

Why the United States Lacks a Federal Climate Policy: Collective Action Problems, Tea Parties, and Blue Dogs

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Abstract:

In 2009, President Barack Obama and a majority Democratic 111th Congress came to office in a favorable position to enact federal climate legislation. But less than two years later prospects for passing that legislation dimmed considerably. Most explanations for this turn of events fault 1) institutional rules requiring bills receive a 60-vote supra-majority to avoid a Senate filibuster; and 2) the Obama administration's decision to prioritize health care over climate change. Both of these explanations, however, overlook that passing climate legislation requires overcoming a collective action problem. This paper uses a logistical regression model on House Bill (H.R.) 2454 (The American Clean Energy and Security Act of 2009) to demonstrate that a divided Democratic party made resolving this problem particularly challenging during the 111th Congress. To make this problem more tractable, supportive Democrats would be well-advised to build coalitions for climate legislation around its non-climate benefits and the costs of the *status quo* fragmented regulatory environment. These concentrated benefits/costs may not only break fragile ties between pragmatic and tea party Republicans. The added political benefits of triangulating Republicans may also strengthen incentives for blue dog and green Democrats to find common cause in climate legislation.

Keywords: United States Climate Policy; Political Parties; Collective Action Problems; Tea Party Republicans, Blue Dog Democrats

The findings, interpretations, views, and conclusions expressed in this paper are entirely those of the author in her personal capacity, and do not necessarily represent the views of IGES.

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1. Introduction

In 2009, President Barack Obama and a majority Democratic 111th Congress came to office in a seemingly favorable position to enact federal climate legislation. That legislation would, in turn, inject momentum into international negotiations over a post-Kyoto climate agreement at the 15th Conference of Parties (COP15) to the United Nations Framework Convention on Climate Change (UNFCCC) at the close of 2009. At least this was the prevailing sentiment nearly three years ago (Dickinson, 2010; Merchant, 2010). Today these hopes have faded like the “yes we can” optimism President Obama rode into office. The question motivating this paper turns that optimism on its head: why can’t the United States enact federal climate change legislation?

Most answers to the above question fault 1) institutional rules requiring bills receive a 60-vote supra-majority to avoid a Senate filibuster; and 2) the Obama administration’s decision to prioritize health care over climate change. Both of these explanations, however, overlook that passing climate legislation requires overcoming a collective action problem. This paper uses a logistical regression model on House Bill (H.R.) 2454 (The American Clean Energy and Security Act of 2009) to demonstrate that a divided Democratic party made resolving this problem particularly challenging during the 111th Congress. To make collective action more feasible, supportive Democrats would be well-advised to build coalitions for climate legislation around its non-climate benefits and the costs of the *status quo* fragmented regulatory environment. These concentrated benefits/costs may not only break fragile ties between pragmatic and tea party Republicans. The added political benefits of triangulating Republicans may also strengthen incentives for blue dog and green Democrats to find common cause in climate legislation.

This paper is organized into four sections. The next section draws upon theories on collective action to understand the difficulties in enacting climate legislation. The third section tests a theory about the role of political parties with a logistical regression model and analysis of votes for H.R. 2454. A final

section concludes with policy recommendations. The paper also draws upon insights gleaned from stakeholder interviews conducted during the winter of 2011.

2. Climate Change Legislation: A Collective Action Problem

The United States’ response to climate change has drawn interest for as long as anthropogenic greenhouse gases (GHGs) emissions have been linked to rising global temperatures. The interest is justified on several grounds. The United States is the world’s largest economy and emits nearly one-fourth of global GHGs. It is also home to the world’s second highest levels of per capita GHG emissions and bears the greatest historic responsibility for those emissions (See Table 1). However, as exemplified by the 2004 withdrawal from the Kyoto Protocol, key elements of the United States government have been reluctant to commit to GHG mitigation targets.⁵ Not surprisingly, a growing chorus of world leaders has called for the United States to “do more on climate change (Reuters, 2007; AFP, 2009).”

More surprising is the range of stakeholders echoing these calls in the United States. For instance, many in the national security community have backed climate legislation intended to curb addictions to imported oil (Energy Security Leadership Council, 2006). Meanwhile, a growing segment of the environmental community has supported climate policy because its benefits extend beyond a stable climate to clean air and livable communities (Groosman et al, 2009). Further, some in the business community have sought a climate policy promoting low carbon technologies and green collar jobs (USCAP, 2007). The multiple non-climate benefits highlighted in the above energy security, environmental, and eco-business arguments would presumably appeal to policymakers. But identifying these benefits has thus far proven easier than crafting policy capable of realizing them.

⁵ This was partially attributable to President George W. Bush’s determination to keep the United States outside of Kyoto as well as the requirement that ratifying a treaty requires approval from two-thirds of the Senate.

Table 1. Basic Data on the United States

CO ₂ emission	5,826.7 Million tons
Historical CO ₂ emissions (1850-2007)	339,174 Mt
Per capita CO ₂ emissions	18.67 ton/capita
Per GDP CO ₂ emissions GDP	2,502.00 USD/GDP

Sources: World Resources Institute, “Climate Analysis Indicators Tool,” <http://cait.wri.org/>

The main reason for the difficulties is not benefits *per se* but the interests to which they accrue. At the international level, a longstanding challenge for climate change has been that, because it is inherently difficult to prevent countries from enjoying the benefits of a stable climate, governments are inclined to free ride rather than contribute to this global public good (Ostrom, 1990). At the national level, benefits from energy security, environmental quality, and eco-business are more concentrated insofar as they accrue to smaller groups of interests. But these benefits also tend to be distributed among many stakeholders over a longer time horizon than GHG mitigation costs (Victor, 2001; Victor, 2004; Jacobson, 2002). The difference in the distribution of costs and benefits lie at the core of a collective action problem that can, in turn, result in the undersupply of public goods (Olson, 1965).

