

THE EFFECTS OF STATE TERM LIMITS ON
NATURAL RESOURCE SPENDING

A Thesis
presented to
the Faculty of the Graduate School
at the University of Missouri-Columbia

In Partial Fulfillment
of the Requirements for the Degree
Master of Science

by
OLIVIA CLAIRE SHIPP
Dr. Michael Sykuta, Thesis Supervisor

JULY 2022

The undersigned, appointed by the dean of the Graduate School, have examined the thesis entitled

THE EFFECT OF STATE TERM LIMITS ON
NATURAL RESOURCE SPENDING

presented by Claire Shipp,
a candidate for the degree of master of science,
and hereby certify that, in their opinion, it is worthy of acceptance.

Professor Michael Sykuta

Professor Harvey James

Professor Adrienne Ohler

Professor Robin Rotman

ACKNOWLEDGEMENTS

I would like to thank all the members of my committee who supported me in developing this thesis. First, Dr. Michael Sykuta, Associate Professor of Agriculture and Applied Economics, served as my thesis supervisor and committee chair. Dr. Sykuta has served as my academic advisor for three of my four years at the University of Missouri. His commitment to student success has allowed me to complete a B.S. and a M.S. in four years. He allowed me the freedom to explore research topics that interested me. As a student with limited exposure to graduate programs, Dr. Sykuta gave me the necessary resources to find a direction in my thesis and graduate work. He has guided me throughout the entire program, pointing me in the right direction while allowing me to discover answers and solutions on my own. His suggestions and revisions were invaluable to reaching the final draft of my thesis.

Next, Dr. Adrienne Ohler, Associate Research Professor in the MU School of Medicine, provided significant statistical support during the analysis portion of my thesis development. She supported my exploration of R-Studio and helped me understand the linear models I used at a deeper level.

Additionally, Professor Robin Rotman, Assistant Professor of Natural Resources, provided excellent mentorship throughout the thesis writing process. Dr. Rotman challenged me to explore the concepts in my thesis at a deeper level. She also helped refine my writing to clearly communicate my findings. Dr. Rotman was helpful at keeping me on track to finish on time.

Finally, Dr. Harvey James, Associate Director of the Division of Applied Social Sciences, served as a liaison between my graduate studies and my research endeavors. In my class with Dr. James, he allowed me to write my background section, and provided helpful feedback. As a member of the committee, Dr. James used what he learned about me from class to help me write a more robust thesis.

Without the help from these four Professors, I would not have been able to write a thesis of this caliber. I am thankful for their support, questions, and investment.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS	ii
LIST OF ILLUSTRATIONS AND TABLES	iii
ABSTRACT	iv
Chapter	
1. INTRODUCTION	1
2. BACKGROUND	2
The Term Limit Movement	2
Arguments For and Against Term Limits	5
3. LITERATURE	6
Changes to the Legislature	6
Changes to the Legislator	9
Changes to the Legislation	11
Literature Summary	12
4. METHODS	13
Model 1	13
Model 2	23
5. DISCUSSION	27
6. CONCLUSION	28
APPENDIX	31
1. Discussion on Natural Resources Spending Data.....	31
2. Table 1A: Sensitivity Analysis.....	32
3. Table 2A: Comparative Summary Statistics	34
BIBLIOGRAPHY	36

LIST OF ILLUSTRATIONS

Figure	Page
1. Significant Events in the Term Limit Movement	3
2. A Visual Representation of State Legislative Term Limit Adoption in the U.S.	4
3. Trends in Natural Resource Spending for States With and Without Term Limits	15

LIST OF TABLES

Table	Page
1. Summary Statistics	20
2. Model 1: Random and Fixed Effects Linear Models	22
3. Model 2: Difference-in-Difference Model	26
4. Sensitivity Analysis.....	32
5. Comparative Summary Statistics	34

THE EFFECT OF STATE TERM LIMITS ON
NATURAL RESOURCE SPENDING

Claire Shipp

Dr. Michael Sykuta, Thesis Supervisor

ABSTRACT

This paper examines how term limits operate as an institutional characteristic of state legislative branches. First, I describe the history of the term limit movement to contextualize public opinion. I then review relevant literature that explores the effects of term limits on legislatures, legislators, and legislation. The cited literature suggests that term limits may amplify decreased spending in natural resources. I test that hypothesis using two different models. The first is a linear model and the second is a difference-in-difference model. My empirical analysis suggests that term limits do decrease natural resource spending, but I cannot confirm a causal relationship. This result suggests that the effects of term limits may be more superficial than proponents and opponents suggest.

INTRODUCTION

The public has long criticized the United States (U.S.) Government. There have been a variety of institutional tools enacted in an attempt to decrease perceived issues with the American political economy. One of the most recent is term limits. Term limits restrict the time individuals can serve in public office. Supporters of term limits hoped to reduce corruption, increase diversity, and strengthen ties between legislators and constituents. While federal term limits have been declared unconstitutional, term limits have appeared in many states since the 1990s. In the last 30 years, 21 U.S. states implemented term limits, though six of those states later repealed them.

There are arguments for and against term limits. Supporters believe that term limits effectively accomplish the previously mentioned goals. Opponents argue that term limits increase dependency on lobbyists and legislative staff by preventing the accumulation of institutional knowledge. Researchers expanded on the public's opinions of term limits theoretically and empirically. Existing theory suggests that term limits reduce the relative influence of the legislature, increase the gap between legislators and their constituents, decrease state budget health, and decrease the complexity of the legislation.

This paper explores the progression of the term limit movement in depth and tests their hypothesized negative effects. I review the history of the term limit movement and contextualize public opinion of term limit implementation. Then, I use spending on natural resources as a case study to understand the impact of term limits on a specific portion of state budgets. Using a fixed-effects linear model, I estimate natural resources spending as a percentage of total state expenditures. The final model suggests that term limits have a limited impact on natural resource spending. This finding invalidates arguments by both

supporters and opponents of term limits. In this specific case, term limits have neither positive nor negative effects on legislative behavior. This finding informs future research on the impacts of term-limited state legislatures.

BACKGROUND

The Term Limit Movement

Restrictions on term length have existed since the ratification of the U.S. Constitution.¹ These restrictions may exist at the federal, state, or local level. However, restrictions on the number of cumulative years an individual can serve in a particular position did not exist until the 22nd amendment to the Constitution which limited U.S. Presidents to two, four-year terms.² Meaningful conversations regarding term limits did not pick back up again until the Watergate scandal of 1972.³

After the resignation of President Nixon, federal term limits began to receive more attention.⁴ For many, term limits at all levels of government seemed to be the reform needed to diversify representation and root out bureaucracy.⁵ A 1995 study, using survey data from the 1992 American National Election Study and supporting statewide surveys, showed that partisanship, cynicism, and general dissatisfaction with the government drove public support for term limits.⁶ Figure 1 illustrates a timeline of notable events that led to the proliferation of term limits. In the early 1990s, 22 states passed federal Congressional term limits, but no limits on federal Congress People endured past 1995.⁷ The U.S.

¹ Rausch, John D. "When a Popular Idea Meets Congress: History of the Term Limit Debate in Congress." West Texas A&M University, vol. 1, Issue 1, 2006, Pages 34-43

