How to Get Elected in Oregon: An Examination of the Effects of Campaign Contributions on Oregon State Legislative Outcomes.

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Introduction:

In any given election, there are certain factors individual candidates possess which give them an advantage over opponents when it comes not only to whether or not a given candidate has the edge to win an election, but also in determining the margin by which a candidate will win an election. These effects include candidate characteristics such as candidate incumbency status, party composition of the candidates' constituency, campaign contributions and expenditures, as well as less easily quantified statistics, such as charisma or whether or not the candidate has been involved in any type of a political scandal. Any number of these characteristics could be the subject of an investigation, as they each possess explanatory power in determining the number of votes a candidate will receive. For our investigation we will attempt to determine which factors are the most significant predictors of electoral success, while paying special attention to the effect of campaign contributions.

While there have been many studies examining the role of campaign contributions electoral and legislative outcomes, but these studies have disproportionately focused on either large states, such as California or New York, or on Federal elections to the United States Congress. Given this, our study has the potential to add to the literature in several ways. First, we attempt to explain election results in races that may attract fewer large-scale corporate and PAC donors, providing a direct contrast to the higher stakes nature of Federal or large-state elections. Additionally, Oregon state elections and Federal elections differ notably in the limits that they impose on contributors to various political candidates and parties. At the Federal level, individual donors are restricted to contributing no more than $2700 per election to candidate

committees and no more than $5000 per year to a given PAC.[1] [2] This is in sharp contrast to Oregon, where state laws which place no limitations on individual or corporate contributors.[3] Given this disparity, the findings of this investigation will seek to provide insight into the significance of campaign contributions in Oregon state legislative election outcomes. Further, this investigation will also examine the source of contributions and whether those effects differ in predictive power of candidate success.

2. Literature Review:

As stated in the introduction, there have been a variety of investigations in both economics and political science examining the factors that are critical in determining the success of candidates in various types of elections. While the body of literature as a whole shows consensus that factors such as incumbency of the candidate and partisanship voting tendencies of their district influence the percentage of the vote that a candidate is likely to receive, the effects of campaign finance are not as consistent. In this section, we will discuss some of the works that have been influential to the development of the framework of our investigation, paying especially close attention to analytical methods that might be useful in our own analysis.

The first paper we consider is "The Effects of Campaign Contribution Sources on the Congressional Elections of 1996," by Craig Depken.[4] This paper focuses on determining the marginal effect of various types of contributions on the percentage of the vote that a candidate

[1] "Contribution Limit for 2017-2018 Federal Elections." *Federal Election Commission,* accessed, May 17, 2017, https://transition.fec.gov/info/contriblimitschart1718.pdf.
[2] Statistics are for the 2017-2018 election cycle.
[3] "Election Law Summary." *Oregon Secreatary of State,* accessed May 17, 2017, http://sos.oregon.gov/elections/Documents/elec_law_summary.pdf.
[4] Craig Depken, "The Effects of Campaign Contribution Sources on the Congressional Elections of 1996," *Economics Letters*, Volume 58, no. 2, (1 February 1998), Pages 211-215.

would receive. Depken makes that argument that while a single dollar from an individual and a political action committee would yield the same marginal benefit for a candidate in terms of their ability to spend that dollar on campaign strategy, such as advertising, the implication of donations from a political action committee and from an individual have different implications for the percentage of the vote that a candidate would receive. Depken reasons that this phenomenon is explained by the idea that a political action committee has a constituency associated with it, and as such, contributions from a political action committee would tend to "deliver" more votes to a candidate than would donations from an individual. This argument addresses the fact that the value of campaign contributions are not only for monetary value, but also can be used to serve as a predictor for the amount of support that a candidate will receive in a particular election.