The recognition that free markets tend to undersupply of public goods was one of the motivations for creating governments. Governments were supposed to step in where markets fail. However, the degree to which governments succeed in correcting market failures and overcoming collective action problems varies over time and across countries (Ostrom, 1990). While some governments offer ample opportunities to aggregate and articulate diffuse interests, others favor well-organized groups. While some politicians capitalize on changing political landscapes and shifting popular attitudes to mobilize disparate interests, others allow these windows of opportunities to close. There are many reasons for

the variation in the supply of public goods; two of the more important are policymaking institutions and critical moments.

2.1 Policymaking Institutions: A Veto Players Argument

Most institutional arguments are based on the rules governing lawmaking. The term “veto players” succinctly summarizes their impacts. Veto players refer to political actors that can prevent a proposed policy from moving forward. At the core of the veto player’s argument lies a simple hypothesis: the more veto players, the more difficulties changing policy. There is a positive correlation between veto players and policy stability (Tsebelis, 2007; Bang, 2010).

The checks and balances in the United States policymaking process illustrate this correlation well. This process typically begins with a member of either the House of Representatives or the Senate authoring a bill. The bill then is assigned to a committee (and usually a smaller subcommittee within the larger committee). Once assigned, the legislation can be debated and voted upon by committee members. Assuming a majority of representatives in the committee vote for the bill, the proposed legislation can then be scheduled for debate and a vote in the larger Senate and House of Representatives.

Since both the Senate and the House of Representatives must approve a version of the bill before passage, the number of votes needed to get out of either side of the legislature warrants careful

consideration. The 435-seat House of Representatives requires a simple majority to pass a bill; the Senate requires a qualified 60-vote majority to overcome a procedural maneuver known as a filibuster. A filibuster can stall legislative debate and effectively kill legislation; hence getting past this 60-seat threshold is both critical and difficult. The main reason it is difficult is each of the 50 states, regardless of population, has two Senators. Therefore a coalition of 41 Senators representing a small proportion of the electorate can derail reforms.

If the voting thresholds are passed in the Senate and the House of Representatives, then a joint Senate-House committee will be created to reconcile language between the two bills. The President can then either sign or veto the bill. In the former case, the bill becomes law. In the latter, becoming law requires a two-thirds vote from the House of Representatives to overturn a Presidential veto.

As suggested by these hurdles, changing policy from the status quo is challenging in the United States. This is all the more true for climate policy because it touches many well-organized interests that stand to lose from such reforms. Some have suggested that this is why it took a decade of deliberations to pass the Energy Policy Act in 2005—a bill that the former Bush Administration backed partially because it increased energy efficiency and renewable energy but mostly because it extended domestic exploration of oil and gas. It is also why The Energy Independence and Security Act of 2007—a bill a Democratic-majority Congress introduced to reverse some of the Energy Policy Act of 2005 more objectionable statutes—was stripped of clean energy provisions such as a renewable electricity standard (RES) before it passed (Bang, 2010; Sissine, 2007).

In both the Energy Policy Act in 2005 and The Energy Independence and Security Act of 2007, policy change was incremental. In that respect, they both conform to the predictions in the veto players argument (Bang, 2010). However, in both cases an opportunity for more radical policy ultimately resulted in an outcome that leaned toward the right of the ideological spectrum. The veto players

argument has less to offer in explaining the direction of policy change and whether a more radical shift in policy is possible. Another approach that can shed light on breaking this relatively stable equilibrium focuses on how politicians manage popular mandates for change at critical moments.

2.2 Critical Moments: What Happened to Obama's Support?

The above institutional argument is not only set of claims about the factors influencing the provision of public goods. Another set of arguments concentrates on whether politicians capitalize on shifts in popular attitudes and political landscapes to clear institutional hurdles. This often amounts to whether the President gets involved in a policy debate at a juncture when rallying the electorate could be the difference between legislation advancing or stalling. This type of argument can be applied to the Obama administration's first year in office.

A little background is useful to understand how President Obama managed that first year. And a critical piece of background was that climate change was made a priority during Obama's run for office. Obama's support for the issue was readily apparent throughout the campaign, from early stump speeches to the inaugural address where he remarked:

...I am absolutely certain that generations from now, we will be able to look back and tell our children that this was the moment when we began to provide care for the sick and good jobs to the jobless; this was the *moment when the rise of the oceans began to slow and our planet began to heal* (Obama, 2008).

However, once President Obama entered office, it became equally apparent that health care took precedence over climate change. It was further evident that, with the Obama Administration investing time and resources into health care (the Patient Protection and Affordable Care Act (PPACA) and the Health Care and Education Reconciliation Act of 2010), "little oxygen was left in the room for climate change (Interview File)."