² *Id.*

³ *Id.*

⁴ *Id.*

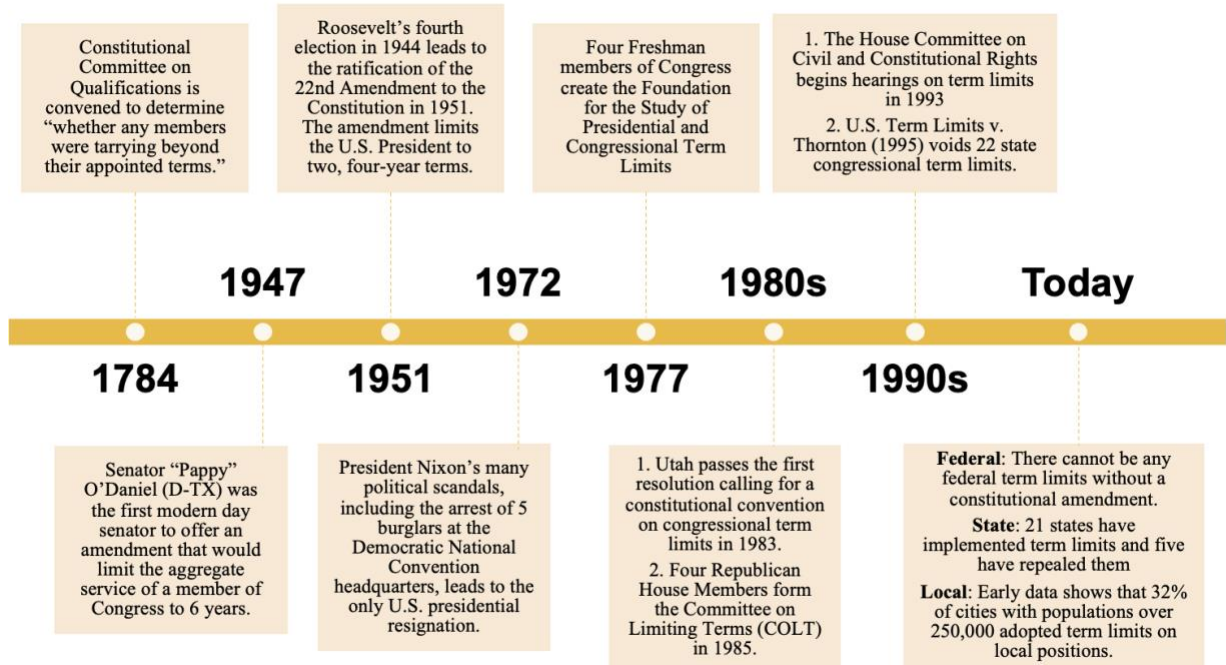
⁵ *Id.*

⁶ *Id.*

⁷ *U.S. Term Limits vs. Thornton*, 115 S. Ct. 1842, 1995

Supreme Court ruled that federal term limits are unconstitutional in *U.S. Term Limits v. Thornton*.⁸ The Court argued that federal term limits impose “qualifications for congressional service” that can only be adopted by constitutional amendments.⁹

Figure 1: Significant Events in the Term Limit Movement ¹⁰



The *U.S. Term Limits v. Thornton* ruling does not impact the viability of state term limits, so the entirety of the term limit movement post-1995 has focused on state term limits. Given that information, the rest of this paper will focus only on state term limits.

By May of 1998, 21 states had adopted state legislative term limits.¹¹ Since then, six states have repealed the limits or declared them unconstitutional.¹² That leaves 15 states

⁸ *Id.*

⁹ *Id.*

¹⁰ Rausch, John D. “When a Popular Idea Meets Congress: History of the Term Limit Debate in Congress.” West Texas A&M University, vol. 1, Issue 1, 2006, Pages 34-43; Journal of the Continental Congress. (1784). Vol. 26, 26 February; Congressional Record. (1947). 80th Cong., 1st sess. Vol. 93.

¹¹ Cain, Bruce, and Marc Levin. “Term Limits.” Annual Review of Political Science, vol. 2, no. 1, 1999, pp. 163–188.

¹² “The Term-Limited States.” Policy Research on Legislative Issues, National Council of State Legislatures, 2021.

Arguments For and Against Term Limits

As with all policies, the public has varying opinions on term limits. There are reasonable arguments in favor of term limits, given their success across the nation. Supporters believe that limiting the time a person can serve in office will limit their susceptibility to corruption and special interest groups.¹⁸ Additionally, they argue that removing the representative or senator from a legislative role in a short number of years will make them more accountable to constituents, as they become one after being termed out.¹⁹ Following similar logic, supporters claim term limits decrease partisanship by reducing legislators' focus on reelection.²⁰ Finally, term limit supporters believe term limits will provide non-incumbents a greater chance at winning elections, therefore energizing and diversifying the legislature.²¹

Just as there are strong supporters of term limits, many Americans are concerned about the negative impacts of term limits. The most prevalent argument against term limits is the loss of institutional experience within the legislature. By forcing out career politicians, who have years of experience in policymaking and government, term limits prevent the accumulation of institutional knowledge.²² Additionally, opponents believe that term limits are unnecessary, given legislators are regularly re-elected and can be voted out of office.²³ Finally, they argue that term limits provide more power to bureaucrats and lobbyists because incoming legislators rely heavily on others for advice, given their lack

¹⁸ Weeks, Bob. "Arguments for and against Term Limits." Voice For Liberty, 30 May 2014.

¹⁹ *Id.*

²⁰ *Id.*

²¹ *Id.*

²² *Id.*

²³ *Id.*

of institutional familiarity.²⁴ This assertion is antithetical to the argument supporters pose about decreased reliance on external parties.

LITERATURE

When states began to present term limit legislation and ballot initiatives, political scientists began to evaluate public predictions about term limit impacts on legislative institutions. At the time, there was inadequate research to draw reliable conclusions. Many political scientists reached judgments by reviewing academic work on executive term limits, incumbency, seniority, and voting behavior. Since the mid-to-late 1990s, the body of literature related to term limits has grown substantially. Experts have explored term limits' effects on institutional expertise, collegiality, career incentives, policy development, power allocation, and leadership in state political bodies. The literature concludes that term limits decrease institutional knowledge, increase reliance on external parties, and weaken the tie between constituents and legislators. These effects, as well as others, are explored in greater detail below. In this section, I bring together significant work to demonstrate patterns in the impacts of term limits on the legislature, legislators, and legislation.

Changes to the Legislature

New institutional economics attempts to define the role of individuals within institutions because the people who make up an institution, like a state legislature, impact its outcomes. The laws produced by a state legislature reflect the legislators serving at the time. Advocates for term limits in the 1990s argued that term limits would increase the number of minority and women legislators. They believed term limits would overcome the

²⁴ *Id.*

incumbent advantage that disproportionately supports the election of white males.²⁵ Research on this topic is inconclusive. Samantha Pettey's 2018 analysis indicated that term limits do increase the election of female legislators,²⁶ and Stanley Caress' 2003 article shows that term limits have increased the number of minority legislators.²⁷ However, John Carey's study from 1998 showed that term limits do not affect the number of women or minority legislators elected.²⁸

Jerome Black's model of a prospective candidate's decision calculus may explain this phenomenon. This model sets an individual's potential to run for office equal to the benefit of winning times the likelihood of winning minus the cost of running.²⁹ Supporters believe that term limits increase the probability of winning an election and decrease the cost of running for office by reducing the effects of the incumbent advantage. This argument does not reflect the reality that term limits also reduce the benefits of winning elections by limiting the future potential for a career in politics. Additionally, the costs of running for office differs geographically, and disadvantaged populations experience higher up-front campaign costs. Therefore, term limits' effects on the composition of legislatures are dependent on a variety of factors including geography and community contributions.

In addition to changing the demographic composition of the legislature, term limits alter the relative influence of the legislative body on other state political actors. Term limit advocates hoped term limits would energize the legislative body and reduce risk aversion

²⁵ Carey, John, et al. "The Effects of Term Limits on State Legislatures." *Legislative Studies Quarterly*, vol. 23, no. 2, 1998, pp. 271–300.

²⁶ Pettey, Samantha. "Female Candidate Emergence and Term Limits: A State-Level Analysis." *Political Research Quarterly*, vol. 71, no. 2, June 2018, pp. 318–329.

²⁷ Carey, John, et al. "The Effects of Term Limits on State Legislatures." 1998, pp. 271–300.

²⁸ *Id.*

²⁹ Black, Jerome. "The Multicandidate Calculus of Voting: Application to Canadian Federal Elections." *American Journal of Political Science*, vol. 22, no. 3, 1978, pp. 609–38.

to enable the legislative branch to be a driving force for progressive policy making. However, research has shown that term limits have reduced legislative influence relative to the executive branch, making it difficult for the legislative branch to be a leader on any initiative. Lobbyists³⁰ and legislative leaders³¹ agree that the governor, executive agencies, interest groups, and legislative staff have become more influential than legislators. Reduced experience and knowledge of the political process have made term-limited legislators more reliant on those around them to perform their legislative duties. This is especially relevant in legislative leadership positions. The legislative branch derives most of its bargaining power from majority party leaders and committee chairs. In 1993, the average term for representatives was 12 years and 11 years for senators.³² At that time, Arizona and Maine were the only two states with leaders that had less than six years of legislative service.³³ Due to eight- and six-year term limits, leaders within the legislature do not have adequate time to gain the political capital and experience profile needed to be successful negotiators with the political actors.³⁴

Finally, term-limited, bicameral legislatures demonstrate significant shifts in influence between the upper and lower chambers. One California legislator commented on this phenomenon, “it’s hard to quantify it, but lobbyists are clearly going to the Senate for their serious conversations. You have to conclude that the psychological center of the legislature has shifted.”³⁵ Before California passed term limits, the Assembly, or lower

³⁰ Moncrief, Gary, and Joel Thompson. “On The Outside Looking in: Lobbyists' Perspectives on the Effects of State Legislative Term Limits.” *State Politics & Policy Quarterly*, vol. 1, no. 4, 2001, pp. 394–411.

