Competition and the Legislative Effectiveness of State Senators

By

Alexander Lee

Senior Honors Thesis Submitted to the Department of Political Science, University California San Diego

March 31st, 2014

I. Acknowledgements:

I would first like to thank my adviser Professor Thad Kousser. He has consistently made himself available when needed to provide insight and guidance. His expertise in the subject matter and the clarity in which he was able to communicate was always deeply valued.

I appreciate the seminar leaders Professor Erie and Professor Mares who laid the theoretical framework for the thesis. And when disenchanted, disillusioned and exhausted from the project helped lift my spirits and provide precision in my plan of action.

I am sincerely grateful for Annelise Skylar whom streamlined my research and pointed me in the right direction. She helped navigate me through the seas of data to where I needed to be. And also to Steven Oliver willingness to set aside time to share his technical expertise in quantitative research, quantitative analysis, and abilities in Stata.

I want to thank my family for their love and support as well and their understanding my disappearance these past two quarters.

The indirect support I have received from the academics who's articles I've read to the direct support from my advisor's and family have reminded me of the poem *The Bridge Builder* by Will Allen Droomgoole.

"An old man going a lone highway,
Came at the evening, cold and gray,
To a chasm, vast, and deep and wide,
Through which was flowing a sullen tide.

The old man crossed in the twilight dim;
The sullen stream had no fear for him;
But he turned, when safe on the other side,
And built a bridge to span the tide.

"Old man," said a fellow pilgrim, near,
"You are wasting strength with building here;
Your journey will end with the ending day;
You never again will pass this way;
You've crossed the chasm, deep and wide-
Why build you this bridge at the evening tide?"

The builder lifted his old gray head:
"Good friend, in the path I have come," he said,
"There followeth after me today,
A youth, whose feet must pass this way.

This chasm, that has been naught to me,
To that fair-haired youth may a pitfall be.
He, too, must cross in the twilight dim;
Good friend, I am building this bridge for him.'"

II. Abstract:

Competition is regarded as a fundamental principal of American representative democracy. Therefore, it is imperative to understand the relationship between competition and legislative behavior. It was my goal in this paper to begin to understand the relationship that competition has on an underreported segment of the American political system – the state legislator. While my conclusions were underwhelming there is evidence to support that a relationship exists between competition and legislator behavior.

III. Chapter One

i. Introduction

The purpose of my thesis is to explore the relationship that completion has on state legislator behavior. The examination of the relationship that competition has on legislative behavior is due to competition being a fundamental principal of American representative democracy. Joseph Schumpeter[1] describes the representative democratic system as an "intuitional arrangement for arriving at political decisions in which individuals acquire the power to decide by means of a competitive struggle"(Schumpeter, 1950). Understanding the impact that this "completive struggle" has on individuals granted the authority to create social contracts on behalf of their fellow citizen is imperative.

In recent decades uncompetitive and homogenous districts have become increasingly common in America (Jacobson, 2006; Jones, 2013). This decrease in competition has been met with popular skepticism as the lack of competition is perceived as a sign of an unhealthy democratic system and that more competitive districts result in elected officials that are more representative of median voter (Niemi, 2009). This skepticism also has translated into electoral reforms aimed at creating more electorally competitive districts[2]. Research regarding competition has been done (see literature review) in regard to congressional districts while largely glossing over state legislative districts (Hogan, 2004). This uneven distribution of research has taken place alongside the decrease in competitive districts being seen in both state and national districts. There has been much debate (Abramowitz,2006; McDonald,2006) regarding on the qualitative proprieties that competition has on the behavior and policy

[1] This quote was first initially found from The Marketplace of Democracy by John Samples
[2] http://igs.berkeley.edu/library/elections/proposition-11

responsiveness of national legislators. Stepping away from the qualitative arguments it is clear that competition has a significant relationship on legislator behavior. This effect is strong enough that it is expected to translate into state legislatures. But it has been critiqued that literature regarding the policy responsiveness of state legislatures is underrepresented in research (Hogan, 2004). The lack of research done in regard to the effects that competition has on state legislatures performance and their policy responsiveness provides a unique and important research opportunity.

Chapter one introduces the basis for my study and states the purpose for my research. In chapter one I discuss relevant literature and the academic basis for my study. I lay the framework for the importance and significance of my thesis. I finalize chapter one with my theory and rationale behind why I expect to see a decrease in legislative effectiveness in competitive districts. Chapter two holds my research design and the approach that will be taken. I summarize my key variables and go on to discusses the methods in which I obtained my data. Chapter Three shows the process I used to run my statistical tests and the results that I obtained from the tests. Chapter four concludes with a discussion of my findings, areas for expansion and the implications of my study.

ii. Statement of Research

In regards to my study into legislator's behavior it is my goal to examine how competition affects state senators. Are state senators ability to legislate affected by competition? The following literature review will discuss the wide scope of studies done on competition and the affect that it has had on elected officials. It is not my aim to dispute these claims to past studies but rather point that the application of these past studies might be flawed due to unique environments traits held by state senators. It is my aim to see if competition has similar effects on state senators as it does on congressional officials. The main purpose behind this paper is to begin to understand how state legislative behavior is influenced by competition. Effective state legislatures are defined by three characteristics balancing power, legislating and representing their constituencies (Rosenthal, 1999). It is my aim to see what type of competition might affect legislator behavior in one of the most fundamental measures of legislative effectiveness – the ability to produce and pass legislation. Some of the questions I will be asking are; does competition have an effect on state senator's ability to legislate? And does competition promote or dissuade from the production and passage of legislation?

iii. Literature Review

Past literature concerning the effects of competition has been studied thoroughly and because of extensive past research that I will clarify my literature review into two sections. The first section will addresses past research dealing with the relationship between competitive districts and elected officials. The first section shows that past research indicates that competitive districts have an impact on elected representative's behavior. This is relevant as it provides the precedent to conduct research on of effects that competitive districts might have on elected officials. When looking into the effects that competitive districts have on elected officials I find a lack of research when dealing with officials outside of congress. I find that literature looking into the relationship between the effects that competitive elections has on state legislatures is limited in its scope and breadth (Hogan, 2004).

In the second section, I make the assertion that state districts possess the unique trait of low-information environments. This makes the application of research done on competitive congressional districts onto state districts problematic. My assertion that state districts and elections hold certain variables not found in national elections allows for new areas of research.

Competitive districts' effects on elected official are well documented and have been shown to affect a wide spectrum of behaviors (Abramowitz, 1988; Brunell, 2006; Jones, 2003; Kuklinski, 1977). For example, congressional representatives are more likely to abstain from votes in districts that face electoral competition (Jones, 2003). Jones finds that elected representatives abstain from votes in a strategic manner in order to avoid negative repercussions from constituents and interest groups. This example shows that competitive districts impact the legislator's roll call behavior. If competition in a district can impact the ability to cast votes it is worthwhile to determine if competition would impact the ability to produce and pass legislation.

When looking at competitive districts ideologically heterogeneous districts lack the representative qualities of ideologically homogenous districts. It has also been shown that elected officials are much more likely to be responsive in a homogenous district (Bishin, 2006). This relationship demonstrates increased representativeness by elected officials in homogenous districts by the elected official is relevant to my research. The representative's electorate receives policy initiatives more positively because of this relationship. When the a legislator's policy initiatives are met positively in a homogenous district it would be a logical assumption legislators would be more motivated to produce legislation. As legislator's actions would be in tune with the electorates' policy preferences. In comparison, in a heterogeneous district the production and attempt to pass legislation could conflict with segments of the representative's constituency. The production of legislation then in heterogeneous districts could then be logically assumed to create ineffective legislators.

While legislators possibly could become more timid in heterogeneous or competitive districts there is research that could indicate the opposite. This is plausible as competitive districts make it difficult for voters to identify policy platforms and the inability for voters to identify policy platforms adds to incumbent advantage (Ensley, 2009). The inability for voters to identify policy platforms of legislators would allow for legislators to produce and pass legislation while avoiding controversial votes. Conversely it is also plausible that elected officials' legislative effectiveness would follow the findings of the Jones study and legislators would be more likely to refrain from producing legislation as to avoid controversy. Both scenarios warrant further examination to determine if there is a potential effect on legislator's policy behavior.

Literature concerning state elections is limited due to the lack of up-to-date data and therefore is especially limited when looking into policy responsiveness of state legislators

(Niemi, 2006). What research that has been done on these topics indicates a relationship between state legislator's policies and electoral factors. Hogan finds that the more partisan a legislators voting record legislator the higher the likelihood a challengers would emerge that had the ability to raise significant money. And the ability to raise significant funds lessens the incumbency advantage (Hogan, 2008). In this scenario in which partisan voter record increases the chance of a challengers with the ability to raise significant capital one it could be argued that in competitive or heterogeneous districts incumbents would therefore be much less inclined to produce legislation that could be perceived as ideological or partisan. Hogan's findings also show that there is a direct relationship between a legislator's activity and competition in a district.

