

Investigating the Relationship between Ballot Initiatives and Voter Turnout in the United States

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May 10th, 2026

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In partnership with

thePaulDouglasinstitute



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ACKNOWLEDGEMENTS

We would like to express our sincere gratitude to the PDI Board for their guidance, support, and thoughtful feedback throughout the development of this report. Their expertise and encouragement were invaluable in shaping the direction of our research and strengthening the quality of the final product. We are especially appreciative of the time and care they dedicated to reviewing our work, offering constructive insights, and supporting us throughout the research and writing process.

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Abstract

Low voter turnout remains a persistent problem in the United States, raising concerns over the representativeness of its government and the alienation of its voters from the political system. Many scholars have begun to discuss ballot initiatives as a potential mechanism for increasing political engagement due to their ability to circumvent legislatures and offer voters direct access to policymaking. This paper examines the relationship between ballot initiatives and state-level voter turnout from 1980 to 2022 using OLS regression with two-way fixed effects, along with additional specifications that control for socioeconomic and electoral factors. We find a modest positive association between the presence of ballot initiatives and voter turnout. However, the magnitude of this effect suggests that ballot initiatives alone are unlikely to increase participation substantially. These findings highlight the importance of broader institutional reforms and socioeconomic conditions in shaping voter engagement, while also pointing to the broader civic and educative roles that direct democracy may play beyond turnout.

Introduction

The issue of low voter turnout has consistently afflicted politics in the United States. On average, the country hovers around a 58 percent turnout among the voting-eligible population (VEP) in presidential elections. (VEP turnout is preferred by scholars to voting-age population (VAP) turnout because it removes ineligible individuals, such as non-citizens and incarcerated individuals.) Low turnout raises concerns about the representativeness and legitimacy of democratic outcomes, as election results may reflect the preferences of a small, less diverse portion of the population. Indeed, a survey by the Public Religion Research Institute following the 2024 presidential election found that youth, people of color, and lower-income individuals made up a disproportionately high share of non-voters.¹ Turnout in the U.S. also lags far behind most other developed countries, which has left policymakers to look for new ways of bringing voters to the polls.² As a result, the expansion of direct democracy measures, which allow citizens to bypass the legislature and shape policy themselves, has been widely debated in recent decades as a potential driver of higher voter turnout.

Although most democratic countries are categorized as representative democracies, many include aspects of direct democracy. In the United States, there are three unique forms of direct democracy spread across different states: ballot initiatives, legislative referenda, and popular referenda.

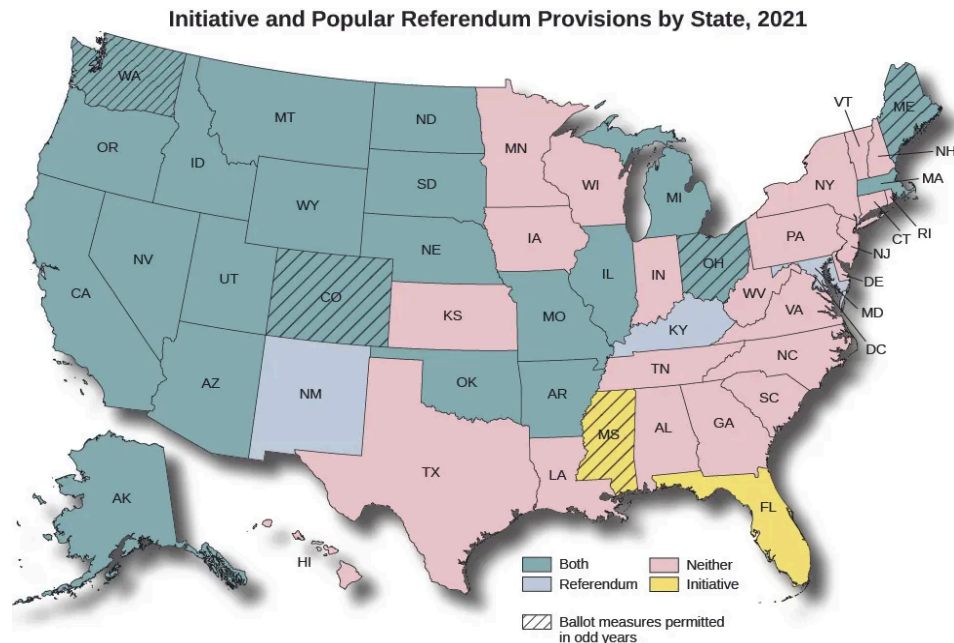
Referenda are direct votes by the electorate, rather than by their representatives, on a given law or political issue. This category can be further divided into legislative or popular referenda. In legislative referenda, voters are asked to confirm or repeal legislation or judicial appointments passed by the legislature. Recalls also fall under this classification, allowing voters to decide whether to remove an elected official from office before the end of their term. A popular referendum is a type of referendum in which a collective petition signed by a minimum number of registered voters can force a public vote on an existing statute, amendment, or ordinance. Essentially, a legislative referendum sees the legislature inquire about citizen approval for pre-written policies, whereas a popular referendum allows citizens to express their policy ideas through their own agency.³

Since the referendum process only allows citizens to collect signatures to ask voters whether to uphold or repeal an existing law, ballot initiatives provide the most direct influence of citizens' voices by allowing citizens to propose laws themselves. As of 2021, twenty-one U.S. states currently have both referenda and initiatives, while three allow only referenda and two allow only initiatives. The remaining twenty-four states allow neither referenda nor initiatives. This breakdown is illustrated in the following map of the United States.