³¹ Peery, G., & Little, T. H. (2002). *Leading when the bell tolls: perceptions of power among termed and untermed leaders. The test of time: Coping with legislative term limits.* Lexington, MA: Lexington Books.

³² Cain, Bruce, and Marc Levin. “Term Limits.” *Annual Review of Political Science*, vol. 2, no. 1, 1999, pp. 163–188.

³³ *Id.*

³⁴ Carey, John, et al. “The Effects of Term Limits on State Legislatures.” 1998, pp. 271–300.

³⁵ Gurwitt R. 1996. Greenhorn government. *Governing* 9:15–19

chamber, drew in ambitious politicians with exciting policy ideas. The Assembly existed in contrast to the Senate, or upper chamber, which legislators perceived as the slower, less desirable place to work.³⁶ Now, 32 years after California enacted term limits, the desired career path for any aspiring California politician flows from the Assembly to the Senate. This case study demonstrates how term limits have redefined the purpose of bicameral legislatures. Most term limits restrict one chamber to six and the other to eight years, providing legislators fourteen possible years in office. Given that timeline, incoming legislators now view experience in the lower chamber as an opportunity to learn their craft and the upper chamber as a place to practice it.³⁷

Changes to the Legislator

The composition and institutional characteristics of the legislature are relevant because the demographic makeup, perceived influence, and internal structure affect legislative outcomes. However, legislators' individual goals and incentives also alter outcomes. Term limit advocates argued that term limits prioritize policymaking over reelection, reducing the time and money spent on campaign activities.³⁸ They correctly predicted a reduction in campaign expenses, but an unexpected behavior has emerged because of term limits. By removing the electoral tie between legislators and their constituents, term limits have allowed legislators to be less responsive to the needs of their district. The behavior change is called a Burkean shift. Legislators who experience this shift are more inclined to engage in broader legislative priorities.³⁹ Additionally, the

³⁶ Cain, Bruce, and Marc Levin. "Term Limits." *Annual Review of Political Science*, vol. 2, no. 1, 1999, pp. 163–188.

³⁷ *Id.*

³⁸ Glazer, Amihai, and Martin Wattenberg. "How Will Term Limits Affect Legislative Work?" *Legislative Term Limits: Public Choice Perspectives*, 1996, pp. 37–46.

³⁹ Carey, John, et al. "The Effects of Term Limits on State Legislatures." 1998, pp. 271–300.

Burkean shift makes term-limited state legislatures more consistent with a progressive-ambition model of politics, where legislators serve the interests of future constituents rather than current ones.⁴⁰ The progressive-ambition model of politics is the opposite of the citizen-legislator model of politics, where legislators focus on the needs of the individuals that elected them for office.

In addition to changing the constituency legislators feel accountable to, term limits have changed the overall experience of legislative service. As mentioned previously, term limits shorten the learning curve for incoming legislators. Individuals serving in term-limited states often use their first term to become acclimated to the political process, their second term to push their policy priorities, and their final term to seek a higher office.⁴¹ In term-limited states, legislators meaningfully serve their state for around two to four years throughout their six to eight-year experience. The shortened period of effectiveness compresses legislators' perceived timelines and often prevents them from taking on long-term, or complex, investments or projects.⁴²

Finally, term limits have changed the way legislators act towards their colleagues. Historically, the American people have viewed politics as highly contentious. Researchers have observed a further increase in disputes within term-limited state legislatures. Though term limits usher in new legislators who carry blank slates, they also significantly reduce incentives for cooperation by reducing legislators' accountability to their colleagues. Individuals that work together over time are more likely to understand the importance of

⁴⁰ Herrick, Rebekah, and Michael Moore. "Political Ambition's Effect on Legislative Behavior: Schlesinger's Typology Reconsidered and Revisited." *The Journal of Politics*, vol. 55, no. 3, 1993, pp. 765–76.

⁴¹ Carey, John, et al. "The Effects of Term Limits on State Legislatures." 1998, pp. 271–300.

⁴² *Id.*

civility. That is why incentives for cooperation are strong in repeat game simulations.⁴³ Game theory supports the observed reality that term limits have led to the disintegration of political relationships within state legislatures.⁴⁴

Changes to the Legislation

Changes to the legislature and legislators have created new changes in legislation. Term limits have altered the budget process substantially. Supporters of term limits hoped that term limits would lower state spending, but many studies have shown the opposite.⁴⁵ Term-limited states spend more money each year because legislators are not accountable for the consequences of deviating from the socially optimal fiscal policy. Decreased risk-aversion, budget experience, and time horizons make it challenging for legislators to make sound financial investments needed for a healthy state budget.⁴⁶

Because term limits decrease legislative experience, legislators are less likely to engage critically in drafting legislation and developing policy solutions. Consequently, the legislative staff in term-limited states has stepped in to supplement the apparent lack of engagement.⁴⁷ This shift effects policy differently depending on the organizational structure of the legislature.

Some legislatures are considered professional-legislatures. This means that the elected representatives and senators treat legislative service as a job rather than a voluntary contribution to the state. Professional-legislatures traditionally have more staff, higher

⁴³ Cohen LR, Spitzer ML. 1992. Term limits. *Georgetown Law J.* 80:477–522

⁴⁴ Carey, John, et al. “The Effects of Term Limits on State Legislatures.” 1998, pp. 271–300.

⁴⁵ Erler, Abbie. “Legislative Term Limits and State Spending.” *Public Choice*, vol. 133, 2007, pp. 479–94.

⁴⁶ Cummins, Jeff. “The Effects of Legislative Term Limits on State Fiscal Conditions.” *American Politics Research*, vol. 41, no. 3, May 2013, pp. 417–442.

⁴⁷ Kousser, Thad. “The Limited Impact of Term Limits: Contingent Effects on the Complexity and Breadth of Laws.” *State Politics & Policy Quarterly*, vol. 6, no. 4, 2006, pp. 410–429.

salaries, and longer sessions. Because there are more staff and research resources in professional-legislatures, Kousser found that term limits increase legislation complexity in highly professional-legislatures.⁴⁸

The organizational structure of citizen-legislatures is less formal. Members of a citizen-legislature typically work full-time jobs in addition to their legislative work. They also have lower salaries and fewer staff members. For these reasons, the complexity of legislation in citizen-legislatures has decreased.⁴⁹

Literature Summary

The impacts of term limits on state legislative bodies are numerous and complex. Studying the effect of term limits on various policy areas helps clarify the significance of these effects on U.S. policy outcomes. My study applies the concepts in the existing literature to a specific case study in state policy. Concerns about the increasing global temperature and the consequences of climate change have increased over time. Of 50 Nobel laureates surveyed in 2017, more than one-third cited population rise and environmental degradation as the most significant threat to humankind. Nuclear war came in second place.⁵⁰ However, state policy relating to the environment and climate change is complex. Legislators perceive environmental protection as a long-term investment that requires significant scientific knowledge. These qualities make environmental investment a relevant case study to examine the incentive effects of term limits on legislators and legislation. The literature described above suggests that term limits are likely to decrease spending on natural resources.

⁴⁸ *Id.*

⁴⁹ *Id.*

⁵⁰ Grove, Jack. "Do great minds think alike? The Lindau Nobel Laureates Survey," The World University Rankings, August 31, 2017.

METHODS

The empirical work on term limits has evolved since the term limit movement of the 1990s. Previous studies have looked at term limits' effects on the complexity of legislation,⁵¹ budget composition,⁵² and election demographics.⁵³ My work adds to this literature by examining the influence of term limits from a different perspective. I seek to understand how deep the effects of term limits go by testing their impact on a specific portion of state budgets. The literature described above creates the template used to test my hypothesis that term limits amplify the universal negative trends in natural resources spending. This section describes the development of my model. Details relating to data collection, variable selection, and results are incorporated.

Model 1

This study uses data on state legislative institutions and budget policies from all 50 U.S. states for the period 1978 to 2019. The independent variable is natural resources spending as a percentage of total state direct expenses, collected from the Urban Institute.⁵⁴ More information about the data is included in the Appendix. I chose spending on natural resources as a proxy for environmental spending because states use their natural resources budget to fund irrigation, flood control, reclamation, wetland and watershed management,

⁵¹ Kousser, Thad. "The Limited Impact of Term Limits: Contingent Effects on the Complexity and Breadth of Laws." *State Politics & Policy Quarterly*, vol. 6, no. 4, 2006, pp. 410–429., doi:10.1177/153244000600600403.

⁵² Erler, H. Abbie. "Legislative Term Limits and State Spending." *Public Choice*, vol. 133, no. 3/4, Springer, 2007, pp. 479–94, <http://www.jstor.org/stable/27698198>; Cummins, Jeff. "The Effects of Legislative Term Limits on State Fiscal Conditions." *American Politics Research*, vol. 41, no. 3, May 2013, pp. 417–442, doi:10.1177/1532673X12461270.

