.63
46	AR	553	57.52	1.29

Table C8: Gun Safety Contributions: Top 5 and Bottom 5 States by Average Anuual Contribution; 2000–2024

Rank	State	Annual Gun Safety Contribution	Average HFR	Rep. Score (Majority)
1	NV	232,311	35.91	1.23
2	WA	120,492	35.94	0.37
3	ME	120,452	41.57	0.66
4	VA	80,968	37.09	1.51
5	OR	61,750	40.93	0.69
50	MS	0	56.08	1.57
49	ND	0	55.11	2.77
48	OK	0	47.66	1.69
47	RI	0	13.83	0.49
46	SD	0	59.30	2.94

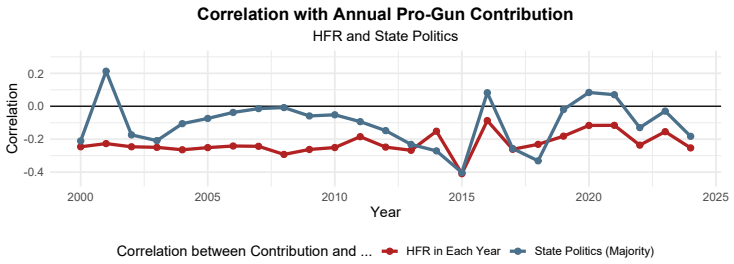


Figure C7: Unweighted yearly correlation between pro-gun SIG contributions and state characteristics, 2000–2024. The series plot the correlation between pro-gun contributions and state HFR (in red) and the correlation between pro-gun contributions and the state political Majority Score (in blue) in each year, giving each state equal weight.

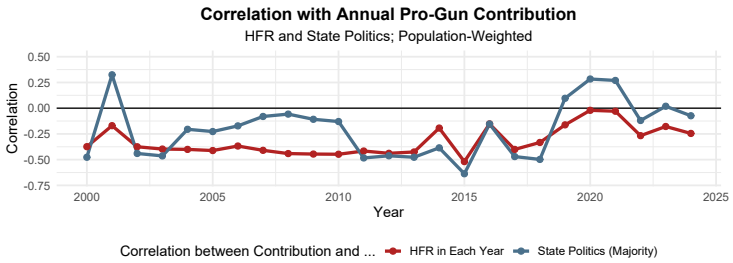


Figure C8: Population-weighted yearly correlation between pro-gun SIG contributions and state characteristics, 2000–2024. The series plot the correlation between pro-gun contributions and state HFR (in red) and the correlation between pro-gun contributions and the state political Majority Score (in blue) in each year, weighting states by population.

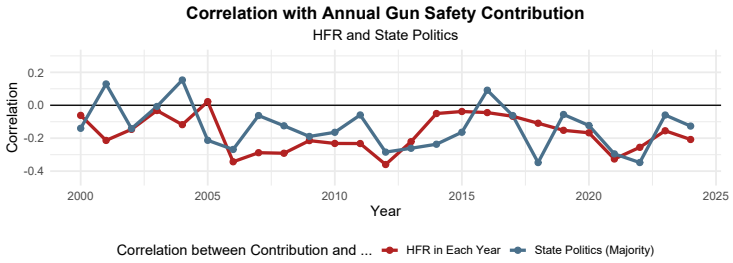


Figure C9: Unweighted yearly correlation between gun safety SIG contributions and state characteristics, 2000–2024. The series plot the correlation between gun safety contributions and state HFR (in red) and the correlation between gun safety contributions and the state political Majority Score (in blue) in each year, giving each state equal weight.

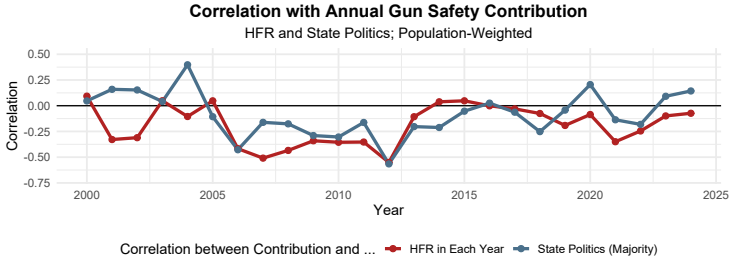


Figure C10: Population-weighted yearly correlation between gun safety SIG contributions and state characteristics, 2000–2024. The series plot the correlation between gun safety contributions and state HFR (in red) and the correlation between gun safety contributions and the state political Majority Score (in blue) in each year, weighting states by population.