Prior research done has looked into the factors related to challenger emergence in state legislative elections (Hogan, 2004). Professor Hogan has showed that district characteristics and policy behavior increased the possibility of challenger from a majority party. Professor Hogan's research provides a basis for my theory on competition and legislator effectiveness. The findings from his study indicate that challengers emerged from districts with narrower party margins as well as in districts that policy behavior diverged from the constituency. A significant challenger to an incumbent's seat would rationally have an impact on the behavior of legislators in a number of ways. An incumbent would logically have to divert energy and resources from their normal duties as a legislature and redirect them towards their political threat. This contributes to my hypothesize it will negatively affect their legislative effectiveness.

There has been extensive research on the effects and the implications of competitive districts in the American system. Past literature has largely been done on competition in relation to congressional elections. And it largely maintains that the effects seen in congressional

elections would be applicable to state legislative elections. This assumption however should be thoroughly explored as state legislative districts constituents are much less informed about their state legislative representative in comparison to that of their congressional representative (Songer, 1984). In these low-information environments legislators often cast votes in order to attract to the more politically active base of their party (Hogan, 2008). Having the general constituency less informed of even the most basic information on state legislators creates an environment in which legislators have to appeal to the more ideological and politically active segments of the constituency.

Low information environments create an atmosphere that changes the state-legislature's roll call behavior. This trait provides a much different environment from Congress, which has significantly more informed constituency. The increase in informed constituents allows for constituents' ability to make informed decisions about their representative. The divergence in one of the most fundamental aspects of a representative democracy, which is an informed constituency, creates an extremely unique environment which questions much of the research done on policy responsiveness without specific regard and focus to state legislatures. To exemplify the discrepancy between information environments and the amount of coverage that the national Senate receives over state legislative bodies see Figure 1.

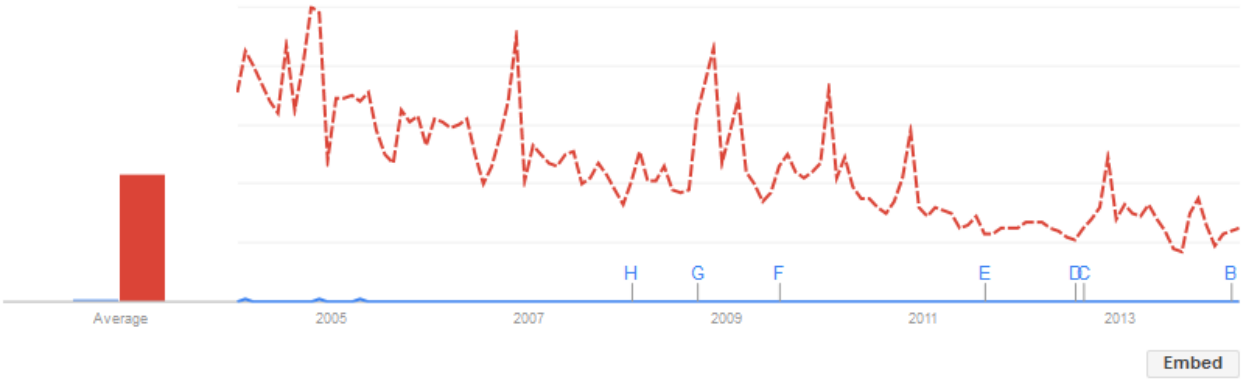

Figure 1. Graph deception of average news coverage of United States Senate (Red) vs California State Senate (Blue)[3]

Literature in this review has shown a significant relationship between competitive districts and legislator behavior. While most research has been conducted on the congressional level there has been limited research done specifically on state legislators. Past literature has covered the policy responsiveness of many national representatives however because of the lack of research done specific to state legislators behavior in response to competitive districts creates a need for research in this area. The need for additional research is only intensified with the issue of the low-information environment found in state districts. The low information environment draws into question the application of research done on national level to state legislators.

[3] Graph from google trends an analytics program based of web search interest and news articles.

iv. Theory

I expect to find that competitive districts will decrease the legislative effectiveness of state legislators. This is similar to the findings study that found United States Senators strategically abstained from votes in competitive elections and districts whose constituency had ideological diversity(Jones, 2003). United States Senatorial elections have much more resources and information surrounding their election cycle. Despite the difference in media coverage and resources I think it is possible that competitive districts in low information environments will depend on the more politically active elements of their party to be elected. To avoid energizing the opposition parties' base in a competitive district I hypothesize that state senators will strategically refrain from the production of legislation. The threat of energizing the opposition's base by producing controversial legislation which has viable chance of becoming law would be too great a threat in competitive districts and therefore create a situation that would promote and reward inaction and strategic abstention in legislating.

Uncompetitive, or safe districts, I hypothesize will also influence legislator effectiveness. Uncompetitive districts legislators won't face the need to campaign or fundraise as heavily as ~~those~~ legislators in competitive districts. Senators would be able to direct their time and efforts towards the act of legislating. Therefore senators with less of a tangible threat to their political office would increase the effectiveness of a senator.

I theorize that state legislators from electorally or ideologically competitive districts will see an increase in the likelihood of political repercussions from their legislative actions. This will contribute to a decrease in legislative effectiveness. In contrast state legislators from uncompetitive districts do not face the same type of political risk from legislating. They do not

have to expend the same type of energy and resources that senators from competitive districts do to maintain their seat and therefore are able to direct that energy in ensuring their bill becomes law.

Additional variables will influence legislator effectiveness as well. The first being leadership positions held by senators. I believe that legislators that hold leadership positions will typically be able to use resources that come from their position to greater influence the passage of the bill that they sponsored. Leadership roles also typically are assigned to more veteran members who have had the political clout to raise in the ranks above the rank and file senators. Senators with leadership positions should see an increase in their effectiveness, as leadership roles having more resources at their disposal addition to influence via formal and informal methods rank and file members to support their legislation.

Leadership position implies political clout within a legislators' caucus and therefore a network of influence among their caucus and the oppositions caucus. I hypothesize that veteran members in the legislature will see an increase in legislative effectiveness from the ability to develop a network and building relationships among other members within and outside of the legislators caucus. I expect to see freshman members preform with less effectiveness than veteran members with more experience in legislative bodies.

The majority party also is expected to increase legislator effectiveness as it is representative of initial ideological support. It is to be expected majority party senators will see greater institutional advantages that would favor a bill passage rate than a minority party member would. The institutional advantages in addition to the benefits for the natural alliance from fellow party members allows for me to hypothesize that being in the majority party would

benefit effectiveness while being in the minority party would have the inverse effect and decrease effectiveness for the same reasons. The majority party advantage only allows benefits, since the party maintains majority control in both upper and lower houses. To conclude, if the legislature is divided- with the upper and lower house having different parties then the majority party benefit would be mitigated. Therefore I assume that divided legislatures will alleviate any majority party advantage.

My hypothesis largely depends on research that was done on congressional representatives and therefore does not account for the low-information environment that is prevalent in State districts. Since research regarding state legislative districts is underrepresented in academic work and most studies were done in respect much different types of environments that state districts I would not be surprised to find that the low-information environment could easily disprove my variables and present alternative findings. I am basing my hypothesis off the literature that is available while recognizing that by doing so might have certain limitations.

Working Hypothesis: State Legislatures from districts that faced competitive elections were less effective legislatures than those legislatures who did not face a recent competitive election

Null Hypothesis: State Legislatures from districts that faced competitive elections were more effective legislatures than those legislatures who did not face a recent competitive election.

II. Chapter Two: Research Design

i. Key Variables

Summary of Variables: The independent variable is the level of competition within a state legislative district. The dependent variable will be the legislative effectiveness of the elected representative from the corresponding competitive district. This examination of effectiveness took place for the 2011-2012 legislative session.

Operational Definitions: Competition is measured using two metrics. The first metric is used to measure the ideological completion in a district and second to measure the districts electoral competition. The first metric is based on the senator's party's vote share in the presidential election (Abramowitz, 2006). This measurement is used to gauge the ideological competition of a district. The second metric for competition measured the margin of victory in the previous state senator's district's election. Therefore this election measured the electoral margin of victory by the state senator who finished the 2011-2012 legislative term.

Abramowitz's model which is typically used for congressional elections uses party share in the previous presidential election. However, California is the only state which reports the presidential vote by state legislative district[4]. Consequently, I slightly altered Abramowitz's model to measure competition in the upcoming election. After extensive research which included contacting the state election boards I discovered that presidential results by state senators' districts in 2008 were not available. This data was available for the 2012 election. Therefore out of necessity his model was slightly altered to accommodate for the lack of

[4] In addition to personal research I contacted a number of state election boards office's to see if presidential vote by senate district could be obtained and was informed that aside from senate district this information was only compiled via precinct

available information. This would allow for a complete view of how competition might affect legislator behavior as one metric would be used to measure previous competition and another would be measuring upcoming election. Abramowitz approach's has been critiqued for its failures to account for 3rd party candidates (McDonald, 2006). I maintain that the standard used by Abramowitz is adequate because the 2012 election cycle did not see any third party candidate that was outside the historical standard.