⁵³ Caress, Stanley M., et al. "Effect of Term Limits on the Election of Minority State Legislators." *State and Local Government Review*, vol. 35, no. 3, Sept. 2003, pp. 183–195, doi:10.1177/0160323X0303500304; Pettey, Samantha. "Female Candidate Emergence and Term Limits: A State-Level Analysis." *Political Research Quarterly*, vol. 71, no. 2, June 2018, pp. 318–329, doi:10.1177/1065912917735175.

⁵⁴ Airi, Nikhita, et al. "State and Local Finance Data: Exploring the Census of Governments." Urban-Brookings Tax Policy Center.

regulation of industries that effect agriculture and natural resources – among other things.⁵⁵ Each of these investments carries the long-term nature of other environmental policies. Therefore, if my hypothesis is correct, term-limited legislators will have less incentive to invest in natural resources, as defined by the Census Bureau. I chose to represent natural resources spending as a percentage of total state direct expenditures to account for the relative size differences of state budgets.

Endogeneity is a common issue in studies that estimate the effect of financial institutions on economic policy.⁵⁶ State spending reflects voters' fiscal interests. As mentioned in the historical review of term limits, voters in states with term limits hoped that term limits would make legislators more accountable to their constituents. For this reason, states with high spending levels may be more likely to adopt term limits. This phenomenon could make term limits endogenous to state spending. However, studies have identified the presence of the initiative process as the main determinant of term limit adoption.⁵⁷ Therefore, the adoption of term limits are exogenous to the budgeting process itself. Furthermore, my study focuses on natural resource spending as a percentage of total state spending rather than the whole budgeting process or spending amount. Even if endogeneity did exist between term limits and state budget levels, using a percentage of the budget rather than total expenses should make any endogeneity issue insignificant.

⁵⁵ “Natural Resources and Environmental Protection.” The Legislative Analyst's Office, The California Legislature's Nonpartisan Fiscal and Policy Advisor, 18 Oct. 2021.

⁵⁶ Besley, T., & Case, A. (2003). Political institutions and policy choices: Evidence from the United States. *Journal of Economic Literature*, 41, 7-73; Knight, B. G. (2002). Endogenous federal grants and crowd-out of state government spending: Theory and evidence from the Federal Highway Aid program. *The American Economic Review*, 92, 71-92.

⁵⁷ Erler, H. Abbie. “Legislative Term Limits and State Spending.” *Public Choice*, vol. 133, no. 3/4, Springer, 2007, pp. 479–94, <http://www.jstor.org/stable/27698198>.

Therefore, I proceed with using natural resource spending as a percentage of total state direct expenses as the independent variable for this study.

A visual inspection of the data shows that spending on natural resources relative to other direct expenses has decreased, on average, across all states. The green line in Figure 3 represents the 21 states that enacted term limits between 1978 and 2019, and the red line illustrates states that have never implemented term limits. The x-axis represents years before and after term limit implementation. Zero is equal to the year the state passed term limits. For states without term limits, zero equals years before and after 1992. I selected 1992 because it is the median year states passed term limits. The x-axis orients the data in a more interpretable format.

Figure 3: Trends in Natural Resource Spending for States With and Without Term Limits

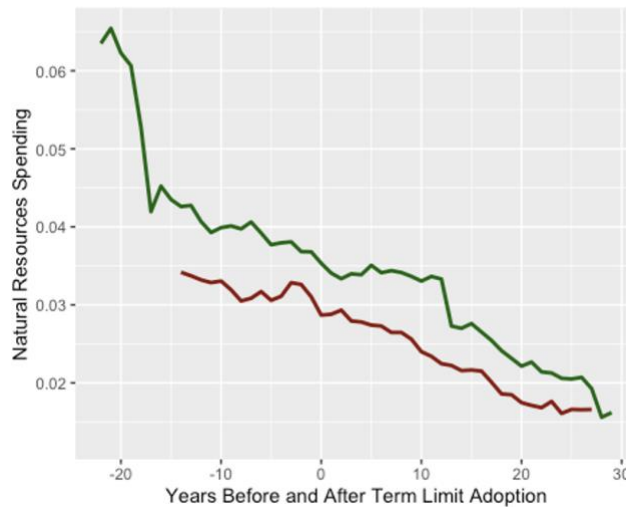


Figure 3 reveals a shrinking gap between the green and red lines, suggesting term-limited states may experience greater amplified in natural resources spending than states without term limits. However, an empirical analysis is required to confirm or refute that conclusion.

To test the hypothesized relation more directly, I use a linear regression model to study the trend observed in Figure 3. The equation used for Model 1, where Y is natural resource spending as a percentage of state direct expenses is:

$$Y = B_0 + B_t X_t + B_{ag} X_{ag} + B_{mi} X_{mi} + B_{ma} X_{ma} + B_{ac} X_{ac} + B_r X_r + B_d X_d$$

The variable of interest is the presence of term limits, represented by X_t in the formula above. Between 1978 and 2019, 16 states adopted and maintained term limits, five adopted and repealed term limits, and 29 never adopted term limits. The term limits variable in Model 1, X_t , is a dummy variable. Data for this variable came from the National Conference on State Legislatures.⁵⁸ I coded the variable zero when no term limits are present and one beginning the year a state passes term limits. The one remains while term limits are in effect within the state. States that never adopt term limits are coded zero for the entire time period. I chose to represent the effect of term limits beginning when term limits pass to account for the forward-focused nature of legislators.⁵⁹ Coding the variable starting with the first year a cohort of legislators is termed-out would ignore multiple years that legislators' horizons are constrained by the legislation while in office. In the formula above, B_t represents the coefficient for term limits used to estimate natural resources spending. To confirm my hypothesis, this coefficient must be negative and statistically significant.

I include six control variables in Model 1 to account for state-specific economic and political attributes that may influence budget allocation decision-making. The first four represent budgeting incentives experienced by state legislators. The variables X_{ag} , X_{mi} ,

⁵⁸ Parker, Deb, and Wendy Underhill. "The Term-Limited States." The National Conference of State Legislatures, 12 Nov. 2020.

⁵⁹ Carey, J., Niemi, R., & Powell, L. (1998). The effects of term limits on state legislatures. *Legislative Studies Quarterly*, 23(2), 271-300.

Xma, and Xac measure the percentage of the state's total industry gross domestic product (GDP) attributable to the agriculture, mining, manufacturing, and tourism industries, respectively. I collected the data used to make these variables from the Bureau of Economic Analysis (BEA). The BEA reported each of these variables using chained 2012 dollars.⁶⁰ The prominence of differing industries affects legislative outcomes. Legislators invest in programs that benefit their constituents and the state economy, and prominent state industries are likely to have powerful advocacy groups present within the state legislature. The reviewed literature suggests that term limits make legislators more susceptible to lobbyists.⁶¹ Therefore, the relevance of a particular industry's size may be higher in term-limited states.

I chose to use the agriculture, mining, manufacturing, and tourism industries as controls because each of these industries is environmentally sensitive.⁶² They each have mixed possible effects on natural resources spending. The agriculture industry could have a negative or positive effect on natural resources spending depending on the state's priorities. Because many farmers must abide by environmental regulations, especially those operating confined agriculture feeding operations (CAFOs), states with large, commercial agriculture industries may invest more in natural resources to ensure environmental compliance. At the same time, states with large agriculture industries are likely to have a significant lobbying presence within the state capitol. Often, agriculture advocacy groups take a defensive stance towards environmental initiatives and regulations,

⁶⁰ "Regional Data: GDP and Personal Income." Bureau of Economic Analysis, 21 Mar. 2022.

⁶¹ Moncrief, Gary, and Joel Thompson. "On The Outside Looking in: Lobbyists' Perspectives on the Effects of State Legislative Term Limits." *State Politics & Policy Quarterly*, vol. 1, no. 4, 2001, pp. 394–411.

⁶² Pled, Virginie, and George Emmanuel Iatridis. "Corporate Social Responsibility Reporting: Evidence from Environmentally Sensitive Industries in the USA." *International Review of Accounting, Banking & Finance*, vol. 4, no. 2, Summer 2012, pp. 61–99.

which may result in decreased natural resource spending. The mining and manufacturing industries operate similarly to the agriculture industry. Though their special interest groups are likely fighting to decrease natural resource spending, states with large agriculture, mining, and manufacturing industries carry some responsibility to fund environmental compliance programs run through the natural resources budget. The tourism industry is a bit different. I included the tourism industry as a control variable because a significant amount of tourism in the U.S. is driven by nature, state parks, and conservation areas. Therefore, I predict states with large tourism industries are likely to have increased natural resource spending. The coefficients for these variables, Bag, Bmi, Bma, and Bac, will demonstrate these effects in Model 1.