4. Gun Sentiment Characteristics

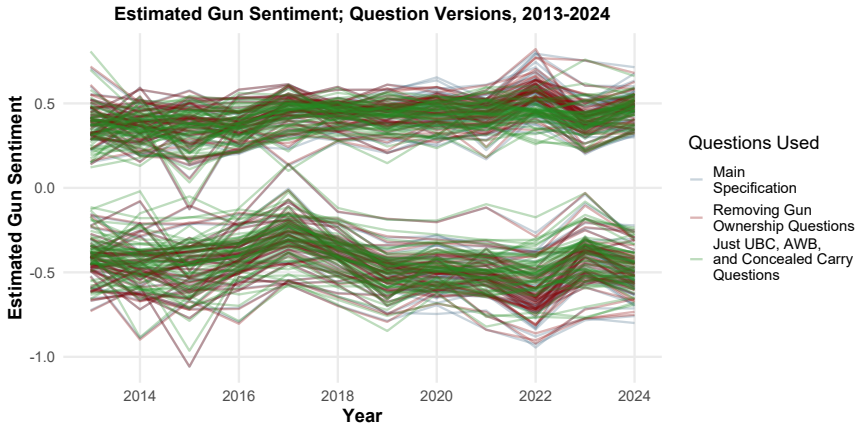


Figure C11: Estimated Gun Sentiment using Different Specifications, 2006–2024. "Main Specification" uses all questions in Table B1 (our primary analysis). "Removing Gun Ownership Questions" uses all questions except those on household or personal firearm ownership. "Just UBC, AWB, and Concealed Carry Questions" estimates IRT using only: "background checks for all sales, including at gun shows and over the Internet", "ban assault rifles", and "make it easier for people to obtain a concealed carry permit."

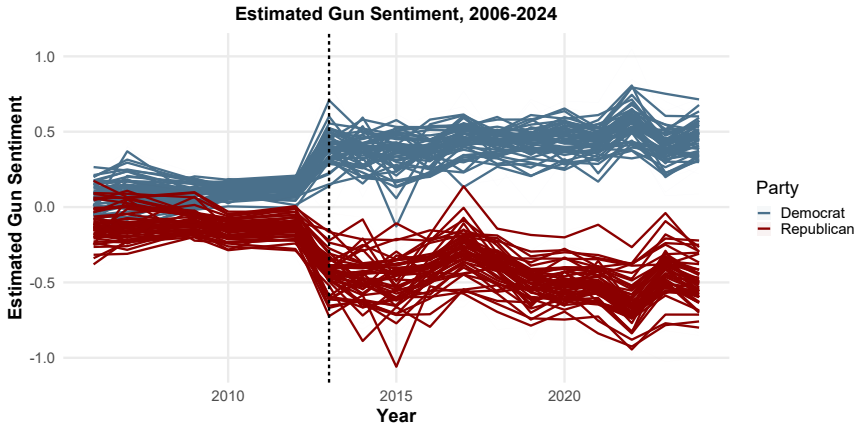


Figure C12: Gun Sentiment Estimates, 2006–2024. Lines show each party within each state. The vertical line marks 2013, when CES questions changed. Our results are not sensitive to the time frame specification.