While these findings from Depken are interesting on their own, they also lay out the importance endogeneity or reverse causality. Campaign contributions may not be a factor that contributes to electoral success, but rather the fact that strong candidates inherently attract more contributions. In order to deal with this endogeneity, we examine the statistical methods used in "Why Do Political Action Committees Give Money to Candidates? Campaign Contributions, Policy Choices, and Election Outcomes" by Christopher Magee.[5] This paper looks into the 1996 US Congressional and attempts to answer the question: do political action committees give money to candidates to influence the positions they adopt or to influence the outcome of the election? The endogenous nature of campaign contributions (interest groups tend to give donations to candidates who would likely support the group's position even in the absence of the

[5] Christopher Magee, "Do Political Action Committees Give Money to Candidates for Electoral or Influence Motives?" *Public Choice* [serial online] 112, no. 3-4, (September 2002):373-399.

contribution) makes this a tough question to answer. Specifically what we found interesting in this paper was the empirical models that they used to account for the endogeneity and estimate the effect of campaign contributions on both incumbent and challenger. The way they go about this is by separating out the effect of contributions on election outcomes from the effect of expected outcomes on campaign receipts by using a system of simultaneous equations. The conclusion they reached in the paper was that political action committees give money to challengers primarily to affect the probability that the candidate is elected, as the contributions received by challengers had a large effect on the outcome of the election. However, contributions received by incumbents did not raise their likelihood of winning the election. Given these findings, it will be important for us to address not only the effects of campaign contributions on election outcomes, but also to explain what factors determine the level of contributions that a candidate will receive.

The last notable trend we observed in the body of literature was the repeated usage of campaign spending as the variable of interest in the examination of the effects of campaign finance on election outcomes. This line of inquiry stems back to "The Effects of Campaign Spending in Congressional Elections" by Gary Jacobson.[6] This investigation examined the effects of campaign spending by incumbency status on the percentage of the vote received by the challenger, rather than looking at the number of campaign contributions received. This methodology is common in the literature and while it is not a technique we will be employing in our own data analysis, it is important to note its relevance and this investigation will address some of the differences that arise which differentiate these two approaches.

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[6] Gary C. Jacobson, "The Effects of Campaign Spending in Congressional Elections." *The American Political Science Review*, vol. 72, no. 2, 1978, pp. 469–491.

3. Data:

In this section, we go through the sources and the process of retrieving the of data in question and how we preprocessed the data to make it relevant for our research. Due to Oregon law[7], the data we collected was all accessible through public means such as the Oregon Secretary of State and the National Institute of Money in State Politics' website, followthemoney.org.

National Institute of Money in State Politics: This organization is a nonpartisan nonprofit which describes itself as "promoting an accountable democracy by compiling comprehensive campaign-donor, lobbyist, and other information from government disclosure agencies nationwide and making it freely available at FollowTheMoney.org."[8] This includes data on lobbying expenditures by various candidates, political action committees, corporations, and other interest groups, as well as whom each registered lobbyist employs as clients. Additionally, it also tracks the amount of money contributed to various state politicians and political action committees and organizes those contributors by type and name. From this organization's website we were able to get data on how much money each candidate in the Oregon House of Representatives elections received in the form of campaign contributions, and from whom, spanning each two-year election cycle from 2016 back to the year 2012. We used this data set as our base file and merged other information into this one, as it was the most complete set of data.

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[7] ORS Chapter 260, "Campaign Finance Regulation; Election Offenses," requires disclosure of contributions and expenditures related to any candidate, measure, or political party active in any election including initiative, referendum, and recall petition drives.
"Campaign Finance Manual." *Oregon Secretary of State,* accessed May 17, 2017, http://sos.oregon.gov/elections/Documents/campaign-finance.pdf.

[8] "Mission and History," *National Institute of Money in State Politics*, https://www.followthemoney.org/about-us/mission-and-history/

We use these data to generate variables for how many candidates ran in each election and found the percentage of total campaign contributions and contributors for each candidate per race. When we were done pre-processing this data set it gave us a complete picture of how much and how many contributions each candidate had received in the Oregon house of representatives from 2012-2016, as well as the source from which the contributions were from.