The final two control variables account for political characteristics of the budgeting process. Xr and Xd measure political party control and friction within state governments. Literature finds inconclusive results regarding the relationship between party control and spending. Earlier studies show no significant effects of party control,⁶³ while more recent studies have identified a relationship.⁶⁴ Given the partisan divide on climate change mitigation, I chose to control for political ideology.⁶⁵ Xr is a dummy variable coded one when the state government experiences a unified Republican legislative and executive branch, and zero otherwise. Contrariwise, Xd is a dummy variable coded one when a state government has a unified Democratic legislative and executive branch, and zero otherwise.

⁶³ Dye, T. R. (1984). Party and politics in the states. *Journal of Politics*, 46, 1097-1116; Winters, R. (1976). Party control and policy change. *American Journal of Political Science*, 20, 597-636.

⁶⁴ Alt, J., & Lowry, R. (2000). A dynamic model of state budget outcomes under divided partisan government. *Journal of Politics*, 62, 1035-1069; Rogers, D. L., & Rogers, J. H. (2000). Political competition and state government size: Do tighter elections produce looser budgets? *Public Choice*, 105, 1-21; Reed, R. W. (2006). Democrats, republicans, and taxes: Evidence that political parties matter. *Journal of Public Economics*, 90, 725-750.

⁶⁵ Chinn, Sedona, et al. "Politicization and Polarization in Climate Change News Content, 1985-2017." *Science Communication*, vol. 42, no. 1, 2020, pp. 112-129., <https://doi.org/10.1177/1075547019900290>.

In addition to controlling for political ideology, X_r and X_d also control for legislative friction. Only five states develop their budget independent of the governor.⁶⁶ A shared party affiliation between both legislative houses and the Governor allows for significantly less debate throughout the legislative process, making it easier for political ideologies to be realized in the budgeting process. More bartering is necessary to pass a state budget when a zero is present. The existing literature suggests that term limits weaken the influence of the legislative branch relative to the governor. Therefore, a term-limited state under bipartisan control may be more likely to follow the governor's spending proposal. A divided government will produce differing outcomes for natural resources spending depending on the preferences and interests of the governor and state legislative body. The coefficients for these two controls, B_r and B_d , will measure the influence of unified Republican and Democrat state governments on natural resources investment.

Table 1 includes summary statistics for each of the variables described above. Natural resources spending accounts for 0.4% to 9.27% of state expenses, a relatively small percentage of the budget. The size of natural resource budgets may make it difficult to establish statistically significant relationships between spending and right-hand-side variables. Table 1 shows that manufacturing is the largest industry, as the mean GDP represents nearly 14% of total industry GDP. Agriculture, mining, and tourism account for much smaller percentages of the state budget, with two, three, and one percent of industry GDP. Of the 2100 observations, there are more observations of a unified Democratic state government than a unified Republican government.

⁶⁶ Snell, Ronald. "Fiscal Policy, State Budgets and Tax Actions | News and Information." National Conference of State Legislatures, 2008.

Table 1 Summary Statistics

Variable	Mean	St. dev.	Min - Max
Natural Resources Expense	2.86%	1.45%	0.40 - 9.27%
Term Limits	0.22	0.41	0 - 1
Agriculture GDP	2.01%	2.06%	0.15 - 11.78%
Mining GDP	3.1%	6.21%	0 - 36.03%
Manufacturing GDP	13.97%	6.4%	1.7 - 36.87%
Tourism GDP	1.17%	1.93%	0.23 - 16.44%
Unified Republican Government	0.22	0.41	0 - 1
Unified Democrat Government	0.26	0.44	0 - 1
Year	1998	N/A	1978 - 2019
Observations	2100		

When using panel data there are implied assumptions about the nature of the error in the regression model. Random-effects models assume that the same error distribution applies to all panel observations of the independent variables regardless of the grouping of the panel. A fixed-effects linear model assumes that the specific groups within the independent variables experience group-specific error distributions. For this study, a random-effects linear model assumes that each natural resource spending observation is the product of the same context. The fixed-effects linear model groups the error terms related to natural resource spending to account for differences among states. I believe the characteristics of my dataset are best suited for a fixed-effects model because natural resource spending is the result of different external factors specific to each of the 50 states. To be sure, I run both models using the plm function in r-studio and conduct a Hausman Test to determine the most appropriate model. The plm function conducts linear models on

panel data sets. The first two columns of Table 2 show the results from both models. The Hausman Test rejects the null hypothesis that the two models are equivalent at the 1% level, affirming the alternative hypothesis that the random-effects model is inconsistent. Therefore, I proceed with a fixed-effects linear model.

The fixed-effects model in Table 2 shows that term limits have a negative and statistically significant (at the 1% level) effect on the percentage of the state budget spent on natural resources. When term limits are in effect, state natural resource investment as a share of the budget decreases by 0.45 percentage points relative to non-term-limited state years. Given the mean value of natural resource budget share is just 2.86%, as shown in Table 1, a 0.45 percentage point reduction is more than a 15% decrease in relative natural resource investment.

In addition to the term limit effect, the size of the manufacturing and tourism industries have positive and statistically significant effects on natural resource spending. This result supports my prediction that tourism increases natural resource spending. Additionally, it clarifies the balance of the effects of manufacturing I discussed previously. The extra expenses relating to environmental standards enforcement, remediation, and oversight incurred by states with larger manufacturing industries outweigh any decreases in natural resource spending caused by manufacturing lobbying efforts. Also, having a politically unified government has a significant effect on natural resource budget shares and is consistent with stereotypical ideological assumptions: Republican governments invest less in natural resources relative to other budget items, and Democrat governments invest more.

Table 2 Model 1: Random and Fixed Effects Linear Model

	Random-Effects (RE) Coefficient (Standard Error)	Fixed-Effects (FE) Coefficient (Standard Error)	Fixed-Effects w/Clustered Errors Coefficient (Standard Error)
Constant	0.01278 (0.001539) ***	0.01492 (0.00118) ***	0.01492 (0.00331) ***
Term Limits	-0.00441 (0.00056) ***	-0.00453 (0.00056) ***	-0.00453 (0.00192) **
Agriculture as a % of Industry GDP	0.13283 (0.02590) ***	0.00816 (0.02895)	0.00816 (0.05637)
Mining as a % of Industry GDP	0.03013 (0.00877) ***	-0.00124 (0.00970)	-0.00124 (0.03525)
Manufacturing as a % of Industry GDP	0.08365 (0.00514) ***	0.09115 (0.00514) ***	0.09115 (0.01473) ***
Tourism as a % of Industry GDP	0.18296 (0.03482) ***	0.21036 (0.04334) ***	0.221036 (0.13131)
Unified Republican Government	-0.00466 (0.00049) ***	-0.00475 (0.00048) ***	-0.00475 (0.001376) ***
Unified Democrat Government	0.00126 (0.00043) **	0.00129 (0.00042) **	0.00129 (0.00094)
Chi-Squared Statistics (RE) and F-Statistic (FE)	667.05 ***	107.72 ***	13.47 ***
Adjusted R-Squared	0.2392	0.2496	0.2696
Observations	n = 50 t = 42 N = 2100	n = 50 t = 42 N = 2100	n = 50 t = 42 N = 2100

Significance codes: ‘***’ 0.01 ‘**’ 0.05 ‘*’ 0.10’

While the above results are noteworthy, there is a possibility that the significance of the results is overstated. Legislators do not create budgets from scratch each year. Instead, they review spending from the year prior and make adjustments given current circumstances. The budgeting structure implies that there may be serial correlation within

the data. Serial correlation exists when a variable and the lagged version of itself are correlated with one another over time. I used a Durbin-Watson (DW) test to identify serial correlation in Model 1, and the DW statistic was significant at the 1% level, suggesting there is serial correlation. When dealing with serial correlation in clustered panel data, Angrist and Pischke suggest “[t]he simplest and most widely applied approach” is to cluster standard errors at the state level.⁶⁷ This clustering approach is particularly recommended when the number of groups (n) is large relative to the number of time periods (t).⁶⁸ Because I have 50 groups and 42 time periods, I chose to use clustered errors at the state level to correct the standard errors for serial correlation.

Column three in Table 2 reports the results of the fixed-effects model with the state-clustered errors. As expected with the presence of serial correlation, the standard errors of the coefficient estimates are larger than in Column 2, reducing the level of significance of some of the estimates but not changing the coefficient values very much. Importantly for this study, the effect of term limits continues to be negative, though the significance of the estimate is now at the 5% level. The positive manufacturing industry effect and the negative effect of unified Republican government are still significant at the 1% level. The estimated effects of the tourism industry and unified Democrat government are still both positive, but no longer significant.