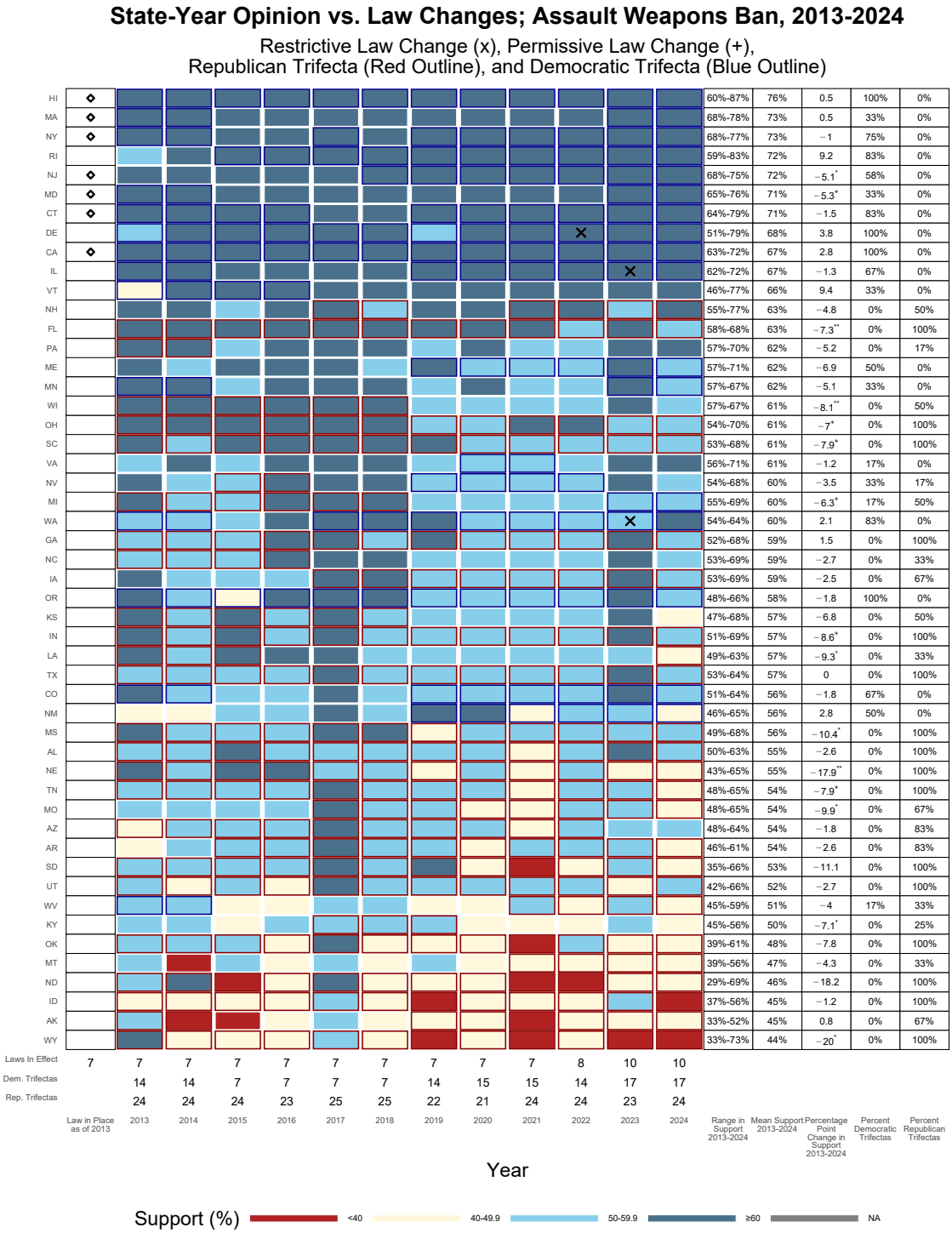


Figure C13: State–Year CES Opinion on an Assault Weapons Ban, 2013–2024. The 7 states that adopted an Assault Weapons Ban prior to 2013 still had them in place at the start of that year. "Support" is the share of CES respondents who supported the statement "Ban Assault Rifles." "Percentage Point Change in Support" is the estimated regression coefficient from a model of support on year multiplied by 11; +, *, and ** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

