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## The Effect of Partisanship on the Passage of Environmental Legislation

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## The Effect of Partisanship on the Passage of Environmental Legislation

### Abstract

This paper addresses the question of how partisanship plays a role in congressional productivity by looking at the number of environmental laws passed each year. This includes analysis of anti-environmental legislation and the connection to party. It was found that, on average, Democratic majorities produce more environmental laws than Republican majorities. Not only that, but polarization has the largest influence on environmental legislation. With an increase in polarization on environmental issues, more anti-environmental legislation is being voted on in Congress, and fewer environmental laws are being passed per year. Ultimately, the conditions producing the lowest number of roll-back environmental bills are a polarized, unified Republican government. The conditions producing the most progressive environmental bills would be an unpolarized, divided Democratic government.

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**Abstract:** *This paper addresses the question of how partisanship plays a role in congressional productivity by looking at the number of environmental laws passed each year. This includes analysis of anti-environmental legislation and the connection to party. It was found that, on average, Democratic majorities produce more environmental laws than Republican majorities. Not only that, but polarization has the largest influence on environmental legislation. With an increase in polarization on environmental issues, more anti-environmental legislation is being voted on in Congress, and fewer environmental laws are being passed per year. Ultimately, the conditions producing the lowest number of roll-back environmental bills are a polarized, unified Republican government. The conditions producing the most progressive environmental bills would be an unpolarized, divided Democratic government.*

### Introduction

In the past 50 years, the United States has undergone a major shift in environmental awareness. Even though the government and the public were beginning to understand the limitations of our environment in the early 20<sup>th</sup> century, it was not until the late 1960's-1980's that the modern environmental movement, known as the "golden era," gained momentum (Klyza & Sousa 2008). This movement included a large push by Congress and pressure from the public to implement environmental protection laws. In the 1970's, Congress passed some of the most important legislation in American environmental history. Although some legislation has been slightly amended since then, these laws built the foundation for environmental protection today. Laws such as the Clean Air Act, the Clean Water Act, National Environmental Policy Act, and Superfund set high standards for regulating pollution and implementing remediation. Others, like the Endangered Species Act and the National Forest Management Act, work in protecting wildlife and our natural resources. Through the decades, environmental issues have become more controversial, though the level of debate among Congress and within the public varies depending on the environmental issue. For instance, climate change, as opposed to water or transportation, has grown to be one of the most disputed problems today (Kim & Urpelainen 2017).

The 1960's and 70's showed exceptional bipartisanship, but, in more recent years, it has been generally accepted that Democrats support pro-environmental policy more often than their Republican counterparts. On account of that, Congress should expect ramifications over environmental policies whenever the majority party changes (Gershtenson, Mangun, & Smith 2004). Democrats and Republicans have become increasingly oppositional in terms of environmental issues. This is arguably due to the Democratic side losing a lot of the more conservative Southerners since the 1980's, resulting in a more homogeneous post-industrial liberal party (Klyza & Sousa 2008). Furthermore, Klyza and Sousa (2008) acknowledge that, accompanying the Republican's desire to limit government interference, the Party's high demands from businesses for relief from the costs of regulation has also been an influence on greater separation. Thus, Congressional voting has become significantly more aligned with this stricter party ideology. Environmental issues, specifically, display increasingly defined partisan development from 1970-2017 compared to congressional polarization on all issues, demonstrated by NOMINATE scores. Environmental issue voting has not always been as polarized as it is today, despite the NOMINATE scores being strongly separated throughout this period. Therefore, environmental polarization, as well as other factors like party control, the number of party bills introduced, and strength of ideology for the party in power, that may impact either the passage of pro-environmental or roll-back laws will be discussed further.<sup>1</sup>

This paper aims to address several questions related to Congress regarding its desire and ability to pass environmental legislation. By examining the years 1970-2017, a bulk of the environmental movement up to the current year will be addressed. The League of Conservation

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<sup>1</sup> After careful consideration on whether to include a measure for public opinion and issue salience, I decided against the inclusion since the measures I had were not providing any additional significance and the paper is focused more so on the partisan/political impact on environmental legislation rather than social influences.

Voters (LCV) provided information needed to study polarization and roll-back legislation. The Comparative Agendas Project (CAP) provided all the other data used in analysis like number of environmental bills per year and number of environmental laws (*Hearings 2017*). Party control, polarization, unified or divided government, number of environmental bills introduced by party, and strength of ideology appeared to be key characteristics that could play a role in the number of significant environmental laws that get passed per year. All of these could influence congressional productivity in terms of environmental legislation, but to what extent is still unknown. With that, I present my main hypothesis: *the number of environmental laws passed per year is most dependent on which party has majority control of Congress*. The issue of how much impact parties have on the passage of environmental legislation is important because 2017 brought about a unified Republican government that has many environmentalists concerned. The goal of this research is to understand if this concern is rational, or if our existing environmental regulations and standards are not threatened despite perceived anti-environmental beliefs among the Republican Party.

### **Literature Review**

The modern environmental movement began in the late 1960's when awareness of environmental limitations and risks was growing among the public. When the 1970's hit, there was a strong push for the passage of major environmental legislation in the United States' government. Some of the earliest analysis of environmental legislation in Congress started arising at this time as well, most likely due to the creation of the League of Conservation Voters in 1970 that allowed for a collection of "scores" related to congressional voting on environmental issues.

In 1971, an article was published with the conclusion that “in their competition for power, both political parties are certain to favor environmental quality, to oppose pollution, to support conservation... [and] are unlikely to present a meaningful choice for the American Voter on these issues” (Ogden 1971). His argument is that environmental politics are “pressure politics” and not partisan politics, and is one that other researchers will ultimately disagree with. Later, a piece by Riley E. Dunlap and Michael P. Allen (1976) clearly stated disagreement with Ogden (1971). Their research was different from most previously published research because, before the LCV, most studies could only focus on individual bills and case studies. The authors focused on Republican-Democrat differences regarding environmental issues. By looking at roll-calls and significant legislation, they found strong support for their hypothesis that there are partisan differences on environmental issues. They predicted that the public is more likely to see setbacks related to environmental issues in Republican controlled Congresses than in Democratic Congresses, since there is a significant difference in policy outcomes depending on party control in Congress (Dunlap & Allen 1976).