Model 2

Model 1 suggests that term limits have a statistically significant negative effect on natural resources spending. However, it is difficult to say that term limits are *causal* to the

⁶⁷ Angrist, Joshua D., and Jörn-Steffen Pischke, *Mostly Harmless Econometrics*, Princeton University Press, Princeton, NJ, 2009

⁶⁸ Arellano, M, “Computing Robust Standard Errors for Within-groups Estimators,” *Oxford Bulletin of Economics and Statistics*, 49(4), 1987, <https://doi.org/10.1111/j.1468-0084.1987.mp49004006>.

apparent reduction in spending based solely on those results. This is especially true given all states were reducing their natural resource budget shares throughout the sample period (see Figure 3), and term limits came into effect over the latter half of the period. As a robustness check, I ran a difference-in-differences (DID) model. Model 1 measures changes in natural resource spending over time for term-limited states, while the DID model measures differences in natural resource spending between states with and without term limits before and after 1992, when term limits became broadly adopted. The equation for Model 2 is:

$$Y = B0 + (Bt * p)(Xtr * Xp) + BtXt + BpXp + BagXag + BmiXmi + BmaXma + BacXac + BrXr + BdXd$$

Model 2's notation is the same as Model 1. The variable Y represents natural resources spending as a percentage of total direct expenses. Xag, Xmi, Xma, and Xac represent the control variables for agriculture, mining, manufacturing, and tourism, respectively, as a percentage of state industry GDP. Finally, Xr and Xd are the controls for unified Republican and Democrat state governments. Each B term represents the coefficient for its respective variable.

What differs from Model 1 is the DID controls and interaction terms. The variable Xtr is treatment group variable equal to 1 in all periods if the state ever has term limits, and 0 otherwise. The time period, Xp, is coded zero before the introduction of term limits and one afterward to capture the effect of the policy over time. For states that never adopted term limits, I set the value to zero prior to 1992 and one after 1992. The time period variable represents the time period when a difference in behavior between term-limited and non-term-limited states would begin if there were a relationship between term limits and natural

resources spending. I selected 1992 as the control year for non-term limit states because it is the median year that term-limited states enacted term limits. To be confident that 1992 is an appropriate year to use, I conducted a sensitivity analysis. The sensitivity analysis includes a DID model for each year from 1990 to 2001. Table 1A in the appendix contains the sensitivity analysis results. Each model returns the same statistically significant variables. Though the coefficient for the interaction variable changes over time, the p-value stays within the range of 0.6 to 0.9. Therefore, using 1992 remains a logical choice.

Table 3 shows the results from Model 2. Similar to Model 1, natural resource spending is higher in states with large manufacturing and tourism industries, though the tourism result is not statistically significant. Unified Republican governments continue to decrease natural resource spending, but the p-value for unified Democrat governments increases, making the positive effect insignificant. The time period variable has a statistically significant negative coefficient, suggesting that all 50 states experienced a decrease in natural resource spending after 1992, as is evident in Figure 3. Likewise, the treatment group coefficient is positive and significant, reflecting the data in Figure 3 showing term limit states have higher average natural resource spending than non-term limit states.

However, while the interaction term is negative, it is not statistically significant, suggesting the term limits to did not play a significant causal role in the decline of natural resource spending among term limit states. This is somewhat contradictory to the results observed in Model 1, which suggested term limits do reduce relative spending on natural resources. One potential reason is that, as noted above, there is no clear date of policy change for term limits across states. This may make it difficult for the DID model to detect

any effect of the “innovation” of term limits since their marginal effect may be low in any time period between 1990 and 2001, as individual states adopted the policy.

Table 3 Model 2: Difference-in-Difference Model

	Coefficient (Standard Error)
Interaction Term Between Term Limits and Time Period	-0.00081 (0.00181)
Treatment Group (1 = Term-limited states)	0.00860 (0.00423)**
Time (Treatment control)	-0.00754 (0.00122) ***
Agriculture as a % of Industry GDP	0.06734 (0.05421)
Mining as a % of Industry GDP	-0.00295 (0.02291)
Manufacturing as a % of Industry GDP	0.04260 (0.01342) ***
Tourism as a % of Industry GDP	0.09664 (0.06914)
Unified Republican Government	-0.00218 (0.00097) **
Unified Democrat Government	0.00117 (0.00077)
Wald χ^2	197.49 ***
Adjusted R-Squared	0.4021
Observations	n = 50, t = 42, N = 1992
Significance codes: ‘***’ 0.01 ‘**’ 0.05 ‘*’ 0.10	

DISCUSSION

Existing literature on the effects of term limits suggests that term limits shorten the time horizon of legislators, decrease the complexity of legislation, and weaken the legislative branch relative to external political actors. I chose environmental investment, using natural resource spending as a proxy, as a case study on term limits because many qualities of an environmental investment reflect the type of legislation that the literature suggests would be negatively affected by term limits. Environmental investment requires a long-term outlook, a basic understanding of science, and the ability to navigate the opinions of varying advocacy groups. These qualities suggest that term limits may decrease natural resource spending in state governments.

My empirical results are mixed. While I find that term limits are associated with lower spending on natural resources as a percentage of state budgets (Model 1), my DID results (Model 2) suggest that term limits do not have a significant causal effect on natural resource spending as a percentage of total direct expenses over time.

There are a few reasons I think Model 2 did not provide a statistically significant effect related to term limits. First, natural resources spending as a percentage of total direct expenses may not be the appropriate proxy for environmental investment. Natural resource spending does not carry the same qualities as environmental investment mentioned above. Because such a significant portion of the natural resource budget funds departments of natural resources and conservation, legislators do not view natural resource spending as a long-term, scientific investment. Additionally, natural resource spending represents a very small percentage of state expenses, making it difficult to identify significant changes over time.

Second, the effects of term limits that may increase environmental investment could stifle the impacts that, I have argued, reduce natural spending. Per the Burkean Shift, term limits reduce the tie between constituents and their representatives. Therefore, legislators are more likely to work on state-wide issues or issues of personal interest. Because environmental matters are transboundary, the Burkean Shift offers that legislators would be more likely to engage with environmental policy. Additionally, empirical work has shown that term limits increase total state spending due to reduced risk-aversion and accountability.

Given the issues identified above, this study is ripe for revision. Running a similar model using a different proxy for environmental investment may result in more significant results. At the time of this study, I could not access a more accurate variable. For instance, one might use data that captures the amount or significance of environmental regulation imposed in a given legislative year, or the likelihood of a given piece of legislation passing. Barring alternative measures of environmental investment, future research might focus on other relevant policy areas that would hone the broader effects identified in studies relating to the whole state budgets. Possible areas of interest may be higher education, sustainable agriculture policy, or healthcare. These policy areas require a significant initial investment for future returns, require some specialized knowledge, and are influenced by special interest groups.

CONCLUSION

Term limits continue to be a hotly debated option for limiting the power of state governments and individual politicians. The existing research provides mixed results on just the significantly term limits affect the operation and outcomes of state legislatures. My

results add to that mixed review. Using a linear fixed-effects model that controls for state-specific economic and political factors, I find that term limits are associated with less spending on natural resources as a percentage of states' budgets. However, a difference-in-differences model fails to support the hypothesis that term limits had a causal effect on natural resource spending over time. Given these mixed results, further research is necessary to better proxy for environmental investment by state legislatures or to consider alternative types of legislation that have similar qualities that might better capture any effect of term limits.

APPENDIX

DISCUSSION ON NATRUAL RESOURCES SPENDING DATA

The Urban Institute brought together data from the U.S. Census Bureau's Census of Governments, Annual Survey of State and Local Government Finances, the US Bureau of Economic Analysis, and the Bureau of Labor Statistics to create the natural resources expenses variable I used.⁶⁹ State natural resource expenses is a summary variable tabulated by the Census Bureau. The variable is collected from the Census of State Governments and is reported each year.⁷⁰ Because I selected environmental expenses from state governments, federal pass-through dollars should not be accounted for. However, the guidance on how federal money is handled within the variable is unclear.

The variable includes expenses from current operations, construction, land, and existing structures for state fish and game, federal and state forestry, and 'other' natural resources.⁷¹ According to the Census Bureau, other natural resource expenses include, "expenditures related to water resources, mineral resources, agriculture, and the regulation of industries which develop, utilize, or affect natural resources, as well as the regulation of agricultural products and establishments. Includes conservation, promotion, and development activities related to agriculture and natural resources (soil, water, energy, minerals, etc.)."⁷² This does not include investment in hydroelectric power facilities, state and local electric power utilities, improvement of waterways, construction, and maintenance of canals, operation of public water transportation facilities, inspection of

⁶⁹ Airi, Nikhita, et al. "State and Local Finance Data: Exploring the Census of Governments." Urban-Brookings Tax Policy Center.