Oregon Secretary of State: The next data set we used for our research was provided by the Oregon Secretary of State. Their online website provided us with results from each state congressional election dating back to the year 2000. However, these data sets were in PDF format and not easily machine readable. With the help of the Oregon Secretary of State Election division's office we were able to complete a file transfer and receive the data in word or excel documents.

Once we got this information we merged it into our other file using Excel's MATCH and VLOOKUP commands. The data we received includes the the candidates in each election, the district seat they were running for, and how many votes each candidate received during the general election. In addition to election data, the Oregon Secretary of State also gave us data which includes the turnout rate of each election and the number of registered voters within each district, as well as the breakdown of parties in which said voters are registered. Once this data was merged with the other file we again constructed some relevant variables. Instead of using the number of votes received by each candidate, we generated a variable for percentage of votes received for each candidate within each race. Also, using the registered voter breakdown we generated variables for the partisan breakdown of each district and a “close race” dummy variable (which we defined as plus or minus 10% of registered democrats to republicans).

Establishing the partisanship background of each district is incredibly important, as we will make the assumption that those registered for a particular party will, all else equal, vote in line with their party.

US Census: The last data set we wanted to incorporate in our research was census data to see if factors such as income of a district would affect the outcome of an election. Census data however, does not come by house representative districts, but again thanks to the people at Oregon Secretary of State office we were able to get an excel file which matched the house representative's districts to the census tracts.

4. Econometric Analysis:

Given the nature of our data and the methods present in the existing literature, there are a number of ways to approach the problem of determining the marginal effects of campaign contributions on the likelihood that a candidate will be elected. As discussed in the data section, campaign contribution data will be the primary variable of interest in our investigation. In addition to campaign contributions, we will also control for the incumbency status of each candidate, the percentage of each candidate's district which shares a political affiliation with the candidate, the number of opponents in a given race, and the voter turnout in a particular race. Our dependent variable will be the percentage of the votes that a candidate received. As stated in our discussion of the data, our sample draws from the years 2012, 2014, and 2016, as these are the three available election cycles which occurred after the 2010 redistricting. Our sample consists of 376 individual candidates and 180 distinct elections.

Summary statistics and descriptions of each variable are provided below (Tables 1 and 2). It is important to note the negative values that appear in the percent individual and percent non-individual minimums. These exist due to negative contributions that are likely attributable to the fact that candidates sometimes had to repay contributions which were initially received before the year in question where we tracked campaign contributions. While this seems problematic, there are so few examples of these negative contributions in the data we anticipate it will have a negligible effect on any outcomes that we may examine.

Table 1) Variable Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
cand_percent	376	.4737332	.2677956	.0202654	.987425
incumbent	376	.3670213	.4826346	0	1
close_race	376	.3776596	.4854478	0	1
percent_in~s	376	.4760638	.408334	-.0139113	1.013911
percent_no~s	376	.4787234	.4272225	-.0009056	1.000906
rrep_percent	376	.1319998	.1682335	0	.5021996
ddem_percent	376	.1623018	.204922	0	.669643
number_of_~s	376	1.351064	.7618566	0	3
votes_turn~t	376	.6784342	.0733191	.3582266	.7831742
percent_re~s	376	.4787234	.3955221	0	1
percent_co~s	376	.4787234	.4143357	0	1