¹ PRRI, 2025.

² Krutz and Waskiewicz, 2025.

³ Ballotpedia, accessed 2026.



(Krutz and Waskiewicz 2025, chap. 7)

Originally taking the form of citizen assemblies, systems of direct democracy have been a staple of American politics since the founding of the New England colonies.⁴ However, these systems of direct democracy were quickly replaced by representative bodies as the population increased—a pattern that repeated itself as the United States expanded across the continent. In 1898, South Dakota became the first state to bring direct democracy back to the state level by introducing a system of ballot initiatives.⁵ Since then, 23 other states have followed suit, along with the District of Columbia and the U.S. Virgin Islands. Systems of ballot initiatives have been written into state constitutions both as amendments, such as in Oregon in 1902, and as parts of the original state constitution, such as when Arizona became a state in 1912.⁶ Most of these systems are the remnants of political reforms instituted during the Progressive Era (1890-1905), which did not succeed in many states.⁷

In recent years, however, certain states have rolled back direct democracy processes available to their citizens. Since 2018, seven state legislatures have passed measures to introduce stricter signature requirements for ballot initiatives, often following citizen-initiated measures on salient issues like abortion and minimum wage.⁸ Lawmakers have also introduced obstacles such as

⁴ Squire, 2013.

⁵ National Conference of State Legislatures, 2022.

⁶ Byrne, 2025.

⁷ Carter, et al., 2024.

⁸ Ibid.

geographic distribution requirements, which often require an initiative to receive signatures from all counties or legislative districts in a state, making signature collection much more costly. Montana did this directly in 2023, when the state implemented a \$3,700 fee to file an initiative petition.⁹ This is particularly concerning because direct democracy provides a unique avenue for citizens to bypass potentially unresponsive or gridlocked representative bodies, making it an especially important mechanism for ensuring that public preferences can still be translated into policy when traditional institutional channels fail. Specifically, as we found in our literature review, certain voters may be more likely to go to the polls when policies they prioritize are directly on the ballot rather than subject to legislators' preferences, making voter turnout a key measure for understanding the distinct mobilization effects of direct democracy.

As impediments against ballot initiatives continue to grow and direct democracy slowly erodes in the United States, studying the relationship between different forms of direct democracy and voter turnout is imperative. Our goal with this research is to analyze how the presence and number of ballot initiatives put up for a vote in a state affect voter turnout in presidential and midterm elections in that state. With this research, we hope to investigate the effectiveness of ballot initiatives as a potential solution for depressed voter turnout and as a vehicle for political change in the United States.

Literature Review

The Relationship between Ballot Initiatives and Voter Turnout

One of the most cited studies on the relationship between ballot initiatives is Mark A. Smith's 2001 paper "The Contingent Effects of Ballot Initiatives and Candidate Races on Turnout." Using data from 1966 to 1977, Smith finds that initiatives which are *salient* to voters provide a significant boost to turnout of approximately four percentage points during midterm elections, comparable in magnitude to the turnout boost associated with closely contested gubernatorial or senatorial races. He defines salience as the importance voters place on issues and measures it by the number of paragraphs devoted to each ballot initiative in local newspapers after they were voted on. Conversely, the effects of ballot initiatives on turnout vanish during presidential years, indicating that the salience of these initiatives does not provide a meaningful additional stimulus to vote when a presidential contest is already occurring.

Similarly, a 2008 study by John A. Grummel, which focused on salient moral policy ballot measures such as gay rights and stem cell research, found that ballot initiatives had an insignificant effect on voter turnout in presidential elections but a significant positive effect in midterms.

⁹ Carter, et al., 2024.

Grummel hypothesizes that this contrast results from the fact that voting in midterm elections is generally reduced by low voter information and interest—influences that are naturally counteracted by morally charged ballot initiatives that attract voters’ attention.¹⁰

As previously noted, much of the literature regards salience as the principal factor in whether ballot initiatives drive greater voter turnout. Childers and Binder’s research linked salience to increases in voter turnout, with ballot initiatives on politically polarizing social issues like same-sex marriage leading to far higher voter turnout than uncontroversial initiatives.¹¹ Similarly, a 2025 study by Juelich and LaCombe found that the presence of youth-salient ballot measures in the 2022 midterm election, which the authors define as proposals that would “expan[d] rights for self-expression or suffrage, advance LGBTQ rights, or take a rehabilitative approach towards criminal justice” as well as “marijuana legalization and increasing funding to higher education,” led to increased youth voter turnout.¹² This effect was especially prominent for turnout among young women, similar to how ballot measures from earlier eras, such as during the 2008 US election cycle, on the prohibition of abortion led to increased evangelical Christian turnout. Gardner et al., meanwhile, focused on female voters, who they concluded were more likely to turn out to vote in the presence of salient abortion-related ballot initiatives during the 2022 midterm elections.¹³ Daniel R. Biggers also found that “high-profile” (salient) ballot initiatives significantly increase turnout, while the mere presence of ballot initiatives does not reliably boost participation.

However, studies have shown limitations of the effect of ballot initiatives. Keele et al. found little evidence of a ballot initiative promoting voter turnout when not discriminating by salience.¹⁴ They studied a single 2008 ballot initiative on sick leave at the municipal level in Milwaukee and compared the city’s voter turnout to that of its suburbs, which do not have ballot initiatives. The study estimated around 1.2% of the votes were attributable... but found insufficient evidence to conclude that the ballot initiative had a positive causal impact on voter turnout.