It has been a long-standing question of whether there have been notable changes over time in the relationship between partisan affiliation, political ideology, and environmental concern. Dunlap and colleagues realized that “this is a difficult question to answer because the numerous studies have been based on highly divergent samples of the general public, ranging from single communities to the entire nation, as well as special populations such as college students and government officials” (Dunlap, Xiao, & McCright 2001). However, these same researchers got together again and expanded on this subject with a larger time frame, though they came to similar conclusions in both (Dunlap, Xiao, & McCright 2014). This article discusses how congressional Republicans have become more hostile toward environmental protection and

more anti-environmental in how they vote. They studied general Social Survey data from 1974 to 2012 to see whether political polarization has occurred in the public in government spending on environmental protection. The authors found that there was no political divergence on environmental concern in US public from 1974 to 1991, but that there had been significant partisan and ideological polarization since 1992 regarding this issue. They believe that this polarization likely will inhibit the further development and implementation of environmental policy. Their rationale behind this is that the polarization appears to be increasing due to the growing anti-environmental sentiment among conservative elites in Congress.

Both of Dunlap's pieces (1976; 2014) have been cited numerous times by other researchers. For example, in a conference paper from the Midwestern Political Science Association's annual meeting by Joseph Gershtenson, William Mangun, and Brian W. Smith (2004), the authors confirmed that partisanship is important for understanding environmental support and looked further into other determinants like constituency characteristics that previous work had not considered as intensely. They mention how earlier environmental literature like Dunlap and Allen (1976) did not give enough attention to the role of partisanship, most likely because polarization and separation of ideologies has changed over time. Their paper examines voting records for 1993-2002 to understand how the switch in majority party to Republican is affecting the relationship between partisanship and environmental support in both the House and the Senate. The fact that they are considering both chambers gives this paper another distinguishing feature since most other literature focuses on the House.

One of the broadest datasets is from Sun E. Kim and Johannes Urpelainen (2017) because they studied Senate and House votes on environmental legislation from 1971-2013. It furthers the idea of elite partisan polarization that McCright, Xiao, and Dunlap (2014) discuss by saying

“it remains unclear how much of such elite polarization is merely a response to changing electoral conditions or reflects a more fundamental elite conflict,” and call for more research on the idea and its origin (Kim & Urpelainen 2017). They also find consistence with Dunlap and Allen (1976) by acknowledging how environmental issues were never truly bipartisan, even though the gap has grown wider over time. Their results allow them to reject public opinion, the median voter’s preferences, and other differences across districts as factors that could account for the differences between party voting behavior. They also present valuable data on the gap between party voting on various issues like climate change, toxics, land, clean energy, dirty energy, and water. They find that climate change has most often resulted in strict party-line votes.

Research by Jon Agnone (2007), which analyzed public opinion and protest data regarding environmental concern from time-series data for the 1960-98 period, set the basis for data retrieval of environmental legislation. His conclusions led to the idea that protest affects legislative action independent of public opinion, but the impact of public opinion on legislation is greater depending on the amount of protest. He controls for partisanship based on whether the Democratic Party controls Congress and the presidency. Therefore, his results contrast with Kim and Urpelainen (2017) in the sense that public opinion may play a role in the differences in party voting behavior. Agnone (2007) compiled the most significant environmental legislation over these years and found there to be 393 total laws with a maximum yearly count of 32 and a minimum of 10. A drawback is that their research is only consistent with pro-environmental (social movement) goals and little research exists on any roll back or antienvironmental legislation.

### **Questions and Hypotheses**



After these various studies, my research will address the main question of *how does partisanship affect the productivity of Congress regarding the passage of environmental legislation?* This will be addressed with an in-depth look at questions like *how does party polarization affect the passage of environmental legislation? Which congressional characteristics (party control, polarization, ideological strength, unified/divided, number of party bills) has the most significant effect on productivity? What characteristics lead to the introduction/passage of either pro-environmental or anti-environmental legislation?* This will be accomplished by creating a master-list of all the environmental bills introduced and legislation passed per year from 1970-2014<sup>2</sup>. Following that, the LCV scores and voting records of Congress from 1970-2017 will be used to understand the role of polarization and party in environmental voting. My hypotheses will be as follows:

**Hypothesis 1:** More environmental legislation gets passed under Democratic control compared to the amount of environmental legislation passed under Republican control.

**Hypothesis 2:** If there is more polarization within Congressional parties, there will be more rollback legislation passed through Congress under Republican control and less environmental legislation passed under Democratic control.

**Hypothesis 3:** The number of environmental laws passed per year is most dependent on which party has majority control of Congress.

## Methods

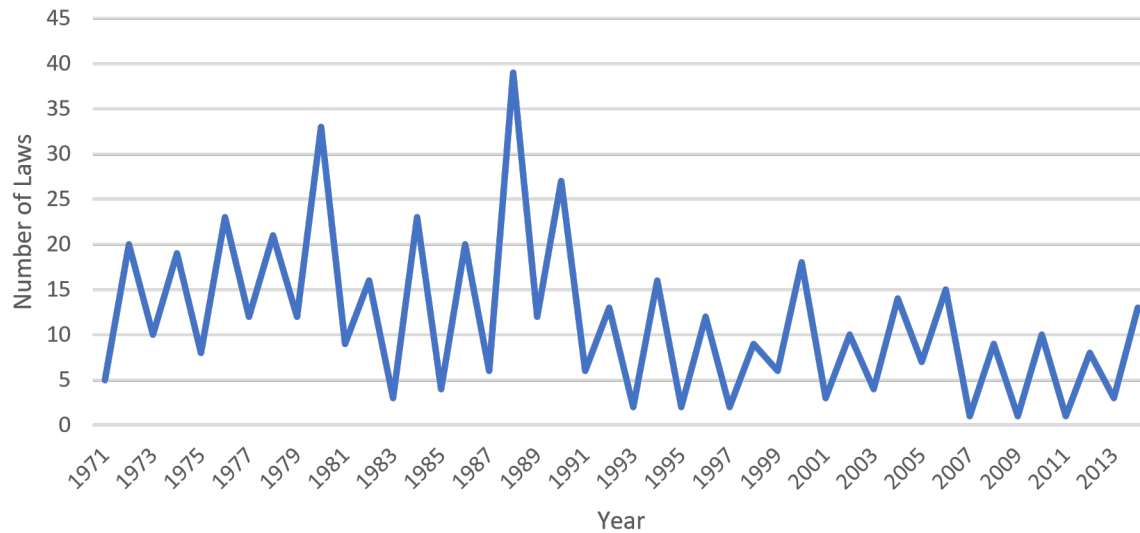
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<sup>2</sup> The CAP only has data up until 2014. <sup>3</sup> “E. Scott Adler and John Wilkerson, Congressional Bills Project: (years of data), NSF 00880066 and 00880061. The views expressed are those of the authors and not the National Science Foundation.”