Table 2) Variable Summary

Variable	Description	Possible Value Range
Candidate_percent	Gives the percent of votes received by a candidate within their district	(0-1): Percent expressed as a decimal
Incumbent	Dummy variable which tells if the candidate is an incumbent	0: Candidate is not an incumbent 1: Candidate is an incumbent
Close_race	Dummy variable which we define as total registered democrats are within ± 10% of total registered Republicans	0: If number of democrats to republicans or republican to democrats is greater than or 10% 1: If number of Democrats to Republicans is within ± 10%
Percent_individual_contributions	Gives the percent of individual contributions received by a candidate within their district	(0-1): Percent expressed as a decimal
Percent_non_individual_contributions	Gives the percent of non-individual contributions received by a candidate within their district	(0-1): Percent expressed as a decimal
Rrep_percent	Dummy variable for Republican candidates interacted which the percent composition of registered Republicans within the district	0: Candidate is a Democrat (0-1): Composition of Republicans within the district if candidate is a Republican
Ddem_percent	Dummy variable for Democrat candidates interacted which the percent composition of registered Democrats within the district	0: Candidate is a Republican (0-1): Composition of Democrats within the district if candidate is a Democrat
Number_of_opponents	Gives the number of opponents for a given candidate for said race	[0-3]: Integer of number of opponents the candidate has
Votes_turnout	Gives the percent of votes cast to voters registered within a district	(0-1): Percent expressed as a decimal
Percent_contributions	Gives the percent of contributions received by a candidate within their district	(0-1): Percent expressed as a decimal
Percent_records	Gives the percent of contributors to a candidate within their district	(0-1): Percent expressed as a decimal

We will be using an OLS model with vote share as the dependent variable throughout this investigation. The primary reason for this is that although employing a probit model to predict victory is interesting and important to understand in the context of how these elections actually play out, our relatively small sample size and the fact that very few elections deviate from outcomes where the incumbent or the candidate whose party holds majority in their district wins, OLS becomes necessary to not only track who is winning the election, but also to examine the margin by which a given candidate is winning or losing an election. Thus, by tracking the actual percentage vote that each candidate received, we will be able to more accurately gauge the effects of various factors on election outcomes.

While OLS is the most direct way to gauge the effects of campaign contributions on election results, it does result in us having to take some precautions to ensure that there are not issues in conducting the analysis. The largest consideration we made was in the way that we measured the amount of contributions received by each candidate. Rather than expressing the contributions as a value, we converted it into a percentage of the total amount of campaign contributions received by each candidate within the race. Thus, we are able to track the effects of campaign contributions on an an election for an amount of campaign contributions relative to the amount raised by one's competitors. This is meant to cut down on the endogeneity that can occur when candidates receive more contributions as a result of being involved in a close race. This phenomenon can be observed in our probit regression table in Table 7 in the Appendices section, which shows that candidates that are in involved in close races are more likely to receive contributions from their affiliated political party, which Table 11 shows to be the largest source of contributions in a particular election year. This idea is also highlighted when one examines

Table 8 in the Appendices, which shows that though only approximately one third of elections are considered "close races," the amount of contributions received by candidates in these races is almost equal to or greater than the amount of contributions received by candidates in races which are not considered "close."

Our first group of regressions appears in (Table 3) and shows the results of three regressions, each examining the entirety of our sample. We examine three distinct ways of tracking the effects of campaign contributions. In the second and third regressions we use percentage of contribution amount and percentage of number of contributions in order to examine these effects. We used percentages here rather than actual values in order to express the fact that the effects of receiving campaign contributions are not absolute, but rather relative to the amount of contributions received by one's competitors. Our first regression which appears in the table distinguishes between the effects of contributions from individuals and the effects of contributions from non-individuals (parties, PACS, corporations, etc.). By incorporating this distinction, we mirror the concept Depken addressed in his article, attempting to determine whether the marginal effects of an increase in individual contributions differs from that of non-individual contributions (notably non-individual contributions consist of PAC's, political parties and corporations).

Table 3) Regressions 1 (all candidates, all races)

	(1) cand_percent	(2) cand_percent	(3) cand_percent
incumbent	0.0411***	0.0355***	0.0328**
	(0.0111)	(0.0107)	(0.0108)
votes_turn-t	-0.522***	-0.523***	-0.507***
	(0.0487)	(0.0488)	(0.0479)
percent_in-s	0.0594***		
	(0.0132)		
percent_no-s	0.189***		
	(0.0205)		
ddem_percent	0.712***	0.713***	0.669***
	(0.0434)	(0.0432)	(0.0438)
rrep_percent	0.821***	0.829***	0.824***
	(0.0510)	(0.0504)	(0.0488)
number_of_-s	-0.0515***	-0.0525***	-0.0500***
	(0.00674)	(0.00676)	(0.00632)
percent_co-s		0.247***	
		(0.0196)	
percent_re-s			0.276***
			(0.0207)
_cons	0.539***	0.543***	0.524***
	(0.0329)	(0.0329)	(0.0322)
N	376	376	376
adj. R-sq	0.942	0.942	0.944