This ordering of priorities proved unfortunate because several climate bills were introduced during the first year in office. Among the most notable was H.R. 2454 (introduced by Representative Henry Waxman, Democrat, 30th District, California and Representative Edward Markey, Democrat, 7th District, Massachusetts). H.R. 2454 covered, *inter alia*, renewable electricity and efficiency standards; carbon capture and storage; performance standards for new coal-fired power plants; research and development for electric vehicles; support for smart grid; energy efficiency programs for buildings, lighting, appliances, and vehicles; and domestic and international adaptation initiatives. Above and beyond this collection of provisions, H.R. 2454 was anchored by a cap-and-trade program that called for reductions of carbon dioxide (CO₂) beginning at 3% off of 2005 levels by 2012 and reaching 83% off 2005 levels by 2050. H.R. 2454 passed by a narrow 219-213 majority in the House of Representatives, but died when a companion bill was not introduced in the Senate. In retrospect, H.R. 2454—and another Senate proposal from Senator John Kerry, Democrat, Massachusetts; Senator Joe Lieberman, Independent, Connecticut; and Lindsey Graham, Republican, South Carolina—may have been the closest the United States would get to the federal climate legislation for some time (Lizza, 2010).

That H.R. 2454 was indeed a high watermark became apparent following a special Senate election in Massachusetts in January 2010. The special election saw the then vacant seat of recently deceased Democratic Senator Ted Kennedy move to Republican Scott Brown. The transfer of the seat would not only remove the filibuster-proof majority Democrats held in the Senate, but anticipate more sweeping changes across the entire Congress in the 2010 mid-term elections. In those elections, Republicans capitalized on the sluggish pace of economic recovery and the interventionist nature of health care reforms to regain a majority in the House of Representatives (from 239 to 183 seats) and expand seat totals in the Senate (from 40 to 46 seats). The change in the makeup of the legislature also had other implications that further hurt the chances of climate legislation. For instance, the chairmanship of

the Energy and Commerce Committee was switched from the Democratic sponsor of H.R. 2454, Henry Waxman, to a staunch opponent of the bill, Fred Upton (Republican, 6th District, Michigan).

The critical moments argument can illuminate how the lack of support from the President at a key juncture made it difficult to pass climate change legislation. It also underlines that with that moment gone the institutional barriers highlighted previously became more formidable; the politics of the time coupled with institutions from the past to prevent the passage of said legislation. What the critical moments explanation does not address is why the President did not work with Democratic majorities in Congress to push through climate legislation given the well-known risks of losing seats in mid-term elections. The easy answer to this question, as the next section will argue, was it was not so easy to work with a Democratic Party that was divided over climate change.

2.3 Political Parties: Divided over Climate Change

Both the institutional and critical moment arguments explain part of the climate policy story, but downplay the role political parties. This oversight is important because these arguments effectively overlook the collective action problem that makes passing climate legislation challenging. It is also unfortunate because political parties have several properties that can help overcome collective action problems (Aldrich, 1995). These include crafting a policy platform that unites politicians with difference preference schedules in the pursuit of collective goods. They also include servicing an organizational infrastructure that can reduce the costs of information sharing for candidates and reduce the costs of information gathering for voters. (Kitschelt, 2000) By uniting politicians and lowering organizational costs, parties convert a public good that is inherently diffuse into a private benefit that is not. How effectively parties perform at this conversion nevertheless depends on their ability to work with members of the other and their own party.

Since the 1980s, dramatic changes in the party landscape in the United States have made passing legislation increasingly difficult. One of the more noteworthy shifts has seen conservatives replace moderate elements in the Republican Party. This initially gradual tilt rightward has gained momentum in 2009 with the emergence of the tea party. The upshot of the tea party's ascent has been some signs of intra-party divisions that will become important to the paper's later argument. Since the 1980s, there has also been a corresponding rise of more liberal as well right-leaning elements in the Democratic Party. These right-leaning elements known as the Blue Dog Democrats are the offshoot of what used to be exclusively Southern Democrats who are committed to "a free market which is not controlled, dominated and excessively regulated by the government (Blue Dog Coalition, 2011b)." Along with the decline of strong leadership in both parties, these trends have made brokering a compromise on any form of legislation difficult. In many cases, partisan divisions have meant investing the kind of sustained effort the Obama administration made in health care to secure a bill's passage.

While this describes how parties may have influenced passing legislation generally, two additional considerations merit underlining for climate change legislation specifically. The first of these considerations involves the coherence in the Democratic Party. One would anticipate that the Democratic Party would be more supportive of climate change legislation because it tends to look more favorably on interventions in markets in the name of improving social welfare. Climate legislation, however, poses a problem for Democrats from regions that would be worse off from such legislation; for example, representatives from districts with coal-fired power plants would have more to lose than gain from voting for the legislation. Yet another key consideration is that Republicans are unlikely to feel the same compulsion. That is, there is no inherent conflict between Republican's traditional distaste for intervening in free markets and opposition to climate legislation that intervenes in those markets. Both suggest are climate change. The mutually reinforcing nature of these preferences, in

turn, makes it easier for Republicans to stand together against climate change than for Democrats to stand together for climate change legislation.

These considerations leads to two hypotheses concerning how legislators from different parties will vote on climate change legislation:

- Hypothesis 1: Republicans will be more likely to oppose climate legislation due to their opposition to intervention in free markets.
- Hypothesis 2: The higher the per capita emission in their districts, the less likely Democrats will support climate legislation.