On the other hand, Tolbert and Smith (2005) recorded increases in voter turnout due to ballot initiatives regardless of their salience to voters.¹⁵ They revealed that ballot initiatives increased the VEP turnout rate in midterm and presidential elections from 1998 to 2002 without accounting for salience. Specifically, midterm election turnout increased by 1.7% on average, while presidential election turnout rate increased by 0.7% on average, while controlling for variation in other candidate races on the ballot, registration requirements, state racial or ethnic composition, and socioeconomic conditions. Tolbert and Smith argue that their findings support the “educative effect of direct democracy,” where ballot initiatives promote greater political knowledge and interest among citizens and thereby encourage them to vote.¹⁶

¹⁰ Grummel, 2008.

¹¹ Childers and Binder, 2012.

¹² Juelich, LaCombe, et al., 2025.

¹³ Gardner et al., 2025.

¹⁴ Keele et al, 2014.

¹⁵ Tolbert and Smith, 2005.

¹⁶ Ibid.

Another study by Brian D. Williams found that direct democracy measures such as ballot initiatives can “nudge” voters who would not have otherwise voted into casting a ballot, specifically noting their impact on people’s likelihood of casting an absentee ballot.¹⁷ Williams concludes that this mechanism can allow policymakers to use direct democracy to create a more representative electorate.

On the whole, existing literature has found mixed results for the influence of ballot initiatives on voter turnout. Some studies find that the salience of the particular ballot initiatives is central to the impact of initiatives on turnout, while others reject all statistical association between initiatives and turnout. Even among those who agree that salience is important, some researchers claim that salient initiatives only mobilize habitual voters, while others claim that even uncontroversial initiatives can nudge voters to cast a ballot.

Other Factors Affecting Voter Turnout

Our literature review also identified a number of possible confounding factors on the impact of ballot initiatives on voter turnout. For instance, the previously mentioned study by Tolbert and Smith excluded Southern states from their analysis due to their historically lower turnout rates “as a legacy of Jim Crow laws and one-party dominance.”¹⁸ It also found that states with stricter registration laws and higher racial and ethnic diversity experience lower voter turnout. Daniel Stockemer’s 2017 meta-analysis of other papers on the topic from around the world found three factors that predict high turnout: compulsory voting, whether the election will fill a high number of important offices, and small population size.¹⁹ It also rejected the effect of several other predictors on voter turnout, such as the number of parties, the frequency of elections, and the level of economic development in a country. Brian D. Williams’ aforementioned paper also explored the impact of early voting on voter turnout, finding that it tends to increase turnout among groups already likely to vote.²⁰ The author found that early voting had no impact on groups that were already unlikely to vote, such as young people, non-white people, and those without strong partisan identification. Thus, Williams argues that while early voting can increase turnout, it results in the voting population being less representative of society as a whole.

Another study by Mijeong Baek argues that institutional settings that lower information costs for voters increase voter turnout.²¹ Baek writes that “campaign finance systems that allow more money and electoral communication in election campaigns are associated with higher levels of

¹⁷ Williams, 2020.

¹⁸ Tolbert and Smith, 2005.

¹⁹ Stockemer, 2017.

²⁰ Williams, 2020.

²¹ Baek, 2009.

voter participation.”²² Gerber et al., meanwhile, link voter turnout to whether citizens believe the vote is secret or not.²³ Many citizens, despite the secret ballot being legally guaranteed in the US, doubt ballot secrecy out of fear of intimidation, surveillance, and potential social conflict. Using survey data, the authors show that nonvoters are significantly more likely than habitual voters to believe that their name could be linked to their ballot, that poll workers can see or ask about their vote, and that voting might involve confrontation. On the other hand, a study by Gerber et al. found that greater social pressure on voters, which takes the form of perceptions of approval or disapproval from one’s community members or expectations that all of one’s neighbors are voting, also contributes to higher turnout.²⁴

Other notable literature on this question includes Steven J. Rosenstone’s 2008 analysis of the relationship between economic adversity and the likelihood of voting. Rosenstone finds that individuals who experience higher prices, poverty, or unemployment are significantly less likely to vote.²⁵ In addition, Steven Tenn’s research found that enrolled students are significantly more likely to register to vote, but overall years of education has only a small, though statistically significant, positive effect on registration with no significant effect on turnout.²⁶ This suggests that the immediate context of being a student is more influential than cumulative schooling years and individual propensity to vote.

Overall, the literature suggests that voter turnout is shaped by a wide range of socioeconomic factors that interact in complex ways. While reforms such as ballot initiatives or early voting may influence participation, their effects are often uneven and mediated by broader conditions like registration laws, political context, and voter perceptions. Taken together, these findings highlight the importance of accounting for as many of these factors as possible when evaluating the impact of any single reform on turnout, as no factor operates in isolation.

Given this and the mixed findings discussed above, further empirical analysis is warranted to clarify the conditions under which ballot initiatives may influence voter turnout. Our study seeks to contribute to this ongoing debate by analyzing new turnout, initiative, and covariate data from the 21st century. We also disentangle salient from non-salient initiatives and the presence of initiatives from the number of initiatives, allowing us to separately examine the magnitude and significance of each statistical relationship with turnout.

²² Ibid.

²³ Gerber et al., 2013.

²⁴ Gerber et al., 2008.

²⁵ Rosenstone, 2008.

²⁶ Tenn, 2007.