Standard errors in parentheses
* p<0.05, ** p<0.01, *** p<0.001

In addition, we ran several other regressions containing other subsets of our data in order to try and pick up on the effects of campaign contributions on other types of races. In particular, we looked at the effects of campaign contributions where the number of Democrats and Republicans living in a district are not drastically different. We defined this as districts where the percentage of voters who are registered Democrats and the percentage of voters who are registered Republicans are within ten percent of one another. We called these close races and ran our regressions again using only candidates who were involved in close races. We used this

subset to see if certain factors (specifically campaign contributions) were more pronounced when an election did not have a clear front-runner. Those results are displayed in Table 4.

The benefit of exploring our data in this manner was in order to even further alleviatte some of the endogeneity that was previously addressed. By limiting our sample to only instances where the candidates were involved in races that were considered "close," we eliminate some of the problems associated with candidates who may be receiving contributions in an attempt to sway their decisions once they are actually elected into the state legislature, or incumbents who were so secure in their likelihood of winning, that they did not feel the need to extensively campaign and generate large amounts of campaign contributions.

Table 4) Regressions 2 (all candidates, close races)

	(1) cand_percent	(2) cand_percent	(3) cand_percent
incumbent	0.0343	0.0326	0.0265
	(0.0220)	(0.0199)	(0.0178)
votes_turn-t	-0.500***	-0.493***	-0.449***
	(0.116)	(0.115)	(0.107)
percent_in-s	0.0397*		
	(0.0196)		
percent_no-s	0.178***		
	(0.0393)		
ddem_percent	0.745***	0.731***	0.650***
	(0.0728)	(0.0725)	(0.0757)
rrep_percent	0.848***	0.842***	0.825***
	(0.0907)	(0.0888)	(0.0861)
number_of_-s	-0.0413**	-0.0414**	-0.0404**
	(0.0142)	(0.0142)	(0.0128)
percent_co-s		0.224***	
		(0.0369)	
percent_re-s			0.258***
			(0.0361)
_cons	0.515***	0.511***	0.479***
	(0.0825)	(0.0813)	(0.0754)
N	142	142	142
adj. R-sq	0.902	0.905	0.913

Standard errors in parentheses
* p<0.05, ** p<0.01, *** p<0.001

The regressions we ran above came out as we expected, but running each candidate's vote percentage as the dependent variable presents an issue. The issue is that we implicitly assume that each candidate's vote percentage is not correlated (independent) with each other candidate. This of course is not the case, within each district the effect of having other candidates is relevant, because if a candidate receives a vote that vote cannot go to the other candidates of

said race. We go about addressing this issue by looking at the subset of just the winners of each district election. We generated another variable called vote_differential which is just the winners vote percentage minus the sum of all other candidates for said race. This variable still accounts for the amount of votes received by the other candidates which tells us more information than the candidate_percent independent variable and seems to work better in our regression (as seen in Table 5 and Table 6, regression 1 and 2). We ran the same 3 regressions (the first and second one are the same regression with different dependent variable) for this subset as we did above.

For Table 6, we ran the same regressions once again. However, this time, we looked only at the subset of close races. While this serves a similar purpose as the regression run in Table 4, once we condense the sample size to only looking at election winners, problems begin to emerge as far as our sample size is concerned. Our results still come out as significant, but the sample size is significantly smaller and as such, it won't be our primary regression output of interest when it comes to the analysis portion of the investigation.