The first step was gathering data on congressional environmental bills and laws from the Comparative Agenda Project (CAP) for the years 1970-2014 (*Hearings* 2017). Although the late 1960's would have provided valuable information as well, the League of Conservation Voters (LCV) only had accessible scores dating back to 1970 (*National Environmental Scorecard* 1972-2015). In terms of determining which legislation should be considered as "environmental", this study follows the previous study by Agnone (2007). He used a collection of bills and laws that were coded by CAP by their major topic. For this study, the "Environment" policy topic in its entirety was used, along with four subcategories of "Energy": Alternative & Renewable, Conservation, Coal, and Natural Resource & Oil.<sup>3</sup> In addition to Agnone's research, the latter two categories, Coal and Natural Resource & Oil, were added. Although those are energy issues, the LCV includes "dirty" and "clean" energy in their collection of rollcall votes because these issues directly affect human impact on the environment. The total environmental laws passed per year is the main dependent variable in determining the productivity of Congress. If more environmental laws are passed in a year, this would mean that Congress has been more productive.<sup>3</sup> This section will not distinguish how many of these laws are actually anti-environmental or roll-back legislation. This means that even if Congress is more "productive," it is not necessarily good for the environment.

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<sup>3</sup> I did not go through each of the laws that were passed per year to determine whether every single law is relevant to this study, so it is assumed that if it is designated with one of the environmental codes above, it is a reasonable piece of legislation to include.

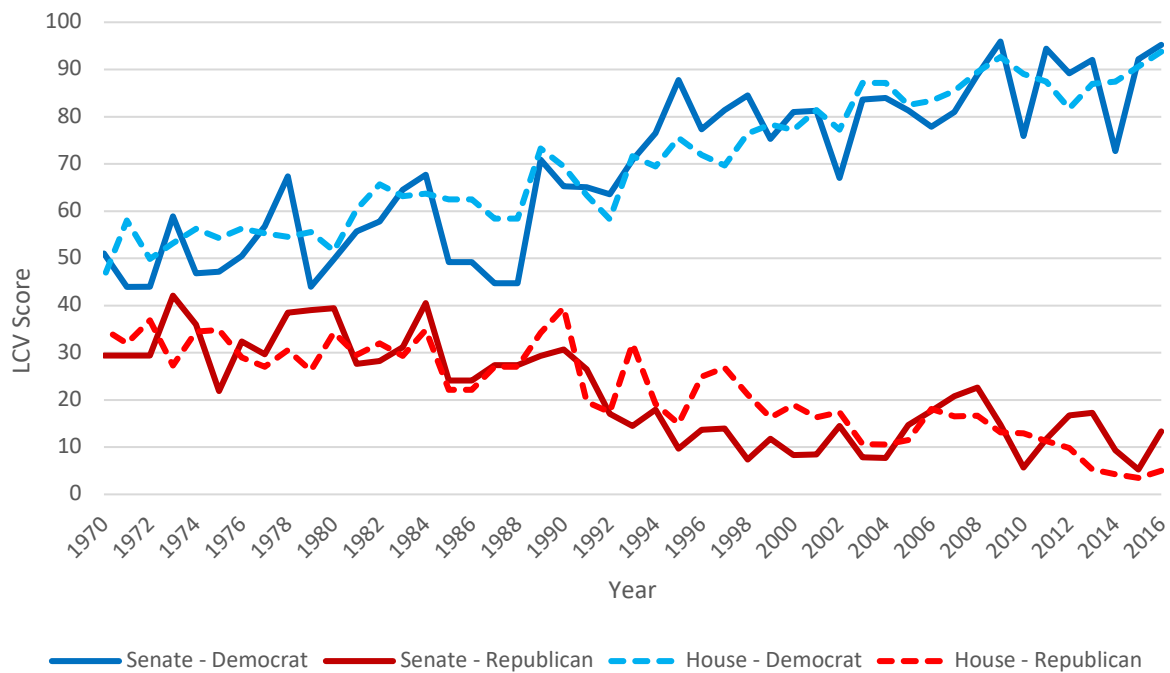
**Figure 1: Total environmental laws per year 1971-2014.**

For the data on LCV scores, all the individual Congress member's scores were gathered for both the House and the Senate, separated by whether they identified as Democrat or Republican, and then combined and averaged per year to analyze the effect of polarization on the amount of environmental legislation passed. The reasoning behind this is that the averages for the House and Senate provided by the LCV do not effectively illustrate the polarization that has occurred over this period between the two parties. The other variables that were used to demonstrate the effect of party were majority control in Congress, the president's party, the majority in House or the Senate, and whether Congress was unified (0) or divided (1). These variables were set up as dummy variables: Democratic (0) or Republican (1).

For the regression analysis, two more variables were created called LCV\_in\_Power and LCV\_Gap in order to appropriately measure the effects of ideology strength and polarization, respectively. LCV\_in\_Power was created by taking the average LCV score for the Democrats if they had control of Congress that year and taking the average LCV score for Republicans if they were the party in control. This provided a measure for how far left or right the parties were each

year. This variable was included because it would explain, for instance, if there was more resistance to anti-environmental legislation or more push for pro-environmental legislation within Congress when Democrats were intensively pro-environmental, and vice versa for Republicans. Secondly, LCV\_Gap is comprised of the gap between the two averaged party scores per year. This effectively measures polarization because if the gap increases, it means Congressional ideologies are more contradictory to one another. This is important because the level of polarization is related to the level of controversy around environmental issues. The level of controversy could imply less productivity or more variation in the number of progressive or roll-back laws.