The next logical step is testing these hypotheses on the votes from the aforementioned H.R. 2454. Before doing so, a possible critique of this test should be raised and addressed. One might reasonably argue that looking at the support and opposition for a bill that already passed the House of Representatives is not the best way to examine the factors influencing the passage of climate change legislation. Since the bill has already passed the House of Representative, a more appropriate test would look at the likelihood of a bill passing in the Senate. The Senate, in this instance, is the key veto player. While this is a fair critique, it is worth reiterating that if it was difficult to bring together elements of the Democrat Party to get a simple majority in the House of Representatives, those difficulties will be all the more problematic in the Senate since the bar on the passage on legislation is higher.

3. Tests

3.1 Data

This section uses a multivariate logistical regression model or logit to evaluate explanations for the differences in the votes from the 111th Congress on H.R. 2454. The code needed to reproduce the results from the model can be found in Appendix (for the program R).

The dependent variable in the model is dichotomous:

a vote favoring the legislation was coded 1, while a vote opposing the legislation was coded 0. H.R. 2454 passed the House of Representatives with a narrow majority of votes (219 to 212 or 50.8% in favor). Out of a possible 435 Representatives, 431 cast a vote. Three representatives did not vote (Jeff Flake, Republican, 6th District, Arizona; John Sullivan, Republican, 1st District, Oklahoma; and Alcee L. Hastings, Democrat, 23rd District, Florida). There is also no data for the seat from the 32nd district in California because it was vacant at the time of the vote.

To determine the attributes associated with the Representatives voting for or against the legislation, the model includes the main explanatory variables in the hypotheses: 1) party affiliation; and 2) average per capita CO₂ emissions in a congressional district. The model controls for median household incomes so as to avoid omissions of possible factors influencing the estimates of the coefficients of the main variables (other controls such as educational level were included in other runs of the model but were not significant and did not appreciably change the values of the main explanatory variables).

As with any model, variable construction is very important. Creating a variable for “party affiliation” was straightforward. Out of 431 Congress people casting votes, 258 were Democrats (coded 1) and the remaining 175 were Republicans (coded 0). This reflects the majority that the Democrats held in the 111th Congress.

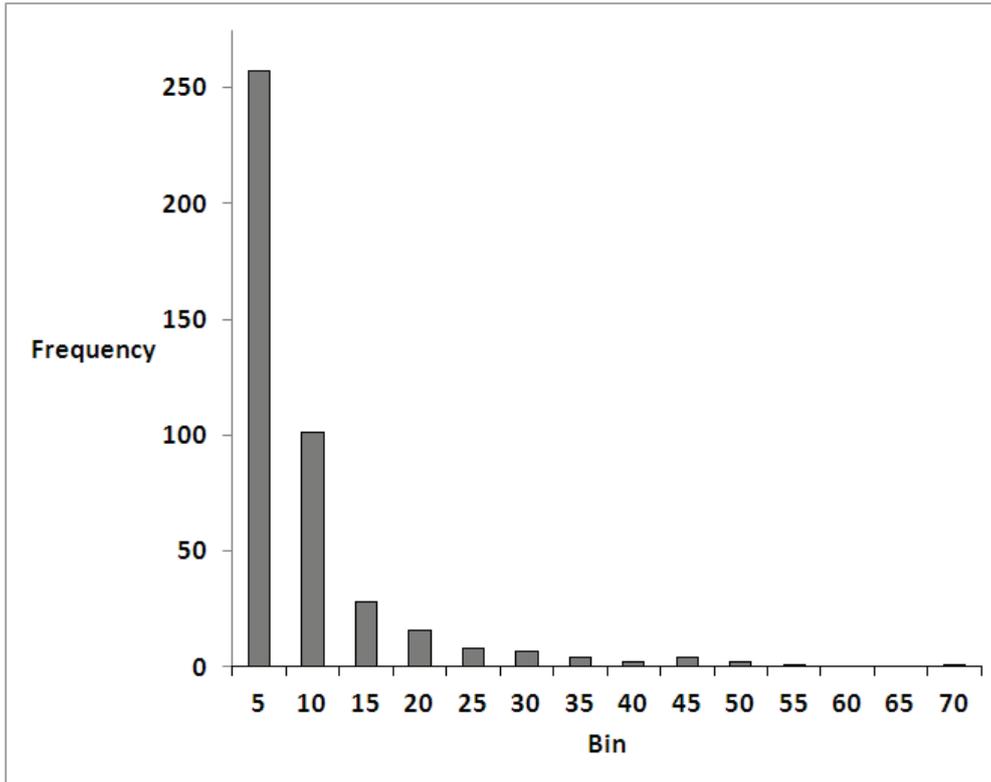
Building a variable for per capita CO₂ emissions was more complex. *The Vulcan United States Fossil Fuel CO₂ Emissions Inventory Dataset* for 3,142 counties was used for these purposes (Gurney et al, 2009). Unfortunately, there is not a one-to-one correspondence between the geographical borders of counties (in the Vulcan data) and congressional

districts (for the voting data). Congressional districts are based upon population and can vary greatly in geographical size. In sparsely populated states, a single congressional district can span many counties; densely populated cities, on the other hand, can cover many congressional districts.

These difficulties notwithstanding, the following admittedly imperfect procedure was used to estimate per capita CO₂ emissions for each congressional district. The congressional district data was matched with *all* corresponding counties in that district. An evenly weighted average of per capita CO₂ emissions for each district was then calculated. This evenly weighted average can cause problems resulting in either underestimation or overestimation, depending upon the magnitude of the emissions from the counties that cover only a portion of the district and are thus counted in more than one district. Even with these limitations, it is possible to generate a reasonably good proxy of emission levels on the basis of congressional districts.