Methodology

We collected our ballot initiative data from the website of the National Conference of State Legislatures (NCSL), which publishes a comprehensive list of all state ballot measures in the United States since 1902 that can be filtered by topic, year, and election type.²⁷ We filtered out withdrawn initiatives that did not appear on the ballot. Additionally, we collected our VEP turnout rates from the University of Florida Election Lab's dataset of state-level voter turnout in presidential and midterm elections from 1980 to 2022.²⁸ For our covariates, we obtained unemployment data from the U.S. Bureau of Labor Statistics (BLS), specifically its state-level unemployment rate data from 1976 to 2025.²⁹ We sourced our poverty rate data from IPUMS, which consolidates data from the Annual Social and Economic Supplement to the U.S. Census Bureau and the BLS' Current Population Survey.³⁰ Lastly, we used population data from census results published by the Federal Reserve Bank of St. Louis, which reports annual state-level population estimates from 1900 to 2025.³¹ We included only even-numbered years from these sources in our consolidated dataset so as to be consistent with the University of Florida's dataset, which includes state-level turnout data from only presidential and midterm election years.

We then filtered the NCSL Ballot Measures Database to use morality issues as a proxy for salience, in accordance with Grummel's findings in "Morality Politics, Direct Democracy, and Turnout." He found that moral issues, in which a "sizeable portion of the population holds a strong and uncompromising position on the values embodied in the proposed policies", are generally salient to voters. In his study, these issues included abortion, gay and anti-gay rights, the Defense of Marriage Act (DOMA), physician-assisted suicide, and stem cell research.³² The specific categories of initiatives from the NCSL database that we considered morality issues are as follows: Abortion, Animal Rights, Civil and Constitutional Law, Criminal Justice, Drug/Alcohol/Tobacco Policy, Ethics/Lobbying/Campaign Finance, Health, Human Service, Juvenile Justice, Labor & Employment, Law Enforcement, Military & Veterans Affairs, and Natural Resources. While this classification is inherently somewhat subjective, it provides a consistent proxy for policy salience, which multiple studies in our literature review identified as a key driver of voter turnout.

We used an Ordinary Least Squares (OLS) regression framework with two-way fixed effects and clustered standard errors for state and year to estimate the relationship between ballot initiatives and voter turnout. We also specified a significance level of $\alpha = 0.05$. Our inclusion of two-way fixed effects controls for unobserved, time-invariant factors affecting voter turnout in individual states

²⁷ National Conference of State Legislatures, 2024.

²⁸ McDonald, 2024.

²⁹ Bureau of Labor Statistics, 2018.

³⁰ Flood et al., 2025.

³¹ Tauberer, 2025.

³² Grummel, 2008.

across all election years, as well as across all states in a given year. For instance, a unique state-specific political culture would affect voter turnout in only that state across all years, while a deep recession during an election year might depress voter turnout in only that election across all states. Two-way fixed effects, therefore, reduce omitted variable bias and allow us to isolate the relationship between ballot initiatives and turnout more accurately. Similarly, clustering standard errors accounts for these state and year factors in turnout by adjusting the standard errors of our estimated regression coefficients. This prevents us from over- or understating the statistical significance of the association between initiatives and turnout.

We first conducted a preliminary analysis using a simple linear regression of only turnout on the number of initiatives. Specifically, the independent variable was the number of ballot initiatives per state-year, and the dependent variable was voter turnout, measured as the Voting Eligible Population. Again, we used VEP rather than Voting Age Population (VAP) because it more accurately reflects the population of eligible voters by including only citizens who are legally eligible to vote and not ineligible individuals like non-citizens or incarcerated individuals.

The number of ballot initiatives in our dataset represents the total number of initiatives in each state and year. We initially ran a simple linear regression of only the number of initiatives on voter turnout. This preliminary regression model is as follows:

$$Turnout_{it} = \alpha_i + \lambda_t + \beta_1(Initiatives_{it}) + \varepsilon_{it}$$

where i = state, t = year, $Turnout$ = turnout in state i at time t (in decimal form), $Initiatives$ = number of ballot initiatives, and β_1 is the change in VEP voter turnout when the number of ballot initiatives increases by one. α_i represents fixed effects of state i on turnout, while λ_t represents fixed effects of election year t .

We then included other factors on voter turnout as control variables in a multiple linear regression. These controls were the unemployment rate, poverty rate, population, and the number and presence of initiatives on morality issues as a proxy for salient issues in each state and year. Of these variables, we included only one of these four in each regression: number of initiatives, presence of initiatives (a dummy variable taking on the value of 0 when initiatives are absent and 1 when present), presence of salient initiatives (another dummy variable), and number of salient initiatives. We did not add more than one of these at once to avoid multicollinearity, as the number and presence of salient initiatives are most likely correlated with the number/presence of initiatives in general. Meanwhile, unemployment rate, poverty rate, and population were included as control variables in every multiple linear regression. We subsequently verified that there was no remaining collinearity between these controls and the one initiative-related regressor included in each regression.

Other factors identified in the literature were not included due to the lack of publicly available online data or because they are already captured by the state and year fixed effects. For

instance, the competitiveness or importance of a particular presidential election year is already captured by the year fixed effects, while lower voter turnout in Southern states due to their history of segregation is captured by the state fixed effects. As for the effect of current educational enrolment on an individual's voter turnout, we ultimately lacked the historical data on the annual enrollment rate of each state's adult population needed to include it as another control variable (Note that *current* enrollment is distinct from one's *cumulative* years of education, for which there is state-level data but which Tenn concluded did *not* have an effect on voter turnout).³³

We also avoided including factors from our literature review that clearly correlate with one another, principally Rosenstone's various metrics that measure economic adversity, like the unemployment rate in a particular year and the percentage of people who report being "worse off financially" than the year before.³⁴ Including correlated independent variables in the same regression model would introduce multicollinearity, making us unable to estimate reliable coefficient estimates and distinguish the individual associations of each variable with turnout. We did, however, include state poverty rates alongside unemployment rates after our VIF tests did not detect a correlation between these two particular variables, as will be discussed later in this paper.