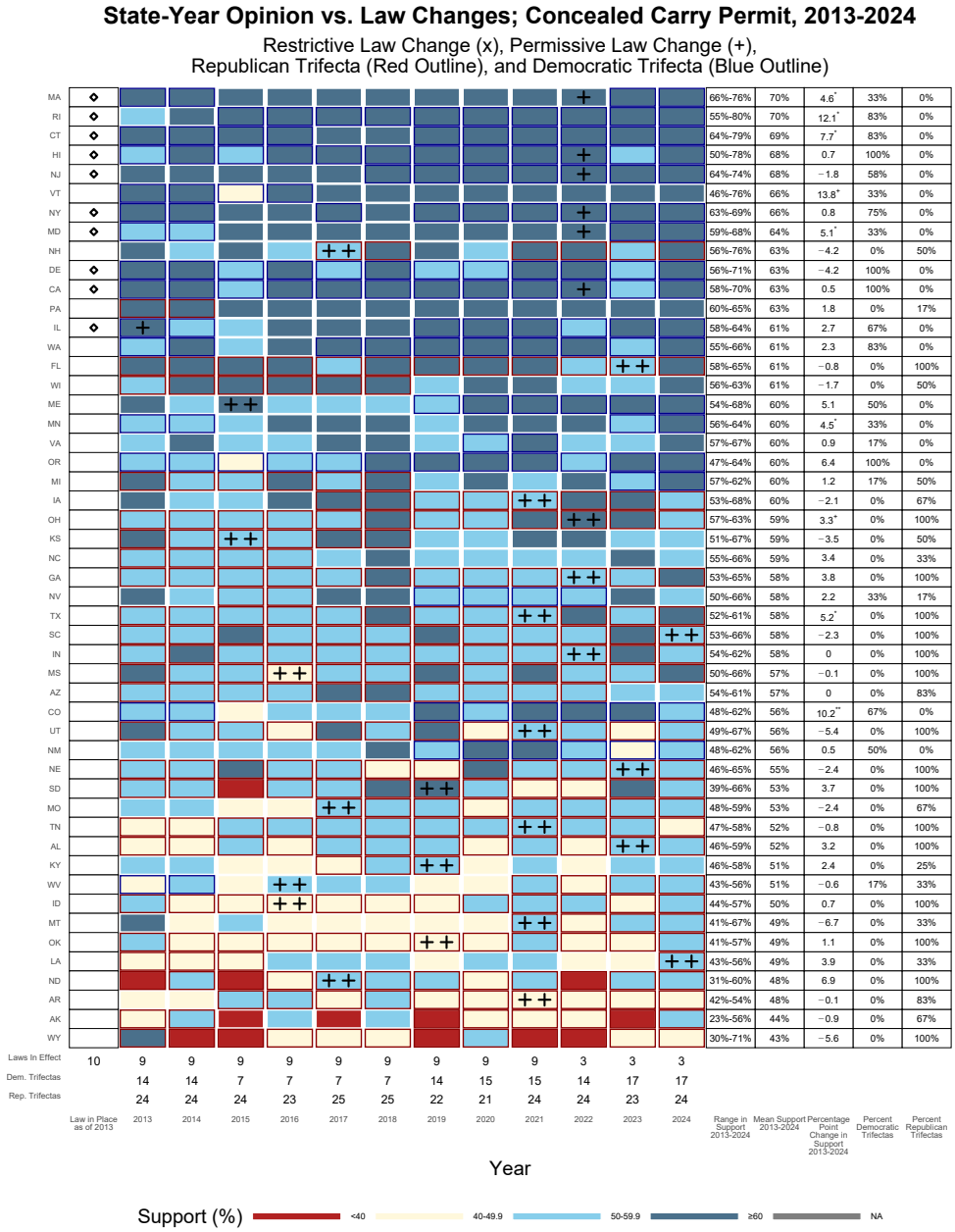


Figure C14: State–Year CES Opinion on Concealed Carry, 2013–2024. Although 35 states had discretionary restrictions on concealed carry at some point from 1990–2012, the gun lobby campaign had eliminated those restrictions in all but 10 states by the start of 2013. "Support" is the share of CES respondents who opposed the statement "Make it easier for people to obtain a concealed carry permit." A single plus sign (+) indicates a change from either a prohibition on concealed carry or a "may-issue" regime to a "shall-issue" regime. A double plus sign (++) indicates a change to permitless carry. "Laws in Effect" reflects the number of laws in each year that are at least as restrictive as a "may-issue" policy. "Percentage Point Change in Support" is the estimated regression coefficient from a model of support on year multiplied by 11; +, *, and ** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

Appendix D — Additional Interest Group Analysis

Table D1: Impact of Future Contributions on Change in Gun Law Index, 2000–2024: Continued

(a) Pro-Gun

	Future (t+1 ∼ t+3)	Future (t+2 ∼ t+3)	Future (t+3)
Future Pro-Gun SIG Contribution (in $millions)	−5.265 (2.685) $p = 0.056$	−3.383 (2.792) $p = 0.231$	−2.841 (3.567) $p = 0.430$
Republican Trifecta	−0.310 (0.086) $p = 0.001$	−0.313 (0.085) $p = 0.001$	−0.335 (0.092) $p = 0.001$
Interaction with Republican Trifecta	3.202 (4.494) $p = 0.480$	2.219 (4.376) $p = 0.614$	3.293 (4.841) $p = 0.500$
Num. Obs.	1100	1100	1100
R^2	0.218	0.215	0.214
Adj. R^2	0.156	0.152	0.151

(b) Gun Safety

	Future (t+1 ∼ t+3)	Future (t+2 ∼ t+3)	Future (t+3)
Future Gun Safety SIG Contribution (in $millions)	3.659 (2.531) $p = 0.155$	2.803 (2.200) $p = 0.209$	2.245 (2.104) $p = 0.291$
Democratic Trifecta	−0.038 (0.127) $p = 0.769$	3.89×10^{-3} (0.118) $p = 0.974$	0.070 (0.121) $p = 0.567$
Interaction with Democratic Trifecta	6.533 (3.950) $p = 0.105$	3.646 (2.244) $p = 0.111$	−0.554 (1.931) $p = 0.776$
Num. Obs.	1100	1100	1100
R^2	0.216	0.211	0.207
Adj. R^2	0.154	0.148	0.144