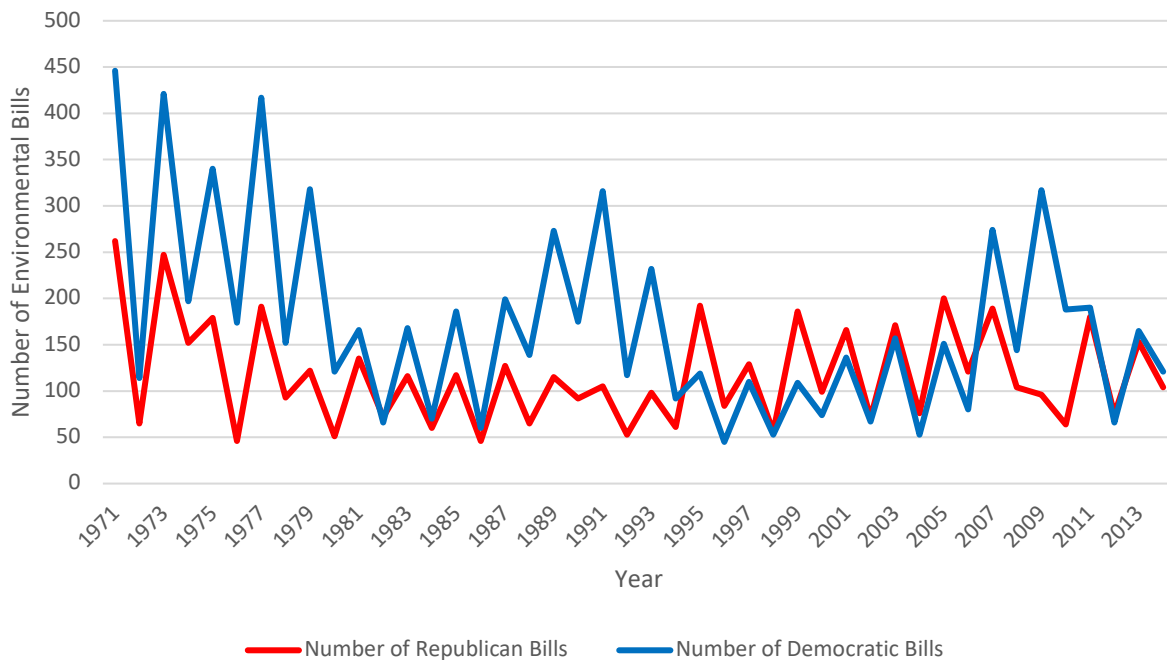
**Figure 2: Averaged LCV Scores in House and Senate for both parties from 1970-2016.**



Finally, this research analyzes whether there was a disparity in the number of bills that were introduced by Democrats or Republicans, and if that influenced which party's bills got passed into law more often, or if there have been any noticeable changes over the years. For the

regression model, another variable was created called Bills\_in\_Power, which is comprised of the number of bills introduced by the party that has control of Congress each year. Essentially, this variable provides a measure to understand the connection between number of laws passed per year and the number of bills that are being introduced by the majority party. The number of Democratic bills and the number of Republican bills had multicollinearity with one another, so they were combined for a more accurate linear regression. With this variable, I would suspect that as the number of bills increases, more environmental legislation gets passed. This becomes a concern when there are more Republican bills being introduced because the chances that some of them are anti-environmental is higher than in the introduction of a large number of Democratic bills.

**Figure 3: This displays the split between the number of environmental bills introduced by each party from 1971-2014.**



## Data and Analysis

### Bivariate correlation: LVC Scores

Firstly, these variables were analyzed using a bivariate matrix to see which variables had significant correlation with one another. One of the strongest correlations was the relationship between year and the split between Democratic and Republican LCV scores. It has been concluded that over the past 40 years, average Republican scores have been decreasing and average Democratic scores have been increasing. This has caused a significant gap between the two parties creating a very polarized Congress for environmental voting. Though I compiled my own averages, this is essentially a three-year addition to research done by Dunlap et al. where they observed that the partisan divide in environmental voting scores increased slightly due to the Democratic voting record, but after 1990, there has been a substantial increase in the partisan divide on environmental voting (Dunlap, Xiao, & McCright 2014). The trend has continued to the point where 2015 and 2016 seem to be the most polarized years yet.

According to the bivariate matrix, year and the Democratic LCV score have a coefficient of .949\*\* and year and the Republican LCV score have a coefficient of -.883\*\*.<sup>4</sup> In terms of how this impacts the number of environmental laws passed per year, there was a correlation of -.473\*\* for the Democratic score and .443\*\* for the Republican score. This implies that as the Democratic LCV score increases, the amount of environmental legislation passed is going to decrease and as the Republican LCV score decreases, the amount of environmental legislation passed is going to decrease also. Thus, with increased polarization between the two parties, congressional productivity will be hindered as less environmental laws are going to be passed. Also, it is important to note that the gap in NOMINATE scores between the two parties have

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<sup>4</sup> \*\* means correlation is significant at the .01 level (2-tailed).