Our multiple linear regression model is thus as follows:

$$Turnout_{it} = \alpha_i + \lambda_t + \beta_1(Initiatives_{it}) + \gamma_{it} + \varepsilon_{it}$$

where i = state, t = year, γ_{it} is a matrix of covariates including the unemployment rate, poverty rate, and population in state i in year t . $Initiatives_{it}$ is, again, the number of initiatives on the ballot in state i in year t . It can be replaced by any of β_1 = the change in VEP voter turnout rate when the number of initiatives increases by one, with all control variables held constant.

Results

We began by generating a preliminary OLS simple linear regression model with two-way fixed effects for voter turnout on only the number of initiatives. We obtained an estimated regression coefficient for the number of initiatives of 0.00132, with a p -value of 0.009, which is well under our significance level of 0.05. This suggests that for every additional initiative on the ballot, there is, on average, a 0.132 percent increase in turnout in that state and election year. This provides what appears to be statistically significant evidence of a weak positive linear association between the

³³ Tenn, 2007.

³⁴ Rosenstone, 2008

number of ballot initiatives and voter turnout when only including the number of initiatives as a regressor.

We then added two control variables to conduct a multiple linear regression: *unemployment* and *population*. This is motivated by what we found in the literature review to affect voter turnout.³⁵ First, we found that the estimated regression coefficient for the *number of initiatives* is approximately 0.00135 with a *p*-value of 0.01, making it statistically significant at the 0.05 level.

The estimated regression coefficient for the *presence of initiatives* is approximately 0.018, with a *p*-value of 0.0004, indicating statistical significance at the 0.05 level. There is a stronger positive correlation between the presence of initiatives and voter turnout (0.018) than the number of initiatives and voter turnout (0.00135).

The estimated regression coefficient for the *number of morality initiatives* is approximately 0.00189 with a *p*-value of about 0.0009, which is statistically significant at the 0.05 significance level. This means we have strong evidence that the number of morality initiatives is linearly associated with voter turnout.

On the other hand, the estimated regression coefficient for the *presence of morality initiatives* is approximately 0.012, but with a *p*-value of about 0.102, which is not statistically significant at the 0.05 significance level. This means we find that only the number of morality initiatives has a linear relationship with voter turnout, rather than their simple presence.

³⁵ Rosenstone, 2008; Stockemer, 2017.

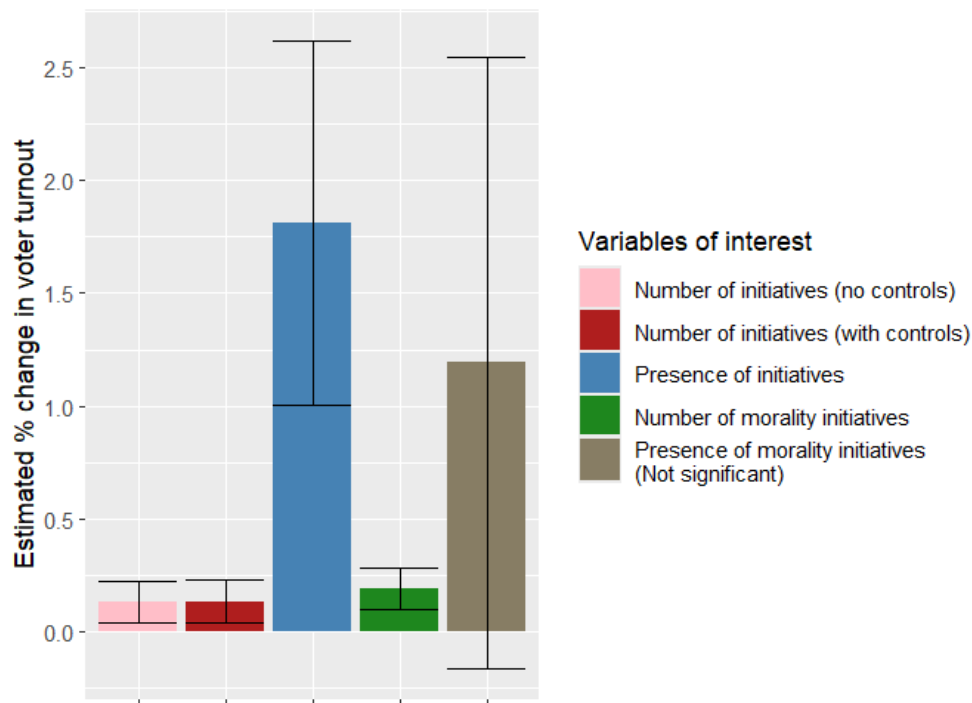


Figure 1: Estimated percentage changes in voter turnout associated with each of our initiative-related regressors

Although three out of four initiative-related independent variables are positively correlated with voter turnout, the correlations are relatively weak. The presence of any initiative has the largest and most statistically significant effect on turnout, followed by the number of initiatives. Broader conditions, such as population and economic adversity, are key to understanding voter participation.

Specifically, the regression results indicate that the *number of ballot initiatives* has a positive and statistically significant relationship with voter turnout. Each additional initiative is associated with an increase of approximately 0.14 percent in turnout while holding control variables constant. While statistically significant, this effect is small, suggesting that increasing the number of initiatives does not meaningfully increase participation.