The first measure of competition which measures the presidential vote share of the incumbent senator's party was used to measure two things. First, to gauge the ideological makeup of the district and therefore the potential ideological competition within a district. Secondly, the metric was also used to measure the perceived competition that the incumbent senator faced.

Competition for both metrics was measured ~~as~~ within ten points of the challenging party. This is a standard set from Abramowitz's model of competition. In addition to the ten percentage points threshold I created a "significantly competitive" variable for districts that fell within elections within seven points of the challenging party. I also created an "extremely competitive" variable for districts whose margin of victory fell within five points. Each metric was given were given a dichotomous value (1 = Competitive, 0 Not Competitive).

In addition to the dichotomous variables for competition I created variables which calculated the margin of victory. I calculated the margin of victory using the total share of the senators party in the presidential election following the 2011-2012 legislative session. For the second competition metric it measured the electoral margin of victory in the state senator's previous election.

The list of controls that were collected can be separated into two categories. The first category is the biographical controls and second are the institutional controls. The biographical controls included whether the legislator held a leadership position, whether the legislator was serving their first term in the upper house, the gender of the legislator, the legislator had been a member in the lower house previously, and the length of time the legislature had held elected office in a legislative body. The institutional controls included whether upper and lower house were divided in party control, salary, staff size, professional or hybrid legislative body, and if the legislator held a majority party.

The dependent variable is defined as the ability for an individual legislator to produce as the primary sponsor and have the bill signed into law. This was be done by looking at the total number of bills that were successfully passed through the both houses and signed divided by the number of bills introduced by a legislator with which the legislator was the primary sponsor. The battle average method allows for a legislators performance to be calculated objectively against their own goals and also their ability to complete legislative action (Kousser,2004). All other legislation aside from bills was excluded in my study.

If a senator that served and finished the 2011-2012 legislative session was different than the senator that ran in the previous election to due resignation, appointment, death, recall or any other extenuating circumstances the competition metric for that district was measured by the individual of the same party whom ran in the last previous election.

ii. Methodology:

Methods will be organized by first discussing the process for determining which states were to be selected from the list of professional and hybrid states. Secondly, I will discuss the process for obtaining past legislative session rosters which was surprisingly painstaking. Third, I will cover the process for collecting the biographical and institutional controls. Fourth, I will demonstrate how I obtained the dependent variable effectiveness. And lastly, methods for obtaining independent variables for competition. All data that was collected was input into excel converted into .csv and then Stata was used to run a multivariate regression analysis.

The first stage in data collection was determining states to be selected for analysis. States were first selected by their categorical ranking of professionalism. States were cross referenced from the Kurtz's ranking system to the data set which compiled the 2012 presidential election by senate district (Dailykos, 2013). There were originally ten professional states from the Kurtz ranking after cross referencing with the dataset measuring presidential election by senators district seven professional states remained as Pennsylvania, Illinois, and Florida were not included in the dailykos.org presidential elections data set. From the original list of 23 hybrid states form the NCSL listing of legislature type 11 states were not covered by presidential election by senators' district. This left 12 hybrid states that had enough data available for measurement of party share during the 2012 presidential election by senators district. To match the number of professional states in the study seven hybrid states were selected randomly. This process left the 14 states included in the study. The seven professional states are; California, New Jersey, Michigan, Wisconsin, Ohio, Massachusetts and New York. The seven hybrid states are; Colorado, North Carolina, Nevada, Virginia, Washington, Oregon, and Delaware.

The first step in collecting data was getting a legislative roster for the 2011-2012 session. This was surprisingly difficult and again was perfected through trial and error. Initially, I attempted to go to each states legislative website to get past years roster however it was a rarity that rosters were kept for past sessions. State bluebooks were extremely helpful for determining leadership positions and roster for the 2011-2012 session [5]. However, bluebooks are not released by every state. For the remaining states that did not release a bluebook and did not have past senate rosters on their website I navigated to the election board for the past election in that district. Since some members that might have been elected in the last regular session might have not filled their term – best exemplified by Wisconsin which faced a large degree of recalls in 2011- two things were necessary done to ensure a correct roster was held for that term. There were two measures I was able to enact to ensure that the roster for the session was accurate and I was measuring senators whom were facing election in the upcoming election. First, the biographical variables (see next paragraph to see process for obtaining biographical controls) indicated that the senator did not finish their term. If a senator did not finish their term I was able to determine who filled their seat by going back to the election board for that state and looking up the members who participated in the special election for that corresponding district.

Biographical controls where gathered manually from Projectvotesmart.org and entered into the excel spreadsheet for the corresponding senator. All information for the biographical controls was listed on project vote smart. This included whether a member did not complete their term in office which assisted with completing the legislative roster for the 2011-2012 term. Institutional controls were gathered from the Council of State Governments 2011 Book of the States (Wall, 2011).

[5] American Library Association's Government Documents Round Table listed state published almanacs also known as blue books which allowed for a streamlined process in determining which states released bluebooks

The effectiveness metric using the batting average method was used with data collected from individual state senator's record in the 2011-2012 term using OpenStates.org a branch of the non-profit Sunlight Foundation. The data was compiled from each state's legislative website and the states will be selected based of availability and accessibility of the pertinent information. From this platform I looked up each senator from the established roster and looked up the number of bills with which that senator was the primary sponsor that they produce. Then the number of "bills" for that term that were signed into law were obtained from the search engine on OpenStates. The totals from both search were then entered into excel and repeated for each senator from the roster. Figure 2 shows the N size for this study which was 529 senators with 283 coming from professional legislatures and 243 coming from hybrid legislators.

	Number of Legislators
Professional Body	286
Hybrid Body	243
Total	529

Figure 2. Total N size and by Legislative Professionalism

The data source for my dependent variable had a security measure which prevented high volumes of data being extracted in one sitting from the same IP address[6]. This prevented more than approximately 50 senators from being entered in one sitting before being "timed out". Other times certain states were incomplete in their data set and those states had to be abandoned and replaced by other states that were complete.

[6] Informed via personal communication with Sunlight Foundation Website Developer upon receiving a reoccurring error. It was not until after the dependent variable was collected that I was made aware that bulk data was available in .csv format

The competition metric which measured the presidential margin of victory by senators district in 2012 was the only metric that existed in excel format and therefore did not need to be manually input rather could be pasted into the existing workbook. This information as stated was collected from Daily Kos data set. The challenge with this data set was due to redistricting that took place from the 2010 census. The majority of senator's districts were the same district number despite having different constituents. For the districts that were altered in number the district that was measured was the district that the elected official faced the election. Senator Tom O'Mara from New York illustrates what was used for redistricted senators. Senator O'Mara previously represented the 53rd district but after the redistricting he governed the 58th[7] district. Consequently, I measured the presidential results from the 58th that he was redistricted into in 2012 rather than the outdated 53rd district which Senator Valesky[8] was redistricted into.

District competition by previous election was gathered by each states election board or secretary of state. This information was gathered for both the 2008 and 2010 election cycles for states that have four year terms such as California and only for 2010 for states that had two year terms such as New York. For elections with more than two candidates all other candidates aside from the winner and main contender were grouped into a single category of "other candidates". For elections that were uncontested the senator received 100% of the vote while the challenger was input with a 0 value.

I will run a multivariate regression analysis using Stata. I will run the regression for each measurement of my independent variable while controlling for my covariates. The dependent

[7] http://www.nysenate.gov/senator/thomas-f-omara/bio
[8] http://www.nysenate.gov/senator/david-j-valesky/bio

variable of effectiveness will be on the Y axis and the independent variable measuring competition will be on the X axis.

Chapter Three: Results and Analysis

The results section is organized into two sections. The first section analyses the results between the independent variable for competition that was used measured the ideological competition in a district via the legislator's party margin in presidential election. The second section analyzes the results for electoral margin in the senators' election. Both sections included the biographical and institutional controls in the analysis. I ran the tests with a two tailed test at the 95% confidence interval. The independent variables measuring competition failed to reject the null under these criteria. In addition every regression was clustered by state[9]. To conclude I will summarize the findings from the multivariate regression analysis.

Table one shows the results from the first regression running the independent variable used to measure ideological competition against effectiveness with the institutional and biographical controls. The total margin of victory from the legislator's party in the presidential election was used as the metric for competition. With a t value of -1.63 this metric for competition failed to reject the null. Despite the failure to reject the null there does seem to be a statistical relationship which is examined in the following chapter. The covariate which measured professionalism of the legislative body rejected the null at a statistically significant margin. The coefficient being 44.9532 exceeded the outer bounds of the 95% confidence interval.