⁷⁰ "Classification Manual Covering the activities of the Federal, state and local governments." U.S. Bureau of the Census, Government Finance and Employment.

⁷¹ *Id.*

⁷² *Id.*

public drinking water, activities related to air and water quality and pollution control, advertising of state resources, or higher education.⁷³

agricultural schools and land grant colleges (report at Other Higher Education, code *18) except for agricultural experiment stations and extension services (report at Natural Resources, Other).

⁷³ *Id.*

Table 1A: Sensitivity Analysis

	1990	1991	1992 *	1993	1994	1995
Term Limits (interaction between group and difference)	1.2379e-04 (0.7476)	5.5756e-05 (0.884)	-1.2492e-04 (0.7433)	-7.4882e-05 (0.8437)	5.4872e-05 (0.8849)	-2.5424e-05 (0.9467)
Agriculture GDP	-9.2291e-03 (0.5544)	-1.0479e-02 (0.5024)	-1.2856e-02 (0.4126)	-1.2171e-02 (0.4372)	-1.5328e-02 (0.3278)	-1.3794e-02 (0.3787)
Mining GDP	-8.384e-03 (0.1326)	-7.9050e-03 (0.1393)	-7.5092e-03 (0.1611)	-7.3166e-03 (0.1714)	-7.3085e-03 (0.171)	-7.2128e-03 (0.1772)
Manufacturing GDP	1.2248e-02 (0.0012)	1.2233e-02 (0.0001)	1.2830e-02 (6.702e-05)	1.2088e-02 (0.0002)	1.0780e-02 (0.0009)	1.0471e-02 (0.0017)
Tourism GDP	-14338e-01 (0.488)	-1.1577e-02 (0.6284)	-9.2670e-03 (0.699)	-7.5337e-03 (0.7531)	-5.7432e-03 (0.8101)	-5.2244e-03 (0.8272)
Population	-3.8304e-07 (3e-06)	-3.8529e-07 (2.653e-06)	-3.9312e-07 (1.749e-06)	-3.8764e-07 (2.415e-06)	-3.8053e-07 (3.534e-06)	-3.8245e-07 (3.292e-06)
Unified Republican State Government	-4.7872e-05 (0.8573)	-3.2014e-05 (0.9044)	-1.8290e-05 (0.9454)	6.4369e-06 (0.9808)	2.2323e-05 (0.9333)	1.5287e-05 (0.9543)
Unified Democrat State Government	1.7578e-04 (0.4502)	1.7363e-04 (0.4562)	1.9337e-04 (0.4075)	1.7823e-04 (0.4451)	1.5922e-04 (0.4945)	1.8938e-04 (0.4165)
Lagged Natural Resources Spending	7.5922e-01 (< 2.2e-16)	7.5727e-01 (< 2.2e-16)	7.5900e-01 (< 2.2e-16)	7.5751e-01 (< 2.2e-16)	7.5412e-01 (< 2.2e-16)	7.5501e-01 (< 2.2e-16)
Difference Variable	-1.7366e-03 (8.676e-10)	-1.6828e-03 (2.706e-09)	-1.4618e-03 (2.536e-07)	-1.5496e-03 (4.534e-08)	-1.7459e-03 (1.011e-09)	-1.6521e-03 (1.293e-08)
	1996	1997	1998	1999	2000	2001
Term Limits (interaction between group and difference)	3.4976e-05 (0.9269)	7.7356e-05 (0.8401)	1.4289e-04 (0.7066)	1.2140e-04 (0.7475)	2.0408e-04 (0.5863)	2.0243e-04 (0.5884)
Agriculture GDP	-1.5399e-02 (0.326)	-1.6142e-02 (0.3034)	-1.5129e-02 (0.3332)	-1.1856e-02 (0.4473)	-1.0793e-02 (0.488)	-9.0542e-03 (0.5605)
Mining GDP	-7.2840e-03 (0.1727)	-7.3702e-03 (0.1676)	-7.8507e-03 (0.1412)	-7.8755e-03 (0.1399)	-7.7054e-03 (0.1477)	-7.4892e-03 (0.1591)
Manufacturing GDP	9.2974e-03 (0.0061)	8.0768e-03 (0.01997)	8.0187e-03 (0.0187)	8.6543e-03 (0.01)	8.6714e-03 (0.0088)	9.4512e-03 (0.0038)
Tourism GDP	-4.9036e-03 (0.8376)	-4.5723e-03 (0.8484)	-5.3603e-03 (0.8224)	-6.8513e-03 (0.7741)	-9.5386e-03 (0.6889)	-1.0156e-02 (0.6698)

Population	-3.7795e-07 (4.270e-06)	-3.7499e-07 (5.100e-06)	-3.6794e-07 (7.440e-06)	-3.6629e-07 (8.198e-06)	-3.6380e-07 (8.936e-06)	-3.6621e-07 (7.663e-06)
Unified Republican State Government	1.0152e-05 (0.9696)	1.4700e-05 (0.956)	2.6240e-05 (0.9215)	4.1930e-05 (0.8749)	4.9871e-05 (0.8512)	4.9484e-05 (0.8523)
Unified Democrat State Government	2.0629e-04 (0.3753)	2.3446e-04 (0.3131)	2.5392e-04 (0.2736)	2.6945e-04 (0.2452)	2.8840e-04 (0.2127)	3.0106e-04 (0.1933)
Lagged Natural Resources Spending	7.5347e-01 (< 2.2e-16)	7.5250e-01 (< 2.2e-16)	7.4861e-01 (< 2.2e-16)	7.4697e-01 (< 2.2e-16)	7.4286e-01 (< 2.2e-16)	7.4086e-01 (< 2.2e-16)
Difference Variable	-1.7484e-03 (3.401e-09)	-1.8209e-03 (2.081e-09)	-1.9360e-03 (9.044e-11)	-1.9265e-03 (6.755e-11)	-2.0564e-03 (1.866e-12)	-2.0566e-03 (1.316e-12)

Statistically significant p-values are highlighted in bold.

Table 2A Comparative Summary Statistics

1978 - 1991						
Variable	States with No Term Limits			States with Term Limits		
	Mean	St. dev.	Min-Max	Mean	St. dev.	Min - Max
Natural Resources Spending	3.22%	1.25%	0.87-9.27%	4.02%	1.55%	1.13-7.69%
Term Limits	0	0	0-0	0.02	0.14	0-1
Agriculture GDP	1.75%	1.59%	0.29-9.32%	2.52%	2.19%	0.35-10.11%
Mining GDP	2.45%	5.41%	0-3.6%	3.64%	6.94%	0-32.36%
Manufacturing GDP	17.42%	6.81%	2.69-30.49%	14.08%	6.4%	3.13-20.63%
Tourism GDP	1.01%	0.95%	0.31-6.51%	1.59%	2.99%	0.36-16.44%
Unified Republican Government	0.09	0.29	0-1	0.08	0.27	0-1
Unified Democrat Government	0.42	0.49	0-1	0.27	0.44	0-1

1992-2019						
Variable	States with No Term Limits			States with Term Limits		
	Mean	St. dev.	Min-Max	Mean	St. dev.	Min - Max
Natural Resources Spending	2.23%	1.1%	0.4-7.92%	2.93%	1.51%	0.66-8.56%
Term Limits	0	0	0-0	0.95	0.21	0-1
Agriculture GDP	1.6%	1.77%	0.15-11.78%	2.55%	2.54%	0.19-11.7%
Mining GDP	2.83%	5.8%	0-33.03%	3.4%	5.87%	0-32.21%
Manufacturing GDP	13.55%	6.19%	1.7-30.15%	12.31%	5.82%	2.66-36.87%
Tourism GDP	0.95%	1.05%	0.23-7.1%	1.51%	2.79%	0.29-15.47%

Unified Republican Government	0.23	0.42	0-1	0.35	0.48	0-1
Unified Democrat Government	0.25	0.44	0-1	0.13	0.47	0-1