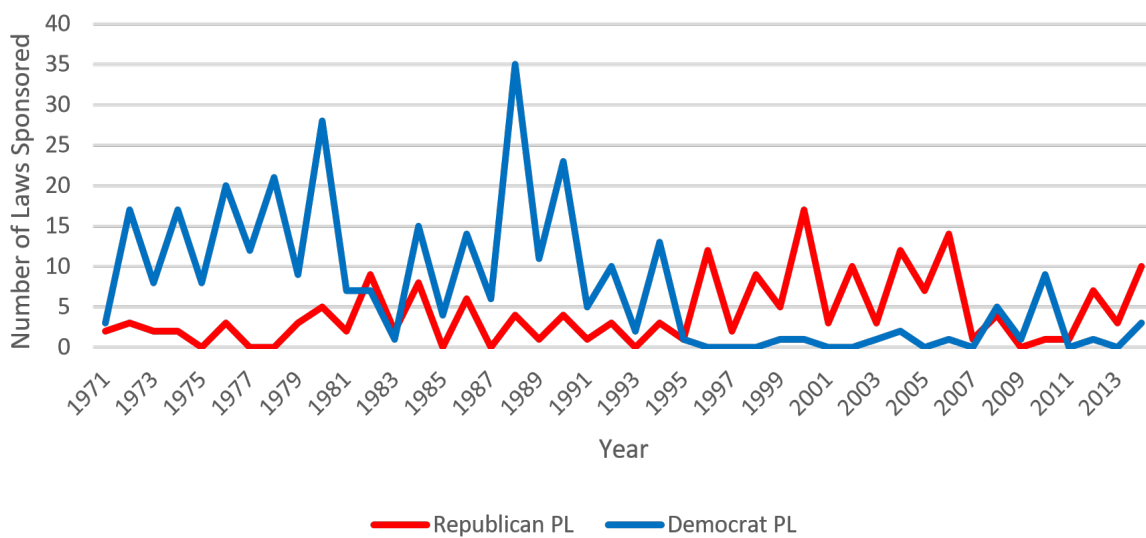
been consistently high and constant over this period while environmental issues, by themselves, have become particularly more partisan within the past 40 years compared to general partisanship within Congress for all issues. This observation coincides with the fact that in 2012, environmental protection was the second most politically divided issue (Dunlap, Xiao, & McCright 2014). Importantly, the correlation between total environmental laws passed per year and the LCV gap resulted in a coefficient of  $-.431^{**}$ . This implies that polarization has a strong relationship with the number of environmental laws passed per year by itself.

### **Bivariate Correlation: Majority**

Congress was controlled by the Republican Party from 1995-2006 and 2011-2014. According to Figure 4 below, Democrats have been, overall, much more successful in getting their environmental bills passed into law, but from 1995-2006 and 2011-2014, the Republicans were responsible for a larger amount legislation passed. Looking back to Figure 3, these years are also the same years that more environmental bills were introduced by Republicans than Democrats. There is a clear relationship between which party has majority control of Congress and the number of bills introduced by each party as well as the number of party bills signed into law. When the Republican Party has the majority, there will be less Democratically sponsored laws per year. The coefficient for this is  $-.565^{**}$  whereas, for majority and Republican sponsored laws, the coefficient is  $.528^{**}$ . This means that the opposite is true for Republican sponsored laws when the majority is Republican since there will be an increase in Republican sponsored laws. One may argue that since there are more Republicans, there will be more Republican sponsored laws as there should be more Republican bills introduced but, according to Figure 3, it is evident that the number of bills introduced by Republicans is more or less equal relative to the

number of bills introduced by Democrats in most years. Overall, total environmental laws and majority have a correlation of  $-.315^*$ .<sup>5</sup> Therefore, we can conclude that when Republicans have control of Congress, there will often be less environmental fewer passed than when Democrats have control.

**Figure 4: Number of environmental party laws (original sponsorship for environmental laws passed per year.**



### Party Switch

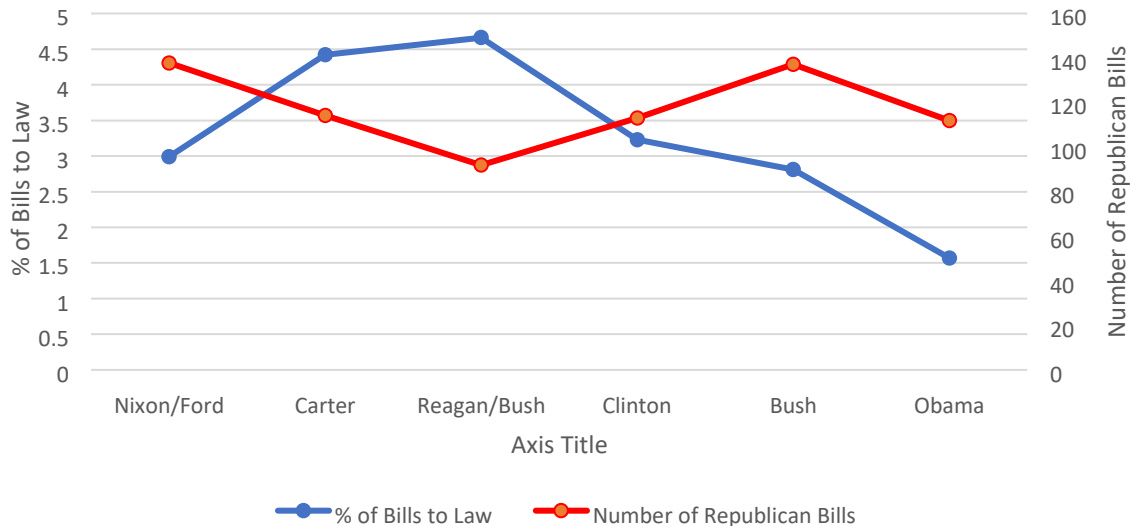
In order to see if there were any obvious changes between any of the different variables when the party switched, a more in-focus study of each presidency according to party (Nixon-Ford and Reagan-Bush are grouped into one since there was no party switch) was conducted. After averaging most of the variables by party of presidency, one of the most seemingly significant

<sup>5</sup> \* means significant at the .05 level.



findings was the relationship between the average number of Republican bills introduced during these presidency terms and the average percent of bills that became a law during the same time.

**Figure 5: The average percent of bills that became a law (number of laws and number of bills introduced per party reign).**



In Figure 5, we can see that there is an inverse relationship between these two variables except for Obama's term. When the number of Republican bills increases, the percent of bills that become a law decreases and vice versa. It would be assumed that when the President's party switches from Republican to Democratic, there should be more environmental bills becoming a law since Democrats are generally more pro-environmental. According to this figure, however, this only occurred when we moved from the Nixon-Ford administration to Carter's. Therefore, the number of Republican bills introduced on average seems as though it could be a reason behind the fact that less bills are becoming laws, even though there is a Democratic President. If there are more Republican bills being introduced, chances that they are more in line with the Republican Party's agenda that tends to be less environmentally friendly. Thus, those bills are not as likely to pass through to become a law in the end since the Democratic administration still

has a large amount of power. It is also evident that the gap between the percent of bills that are becoming law and the number of Republican bills introduced is consistently large over all the Republican administrations no matter which line is higher, meaning their ability to pass legislation has been fairly constant depending on the amount of bills introduced.