[9] Full regression analysis which includes state control clusters and the constants are included in the appendix

Table 1. Senator's party margin in presidential election

Effectiveness	Coef.	Std. Err.	t	P>t	95% Conf. Interval	
					Lower	Upper
Party margin	-0.0395	0.0243	-1.63	0.105	-0.0871	0.00822
Male legislator	-2.0451	0.8269	-2.47	0.014	-3.67	-0.4203
In the majority	11.5512	1.0948	10.55	0	9.3999	13.7024
Leadership role	0.9252	1.652	0.56	0.576	-2.3208	4.1713
Held prior legislative seat	-0.1488	0.8621	-0.17	0.863	-1.8428	1.54516
First term in senate	1.575	1.3286	1.19	0.236	-1.0354	4.18548
Divided legislature	1.2211	11.581	0.11	0.916	-21.534	23.9764
Years holding legislative office	0.049	0.0792	0.62	0.537	-0.1066	0.20459
State professionalism ranking	44.9532	5.4461	-8.25	0	-55.654	-34.252

n=512

In tables two, three and four I ran regressions measuring elections that were labeled as competitive, significantly competitive and extremely competitive. These regressions held similar findings to in table 1 which examined the entire margin of victory by party in the presidential election. The independent variables failed to reject the null hypothesis as well as the covariates failed to reject the null hypothesis. These tests maintain no statistical significance for my independent variable measurements of competition and they hold no statistical significance at the 95% confidence interval for any of the covariates outside of state professionalism ranking.

Table 2. Competitive districts with party share in presidential election

Effectiveness	Coef.	Std. Err.	t	P>t	[95% Conf. Interval]	
					Lower	Upper
Competitive districts	-0.0145	1.4800	-0.01	0.992	-2.9226	2.8936
Male legislator	-2.0255	0.8307	-2.44	0.015	-3.6578	-0.3931
In the majority	11.5999	1.0977	10.57	0	9.44308	13.7567
Leadership role	0.8291	1.6555	0.5	0.617	-2.4237	4.08199
Held prior legislative seat	-0.1546	0.8680	-0.18	0.859	-1.86	1.55088
First term in senate	1.7092	1.3445	1.27	0.204	-0.9325	4.35093
Divided legislature	1.0260	11.6126	0.09	0.93	-21.791	23.8434
Years holding legislative office	0.0539	0.0795	0.68	0.498	-0.1023	0.21012
State professionalism ranking	-45.181	5.4790	-8.25	0	-55.947	-34.415

n=154

Table 3. Significantly competitive districts

Effectiveness	Coef.	Std. Err.	t	P>t	[95% Conf. Interval]	
					Lower	Upper
Significantly competitive districts	-2.0103	1.6638	-1.21	0.228	-5.2795	1.25893
Male legislator	2.0541	0.8307	-2.47	0.014	-3.6864	-0.4218
In the majority	11.6800	1.0994	10.62	0	9.51967	13.8403
Leadership role	0.8203	1.6545	0.5	0.62	-2.4305	4.07121
Held prior legislative seat	-0.2213	0.8668	-0.26	0.799	-1.9245	1.48193
First term in senate	1.8305	1.3370	1.37	0.172	-0.7964	4.45754
Divided legislature	0.9467	11.6050	0.08	0.935	-21.856	23.7494
Years holding legislative office	0.0456	0.0796	0.57	0.567	-0.1108	0.20206
State professionalism ranking	-45.714	5.4746	-8.35	0	-56.471	-34.957

n=113

Table 4. Extremely competitive districts

Effectiveness	Coef.	Std. Err.	t	P>t	[95% Conf. Interval]	
					Lower	Upper
Extremely competitive districts	-1.4639	1.88326	-0.78	0.437	-5.1643	2.23652
Male legislator	-2.0699	0.83289	-2.49	0.013	-3.7065	-0.4334
In the majority	11.6031	1.10106	10.54	0	9.43962	13.7666
Leadership role	0.85486	1.65668	0.52	0.606	-2.4004	4.11008
Held prior legislative seat	-0.2117	0.86896	-0.24	0.808	-1.9192	1.49569
First term in senate	1.8672	1.34297	1.39	0.165	-0.7716	4.50601
Divided legislature	0.96598	11.6188	0.08	0.934	-21.864	23.7959
Years holding legislative office	0.05069	0.07984	0.63	0.526	-0.1062	0.20758
State professionalism ranking	-45.965	5.50665	-8.35	0	-56.785	-35.145

n=83

In table 5, I ran a regression using the electoral margin of victory as the independent variable against the dependent variable effectiveness. This measurement for the independent variable also failed to reject the null hypothesis. Similar to the findings from the tests in tables 1-4 all covariates held no statistical significance aside from the state professional ranking. The covariate for professionalism proved to be statistically significant with a coefficient of 45.144 and a t score of -7.7. These values exceeded the 95% confidence intervals upper bounds.

Table 5. Electoral margin from senator's previous election

Effectiveness	Coef.	Std. Err.	t	P>t	[95% Conf. Interval]	
					Lower	Upper
Electoral victory margin	-0.0032	0.0162051	-0.2	0.845	-0.035	0.02868
Male legislator	-1.9709	0.8359064	-2.36	0.019	-3.6135	-0.3283
In the majority	11.8347	1.120144	10.57	0	9.63357	14.0358
Leadership role	0.63387	1.675758	0.38	0.705	-2.6591	3.92679
Held prior legislative seat	-0.2126	0.8739675	-0.24	0.808	-1.93	1.50479
First term in senate	1.4663	1.364476	1.07	0.283	-1.2149	4.14754
Divided legislature	1.01447	11.67185	0.09	0.931	-21.921	23.9501
Years holding legislative office	0.04592	0.0803709	0.57	0.568	-0.112	0.20385
State professionalism ranking	45.144	5.860119	-7.7	0	-56.659	-33.628

n=512

In tables 6,7 and 8 I ran regressions for electoral districts that were completive, significantly competitive and extremely competitive. These districts focused on elections that faced elections within a certain designated margin and grouped all other elections outside of that margin. These measurements for the independent variable failed to reject the null. The covariates also failed to demonstrate statistical significance based on the 95% confidence interval levels set. Additionally no values held any statistically significance outside of the 95% confidence interval.

Table 6. Legislators that faced competitive (within 10% of their main challenger) electoral races in their previous election

Effectiveness	Coef.	Std. Err.	t	P>t	[95% Conf. Interval]	
					Lower	Upper
Electorally Competitive	1.15227	1.13945	1.01	0.312	-1.0866	3.39118
Male legislator	-2.0221	0.82902	-2.44	0.015	-3.651	-0.3931
In the majority	11.6384	1.1001	10.58	0	9.47678	13.8
Leadership role	0.88709	1.65789	0.54	0.593	-2.3705	4.14467
Held prior legislative seat	-0.1248	0.86577	-0.14	0.885	-1.8259	1.5764
First term in senate	1.68113	1.33042	1.26	0.207	-0.933	4.29527
Divided legislature	1.3234	11.6142	0.11	0.909	-21.497	24.1441
Years holding legislative office	0.04967	0.07945	0.63	0.532	-0.1064	0.20579
State professionalism ranking	-45.275	5.45932	-8.29	0	-56.002	-34.548

n=85

Table 7. Legislators that faced significantly competitive (within 7% of their main challenger) electoral races in their previous election

Effectiveness	Coef.	Std. Err.	t	P>t	[95% Conf. Interval]	
					Lower	Upper
Significantly electorally competitive	1.27891	1.25403	1.02	0.308	-1.1851	3.74296
Male legislator	-2.0141	0.82905	-2.43	0.015	-3.6431	-0.3851
In the majority	11.642	1.10024	10.58	0	9.48009	13.8038
Leadership role	0.85689	1.65678	0.52	0.605	-2.3985	4.11229
Held prior legislative seat	-0.1324	0.86544	-0.15	0.878	-1.8329	1.56813
First term in senate	1.68618	1.33026	1.27	0.206	-0.9276	4.30001
Divided legislature	1.36092	11.6149	0.12	0.907	-21.461	24.183
Years holding legislative office	0.0471	0.0796	0.59	0.554	-0.1093	0.2035
State professionalism ranking	45.264	5.45903	-8.29	0	-55.99	-34.537

n=62

Table 8. Legislators that faced extremely competitive (within 5% of their main challenger) electoral races in their previous election