Table 5) Regressions 3 (election winners, all races)

	(1) vote_diffe-l	(2) cand_percent	(3) vote_diffe-l	(4) vote_diffe-l
incumbent	0.0972***	0.0483***	0.0866***	0.0852***
	(0.0230)	(0.0114)	(0.0222)	(0.0225)
votes_turn-t	-1.232***	-0.608***	-1.208***	-1.189***
	(0.131)	(0.0706)	(0.129)	(0.128)
percent_in-s	0.0923*	0.0430*		
	(0.0386)	(0.0189)		
percent_no-s	0.262***	0.125***		
	(0.0579)	(0.0291)		
ddem_percent	1.813***	0.927***	1.821***	1.844***
	(0.166)	(0.0867)	(0.160)	(0.152)
rrep_percent	2.154***	1.094***	2.170***	2.248***
	(0.201)	(0.103)	(0.193)	(0.182)
number_of_-s	-0.159***	-0.0740***	-0.163***	-0.152***
	(0.0165)	(0.00922)	(0.0164)	(0.0152)
percent_co-s			0.369***	
			(0.0544)	
percent_re-s				0.378***
				(0.0669)
_cons	0.202	0.585***	0.178	0.136
	(0.115)	(0.0571)	(0.115)	(0.122)
N	180	180	180	180
adj. R-sq	0.858	0.847	0.861	0.860

Standard errors in parentheses
* p<0.05, ** p<0.01, *** p<0.001

Table 6) Regressions 4 (election winners, close races)

	(1) vote_diff-l	(2) cand_percent	(3) vote_diff-l	(4) vote_diff-l
incumbent	0.118*	0.0604*	0.0911*	0.0846*
	(0.0519)	(0.0259)	(0.0441)	(0.0410)
vote_turn-t	-1.230***	-0.641***	-1.113***	-1.056***
	(0.292)	(0.159)	(0.280)	(0.281)
percent_in-s	0.149	0.0723		
	(0.0812)	(0.0391)		
percent_no-s	0.233	0.0985		
	(0.132)	(0.0654)		
ddem_percent	1.492*	0.771*	1.545*	1.046
	(0.686)	(0.331)	(0.630)	(0.638)
rrep_percent	1.756*	0.897*	1.841**	1.441*
	(0.704)	(0.341)	(0.647)	(0.643)
number_of_-s	-0.151***	-0.0640**	-0.161***	-0.141***
	(0.0327)	(0.0195)	(0.0333)	(0.0308)
percent_co-s			0.413***	
			(0.104)	
percent_se-s				0.456***
				(0.115)
_cons	0.281	0.645***	0.179	0.259
	(0.314)	(0.154)	(0.292)	(0.291)
N	62	62	62	62
adj. R-sq	0.725	0.677	0.737	0.743

Standard errors in parentheses
* p<0.05, ** p<0.01, *** p<0.001

6. Discussion of Results:

Given the results of the regressions we ran, there are a number of conclusions that we can draw regarding the effects of campaign contributions on the percentage of the vote that a candidate will receive or the margin by which a candidate will either win or be defeated. The first notable result was the reaffirmation of our hypothesis that the partisan composition of the district that a candidate was running in would have a major effect of the percentage of votes that a candidate would receive. The fact that in each instance when we regressed candidate percent on the percent composition of the district we saw a highly significant coefficient was reassuring. Specifically, we would expect that if voters were to all vote exactly in line with their partisanship, this coefficient would be one, as a one percentage point increase in the percentage of democratic voters in a district should increase the percentage of the vote received by the Democrat candidate by one percentage point. Notably, our findings suggest that Republican voters are more likely to support their party's candidates, as the the effect of Republican voter percentages on percentage of votes received by Republican candidates is consistently higher than that of their Democrat counterparts.