On the contrary, the gap during the Democratic administrations suggests that the ability of these administrations to pass laws from the number of bills introduced has been hindered over time, which indicates that there must be something else inhibiting this ability. We see a large decrease in the percentage of total environmental bills that have become laws if strictly looking at Democratic presidencies. Some may say that this could also be because both Clinton and Obama's terms were during a period of divided government, whereas Carter's term had a unified government. Although 1993-94, during Clinton's presidency were unified. That could be what brought up his average considering in 1994, there were fourteen pieces of environmental legislation.<sup>6</sup> Many of the Republican presidencies were also during a time of divided government when Democrats had control of Congress, which could suggest that Democrats are struggling to pass environmental legislation due to the increase in polarization leading to large pushback from the Republicans. If this were true, it would mean that Republicans have introduced many strong anti-environmental bills in recent years that Democrats disapproved of, be that in either chamber, or through presidential veto.

## **Linear Regression**

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<sup>6</sup> There could be a flaw in this data because the averages do not include Obama's second term, making it incomplete because it's possible his second term was very productive, but, for now, by measuring it as a percentage rather than total, it shouldn't make that big of a difference.

For a second form of statistical analysis, a linear regression was developed in order to gauge the overall significance for all the independent variables in relation to the dependent variable, total number of environmental laws passed. In Table 1, the resulting R-squared value was .454 which means that the four partisan variables that were included in the regression explain almost half of the dependent variable. The regression showed that the LCV\_Gap and Bills\_in\_Power were significant (.000) in terms of predicting how many environmental laws will get passed per year. The beta for LCV\_Gap was -.754, and Bills\_in\_Power was -.518. The other two variables were less significant, though unified/divided was a bit more significant than LCV\_in\_Power. From that, it is evident that polarization between the two parties has the largest effect on the outcome of the number of environmental laws passed per year. This is consistent with the assumption that, “major legislation to control climate change and other environmental problems is improbable as long as Republicans and Democrats remain sharply divided” (Kim & Urpelainen 2017, 456).

### **Roll Back Voting**

Up until this point, the difference between anti-environmental legislation and pro-environmental legislation has not been addressed. It should not be assumed that all environmental bills and laws that are originally introduced by Republicans are anti-environmental in nature, but it can be assumed that Republicans introduce more anti-environmental legislation than their Democratic counterparts. As it would take a lot of time to look at all the environmental laws passed and, or, bills introduced over the past 40 years, roll call votes were used as a proxy for this analysis.

**Table 1: Linear regression with Total Environmental Laws per year as dependent variable. Independent (predictor) variables include: LCV\_in\_Power, Unified/Divided, LCV\_Gap, and Bills\_in\_Power.**

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.711 <sup>a</sup>	.506	.454	6.462

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1624.547	4	406.137	9.725	.000 <sup>b</sup>
	Residual	1586.895	38	41.760		
	Total	3211.442	42			

**Coefficients**

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	36.654	5.005		7.323	.000
	LCV_in_Power	-.009	.043	-.026	-.198	.844
	Unified/Divided	-2.123	2.259	-.110	-.940	.353
	LCV_Gap	-.318	.057	-.754	-5.565	.000
	Bills_in_Power	-.049	.012	-.518	-4.118	.000

The LCV has already determined whether Congress members' votes on specific bills are pro- or anti-environmental. Thus, I used the scorecards for various years to count how many pro and anti-environmental bills were voted on, and whether they resulted in the majority voting in the pro-environmental way. The sample years were diversified to include at least a couple in every decade, a couple of unified vs. divided governments, and a couple of variations on majority control and presidential party.<sup>7</sup> As a result, the following years were chosen: 1972, 1975, 1980, 1986, 1988, 1993, 1994, 1995, 1996, 2003, 2006, 2007, 2008, 2010, 2011, 2012, 2016, 2017.

After compiling a chart (see Table 2), averages were taken for each category in each type of government: Democratic majority and Republican president (DM + RP), Democratic majority and Democratic president (DM + DP), Republican majority and Republican president (RM + RP), and Republican majority and Democratic president (RM + DP). The green color coding signifies a number above average and the red color coding signifies a number below average. If bills are pro-environmental in nature, they receive a pro-environmental vote of "YES", whereas the anti-environmental bills receive a pro-environmental vote of "NO" according to the LCV. The ENVIRONMENT WIN category is a compiled number of votes in the House and Senate that resulted in pro-environmental majority vote, and the ENVIRONMENT LOSS category is when the pro-environmental vote did not get the majority vote. To analyze if Congress is intentionally blocking pro-environmental legislation, or if it is pushing through an agenda of anti-environmental legislation, the NUMBER OF YES BILLS THAT GOT VOTED NO and the NUMBER OF NO BILLS THAT GOT VOTED YES were added. This breaks down the ENVIRONMENTAL LOSS category to understand exactly what Congress is doing.

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<sup>7</sup> These years should be considered slightly randomized (though, still inclusive of varied circumstances) so it is possible that there are years that were not included that could have made a difference in the conclusions presented.

The total number of pro-environmental bills that are getting voted on per year seems to correlate strongly with whether the government is unified or divided. There is a higher number of “YES” bills when Congress is divided. As for the total number of anti-environmental bills that are getting voted on, there is a significant difference in the number of bills depending on which party has the majority in Congress. With a Democratic majority, the averages (Table 2) range from 3.6-5.9 bills *lower* than average compared to a Republican majority where the averages range from 5.4-7.8 bills *higher* than average. The average number of “YES” bills that got rejected was notably lower than average for a unified Democratic government, while it was above average for the others (though, not by very much). This suggests that under a unified Democratic government, it is more likely that pro-environmental votes will get passed, whereas it’s fairly constant in all other circumstances. On the contrary, the number of “NO” bills that got passed has a highly partisan relationship. When Congress has a Republican majority, there is an average of up to 15.4 more anti-environmental bills getting approved than when the Democrats have the majority. This implies that Republican majorities are successful in getting roll-back or anti-environmental bills through at least one chamber of Congress.