Effectiveness	Coef.	Std. Err.	t	P>t	[95% Conf. Interval]	
					Lower	Upper
Extremely electorally competitive	0.62091	1.41638	0.44	0.661	-2.1621	3.40397
Male legislator	-2.0229	0.83063	-2.44	0.015	-3.6551	-0.3908
In the majority	11.6491	1.10484	10.54	0	9.47815	13.82
Leadership role	0.7467	1.66673	0.45	0.654	-2.5283	4.02166
Held prior legislative seat	-0.1544	0.86768	-0.18	0.859	-1.8593	1.55053
First term in senate	1.73826	1.33267	1.3	0.193	-0.8803	4.35683
Divided legislature	1.10482	11.6311	0.09	0.924	-21.749	23.9588
Years holding legislative office	0.05131	0.0797	0.64	0.52	-0.1053	0.20791
State professionalism ranking	-45.232	5.46812	-8.27	0	-55.976	-34.488

n= 49

All but one of my biographical and institutional controls failed to show statistical significance in all the regressions that I ran. The variations in my independent variable did not demonstrate any change in the statistical significance in the controls. I did observe variations in the levels of statistical significance of the controls. However, none were able to pass the lower or upper threshold of the 95% confidence interval. Or prove to have a noticeable relationship aside from the covariate significance was professionalism ranking. This was the one finding that was observed in table one and five. It is worth noting that both tables one and five both covered the entire electoral margin whereas the remaining tables focused on specific margins within the electoral margin. This regression indicates that the more professional a legislative body the less effective that legislators in that body would be. This relationship between effectiveness and professionalism ranking of the legislative body was extremely significant when regressed at the 95% confidence interval with a t score of -7.64 and a coefficient of - 44.73.

I ran eight regressions with controls and the results of the regressions at the 95% confidence interval largely failed to reject the null hypothesis or provide statistical significance. The exception being the covariate which represented professionalism ranking. The independent variables failed to reject the null at these levels.

Chapter Four: Conclusion

This study sought to understand the relationship that competition might have on legislators in low information environments. It has been established through what research that has been done on that matter that competition can have an impact influence behavior of state legislators. I was unable at the 95% confidence to reject the null hypothesis, but I was able to observe a statistical relationship. The independent variable which measures perceived ideological competition demonstrated a statistical relationship, but is not strong enough to reject the null. Taking the values from Table 1 on page 26- the t score of 1.63 misses the criteria of missing statistical significance threshold of 1.645 for a one tailed t test at a confidence interval of 90%.

Figure 3 shows as the measure for competition decreases on the X axis (shown by the absolute margin of victory for the senator's party in the presidential election) legislative effectiveness shown on the Y axis decreases. With a coefficient of -.0395 one can expect that for every standard deviation into a "safer" district the overall legislative effectiveness of a senator would decrease by 4%. This figure illustrates a statistical relationship in which state legislators who faced competitive elections were more effective than those state legislators who did not face a competitive election.

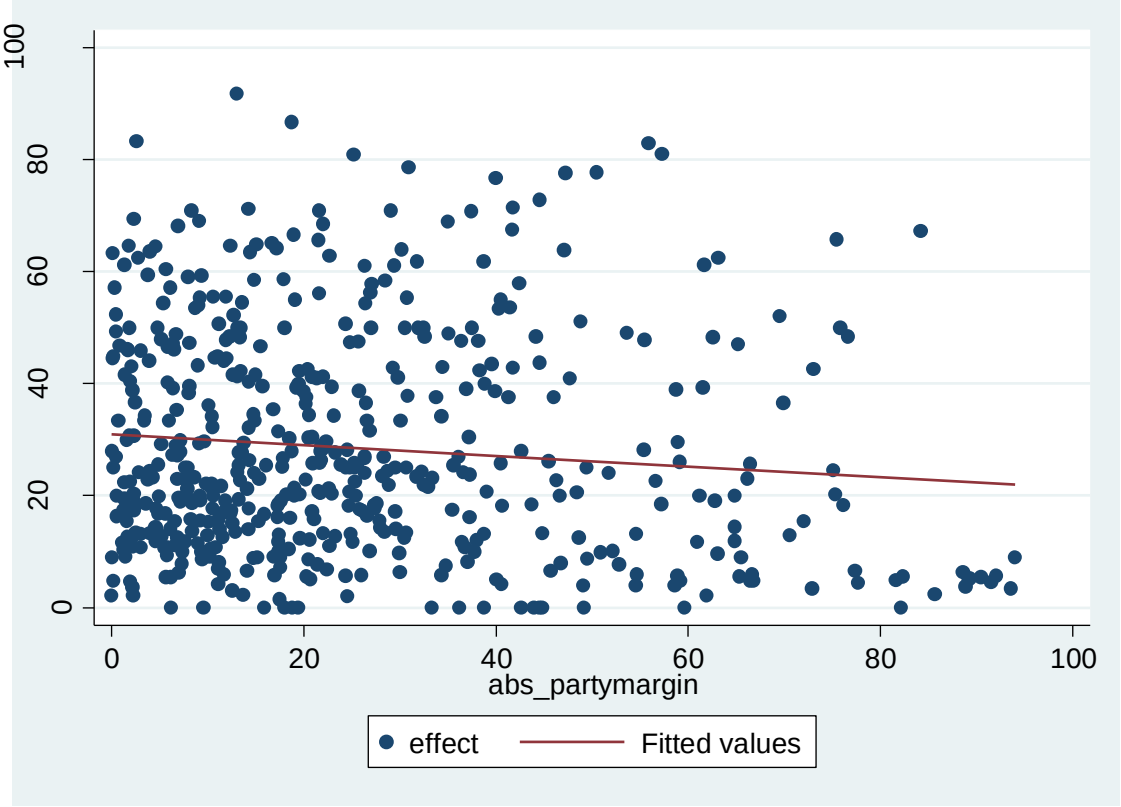

Figure 3. Party Margin in Presidential Election and Effectiveness

This relationship could possibly be caused by three factors. The first possible factor that might be influencing this relationship would be that senators in ideologically competitive districts are motivated to demonstrate that they are working for their constituency. One way that legislators might do that is through legislating. By being in more ideologically competitive districts, more opportunities might arise to legislate across party lines. The second possible factor is that less competitive districts face much less political repercussions from compliancy as there are less conflicting interest groups holding a member accountable for inaction. A third factor is that state legislators in districts that are much less competitive ideologically might be more motivated by the base of that party. This would mean the legislation that is being produced is unlikely to successfully navigate its way to law due to the ideological nature of the bill. The

bill would be more a political maneuver rather than a purposeful act of legislating with reasonable expectations of passage. However being able for a legislator to tell the base in their constituency that they attempted to pass said legislation would be enough to reduce potential primary challengers.

After observing a relationship between the independent variable table one which looked at the presidential party margin of victory by senators district it is interesting that a similar relationship did not occur in the other independent variable metric seen in table five. Table five used the senators' electoral margin from their precious election as its independent variable however with a t score of -.2 and a coefficient of -.0032 it demonstrated no relationship. This is in stark contrast to the relationship that was seen in first regression in table one. I believe this is due to two reasons all which could be further examined and replicated in another study. The first reason is rooted in the incumbent advantage. If a strong challenger was defeated in a previous cycle it is a possibility that another strong challenger's emergence might be lower. It is possible that close election was due to an open seat. This is something that was not accounted for in my study. The second reason this might not influence legislator behavior is because this election might have represented district competition but is no longer as relevant as the upcoming political landscape. Political weakness and vulnerability represented by competition might have been an issue in the prior election however that might not be as relevant to the legislator. Expanding the study to determine if the same legislator that continuously faced electoral competition policy behavior changed would be an excellent area for expansion.

I expected to see greater significance in my independent variables particularly when I was looking at competition narrowly- that is when looking at elections by being within ten

percentage points. I did not expect such a complete rejection in both metrics. I expected to see much more of an effect that competition had on legislative behavior. I namely expected that those senators in competitive elections would have significantly less time to legislating and more time focused on campaigning. This however did not seem to be the case from the results. In addition to failing reject the null there was a lack in the uniformity in the direction of the coefficients which combined with the weak statistical significance that there lacked a relationship with the dependent variable effectiveness that was being measured.

There are certain areas for expansion that apply to all aspect of the study. The first area for expansion would be to increase the legislative sessions that were examined. Increasing the chronological scope of the study to include additional legislative sessions would help account for variations in political climates during specific time period that might adversely impact or affect legislator's behavior. An example of this would be that 2010 (the beginning of the legislative session being examined) had an influx of tea party Republicans (Jacobson, 2011). Tea Parties often being associated with limited government could therefore prioritize different aspects of legislative office such as balancing power instead of from the act of legislating. This shift in political climate and the legislative priories of this session could have altered the results and increasing the amount of sessions being examined would assist in accounting for changes in political climate. This would allow for more reliable testing when it came to surges in political strength as was the case in this specific study[10]. To have study that translated across multiple electoral cycles would allow for a greater N and an increase in the total number of competitive elections that were being examined.