In contrast, the *presence of any initiative* had a strong and statistically significant relationship with turnout. States with at least one initiative on the ballot experience an average turnout approximately 1.8 percentage points higher than states without initiatives, holding control variables constant. This suggests that the existence of initiatives may act as a mobilizing agent, encouraging voter participation regardless of the number of measures. It is, however, worth noting that the standard error for this estimated coefficient is relatively high compared to our other statistically significant coefficients — at 0.00412, it exceeds 0.000461, 0.000481, and 0.000469 by approximately

a factor of 10. This means the exact magnitude of the relationship between the presence of initiatives and turnout is uncertain, although it remains positive and greater than the relationship between our other turnout-related variables and turnout.

The results for salient initiatives are more mixed. The presence of salient initiatives is not statistically significant at the 0.05 level, indicating that we cannot conclude that the presence of salient issues is linearly associated with turnout. However, each additional salient initiative is associated with an approximately 0.19 percent increase in turnout, which is statistically significant but small. As a result, proposing more salient initiatives in particular does not appear to substantially increase participation either.

Taken together, these findings suggest that the presence of initiatives in general, rather than salient ones in particular, is the most consistent predictor of increased voter turnout, and the actual number of initiatives matters little. Notably, the inclusion of control variables did not significantly change the estimated coefficient of the number of initiatives from the simple linear regression model (0.00132 compared to 0.00135). This substantiates the weak positive linear association between the number of ballot initiatives and voter turnout that we found in our simple linear regression by demonstrating that it was not confounded by any of the control variables.

Discussion

Comparing our results to the existing literature, we find that our study reaffirms the results from the 2005 Tolbert and Smith publication, which found increases in voter turnout due to the mere presence of ballot initiatives, regardless of their salience to voters. However, our findings deviate from those of Childers and Binder (2012), Biggers (2011), and Keele et al. (2014). Childers and Binder found that ballot initiatives on politically polarizing social issues like same-sex marriage led to far higher voter turnout than initiatives deemed less controversial, whereas we found that the presence of salient initiatives has no significant effect on turnout. Likewise, Biggers found that salient initiatives significantly increase turnout, while both Biggers and Keele et al. found that the mere presence of initiatives has no reliable effect on turnout. Our results show the inverse to be true: that the presence of initiatives in general has a significant association with increased voter turnout.

A key implication of this finding is that the availability of the initiative process in a state, regardless of how many initiatives actually end up on the ballot, is what matters most for voter turnout. This makes our findings especially pertinent to recent efforts by certain state governments to weaken the initiative process and direct democracy. In 2025, Florida began requiring individuals who start initiative petitions to register with the state and submit their petitions for consideration

within 10 days rather than 30.³⁶ It also allowed counties to increase fees for validating each signature, with petition sponsors needing to pay an average of \$4.5 million to get their initiative on the ballot.³⁷ South Dakota, the first ever state to introduce the initiative and referendum processes, has recently issued legislation that would raise the winning threshold for citizen-proposed constitutional amendments to 60 percent of the vote. This proposal will be on the ballot during the 2026 midterm elections, alongside identical resolutions in North Dakota and Utah.³⁸ Missouri, meanwhile, is set to vote on legislation requiring that citizen amendments be approved by a majority of voters in each of the state's U.S. House districts.³⁹ Taken as a whole, these policies may disincentivize citizens from proposing, signing, and voting on ballot initiatives and endanger the existence of the initiative process in these states altogether. This, as this study's findings suggest, could significantly depress voter turnout, necessitating further research on future turnout changes in states that adopt these measures.

Limitations

However, our study has several limitations. First, the analysis is restricted to the period from 1980 to 2022 due to the limited availability of state-level voter turnout data, which makes it difficult to generalize these findings. Second, our classification of initiative topics as “morality issues” is inherently subjective and could be disputed by other researchers. For example, welfare and employment policies are usually considered economic issues first and foremost, but, at the same time, are often debated in highly charged moral terms. Opponents of welfare programs may argue that they weaken traditional values of hard work and personal responsibility, while proponents may point to the emotionally distressing circumstances of low-income parents and children.⁴⁰ Third, while we include key control variables, other potentially relevant factors identified in the literature—such as electoral competitiveness or voter registration laws—are not explicitly included in our model due to data limitations and impracticality.

In addition, our employment of fixed effects assumes state-specific factors, such as political culture, are constant over time and that year-specific factors affect all states equally. In reality, political culture evolves over time, and national political events may have varying effects across states. We also lacked historical voter turnout data before the implementation of the initiative process at the turn of the 20th century. This meant that we were not able to see trends in turnout before this time and compare changes in turnout before and after the initiative process's introduction between states with and without the process today. As a result, we could only interpret our regression coefficients as associative rather than causal. Even then, the OLS regression tests only

³⁶ Ellenbogen, 2025.

³⁷ Ibid; Zernike, 2026.

³⁸ Ibid.

³⁹ Ibid.

⁴⁰ Ethics Unwrapped, 2016.

for linear association between ballot initiatives and turnout while failing to capture non-linear ones. These would require further investigation with different regression models. Our results are also not generalizable to all forms of direct democracy, since this study focuses only on ballot initiatives, and we did not investigate other channels, such as referenda.

Conclusion

Our study examines how the presence of ballot initiatives impacts voter turnout in U.S. states. Using election data from 1980 to 2022, we built on existing literature that emphasizes the importance of salience in shaping turnout. When collecting our data, we chose to filter for salience by topic rather than following the prior methodology of counting paragraphs dedicated to each initiative in local newspapers. This allowed us to capture which types of issues voters are likely to engage with.