The frequency histogram in Figure 1 illustrates that reasonably good proxy. The figure shows there is wide variation in the average per capita CO₂ emissions in the 435 districts. The mean level of per capita emissions was 7.2 tons per year, the median was 4.3 tons per year, the maximum was 68.8 tons per year, and the minimum was 1.1 tons per year. The x-axis in the histogram represents CO₂ emissions per capita for each congressional district in five-ton increments. The frequency or y-axis represents the number of congressional districts that fall in each in the five-ton bins. Over 250 districts had CO₂ emissions below five tons and as the emissions increased, the number of districts with high emissions fell sharply. The outlier estimates at the tail of distribution will be important later in the paper.

Figure 1 Frequency Histogram of Per Capita CO₂ emissions



3.2 The Model

The next step is to investigate the relationship between the dependant variable (the vote on H.R. 2454) and the key independent variables (political party affiliation and per capita CO₂ emissions). A logit model is used for these purposes because the dependant variable—to vote for or against the legislation—is dichotomous. An ordinary least square (OLS) model is ill-suited for a problem of this nature because it requires a continuous dependent variable. Logit models are designed to examine the log-likelihood of a specific event occurring due to one more or possible testable hypotheses. They take the functional form:

$$f(x)=1/1+e^{-x}$$

where $f(x)$ is the dependent variable and $x=x_0+b_1x_1+\dots+b_nx_n$ where x is a linear combination of x_i through x_n and b_i through b_n are coefficients recovered from running logit on the sample data.

3.3 Results

The results from running the logit are presented below in Table 2. They demonstrate that it is very unlikely that the relationship between party affiliation and per capita CO₂ emissions and the vote is due to random chance alone. In other words, it is possible to reject the null hypothesis that the coefficients for either of the key explanatory variables are equal to zero. In other words, there is support for both of Hypothesis 1 and 2. The control for median household income is also significant and has a positive sign, suggesting that Representatives from wealthier districts are likely to vote against the legislation. Beyond a statement on significance, interpretation of the regression coefficients is more challenging than in the conventional OLS setup.

Table 2: Regression Results

	Coefficients	Std. Error	z value	Pr(> z)
Intercept	-5.496	1.048	-5.247	1.55e-07 ***
CO ₂ Emissions	-0.147	0.03507	-4.199	2.69e-05***
Party Affiliation	5.430	0.5176	10.491	< 2e-16 ***
Median Income	4.983e-05	1.405e-05	3.547	0.00039 ***

To ease the interpretation, it helps to plot the relationship between the between the estimated dependant variables across the range of actual explanatory variables. This approach has the added benefit of permitting the estimated relationship for both the Republican and Democrat under different levels of per capita CO₂ emissions to be displayed on the same figure. Using the results from the logit, for instance, the equation describes the relationship between the vote and capita CO₂ emissions for a Democrat as such:

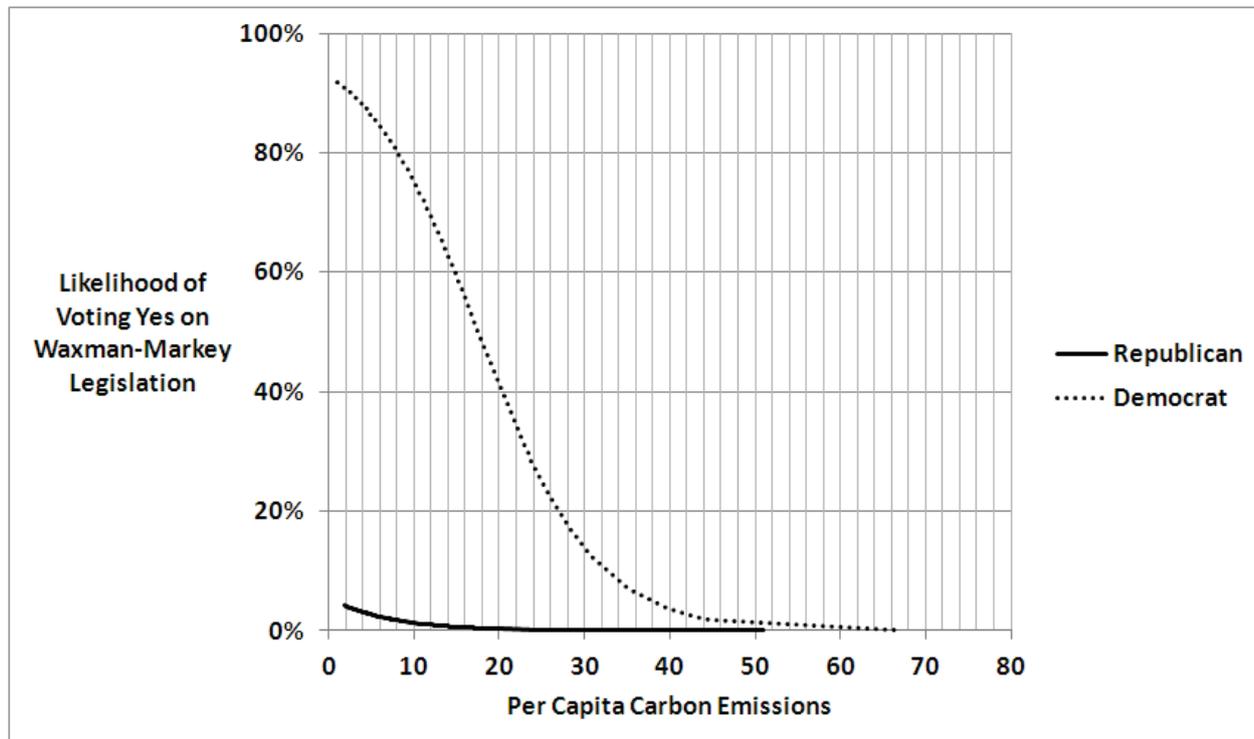
$$f(z)=1/1+e^{5.49+.147x_1 -5.4x_2+.000049x_3}$$

Note that for a Republican the equation would look similar but with the removal of the b₂ coefficient because x₂ is coded zero when a representative is a Republican.