*The outcome is the change in the Gun Law Index across fifty states (2000–2021). The treatment "SIG Contribution" is mean special interest group contributions for the year(s) indicated in the column header, in millions of USD. Standard errors are state-clustered. "t+1 ∼ t+3" refers to the mean of special interest group contributions in times t+1, t+2, and t+3, while "t+2 ∼ t+3" refers to the mean of special interest group contributions in times t+2 and t+3.

Table D2: Impact of Contributions on Change in Gun Law Index, 2000–2024: Alternative Treatment Specifications

(a) Pro-Gun

	Log Dollar (t-1 ∼ t-2)	Log Dollar (t-1)	Dollar (t-1)
Pro-Gun SIG Contribution (in $millions)			5.748 (1.974) $p = 0.005$
Log Pro-Gun SIG Contribution (in $millions)	0.026 (0.028) $p = 0.361$	0.033 (0.019) $p = 0.081$	
Republican Trifecta	0.276 (0.208) $p = 0.191$	0.184 (0.154) $p = 0.237$	−0.244 (0.111) $p = 0.033$
Interaction with Republican Trifecta	−0.081 (0.029) $p = 0.007$	−0.075 (0.021) $p = 0.001$	−9.329 (2.192) $p = 0.000$
Num. Obs.	1150	1200	1200
R^2	0.194	0.192	0.201
Adj. R^2	0.132	0.132	0.142

(b) Gun Safety

	Log Dollar (t-1 ∼ t-2)	Log Dollar (t-1)	Dollar (t-1)
Gun Safety SIG Contribution (in $millions)			−0.195 (2.629) $p = 0.941$
Log Gun Safety SIG Contribution (in $millions)	-2.38×10^{-3} (0.018) $p = 0.895$	8.87×10^{-3} (0.016) $p = 0.582$	
Democratic Trifecta	0.119 (0.120) $p = 0.325$	0.104 (0.110) $p = 0.351$	0.107 (0.131) $p = 0.418$
Interaction with Democratic Trifecta	0.016 (0.034) $p = 0.644$	0.025 (0.027) $p = 0.352$	5.979 (3.282) $p = 0.075$
Num. Obs.	1150	1200	1200
R^2	0.185	0.180	0.188
Adj. R^2	0.123	0.119	0.127

*The outcome is the change in the Gun Law Index across fifty states (2001–2024). The treatment "SIG Contribution" is mean special interest group contributions for the year(s) indicated in the column header, in millions of USD. Standard errors are state-clustered. "t-1 ∼ t-2" is mean special interest group contributions in times t-1 and t-2.

Table D3: Impact of Contributions on Change in Gun Law Index, 2000–2024: Alternative Covariate Specifications

(a) Pro-Gun

	Less Covariates	No Covariates	Added Covariates
Pro-Gun SIG Contribution (in $millions)	5.937 (2.233) $p = 0.011$	6.084 (2.173) $p = 0.007$	4.972 (2.251) $p = 0.032$
Republican Trifecta	−0.202 (0.096) $p = 0.041$	−0.206 (0.092) $p = 0.029$	−0.238 (0.100) $p = 0.021$
Interaction with Republican Trifecta	−9.282 (2.624) $p = 0.001$	−9.380 (2.531) $p = 0.001$	−8.740 (2.307) $p = 0.000$
Num. Obs.	1150	1150	1150
R^2	0.196	0.194	0.204
Adj. R^2	0.137	0.137	0.139

(b) Gun Safety

	Less Covariates	No Covariates	Added Covariates
Gun Safety SIG Contribution (in $millions)	−1.771 (2.268) $p = 0.439$	−1.915 (2.315) $p = 0.412$	−2.244 (1.996) $p = 0.266$
Democratic Trifecta	0.125 (0.145) $p = 0.393$	0.136 (0.141) $p = 0.340$	0.145 (0.157) $p = 0.362$
Interaction with Democratic Trifecta	5.815 (2.606) $p = 0.030$	5.630 (2.546) $p = 0.032$	6.397 (2.440) $p = 0.012$
Num. Obs.	1150	1150	1150
R^2	0.187	0.185	0.197
Adj. R^2	0.128	0.129	0.132

*The outcome is the change in the Gun Law Index across fifty states (2002–2024). The treatment, "SIG Contribution" is mean special interest group contributions from the prior two years across fifty states (2000–2023), in millions of USD. Standard errors are state-clustered. The "Less Covariates" model includes only logged incarceration rate, unemployment rate, and real per capita personal income. The "Added Covariates" includes baseline covariates plus poverty rate, per capita ethanol consumption from beer, police staffing, and Hispanic population.