[10] The Republican party which has typically done much better in midterms and who's base energized by the Affordable Health Care vote turned out in much greater numbers and resulted in a very strong election cycle for Republicans in State and National elections.

An assumption that has its roots in the literature is that this metric gauges ideological competition. However this study could be further expanded by looking into voter information in these districts. While it is largely safe to assume that districts that go heavily in the direction of a presidential candidate likely have corresponding a favorable party registration advantage this would assist in strengthening the overall argument and validity of the study. Measuring ideological diversity by presidential vote from districts does have a number of problems. Namely, the shift from redistricting as well as the inability to account for independents who might have a particular ideological slant.

In my thesis I measured electoral competition before the session and the party's presidential share by district after the session. I chose to do these two different measurements in order to get the greatest amount of variety for my independent variable in the shortest amount of time possible. I wanted to thoroughly explore my independent variable and be able to determine if there was a relationship between competition and legislative behavior of state legislators. By using two different metrics it allowed me to look at competition through wider lenses and increase the possibility that I might observes a relationship. Increasing the scope in which I would be able to possibility observe a relationship allowed for me to understand my independent variable than if I would have focused in one particular metric. This did make data collection much more intensive and demanding. However, it provided my research with an indicator of a relationship. Expanding my independent variable to include party share by presidential district before the legislative session would be ideal. However, this data set does not yet exist. By creating this data set it would allow for a much more thorough examination. As my results did observe a relationship using this metric this would be an area for expansion that would be most prioritized. Further research into this subject matter would be strengthened by a comparison

across legislative terms. Having the data for the election cycles before and after the corresponding legislative term that is being analyzed would allow for a more through analysis.

An additional area for expansion would be to include the N size to be more inclusive of all states. This is quite difficult as I found that the low-information environment that applies to voters in state legislative districts also extends to research as well. The inconsistency of data across the states in format and accessibility proved to be quite frustrating and caused for me to abandon the inclusion of all legislative body types. The study's initial design included states with citizen legislative bodies. However, the data proved to be far too inconsistent from the data-sets that I was retrieving the rest of the state's information from. Citizen legislatures information was largely unavailable through the datasets that I obtained. The Sunlight Foundation which is where I obtained the information for my dependent variable measurement often did not have past sessions for citizen legislatures[11] If it weren't for the time restraints as well as data accessibility issues a study across all legislative body types would allow for a much more encompassing picture.

The main objective in this study was to begin to understand the effects that competition had on legislator behavior. The metric used to measure behavior in this study was the batting average procedure which measured the legislative passage rate of bills sponsored. However there are a number of other methods used to judge behavior that the study could be expanded to which would replicate a lot of the research that has been done on congressional officials on the state level. Creating law is one of the fundamental qualifications for being an effective legislator, however, it is only one aspect of legislating. Effective legislators represent their consistency and

[11] This was discovered after datasets for citizen legislatures had begun to be compiled and caused me to abandon citizen legislatures from my research design. Five datasets for citizen legislatures had to be discarded due to the lack of data available to complete the independent variables or dependent variables.

maintain a balance of power in government (Rosenthal, 1999). Expanding the study to determine if these other two factors are influenced by competition would be extremely relevant in understanding the relationship that competition might have on state legislators' behavior.

My thesis used the batting average procedure because of it is one of the most fundamental and basic ways in determining legislative behavior. It allows for a relatively simple yet effective comparison between state legislative bodies. However it does have this procedure admittedly does have its flaws. A more comprehensive examination of legislative behavior would allow for a greater understanding in the relationship that competition has on state legislators. An in depth study that would further examine the relationship between competition and legislator behavior would be looking into issues in an election and then the types of bills sponsored by that legislature. Where the batting average procedure choses to treat bills equally as part of its methodology using another methodology which examined bills types in response to significant contenders might give better insight to policy responsiveness by state legislators.

An additional point that was not adequately examined by my study and deserves further examination dealt with the effect that low information environments have on elected officials. Research such as the study done by Professor Bishin regarding strategic abstention in roll-call votes provides for a logical basis that low-information environments would have an effect on elected officials in a number of capacities. Low information environments create situations in which the median voter in a district has little to no knowledge of a candidate or elected official. The base would then holds the elected official accountable not to the median voter but to the more radical portions of the constituency. Understanding the impacts, causes and relationships

of low information environment in this modern era is essential in understanding how our representative democracy is intended to operate in this modern era.

While statistical significance was not shown to be found at the standard 95% confidence interval and the null was failed to be rejected by competitive district elections there does seem to be a relationship between the relationship between legislative behavior and perceived ideological competition which in this instance was measured by the presidential party share in the election following the legislative term that was covered. I hope that I will have the opportunity to further examine the areas that I have outlined. And I hope that this study will inspire others to investigate further.

vii) Appendix

A) Detailed Regression Analysis Table 1

Source	SS	df	MS		
Model	140034.011	21	6668.28622	Number of obs	= 505
Residual	62574.1716	483	129.55315	F(21, 483)	= 51.47
				Prob > F	= 0.0000
Total	202608.182	504	402.000361	R-squared	= 0.6912
				Adj R-squared	= 0.6777
				Root MSE	= 11.382

effect	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
abs_partymargin	-.0394589	.0242659	-1.63	0.105	-.0871387	.008221
male	-2.045138	.8269442	-2.47	0.014	-3.669991	-.4202858
majority	11.55118	1.094827	10.55	0.000	9.399966	13.70239
leader_dummy	.9252401	1.652031	0.56	0.576	-2.320815	4.171295
other_elected	-.1487938	.8621134	-0.17	0.863	-1.84275	1.545162
first_term_upper	1.575022	1.328554	1.19	0.236	-1.035437	4.18548
divided_legislature	1.221093	11.58097	0.11	0.916	-21.53422	23.97641
years_experience	.0489842	.0791934	0.62	0.537	-.106622	.2045904
squire_score	-44.95317	5.446063	-8.25	0.000	-55.65407	-34.25227
state						
2	-45.7724	2.815046	-16.26	0.000	-51.30365	-40.24115
3	-17.72451	2.699942	-6.56	0.000	-23.02959	-12.41943
4	-35.90264	2.816877	-12.75	0.000	-41.43749	-30.36779
5	-35.38039	2.974015	-11.90	0.000	-41.224	-29.53678
6	-52.9156	2.75695	-19.19	0.000	-58.33269	-47.4985
7	-39.82496	11.80832	-3.37	0.001	-63.02697	-16.62294
8	-13.5384	12.12073	-1.12	0.265	-37.35427	10.27747
9	-43.09495	3.37104	-12.78	0.000	-49.71867	-36.47123
10	-19.19188	3.958716	-4.85	0.000	-26.97031	-11.41344
11	-23.82127	12.07144	-1.97	0.049	-47.54029	-.1022396
12	-43.66244	3.062861	-14.26	0.000	-49.68062	-37.64426
13	-28.69696	12.16728	-2.36	0.019	-52.6043	-4.789617
14	0	(omitted)				
_cons	71.35345	4.480862	15.92	0.000	62.54906	80.15784

B) Detailed Regression Analysis Table 2. Competitive districts with party share in presidential election

Source	SS	df	MS
Model	139691.458	21	6651.97417
Residual	62916.7245	483	130.26237
Total	202608.182	504	402.000361

Number of obs	505
F(21, 483)	51.07
Prob > F	0.0000
R-squared	0.6895
Adj R-squared	0.6760
Root MSE	11.413

effect	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
district_comp_10	-.0145144	1.48004	-0.01	0.992	-2.922626	2.893598
male	-2.025451	.8307406	-2.44	0.015	-3.657763	-.3931395
majority	11.59987	1.097664	10.57	0.000	9.443082	13.75665
leader_dummy	.8291471	1.655487	0.50	0.617	-2.423699	4.081994
other_elected	-.1545573	.8679543	-0.18	0.859	-1.85999	1.550875
first_term_upper	1.709241	1.34445	1.27	0.204	-.9324514	4.350934
divided_legislature	1.026025	11.61258	0.09	0.930	-21.79139	23.84344
years_experience	.053905	.0795055	0.68	0.498	-.1023144	.2101244
squire_score	-45.18099	5.479024	-8.25	0.000	-55.94666	-34.41532
state						
2	-45.72055	2.828534	-16.16	0.000	-51.2783	-40.1628
3	-17.43687	2.709972	-6.43	0.000	-22.76166	-12.11208
4	-35.58601	2.828373	-12.58	0.000	-41.14344	-30.02857
5	-35.15065	2.987068	-11.77	0.000	-41.0199	-29.2814
6	-52.80408	2.770678	-19.06	0.000	-58.24815	-47.36001
7	-39.80848	11.84151	-3.36	0.001	-63.07571	-16.54125
8	-13.16382	12.15179	-1.08	0.279	-37.04072	10.71309
9	-42.91794	3.379655	-12.70	0.000	-49.55858	-36.27729
10	-19.04038	3.970416	-4.80	0.000	-26.8418	-11.23896
11	-23.46181	12.1029	-1.94	0.053	-47.24265	.3190317
12	-43.43345	3.068168	-14.16	0.000	-49.46206	-37.40484
13	-28.3329	12.20168	-2.32	0.021	-52.30784	-4.357965
14	0	(omitted)				
_cons	70.2052	4.465467	15.72	0.000	61.43106	78.97934