BIBLIOGRAPHY

- “About State Legislatures.” *Research, Publications, Campaigns and Elections in State Legislatures*, 2021, <https://www.ncsl.org/research/about-state-legislatures/frequently-asked-questions-about-term-limits.aspx#:~:text=Presently%2C%2015%20states%20have%20term,in%20six%20of%20thos%20states.>
- Airi, Nikhita, et al. “State and Local Finance Data: Exploring the Census of Governments.” Urban-Brookings Tax Policy Center, <https://state-local-finance-data.taxpolicycenter.org/pages.cfm>.
- Alt, J., & Lowry, R. (2000). A dynamic model of state budget outcomes under divided partisan Government. *Journal of Politics*, 62, 1035-1069.
- Andrews, Richard N. *Managing the Environment, Managing Ourselves: A History of American Environmental Policy*. Yale University Press, 2020.
- Angrist, Joshua D., and Jörn-Steffen Pischke, *Mostly Harmless Econometrics*, Princeton University Press, Princeton, NJ, 2009.
- Arellano, M, “Computing Robust Standard Errors for Within-groups Esimators,” *Oxford Bulletin of Economics and Statistics*, 49(4), 1987, <https://doi.org/10.1111/j.1468-0084.1987.mp49004006>.
- Bangcaya, Matthew, et al. “Professionalization and Effectiveness in State Legislatures.” Texas A&M Master of Public Service and Administration Capstones, 2015, <https://doi.org/https://oaktrust.library.tamu.edu/handle/1969.1/187046>.
- Besley, T., & Case, A. (2003). Political institutions and policy choices: Evidence from the United States. *Journal of Economic Literature*, 41, 7-73.
- Black, Jerome H. “The Multicandidate Calculus of Voting: Application to Canadian Federal Elections.” *American Journal of Political Science*, vol. 22, no. 3, [Midwest Political Science Association, Wiley], 1978, pp. 609–38, <https://doi.org/10.2307/2110464>.
- “Branches of the U.S. Government.” USAGov, 2021, <https://www.usa.gov/branches-of-government>.
- Cain, Bruce E., and Marc A. Levin. “Term Limits.” *Annual Review of Political Science*, vol. 2, no. 1, 1999, pp. 163–188., <https://doi.org/10.1146/annurev.polisci.2.1.163>.
- Caress, Stanley M. “The Impact of Term Limits on Legislative Behavior: An Examination of a Transitional Legislature.” *PS: Political Science & Politics*, vol. 29, no. 4, 1996, pp. 671–676., doi:10.2307/420790.
- Caress, Stanley M., et al. “Effect of Term Limits on the Election of Minority State Legislators.” *State and Local Government Review*, vol. 35, no. 3, Sept. 2003, pp. 183–195, doi:10.1177/0160323X0303500304.
- Carey, John M., et al. “The Effects of Term Limits on State Legislatures.” *Legislative Studies Quarterly*, vol. 23, no. 2, [Wiley, Comparative Legislative Research Center], 1998, pp. 271–300, <https://doi.org/10.2307/440283>.
- Chadha, Anita, and Robert A. Bernstein. “Why Incumbents Are Treated So Harshly: Term Limits for State Legislators.” *American Politics Quarterly*, vol. 24, no. 3, July 1996, pp. 363–376, doi:10.1177/1532673X9602400304.
- Cummins, Jeff. “The Effects of Legislative Term Limits on State Fiscal Conditions.” *American Politics Research*, vol. 41, no. 3, May 2013, pp. 417–442, doi:10.1177/1532673X12461270.
- Dye, T. R. (1984). Party and politics in the states. *Journal of Politics*, 46, 1097-1116.
- Erler, H. Abbie. “Legislative Term Limits and State Spending.” *Public Choice*, vol. 133, no. 3/4, Springer, 2007, pp. 479–94, <http://www.jstor.org/stable/27698198>.
- Glazer, Amihai, and Martin P. Wattenberg. “How Will Term Limits Affect Legislative Work?” *Legislative Term Limits: Public Choice Perspectives*, 1996, pp. 37–46., https://doi.org/10.1007/978-94-009-1812-2_3.

- Grove, Jack, et al. "Do Great Minds Think Alike? the the/Lindau Nobel Laureates Survey." *Times Higher Education*, 19 Oct. 2018, <https://www.timeshighereducation.com/features/do-great-minds-think-alike-the-the-lindau-nobel-laureates-survey>.
- Herrick, Rebekah, and Michael K. Moore. "Political Ambition's Effect on Legislative Behavior: Schlesinger's Typology Reconsidered and Revisited." *The Journal of Politics*, vol. 55, no. 3, [University of Chicago Press, Southern Political Science Association], 1993, pp. 765–76, <https://doi.org/10.2307/2132000>.
- Karp, Jeffery A. "Explaining Public Support for Legislative Term Limits." *Public Opinion Quarterly*, vol. 59, Issue 3, Fall 1995, Pages 373–391, <https://doi.org/10.1086/269482>
- Knight, B. G. (2002). Endogenous federal grants and crowd-out of state government spending: Theory and evidence from the Federal Highway Aid program. *The American Economic Review*, 92, 71-92.
- Kousser, Thad. "The Limited Impact of Term Limits: Contingent Effects on the Complexity and Breadth of Laws." *State Politics & Policy Quarterly*, vol. 6, no. 4, 2006, pp. 410–429., doi:10.1177/153244000600600403.
- Lewis, Daniel C., et al. "Institutional Characteristics and State Policy Priorities: The Impact of Legislatures and Governors." *State Politics & Policy Quarterly*, vol. 15, no. 4, 2015, pp. 447–475., doi:10.1177/1532440015586315.
- "Natural Resources and Environmental Protection." *The Legislative Analyst's Office, The California Legislature's Nonpartisan Fiscal and Policy Advisor*, 18 Oct. 2021, <https://lao.ca.gov/Publications/Report/4463>.
- Moncrief, Gary, and Joel Thompson. "On The Outside Looking in: Lobbyists' Perspectives on the Effects of State Legislative Term Limits." *State Politics & Policy Quarterly*, vol. 1, no. 4, 2001, pp. 394–411., <https://doi.org/10.1177/153244000100100404>.
- Olson, Michael P., and Jon C. Rogowski. "Legislative Term Limits and Polarization." *The Journal of Politics*, vol. 82, no. 2, 2020, pp. 572–586., <https://doi.org/10.1086/706764>.
- "Organization, Mission and Functions Manual: Environment and Natural Resources Division." *Justice Management Division, The United States Department of Justice*, 27 Oct. 2021, <https://www.justice.gov/jmd/organization-mission-and-functions-manual-environment-and-natural-resources-division>.
- Parker, Deb, and Wendy Underhill. "The Term-Limited States." *The National Conference of State Legislatures*, 12 Nov. 2020, <https://www.ncsl.org/research/about-state-legislatures/chart-of-term-limits-states.aspx>.
- Peery, G., & Little, T. H. (2002). *Leading when the bell tolls: perceptions of power among termed and untermmed leaders. The test of time: Coping with legislative term limits*. Lexington, MA: Lexington Books.
- Petracca, Mark P., and Darci Jump. "Term-Limitation Express." *Society*, vol. 31, no. 1, Nov. 1993, pp. 61–69. EBSCOhost, doi:10.1007/BF02693388.
- Petty, Samantha. "Female Candidate Emergence and Term Limits: A State-Level Analysis." *Political Research Quarterly*, vol. 71, no. 2, June 2018, pp. 318–329, doi:10.1177/1065912917735175.
- Pled, Virginie, and George Emmanuel Iatridis. "Corporate Social Responsibility Reporting: Evidence from Environmentally Sensitive Industries in the Usa." *International Review of Accounting, Banking & Finance*, vol. 4, no. 2, Summer 2012, pp. 61–99. EBSCOhost, <https://search.ebscohost.com/login.aspx?direct=true&db=buh&AN=94819616&site=eds-live&scope=site>.
- Reed, R. W. (2006). Democrats, republicans, and taxes: Evidence that political parties matter. *Journal of Public Economics*, 90, 725-750.
- "Regional Data: GDP and Personal Income." *Bureau of Economic Analysis*, 21 Mar. 2022, <https://apps.bea.gov/itable/iTable.cfm?ReqID=70&step=1&acrdn=1>.
- Rogers, D. L., & Rogers, J. H. (2000). Political competition and state government size: Do tighter elections produce looser budgets? *Public Choice*, 105, 1-21.

Snell, Ronald. "Fiscal Policy, State Budgets and Tax Actions | News and Information." *National Conference of State Legislatures*, 2008, <https://www.ncsl.org/research/fiscal-policy/state-.aspx>.

"The Term-Limited States." Policy Research on Legislative Issues, National Council of State Legislatures, 2021, <https://www.ncsl.org/research.aspx>.

"US Term Limits vs Thornton, 115 S. Ct. 1842, 1995." Legal Information Institute, Cornell Law, 22 May 1995, <https://www.law.cornell.edu/supremecourt/text/514/779>.

Weeks, Bob. "Arguments for and against Term Limits." Voice For Liberty, 30 May 2014, <https://www.wichitaliberty.org/politics/arguments-term-limits/>.

Winters, R. (1976). Party control and policy change. *American Journal of Political Science*, 20, 597-636.