Appendix E — Additional Sentiment Analysis

Table E1: Impact of Estimated Gun Sentiment on Change in Gun Law Index, 2006–2024: 3–Year Moving Average

	Change in Gun Law (Majority Party Sentiment)		Change in Gun Law (Minority Party Sentiment)	
	TWFE	IV	TWFE	IV
Estimated Gun Sentiment	0.650 (0.254) $p = 0.013$	-2.315 (1.575) $p = 0.142$	-0.713 (0.304) $p = 0.023$	1.628 (1.070) $p = 0.128$
Num. Obs.	750	750	750	750
R^2	0.206	0.046	0.206	0.124
Adj. R^2	0.119	-0.059	0.119	0.028
Weak Instrument F-Stat		15.95		39.67

*The outcome is the change in the Gun Law Index across fifty states from 2010–2024. Standard errors are state-clustered. Majority party is the party controlling at least two of the three governing bodies (governor, upper legislature, lower legislature) in each state-year. For split governments, majority party is determined by higher relative state-year population. The treatment variable was adjusted to be a 3–year previous moving average of estimated gun sentiment, and the instrument was adjusted to be a 3–year previous moving average of the shift-share variable.

Table E2: Impact of Estimated Gun Sentiment on Change in Gun Law Index, 2013–2024

	Change in Gun Law (Majority Constituent Sentiment)		Change in Gun Law (Minority Constituent Sentiment)	
	TWFE	IV	TWFE	IV
Estimated Gun Sentiment	0.142 (0.143) $p = 0.328$	0.035 (0.670) $p = 0.959$	5.83e-03 (0.134) $p = 0.965$	-0.108 (0.540) $p = 0.841$
Num. Obs.	550	550	550	550
R^2	0.229	0.228	0.228	0.227
Adj. R^2	0.116	0.116	0.115	0.114
Weak Instrument F-Stat		43.24		57.78

*The outcome is the change in the Gun Law Index across fifty states from 2014–2024. Standard errors are state-clustered. Majority Constituents is defined as the party that has the majority relative population in the state–year.

Table E3: Impact of Estimated Gun Sentiment on Change in Gun Law Index, 2013–2024: Using MRP Estimated Gun Sentiment

	Change in Gun Law (Majority Party Sentiment)		Change in Gun Law (Minority Party Sentiment)	
	TWFE	IV	TWFE	IV
Estimated Gun Sentiment	0.551 (0.364) $p = 0.136$	-1.085 (1.967) $p = 0.582$	-0.543 (0.368) $p = 0.146$	0.994 (1.747) $p = 0.570$
Num. Obs.	550	550	550	550
R^2	0.231	0.201	0.231	0.205
Adj. R^2	0.119	0.085	0.119	0.089
Weak Instrument F-Stat		27.71		28.39

*The outcome is the change in the Gun Law Index across fifty states from 2014–2024. Standard errors are state-clustered. Majority party is the party controlling at least two of the three governing bodies (governor, upper legislature, lower legislature) in each state-year. For split governments, majority party is determined by higher relative state-year population. Estimated Gun Sentiment was created using an MRP approach with state random effects.

Table E4: Impact of Contributions on Estimated Gun Sentiment, 2006–2024

	Rep. Gun Sentiment	Dem. Gun Sentiment
Pro-Gun SIG Contribution (in $millions)	-7.92×10^{-8} (1.00×10^{-6}) $p = 0.937$	-1.36×10^{-7} (1.00×10^{-6}) $p = 0.892$
Gun Safety SIG Contribution (in $millions)	-8.58×10^{-8} (1.00×10^{-6}) $p = 0.932$	-6.81×10^{-8} (1.00×10^{-6}) $p = 0.946$
Num. Obs.	950	950
R^2	0.953	0.944
Adj. R^2	0.948	0.939

*The outcome is the gun sentiment across fifty states (2006–2024). The treatment, "SIG Contribution" is mean special interest group contributions for the given year in millions of USD. Standard errors are state-clustered.