There appears to be a partisan relationship illustrated by the fact that Democrats vote pro-environmental more often than average. The lowest number is an average of 7.3 bills that resulted in a pro-environmental majority vote that occurred under a unified Republican government. Though there is a partisan relationship for the number of environmental wins, there is an even stronger relationship for the number of environmental losses. With a Democratic majority, the average amount of bills that resulted in an anti-environmental outcome ranges from 6.3-8.1 *less* than average, compared to an average of 9.4-9.7 *more* bills that resulted in this negative outcome when there is a Republican majority.

**Table 2: Anti-environmental bills and pro-environmental bills voted on in Congress over nonconsecutive years. Also included are averages for each type of government in each category.**

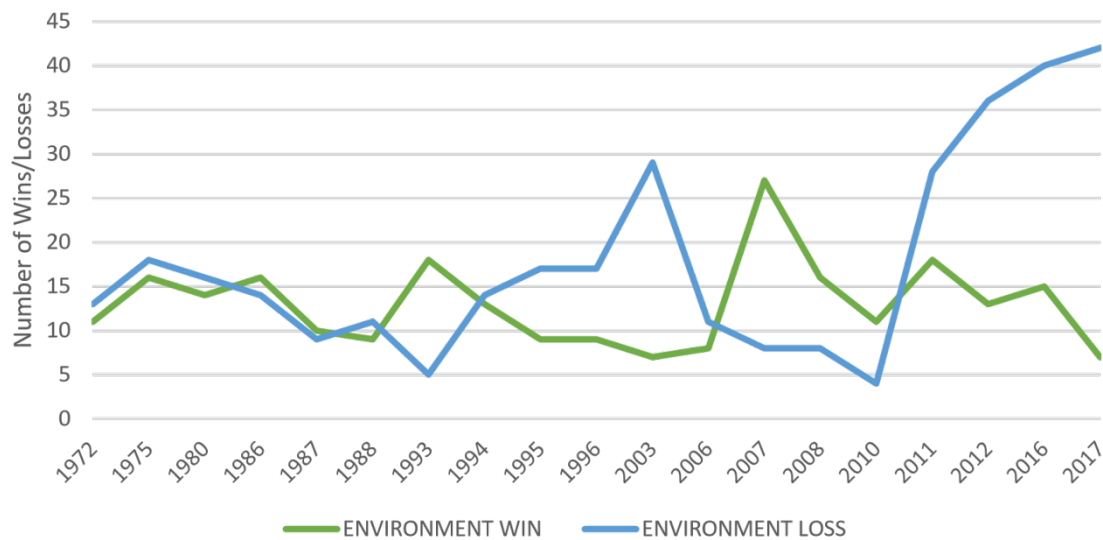
YEAR	“YES” BILLS TOTAL	“NO” BILLS TOTAL	ENVIRONMENT WIN	ENVIRONMENT LOSS	# OF YES BILLS THAT GOT VOTED NO	# OF NO BILLS THAT GOT VOTED YES
1972	14	10	11	13	9	4
1975	25	9	16	18	16	2
1980	13	17	14	16	5	11
1986	16	14	16	14	7	7
1987	8	11	10	9	4	5
1988	9	11	9	11	5	6
1993	10	13	18	5	2	3
1994	10	17	13	14	8	6
1995	11	15	9	17	5	12
1996	14	12	9	17	10	7
2003	23	13	7	29	19	10
2006	10	9	8	11	2	9
2007	23	12	27	8	8	0
2008	16	8	16	8	7	1
2010	10	5	11	4	3	1
2011	9	36	18	28	5	23
2012	17	32	13	36	8	28
2016	28	27	15	40	24	16
2017	5	44	7	42	4	38
<b>MAX</b>	<b>28</b>	<b>44</b>	<b>27</b>	<b>42</b>	<b>24</b>	<b>38</b>
<b>MIN</b>	<b>5</b>	<b>5</b>	<b>7</b>	<b>4</b>	<b>2</b>	<b>0</b>
<b>AVERAGE</b>	<b>14.3</b>	<b>16.6</b>	<b>13</b>	<b>17.9</b>	<b>7.9</b>	<b>9.9</b>

#### Averages

YEAR	“YES” BILLS TOTAL	“NO” BILLS TOTAL	ENVIRONMENT WIN	ENVIRONMENT LOSS	# OF YES BILLS THAT GOT VOTED NO	# OF NO BILLS THAT GOT VOTED YES
DM + RP	15.9	10.7	15	11.6	8	3.6
DM + DP	10.8	13	14	9.8	4.5	5.3
RM + RP	12.7	22	7.3	27.3	8.3	19
RM + DP	15.8	24.4	12.8	27.6	10.4	17.2

This corroborates the 40-year-old prediction made by Dunlap and Allen (1976) that said the public is more likely to see setbacks in Republican controlled Congresses than a Democratic controlled one.

**Figure 6: Environmental wins are counted when bills result in the pro-environmental vote getting the majority vote. Environmental losses are counted when the pro-environmental vote does not get the majority vote.**



In terms of the number of environmental wins and losses during roll call voting over time, they were consistently similar until about the late 1980's when the gap started increasing. It can be argued that this is correlated to the polarization of the two parties that has occurred within Congress regarding environmental voting (recall Figure 2). Though these years are not consecutive, there is an obvious difference between the early-1970's and the mid-2010's. This does not directly imply anything about Congressional productivity in passing environmental laws, but it does speak to the amount of controversy within Congress. For instance, the number of anti-environmental bills that have been voted on since 2011 has been around double the number of bills that were voted on before then, even in a Republican controlled government. This reflects a previous conclusion by Dunlap, Xiao, and McCright (2014) that noted Republican ideology has become increasingly more anti-environmental in recent years. More specifically,



2017 to date and the Trump administration have set the record number of roll-back legislation that got voted on and approved. His administration has also set a record minimum for pro-environmental bills that got passed in either chamber of Congress. Not only that, but it is interesting that 2017 set the record for the lowest number of “YES” bills that got denied since it would be assumed that Democratic leadership would deny the lowest number of pro-environmental bills. Thus, it should be noted that 2017 also set the record for a minimum of five pro-environmental bills that were even voted on.