Figure 2 illustrates the estimated relationship for hypothetical members of both parties across a range of possible levels of per capita CO₂ emissions (it uses the mean of the median household income, effectively controlling for that variable). The figure demonstrates the differences between the Democrats and the Republicans and thus makes it evident why it is difficult to pass legislation. Even in Congressional districts with small carbon footprints, Republicans

are very unlikely to vote for climate change legislation. At most, that likelihood is around 5%. Furthermore, the likelihood of Republicans voting for climate change legislation goes from slim to nothing as per capita CO₂ emissions increase. Overall, this suggests that there is a great deal of cohesion in the Republican party; there are very few Republicans willing to oppose the party position on climate change, and the few that do come exclusively from low carbon districts.

A different set of inferences can be drawn about the Democrats. In Congressional districts with small carbon footprints, there was a strong likelihood of voting for climate change legislation. However, that likelihood begins to drop with increases in per capita CO₂ emissions; at around 10 tons per capita, the likelihood for Democrats voting for the legislation is about 75% and at 12 tons per capita that likelihood falls precipitously. Perhaps most interestingly, around 17 tons per capita, the likelihood is about even odds that a Democratic representative will vote for or against the legislation. Overall, this suggests that there is not as much cohesion in the Democratic Party. Rather natural resource endowments create an issue cleavage within the party—and that cleavage is borne out of the fact that for some Democrats voting for climate legislation would be tantamount to voting against core constituencies.

Figure 2 Results of the Logit Model

3.4 Comparing Results and Data

To get a closer view of the model's implications for Democrats, it is possible to compare the results from the logit with the actual data.

Sixteen Democrats came from districts with CO₂ emissions over 20 tons per capita. Five voted yes and 11 voted no (approximately 31%); for Democrats from districts with CO₂ emissions over 12 tons per year per capita, eight out of 25 voted for the bill (32%). At 10 tons per capita, the number of yes votes increased to 15 out of 33 (45.5%). At 8 tons, yes votes edged over 50% (55%). Thus, the likelihood of Democrats voting yes for the Waxman-Markey Bill climbed to over 50% at CO₂ emissions between 8-10 tons per year.

It is important to underline that the actual data and the model differ in terms of this 50% critical thresholds. The model suggests estimates that the

point where a representative is just as likely to vote for as against climate legislation is around 17 tons per capita, whereas the data indicate that figure is between 8 and 10 tons. The difference is likely attributed to the skew in the distribution and the "outlier" high emission districts that is pulling average values predicted by the logit model outward.

Another interesting set of findings involves the 44 Democrats who voted against the bill. Among the 44 Democrats voting no, eight hailed from districts with CO₂ emissions below the median value and five represented districts with emissions in the lowest one third of the distribution (<3.2 tons per year per capita) (Table 3). These cases are curious because their behavior cannot be explained by the CO₂ emissions levels. To understand the motivations for low carbon Democrats who opposed H.R. 2454, public statements, submissions, and votes on related legislation were reviewed.

Table 3: Low Carbon Democrats Voting Against H.R. 2454

Name	Party	State	Per capita annual GHG emission	Rank within party
Glenn Nye	D	VA	3.712	138
Michael Arcuri	D	NY	3.592	146
Tim Holden	D	PA	3.586	147
Larry Kissell	D	NC	2.888	187
Nick J. Rahall II	D	WV	2.723	198
Peter A. DeFazio	D	OR	2.669	203
Harry E. Mitchell	D	AZ	2.434	215
Pete Stark	D	CA	2.166	242

The review of documents for these anomalous cases reveals that some of the representatives voting against H.R. 2454 harbored reservations about whether the bill was too “watered down” or catered to the needs of regulated industries (Stark, 2009). Democratic Representative Pete Stark of California’s 13th Congressional District illustrates this view. A three decade veteran of the House, Representative Stark “authored the Save Our Climate Act legislation (H.R. 2069)” that aims to use a “simple carbon tax” to wean the U.S. off of fossil fuels. Democrat Representative Peter DeFazio from Oregon’s 4th Congressional District was similarly “committed to...helping reduce emissions of greenhouse gases responsible for climate change...” but believed that regulation by the Environmental Protection Agency (EPA) was “the most efficient and effective way to cut GHGs” and that a “late change in H.R. 2454” took carbon allowances away from “utilities that use renewable sources and hydro” and “gave them to utilities that burn coal” (DeFazio; DeFazio, 2009). This closer examination also reveals there were some Democrats who simply felt climate change was not a priority. Democrat Representative Larry Kissell, representing the 8th District of North Carolina, was a strong proponent of the local industry, especially textiles. He sponsored the “Buy American” amendment in 2009 (Blessing, 2011) and has voiced support for domestic and local interests, especially

the local industry which helped him become re-elected in 2010 (Kissell).