C) Detailed Regression Analysis Table 3

Source	SS	df	MS		
Model	139810.189	21	6657.62805	Number of obs	= 504
Residual	62708.0792	482	130.099749	F(21, 482)	= 51.17
				Prob > F	= 0.0000
Total	202518.268	503	402.620811	R-squared	= 0.6904
				Adj R-squared	= 0.6769
				Root MSE	= 11.406

effect	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
district_comp_7	-2.010307	1.663821	-1.21	0.228	-5.279545	1.258931
male	-2.054086	.8307261	-2.47	0.014	-3.686378	-.4217946
majority	11.67996	1.099442	10.62	0.000	9.519665	13.84025
leader_dummy	.8203423	1.654472	0.50	0.620	-2.430527	4.071211
other_elected	-.2212902	.8668259	-0.26	0.799	-1.924515	1.481934
first_term_upper	1.830546	1.33696	1.37	0.172	-.7964434	4.457535
divided_legislature	.9466712	11.60503	0.08	0.935	-21.85604	23.74938
years_experience	.0456118	.0796235	0.57	0.567	-.1108402	.2020638
squire_score	-45.71401	5.474555	-8.35	0.000	-56.47095	-34.95707
state						
2	-45.93309	2.826371	-16.25	0.000	-51.48662	-40.37956
3	-17.68509	2.707933	-6.53	0.000	-23.0059	-12.36427
4	-35.24598	2.830632	-12.45	0.000	-40.80788	-29.68408
5	-35.32	2.980916	-11.85	0.000	-41.17719	-29.4628
6	-53.0216	2.767397	-19.16	0.000	-58.45925	-47.58395
7	-39.6239	11.83438	-3.35	0.001	-62.87726	-16.37055
8	-13.16076	12.1441	-1.08	0.279	-37.02268	10.70116
9	-43.06456	3.37857	-12.75	0.000	-49.7031	-36.42601
10	-19.07848	3.966251	-4.81	0.000	-26.87176	-11.2852
11	-23.40454	12.09504	-1.94	0.054	-47.17006	.3609871
12	-43.63299	3.076265	-14.18	0.000	-49.67754	-37.58844
13	-28.28822	12.19102	-2.32	0.021	-52.24233	-4.334106
14	0	(omitted)				
_cons	70.76763	4.461742	15.86	0.000	62.00076	79.53449

D) Detailed Regression Analysis Table 4.

Source	SS	df	MS		
Model	139382.369	21	6637.25566	Number of obs =	503
Residual	62726.9601	481	130.409481	F(21, 481) =	50.90
				Prob > F =	0.0000
Total	202109.329	502	402.608225	R-squared =	0.6896
				Adj R-squared =	0.6761
				Root MSE =	11.42

effect	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
district_comp_5	-1.463909	1.883258	-0.78	0.437	-5.164339	2.236521
male	-2.069941	.8328901	-2.49	0.013	-3.706493	-.4333883
majority	11.60309	1.101058	10.54	0.000	9.439616	13.76657
leader_dummy	.8548644	1.656676	0.52	0.606	-2.400351	4.11008
other_elected	-.2117363	.868962	-0.24	0.808	-1.919167	1.495694
first_term_upper	1.867204	1.342966	1.39	0.165	-.7716003	4.506007
divided_legislature	.9659846	11.6188	0.08	0.934	-21.8639	23.79587
years_experience	.0506939	.0798419	0.63	0.526	-.106188	.2075758
squire_score	-45.96537	5.506653	-8.35	0.000	-56.78544	-35.14531
state						
2	-45.87115	2.83536	-16.18	0.000	-51.44237	-40.29993
3	-17.57052	2.718704	-6.46	0.000	-22.91252	-12.22851
4	-35.28528	2.838645	-12.43	0.000	-40.86295	-29.7076
5	-35.27447	2.989017	-11.80	0.000	-41.14761	-29.40133
6	-52.90787	2.777121	-19.05	0.000	-58.36465	-47.45108
7	-39.61724	11.84935	-3.34	0.001	-62.90013	-16.33435
8	-13.21583	12.15924	-1.09	0.278	-37.10762	10.67597
9	-43.04071	3.38513	-12.71	0.000	-49.69218	-36.38924
10	-19.18061	3.973309	-4.83	0.000	-26.9878	-11.37342
11	-23.43973	12.10935	-1.94	0.053	-47.2335	.3540331
12	-43.65033	3.083922	-14.15	0.000	-49.70995	-37.5907
13	-28.36075	12.20569	-2.32	0.021	-52.34381	-4.377682
14	0	(omitted)				
_cons	70.71243	4.478268	15.79	0.000	61.91304	79.51181

E) Detailed Regression Analysis Table 5. Electoral margin from senators previous election

Source	SS	df	MS
Model	133386.869	20	6669.34345
Residual	61469.1412	470	130.785407
Total	194856.01	490	397.665327

Number of obs	491
F(20, 470)	50.99
Prob > F	0.0000
R-squared	0.6845
Adj R-squared	0.6711
Root MSE	11.436

effect	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
victory_margin	-.003217	.0161777	-0.20	0.842	-.0350066	.0285726
majority	11.83449	1.118958	10.58	0.000	9.635711	14.03327
leader_dummy	.6335389	1.673983	0.38	0.705	-2.655879	3.922956
years_experience	.0462814	.0801772	0.58	0.564	-.1112687	.2038315
other_elected	-.2107086	.8727785	-0.24	0.809	-1.925739	1.504322
first_term_upper	1.475276	1.359124	1.09	0.278	-1.195436	4.145988
male	-1.971517	.8349945	-2.36	0.019	-3.612301	-.3307328
squire_score	-45.14713	5.853793	-7.71	0.000	-56.64997	-33.64428
state						
2	-45.80963	2.973463	-15.41	0.000	-51.65256	-39.96671
3	-17.55774	2.823042	-6.22	0.000	-23.10509	-12.0104
4	-35.67686	2.945465	-12.11	0.000	-41.46477	-29.88895
5	-35.23851	3.11576	-11.31	0.000	-41.36106	-29.11597
6	-52.88178	2.925185	-18.08	0.000	-58.62984	-47.13372
7	-38.96365	2.281655	-17.08	0.000	-43.44716	-34.48014
8	-12.31525	3.732638	-3.30	0.001	-19.64997	-4.980523
9	-43.15658	3.563201	-12.11	0.000	-50.15836	-36.15481
10	-19.14346	4.183921	-4.58	0.000	-27.36497	-10.92196
11	-22.92225	3.618858	-6.33	0.000	-30.03339	-15.8111
12	-43.65801	3.26832	-13.36	0.000	-50.08034	-37.23568
13	-26.58749	3.945422	-6.74	0.000	-34.34034	-18.83465
14	0	(omitted)				
_cons	70.51954	4.837093	14.58	0.000	61.01453	80.02454

F) Detailed Regression Analysis Table 6

Source	SS	df	MS
Model	139128.257	21	6625.15509
Residual	62770.5303	482	130.229316
Total	201898.787	503	401.389239

Number of obs	504
F(21, 482)	50.87
Prob > F	0.0000
R-squared	0.6891
Adj R-squared	0.6756
Root MSE	11.412

effect	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
competitive_10	1.152274	1.139451	1.01	0.312	-1.08663	3.391178
male	-2.022079	.8290209	-2.44	0.015	-3.651021	-.3931376
majority	11.63837	1.100103	10.58	0.000	9.476784	13.79997
leader_dummy	.8870858	1.657891	0.54	0.593	-2.3705	4.144671
other_elected	-.1247511	.8657702	-0.14	0.885	-1.825901	1.576399
first_term_upper	1.681128	1.330419	1.26	0.207	-.9330098	4.295266
divided_legislature	1.3234	11.6142	0.11	0.909	-21.49732	24.14412
years_experience	.0496742	.07945	0.63	0.532	-.1064368	.2057853
squire_score	-45.27535	5.459319	-8.29	0.000	-56.00235	-34.54834
state						
2	-45.67619	2.838507	-16.09	0.000	-51.25357	-40.09882
3	-17.81974	2.727355	-6.53	0.000	-23.17871	-12.46077
4	-35.86354	2.830905	-12.67	0.000	-41.42598	-30.3011
5	-35.30068	2.981862	-11.84	0.000	-41.15973	-29.44162
6	-52.88456	2.764478	-19.13	0.000	-58.31648	-47.45264
7	-40.34633	11.85075	-3.40	0.001	-63.63185	-17.06082
8	-13.73411	12.16257	-1.13	0.259	-37.63232	10.16411
9	-42.97824	3.378558	-12.72	0.000	-49.61676	-36.33972
10	-19.24015	3.972535	-4.84	0.000	-27.04578	-11.43453
11	-23.79142	12.10516	-1.97	0.050	-47.57682	-.0060132
12	-43.54665	3.069513	-14.19	0.000	-49.57793	-37.51537
13	-28.80802	12.20572	-2.36	0.019	-52.79101	-4.825028
14	0	(omitted)				
_cons	70.05471	4.440131	15.78	0.000	61.33031	78.77912