### **Findings**

***Hypothesis 1: More environmental legislation gets passed under Democratic control compared to the amount of environmental legislation under Republican control.***

The average number of laws passed during Democratic controlled years is 11.71 compared to 6.94 laws for Republican controlled years. This research can support this hypothesis. Looking deeper into this, there is a difference between unified and divided governments for both parties. When government has a Democratic majority and is unified, they pass 11.875 laws on average, and when it is divided, they pass 11.65 laws on average per year. When a government has a Republican majority and is unified, they pass 8.43 laws on average, but 6.1 laws on average when divided. Accordingly, the President’s party does not make that much of a difference in terms of the passage of environmental laws if Congress has a Democratic majority. On the contrary, there is a large difference between the number of environmental laws passed under a Republican controlled Congress, and even less legislation is passed when the president is a Democrat. Though there are more laws signed during a unified Republican government, it is more likely these laws are more anti-environmental in nature. The smaller number of laws under a Democratic presidency and Republican majority can be explained by the

fact that the President is probably vetoing some of the laws. This can be seen in some of Obama's last years when he vetoed at least four harmful pieces of environmental legislation (according to the LCV rating) that passed both chambers of Congress: S.J. Res 22, S.J. Res 23, S.J. Res 24, and S.1 (*Legislation 1973-2018*).

***Hypothesis 2: If there is more polarization within Congressional parties, there will be more rollback legislation passed through Congress under Republican control and less progressive environmental legislation passed under Democratic control.***

This statement is not referring to actual laws that have been signed, since roll-call votes were used as a proxy of progress for this instead. It is difficult to determine the role that an increase in polarization has had on the amount of legislation because there isn't enough variation between the two parties in the last 40 years to draw a distinct conclusion. Despite this, there is a good amount of evidence to suggest that the first half of this hypothesis is true, while the second half does not seem to be. By looking at the number of "environmental losses," it is evident that the number of environmental losses has significantly increased since the 1970's. The number of "environmental wins" has had a few spikes, but for the most part, it has proven to be consistent. Therefore, it can be said that with an increased ideology gap between the two parties, the discrepancy between the number of environmental wins and losses has been greater over time. This is mostly due to the amount of roll-back legislation that got passed in roll-call voting during the Republican controlled Congressional years, demonstrated by the "NO" BILLS THAT GOT VOTED "YES" column in Table 2. Nevertheless, the Democratic majorities stayed strong in passing progressive environmental legislation through at least one chamber.

***Hypothesis 3: The number of environmental laws passed per year is most dependent on which party has majority control of Congress.***

From the bivariate correlation, the data supports this hypothesis that majority control does have a large impact on the number of environmental laws passed per year. It is evident in the linear regression as well, because the Bills\_in\_Power variable was dependent on majority control; however, the results showed that polarization and the number of bills that the majority party introduced were the most significant variables in predicting in the number of environmental laws passed per year. Therefore, the hypothesis should not be completely rejected, but the results show that polarization played a stronger role in the prediction of the number of environmental laws passed. This also coincided with the bivariate correlation results. Because of this, we can assume that when there is a larger gap between the two parties regarding their average LCV scores, the number of environmental laws passed will be lower than they would be if the LCV scores were closer to being evenly split. This idea can be confirmed by the previous study done by Kim and Urpelainen (2017) where they concluded that partisan polarization was a major barrier to the new environmental policies. The fact that polarization has a significant influence on how many environmental laws get passed per year indicates that partisanship, overall, has a profound influence on Congressional productivity.

This hypothesis can be further defined in terms of what *kind* of legislation gets passed (progressive or roll-back), based on which party has majority control of Congress. Yes, it is important to consider other things like constituency opinion and issue salience when studying what kinds of bills legislators introduce as well as how they vote, but the impact of party ideology on the approval or rejection of both pro- and anti-environmental legislation in Congress seems to be increasingly important, especially when Congress is more polarized. Party-line voting has become more common over time, which means there will either be more push back between the two parties in the passage of environmental legislation (seen in divided

governments), or a significant increase in the number of progressive environmental laws during Democratic years and the number of roll-back bills during Republican years (seen in unified governments). Unfortunately, there is no regression data for this claim, but by looking at the case study years, the importance of party is apparent in terms of which bills end up getting voted on and which ones pass through or get denied. There have been particularly more anti-environmental bills being voted on than previous centuries. Not only that, but the increase in environmental losses in the past 17 years also illustrates that most of that anti-environmental legislation is being approved in at least one chamber of Congress. Despite this, if there is a Democratic President that can choose not to sign this legislation in the end, these negative bills will, most likely, not become a law.

### **Conclusion**

Though there has not been a significant downward trend in environmental legislation in the past 40 years or so, there have not been any large peak years since 1990. It can be concluded that more environmental legislation gets passed under Democratic control than Republican. The lowest average of environmental laws gets passed under a unified Republican government compared to all other government conditions. In addition to that, there has been significantly more roll-back environmental legislation being voted on in Congress in the past seven years. I contend that this is largely due to increasing polarization between the two parties on environmental issues. Thus, roll-back legislation and high polarization appear to have a positive relationship, whereas positive environmental legislation appears to be fairly stable despite the increasing gap. Along with polarization affecting the amount of anti-environmental legislation being voted on, it significantly impacts the number of environmental laws passed overall. Regardless of all of this, even if there is more anti-environmental legislation being introduced

and passed in Congress, it will not necessarily result in more roll-back environmental laws because of the president's power to veto if needed. A unified Republican government, on the other hand, will most likely bring about record numbers of anti-environmental legislation, being both introduced and passed, since polarization is currently high and there are few limitations on the federal government if most Senators, Congressional Representatives, and the President, all push to implement an anti-environmental agenda. Following the trends, it would be a logical prediction that under the Trump administration, we will see a far higher number of anti-environmental legislation be passed into law, at least, during the next half of the 115<sup>th</sup> Congress.

Although my data presentation leads to these conclusions, it is difficult to say if they are completely accurate since not every single year from 1970-2017 was studied when looking at roll-back legislation. Thus, there is an opportunity for further research in this area by using data from every single year available to see if the results are altered in any way. Not only that, but more research can be done by looking at all the laws that were passed per year and determining whether they should be considered pro-environmental or anti-environmental to get a more accurate and quantitative understanding of the environmental laws passed per year. It would be interesting to see how partisanship connects to environmental agency funding and the implementation and regulation of environmental laws.

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