Another set of low carbon Democrats opposing the legislation belong to the aforementioned “Blue Dog Coalition”. Many of these fiscally conservative Democrats interpreted their convictions to the “the goal of representing the center of the House of Representatives and appealing to the mainstream values of the American public” to mean oppose climate change legislation (Blue Dog Coalition, 2011). More interestingly still is that a slight majority—28 out of 54—of the Blue Dog Democrat voted against the H.R. 2454. This suggests another issue cleavage runs through the Democratic Party and yet another reason that this collective action problem proved difficult.

4. Recommendations and the Way Forward

There are a number of real world implications that fall out of the model and the review of the data. Given the differences in the cohesion in the political parties, it is not surprising that Republicans were able to mount an effective challenge to climate change legislation in 2009. In fact, though the added scrutiny of scientific claims from the Intergovernmental Panel on Climate Change (IPCC) and the email scandal at East Anglica University may

not have been started by Republicans, but likely gained more traction because Republicans were united in their opposition to climate change.

More importantly, the most dedicated opponents were able to make it difficult for even members of their own party to break ranks. This was evidenced by the climate bill in the Senate co-sponsored by Senators Graham, Kerry, and Lieberman. Senator Graham was convinced on the merits of such legislation and was willing to cross the aisle in support of the legislation, but eventually backed off due to Democratic delays and Republican pressure (Lizza, 2010). This was indeed a missed opportunity in that if the bill could get over the vote threshold in the Senate, securing passage in the House would have been easier. In that regard, it might suggest lessons for the next time there is a change in the composition of the legislature, the Senate should be the starting point for climate legislation.

This also raises the question of what supportive Democrats should do in the event that another opportunity like 2009 presents itself. In such an eventuality, it is important that Democrats begin to reframe the argument for climate legislation. The foundation of that argument should be the many non-climate benefits above and beyond the long-term, global, and still relatively uncertain climate benefits. These relatively more concentrated energy security, the local environment, and green business benefits are likely to have a greater appeal than the shared benefits of a stable climate. However, for self-motivated politicians this is simply a starting point.

For the same self-motivated politicians, two additional incentives might hold greater sway. The first involve ongoing efforts to mitigate GHG emissions outside of climate legislation. At the national level, the USEPA has begun regulating CO₂ from mobile sources, while tailoring the Clean Air Act to stationary sources. At the regional level, the Regional Greenhouse Gas Initiative (RGGI); the Western Climate Initiative (WCI); the Midwestern Greenhouse Gas Reduction Accord (MGGRA) are aimed to reduce power plant emissions between 10% to

20% off of 2005 levels by 2020 with a series of emissions trading programs. At the same time, 29 state governments have binding Renewable Portfolio Standard (RPS)⁶, while California has sought to reduce emissions to 1990 levels by 2020 with clean energy reforms and an emissions trading program under the Global Warming Solutions Act (AB 32). These initiatives are important in their own right, but for purposes of this paper they also cast into relief a fragmented regulatory environment that also rules out the kinds of efficiencies possible from comprehensive climate legislation. These are precisely the types of costs that should appeal to not only pragmatic Democrats but pragmatic Republicans.

The second of these potentially more powerful incentives involves higher carbon and Blue Dog Democrats. Breaking the fragile coalition between moderate and tea party Republicans could give Democrats divided on climate change the impetus to recapture the political center. It was not long ago that environmental legislation done with an eye toward capturing efficiencies and market-based instruments sat comfortably in that political center (Rosenbaum, 1990). This was evident in the early 1970s when the Nixon administration created the EPA and in 1990 when the Bush administration helped pass the amendments to the Clean Air Act that allowed for the sulfur dioxide emissions trading program. But without strong support from the Democrats, the EPA has been under attack and that notion of emissions trading has been relabeled cap and tax. If coupled with a well designed-combination of side payments—such as, money for retraining programs and support for alternative energies in high carbon districts—some Democrats may have greater incentive to change their position on climate legislation. Dividing the right could help unite the left.

⁶ Six states have adopted non-binding portfolio standards.