G) Detailed Regression Analysis Table7

Source	SS	df	MS		
Model	139130.522	21	6625.26298	Number of obs =	504
Residual	62768.2648	482	130.224616	F(21, 482) =	50.88
				Prob > F =	0.0000
Total	201898.787	503	401.389239	R-squared =	0.6891
				Adj R-squared =	0.6756
				Root MSE =	11.412

effect	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
competitive_7	1.27891	1.254033	1.02	0.308	-1.185136	3.742956
male	-2.014131	.8290549	-2.43	0.015	-3.643139	-.3851229
majority	11.64195	1.100242	10.58	0.000	9.480089	13.80381
leader_dummy	.8568944	1.656775	0.52	0.605	-2.398498	4.112287
other_elected	-.1323814	.865443	-0.15	0.878	-1.832888	1.568126
first_term_upper	1.68618	1.330262	1.27	0.206	-.9276494	4.30001
divided_legislature	1.360923	11.61491	0.12	0.907	-21.46118	24.18303
years_experience	.0470987	.0795991	0.59	0.554	-.1093054	.2035028
squire_score	-45.26364	5.459034	-8.29	0.000	-55.99009	-34.5372
state						
2	-45.55222	2.838859	-16.05	0.000	-51.13029	-39.97415
3	-17.71385	2.714563	-6.53	0.000	-23.04769	-12.38002
4	-35.81877	2.82675	-12.67	0.000	-41.37305	-30.2645
5	-35.26156	2.980174	-11.83	0.000	-41.11729	-29.40582
6	-52.91317	2.765378	-19.13	0.000	-58.34686	-47.47949
7	-40.24397	11.84635	-3.40	0.001	-63.52084	-16.9671
8	-13.62593	12.15787	-1.12	0.263	-37.51491	10.26305
9	-42.86497	3.37863	-12.69	0.000	-49.50363	-36.22631
10	-19.21834	3.971438	-4.84	0.000	-27.02181	-11.41488
11	-23.77214	12.10439	-1.96	0.050	-47.55602	.0117495
12	-43.5189	3.068603	-14.18	0.000	-49.54839	-37.4894
13	-28.74873	12.20331	-2.36	0.019	-52.72698	-4.770479
14	0	(omitted)				
_cons	70.07282	4.439349	15.78	0.000	61.34995	78.79569

H) Detailed Regression Analysis Table 8

Source	SS	df	MS		
Model	138771.017	21	6608.14369	Number of obs	= 503
Residual	62838.4257	481	130.641218	F(21, 481)	= 50.58
				Prob > F	= 0.0000
Total	201609.443	502	401.612436	R-squared	= 0.6883
				Adj R-squared	= 0.6747
				Root MSE	= 11.43

effect	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
competitive_5	.6209107	1.416379	0.44	0.661	-2.162144	3.403965
male	-2.022946	.8306296	-2.44	0.015	-3.655057	-.3908351
majority	11.64905	1.104836	10.54	0.000	9.478145	13.81995
leader_dummy	.7466978	1.666726	0.45	0.654	-2.528265	4.021661
other_elected	-.1543795	.8676769	-0.18	0.859	-1.859285	1.550526
first_term_upper	1.738264	1.332668	1.30	0.193	-.880306	4.356834
divided_legislature	1.104821	11.63109	0.09	0.924	-21.74919	23.95884
years_experience	.0513054	.0797011	0.64	0.520	-.1053	.2079108
squire_score	-45.23187	5.468116	-8.27	0.000	-55.97622	-34.48752
state						
2	-45.67448	2.86428	-15.95	0.000	-51.30253	-40.04643
3	-17.51521	2.712558	-6.46	0.000	-22.84514	-12.18528
4	-35.61345	2.823435	-12.61	0.000	-41.16124	-30.06566
5	-35.17336	2.98333	-11.79	0.000	-41.03533	-29.31139
6	-52.81382	2.767675	-19.08	0.000	-58.25205	-47.37559
7	-39.90988	11.86052	-3.36	0.001	-63.21472	-16.60504
8	-13.27594	12.17203	-1.09	0.276	-37.19286	10.64097
9	-42.87318	3.387108	-12.66	0.000	-49.52853	-36.21782
10	-19.10899	3.97628	-4.81	0.000	-26.92202	-11.29596
11	-23.51371	12.12113	-1.94	0.053	-47.33062	.3031996
12	-43.44745	3.072594	-14.14	0.000	-49.48481	-37.41008
13	-28.40554	12.21816	-2.32	0.020	-52.41309	-4.39798
14	0	(omitted)				
_cons	70.11966	4.449138	15.76	0.000	61.37751	78.8618

viii. Bibliography

Abramowitz, A. I. (1988). Explaining senate election outcomes. *American Political Science Review, 82*(2), 385.

Abramowitz, A. I., Alexander, B., & Gunning, M. (2006). Incumbency, redistricting, and the decline of competition in U.S. house elections. *Journal of Politics, 68*(1), 75-88.

Bishin, B. G., Dow, J. K., & Adams, J. (2006). Does democracy "suffer" from diversity? issue representation and diversity in senate elections. *Public Choice, 129*(1/2), 201-215.

Brunell, T. L. (2006). Rethinking redistricting: How drawing uncompetitive districts eliminates gerrymanders, enhances representation, and improves attitudes toward congress. *PS: Political Science & Politics, 39*(01), 77-85.

DailyKos. (2013). *Daily kos elections' statewide election results by congressional and legislative districts.* Unpublished manuscript.

Elling, R. C., & Kuklinski, J. H. (1977). Representational role, constituency opinion, and legislative roll-call behavior. *American Journal of Political Science, 21*(1), 135-147.

Ensley, M. J., Tofias, M. W., & de Marchi, S. (2009). District complexity as an advantage in congressional elections. *American Journal of Political Science, 53*(4), 990-1005.

Ensley, M. J., Tofias, M. W., & de Marchi, S. (2009). District complexity as an advantage in congressional elections. *American Journal of Political Science, 53*(4), 990-1005.

Hogan, R. E. (2008). Policy responsiveness and incumbent reelection in state legislatures. *American Journal of Political Science, 52*(4), 858-873.

Hogan, R. E. (2004). Challenger emergence, incumbent success, and electoral accountability in state legislative elections. *The Journal of Politics, 66*(4), 1283-1303.

Jacobson, G. C. (2011). The Republican Resurgence in 2010. *Political Science Quarterly,* 126(1), 27-52.

Jacobson, G. C. (2006). Competition in U.S congressional elections. In M. McDonald, & J. Samples (Eds.), *The market place of democracy* (pp. 27-53) The Brookings Insitution and Cato Institute.

Jones, D. R. (2003). Position taking and position avoidance in the U.S. senate. *The Journal of Politics, 65*(3), 851-863.

Jones, P. E. (2013). The Effect of Political Competition on Democratic Accountability. *Political Behavior, 35*(3), 481-515.

Kousser, T. B. (2004) Redesigning democracies: How term limits and professionalization reshape america's state legislatures. *Dissertation Abstracts International, A: The Humanities and Social Sciences,*

McDonald, M. P. (2006). Drawing the line on district competition. *PS: Political Science & Politics, 39*(01), 91-94.

Niemi, R., Lynda, P., Berry, W., Carsey, T., & Snyder Jr, J. (2006). Competition in state legislative elections. In M. McDonald, & J. Samples (Eds.), *The market place of democracy* (pp. 53-73) The Brookings Insitution and Cato Institute.

Rosenthal, A. (1999, The Good Legislature. NCSL State Legislatures Magazine, July/August

Samples, J. (2006). The marketplace of democracy: Normative and empirical issues. *The marketplace of democracy* (pp. 1-7) Brooking Institution and Cato Institute.

Schumpeter, J. (1950). *Capatalism, socialism and democracy* (3rd ed.). New York: Harper.

Songer, D. R. (1984). Government closest to the people: Constituent knowledge in state and national politics. *Polity, 17*(2), 387.

Wall, Audrey. Book of the States 2011, Chapter 3: State Legislative Branch 2011