Examining the coefficients of the different variables for campaign contributions, we can see that that campaign contributions is definitely significant (in all of our regressions), which falls in line with both our initial hypotheses and the existing literature on the subject. However, the most compelling result exists in our regressions which include both the percentage of individual and non-individual contributions received by the individual. One of our initial goals was to examine whether the marginal effects of contributions from individuals and

non-individuals would be different in terms of their power in predicting the percentage of the vote that a particular candidate would receive. While our outputs in Tables 3 through 6 show the consistent higher marginal effect of gaining an additional percentage of the non-individual contributions, we believe this is in large part due to the way we set up the variables. As stated previously, we have broken individual and non-individual contributions into the percentage of each type of contribution received by each candidate. Thus, while controlling a greater percentage of the non-individual contributions appears to have a higher marginal impact, this could be in large part because, as can be seen in Table 9 in the appendices, non-individual contributions make up a vast majority of the total amount of contributions, implying that gaining control of one additional percentage would also imply gaining control of a larger sum of money.

One of the more interesting findings was the coefficient for incumbency. Even though only 3 incumbents lost (out of 137 total incumbents), and the coefficient was significant in most of our regressions (it is not significant in Table 4, where we look at close races on a per candidate basis) the magnitude of the coefficient was relatively low. In most of the regressions it was the lowest (or very near the lowest) positive coefficient. What this means is once all other factors are accounted for incumbency only has a minor positive effect on the outcome of the election. However the numbers don't lie, only 3 incumbents lost, how do we explain that? As you can see, district composition is a much more important factor in deciding the outcome of an election than incumbency or contributions. We believe the reason that 134 incumbents won their race was not mainly because they were incumbents but rather that the district composition was in their favor. When we look at the district that have fairly equal number of registered democrats

and republicans ("close races", Table 4 and Table 6) you can see that incumbency becomes much less significant (it is not significant in Table 4).

One of the variables we dropped from our regression is district income. This is because it came out to be insignificant. We believe this is because the average income of a district does not directly affect the outcome of an election; a better measure would be the change of income during each representative's term. However, census data only comes out every 10 years and our data set only covered a 6-year span, so we could not find the change in income for every 2 years. Since district income came out to be insignificant we left it out of our main regressions.

Finally, when we address the effects of campaign contributions and how they differ across our regressions including all races and just "close" races, we can see that when we are only examining close races, campaign contributions actually increase in magnitude, implying an increased importance in predicting the percentage of the vote that a particular candidate would receive. This does not seem surprising, as it would make sense that the additional financial resources and support, whether by the individual or non-individual, would be more important for those who were in a tight race, as compared to those who are expected to either win or lose by a significant margin.

7. Conclusion:

Our findings show that campaign contributions is indeed a factor in election outcomes, specifically non-individual campaign contributions have a significant effect. This is because of the large amount of money that is being contributed from non-individuals, from Table 11 you can see that party contributions accounted for the largest section of non-individual contributions.

Referring to Table 7, you can see that if the candidate is in a “close race” there is a higher probability that they will receive more in campaign contributions; also, Democrats are likely to receive more party contributions than Republicans (which is reaffirmed in Table 10, since there were 153 democratic, 152 republican, and 71 third party candidates in the three election cycles) in the state of Oregon.

Another one of our findings is that district composition is by far the most important factor on who is elected in the district. This leads us to believe gerrymandering is a real issue that could help specific individuals stay elected in their district. Every 10 years, after the census, the house legislature gets to redraw the district lines to keep the populations in each district about the same. From our research we can see that the composition of the district is a major factor in getting elected, and due to the relatively relaxed laws of redistricting, the legislature could redraw lines to give their party an advantage in the Oregon Legislation (an example of this is given in Table 12). However, our research did not look into the effect of redistricting, so we cannot conclude that redistricting has given an advantage to a specific party in Oregon. This would be a good topic to pursue as a party could gain advantage in the state legislator even though they do not have majority vote.

Ultimately, our findings suggest that within the State of Oregon, the most important factor in getting elected to the state legislature is simply the district that you happen to be running in and the partisanship of its constituency. However, we have shown that in districts where races are close, the effects of campaign contributions are strongly felt and are important in determining the eventual winner. An additional avenue of research that could be explored would be the policy implications of imposing a campaign contribution cap on Oregon State elections.

However, our research suggests the effects of this may be minimal, as the overwhelming majority of contributions candidates are receiving are coming from their respective parties and not from other sources.