References

- AFP (2009) "US must do more on climate change: Germany," March 3, http://www.google.com/hostednews/afp/article/ALeqM5hYXQkSNyHUR4MgbNztHaaD_De_dw0
- Aldrich, J. H. (1995) *Why Parties?* Chicago: The University of Chicago Press.
- Blessing, K. (2011) Lawrence W. "Larry" Kissell (D-N.C.): Why he Matters [Electronic Version]. http://www.whorun.gov.com/Profiles/Lawrence_W._%22Larry%22_Kissell. (accessed November 22, 2011)
- Blue Dog Coalition. (2011) Blue Dog Coalition: About. <http://ross.house.gov/BlueDog/About.htm> (accessed November 17, 2011)
- Burger, A. (2009) Sustainable Ag, Ecosystem Services Big Part of Green Economy Solution. Environmental News Network <http://globalwarmingisreal.com/?s+=Sustainable+Ag%2C+Ecosystem+Services+Big+Part+of+Green+Economy+Solution> (accessed November 23, 2011)
- Congressional Research Service (CRS) (2009) Summary: H.R. 2454: American Clean Energy and Security Act of 2009: 2009-2010 <http://www.govtrack.us/congress/bill.xpd?bill=h111-2454&tab=summary> (accessed September 12, 2011)
- DeFazio, P. Issues: Natural Resource, Climate Change. Congressman Peter DeFazio Representing the 4th District of Oregon, http://www.defazio.house.gov/index.php?option=com_content&view=article&id=617:natural-resources&catid=45 (accessed October 31, 2011)
- DeFazio, P. 2009. DeFazio Votes Against Wall Street Speculation in Climate Change Legislation. Washington, D.C. Bang, G., 2009. Energy Security and Climate Change Concerns: Triggers for Energy Policy Change in the United States? *Energy Policy* 38(2010) 1645-1653.
- Congressional Research Service (2009) Summary: H.R. 2454: American Clean Energy and Security Act of 2009: 2009-2010 <http://www.govtrack.us/congress/bill.xpd?bill=h111-2454&tab=summary> (accessed September 12, 2011)
- Dickinson, T. (2010) "Climate Bill, R.I.P." *Rolling Stone*, July 21.
- Jacobson, H. K. (2002). Climate change: unilateralism, realism, and two-level games. in Patrick, S., Forman, S. (Eds.), *Multilateralism and US Foreign Policy*. Lynne Rienner Publishers, Inc., Colorado.
- Groosman, B., Muller, Nicholas Z. and O'Neill, E. (2009) "The Ancillary Benefits from Climate Policy in the United States" Middlebury College Economics Discussion Paper No. 0920, November 2009. <http://sandcat.middlebury.edu/econ/repec/mdl/ancoec/0920.pdf> (accessed October 31, 2011)
- Gurney, K.R., D. Mendoza, Y. Zhou, M Fischer, C. Miller, S. Geethakumar, S. de la Rue du Can (2009) The Vulcan Project: High resolution fossil fuel combustion CO₂ emissions fluxes for the United States, *Environmental Science and Technology*
- Obama, B. 2009 "President Barack Obama's Inaugural Address," January 21, <http://www.whitehouse.gov/blog/inaugural-address/> (accessed October 31, 2011)
- Olson, M. 1965. *The Logic of Collective Action*. Cambridge: Harvard University Press.
- Ostrom, E. 1990. *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge: Cambridge University Press.
- Kissell, L. Congressman Larry Kissell: representing the 8th District of North Carolina, Biography. <http://kissell.house.gov/about/index.shtml> (accessed November 22, 2011)
- Kitschelt, H. 2000. "Linkages between Citizens and Politicians in Democratic Politics," *Comparative Political Studies* 33 (6/7). pp.845-879
- Lizza, R. (2010) "As the World Burns" *The New Yorker*, October 11, http://www.newyorker.com/reporting/2010/10/11/101011fa_fact_lizza (accessed October 31, 2011)
- Merchant, B. (2010) "It's Official: The Climate Bill is Dead," *Treehugger*, <http://www.treehugger.com/corporate-responsibility/its-official-the-climate-bill-is-dead.html>
- Pew Center (2009) Waxman Markey: Short Summary <http://www.pewclimate.org/federal/analysis/congress/111/acesa/waxman-markey-short-summary> (accessed September 12, 2011)
- Reuters (2007) "Rich nations should do more on climate change: China" March 30, http://www.google.com/hostednews/afp/article/ALeqM5hYXQkSNyHUR4MgbNztHaaD_De_dw (accessed October 31, 2011)
- Sissine, F. (2007) Energy Independence and Security Act of 2007: A Summary of Major Provisions. Report. Congressional Research Service, December 21.
- Stark, P. (2009) Statement of Congressman Pete Stark Opposing Watered-Down Global Warming Legislation. *For Congressional Record* from http://www.stark.house.gov/index.php?option=com_content&view=article&id=1299:statement-opposing-watered-down-global-warming-legislation&catid=54:press-releases-2009&Itemid=100011 (accessed November 23, 2011)
- Tsebelis, G. (2002) *Veto Players: How Political Institutions Work*, Princeton: Russell Sage Foundation
- Energy Independence and Security Act of 2007: A summary of major provisions. Report. Congressional Research Service, December 21
- US Climate Action Partnership (USCAP) (2007). A call for action: Consensus principles and recommendations from the U.S. climate action partnership, a business and NGO

partnership. Report, Washington, DC.. US CAP, 2007).
Rosenbaum, W.A., (1998). Environmental Politics and Policy.
Congressional Quarterly Press, Washington.
True, J. L. Jones, B. D. and Baumgartner, F. R. (1999)

“Punctuated Equilibrium Theory: Explaining Stability
and Change in American Policymaking,” in Theories of
the Policy Process, P. Sabatier ed. Boulder: Westview
Press. pp. 97-117.

Appendix

The below code was used to generate the logit results on a data set US6e.csv. Note that additional control variables for level of education (% of population graduating from high school) and unemployment (% of unemployment in 2008 and 2009) were also included in the model. The education variable was not significant; the unemployment variable for both 2008 and 2009 was significant but with a positive sign. This would suggest that districts with higher levels of unemployment were more likely to vote for the legislation. Additional research is needed to explain this result.

- `US6e.csv <- read.table("C:/Documents and Settings/ My Documents/US Climate Policy/US6e.csv", header=T, sep=",")`
- `print(US6e.csv)`
- `names(US6e.csv)`
- `summary(Total)`
- `mylogit<- glm(Yes1~Total + as.factor(Democrat) + Inc, family=binomial(link="logit"), na.action=na.pass)`
- `summary(mylogit)`

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