Using an OLS regression with two-way fixed effects for state and year, we estimated the relationship between the number of ballot initiatives and turnout. We also ran simple and multiple linear regressions, controlling for factors such as the unemployment rate, population, election type (presidential vs. midterm), and the number of salient initiatives. Our findings ultimately suggest a modest positive relationship between ballot initiatives and voter turnout.

These results suggest that increasing voter turnout requires broader institutional and policy interventions beyond simply adding ballot initiatives. Moreover, the process of expanding the ballot initiative process across the United States is itself challenging. In states without a system of ballot initiatives, introducing or modifying the current system requires amending the state constitution. This is a time-consuming process that, in some states, requires a supermajority in the state legislature. The latter usually requires unlikely agreement from both parties on the establishment of the initiative process and, therefore, intensive lobbying on the part of legislators sponsoring the constitutional amendment. In most cases, such legislators will simply opt to expend their political capital on other policy issues, even if they do support the initiative process, making the latter's introduction unlikely. Therefore, states that wish to increase voter participation may wish to consider more expedient means of doing so suggested in our literature review, such as introducing automatic voter registration, same-day registration, and expanded access to early or mail-in voting. Addressing socioeconomic factors, such as unemployment and poverty, through social safety net programs may also indirectly increase turnout. This is because voters who do not need to spend as much time worrying about basic economic security and earning income for their households are more able to learn about and participate in politics in their spare time. Efforts to increase the visibility and accessibility of political institutions could enhance the salience of elections in voters' minds as well.

While our analysis focuses primarily on voter turnout, ballot initiatives may have broader implications in and beyond elections. Our literature review found that direct democracy measures like ballot initiatives have an “educative effect” on the voting population, “enhancing civic

engagement, building confidence in government, and mobilizing interest groups and political parties,” even when they do not increase turnout.⁴¹ Initiatives shape democratic attitudes and behavior beyond simply mobilizing voters, by making people feel like they have power and influence in the political process.⁴² This may make adopting the initiative process worthwhile even if its association with turnout is as weak as our study suggests.

⁴¹ Tolbert and Smith, 2005.

⁴² Bowler and Donovan, 1998.

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Appendix

Two-Way Fixed Effects Verification

We first verified our need for two-way fixed effects in our regression model by inspecting boxplots of voter turnout by state and year and running ANOVA tests. For unit effects, the boxplot suggested that voter turnout varied considerably across states in both median and spread, with some states consistently having higher or lower turnout than others. Differences in box heights and whisker lengths indicate the differences in spread.

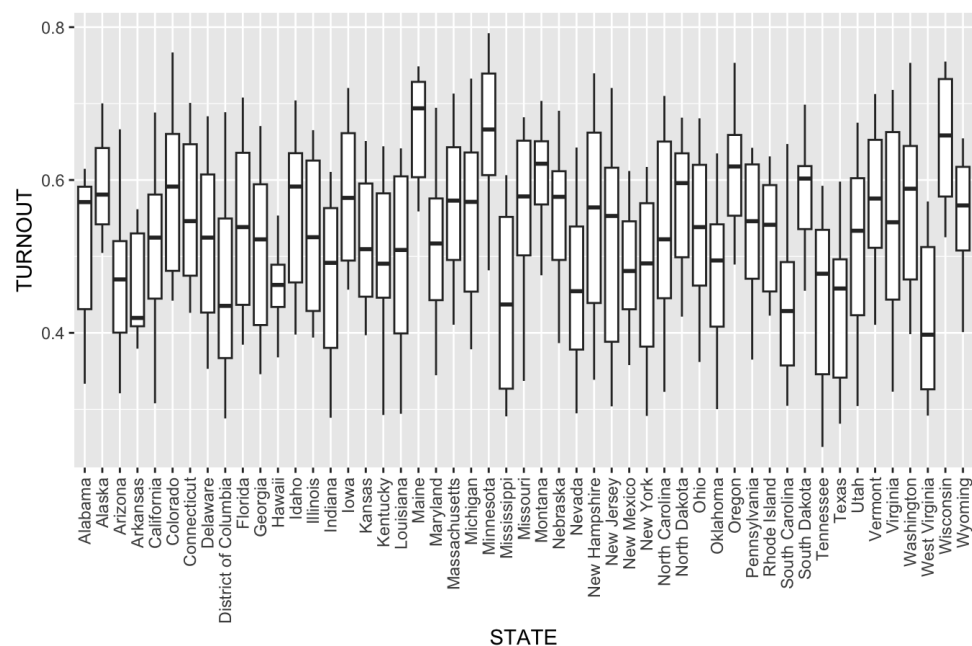


Figure 2: Boxplot of Turnout Rate Across States

We then use the ANOVA procedure to more rigorously test whether mean turnout differs significantly between states. If so, this would suggest unit effects, and ignoring them would cause omitted variable bias and reduce the accuracy of our estimates. We use the conventional threshold of $\alpha = 0.05$ to measure statistical significance. The output of this ANOVA test is shown below.

```

              Df Sum Sq Mean Sq F value Pr(>F)
STATE          50  2.778  0.05556    5.997 <2e-16 ***
Residuals     869  8.051  0.00926
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```


We obtained an F -value of 5.997 and a p -value of $2e^{-16}$. This p -value is much less than 0.05, so we concluded that the mean voter turnout differs across states at the 0.05 significance level, which supports the boxplot. Thus, there are strong unit effects that must be accounted for using a two-way fixed effect model.

We also checked for the need to include time effects in our analysis. As we did with unit effects, we first visualized our turnout data in a boxplot, seen below.

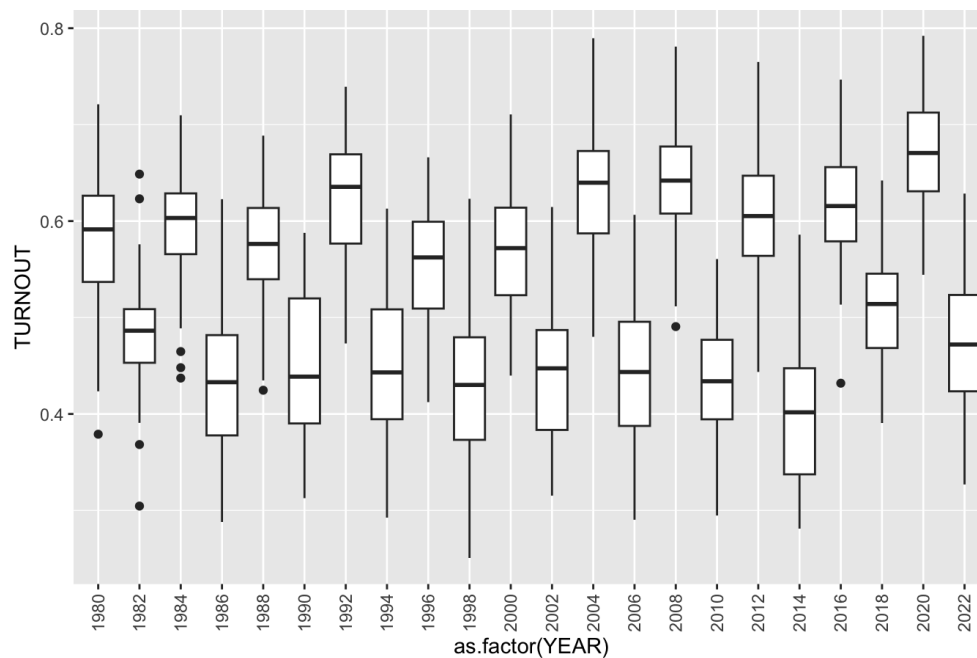


Figure 2: Boxplot of Turnout Rate Across Years

The plot shows that years differ considerably in voter turnout and in its variance, suggesting time effects that should be controlled for. We also see a clear drop in turnout during midterm elections and a rise during presidential elections, a pattern supported by our literature review. We then more rigorously tested for time effects using ANOVA.

	Df	Sum Sq	Mean Sq	F value	Pr(>F)
YEAR	1	0.045	0.04542	3.867	0.0496 *
Residuals	918	10.784	0.01175		

 Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Our ANOVA test results, shown above, yielded an F -value of 3.867 and a p -value of 0.0496. This is less than our significance level of 0.05, allowing us to conclude that the mean turnout differs

across election years and there are significant time effects. The ANOVA results indicate that we must use an OLS regression model with two-way fixed effects to account for unit and time effects.

Regression Output for Initiative-Related Variables on Turnout

```

OLS estimation, Dep. Var.: TURNOUT
Observations: 920
Fixed-effects: STATE: 51, YEAR: 22
Standard-errors: Clustered (STATE & YEAR)
              Estimate Std. Error t value Pr(>|t|)
number_of_initiatives 0.001317    0.000461 2.85683 0.0094426 **
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
RMSE: 0.039267    Adj. R2: 0.857869
                  Within R2: 0.006221

```

```

OLS estimation, Dep. Var.: TURNOUT
Observations: 551
Fixed-effects: STATE: 40, YEAR: 18
Standard-errors: Clustered (STATE & YEAR)
              Estimate Std. Error t value Pr(>|t|)
number_of_initiatives 1.350871e-03 0.00048098 2.808556 0.012086 *
unemployment          5.123940e-01 0.22749277 2.252353 0.037806 *
population            2.940000e-09 0.00000100 0.002938 0.997690
poverty_rate         -3.559148e-02 0.15862890 -0.224369 0.825144
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
RMSE: 0.03704    Adj. R2: 0.861826
                  Within R2: 0.033692

```

>

```

OLS estimation, Dep. Var.: TURNOUT
Observations: 551
Fixed-effects: STATE: 40, YEAR: 18
Standard-errors: Clustered (STATE & YEAR)
              Estimate Std. Error t value Pr(>|t|)
initiatives_dummy    0.0180975720 0.00412075 4.391815 0.00039812 ***
unemployment         0.4771727492 0.22237702 2.145783 0.04662233 *
population           0.0000000028 0.00000100 0.002801 0.99779742
poverty_rate        -0.0384965395 0.15568085 -0.247279 0.80765433
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
RMSE: 0.036913    Adj. R2: 0.862767
                  Within R2: 0.040273

```

```

OLS estimation, Dep. Var.: TURNOUT
Observations: 551
Fixed-effects: STATE: 40, YEAR: 18
Standard-errors: Clustered (STATE & YEAR)

```

	Estimate	Std. Error	t value	Pr(> t)	
morality_initiatives	0.0018892862	0.0004694	4.024892	0.00087853	***
unemployment	0.5262298136	0.2219445	2.370997	0.02982265	*
population	0.0000000027	0.0000010	0.002700	0.99787713	
poverty_rate	-0.0365427637	0.1609260	-0.227078	0.82307127	

```

---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
RMSE: 0.037101    Adj. R2: 0.861369
                  Within R2: 0.030499

```