8. Appendices:

Table 7) Regression 5 (Probit Model)

	(1) party_cont~s
party_cont~s	
close_race	0.715***
	(4.14)
_2014	0.120
	(0.64)
_2016	0.0871
	(0.46)
democrat	3.348***
	(7.84)
republican	2.526***
	(5.98)
number_of_~s	0.0311
	(0.28)
_cons	-2.789***
	(-5.91)
N	376

t statistics in parentheses
* p<0.05, ** p<0.01, *** p<0.001

Table 8) Contributions Table

	2012	2014	2016
Total Contributions	$19,361,665.50	$17,508,013.20	$19,925,510.50
Contributions to Close Races (62 races)	$9,839,318.97	$10,749,817	$9,115,682.40
Contributions to Other Races (118 races)	$9,522,346.53	$6,758,196.2	$10,809,828.1

Table 9) Type Contribution Graph

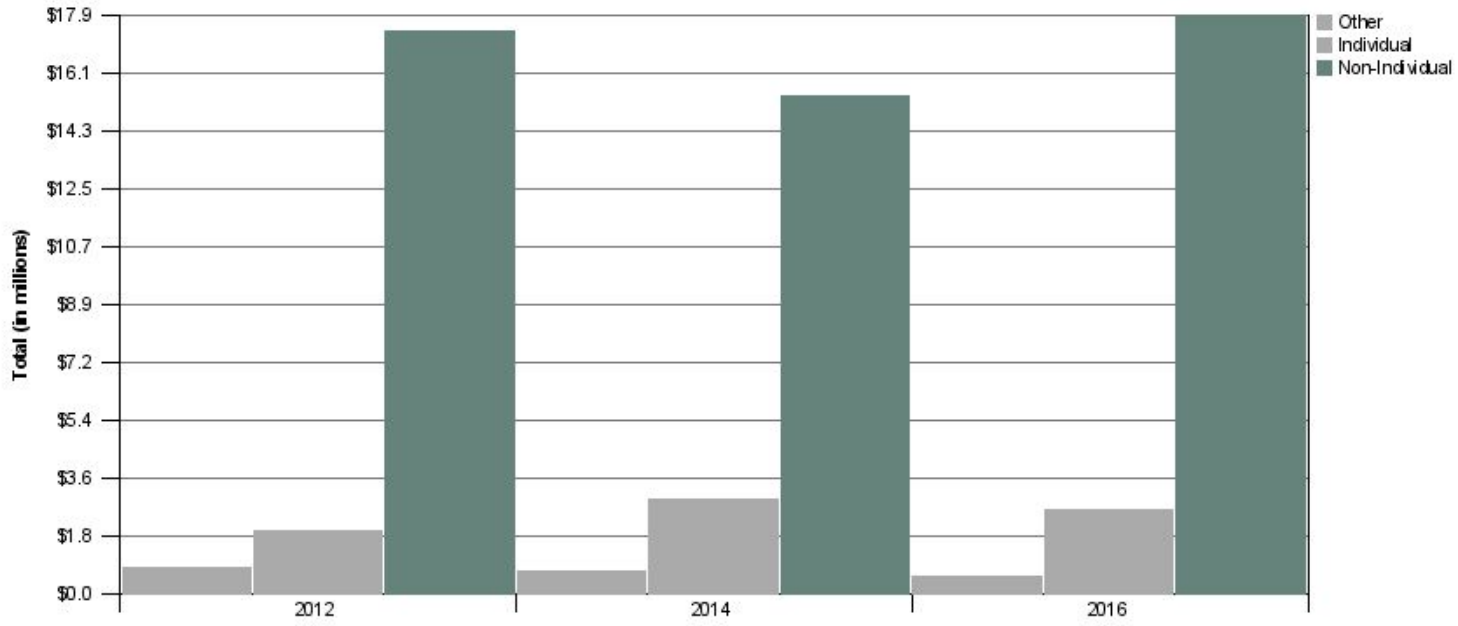


Table 10) Party Contribution Graph

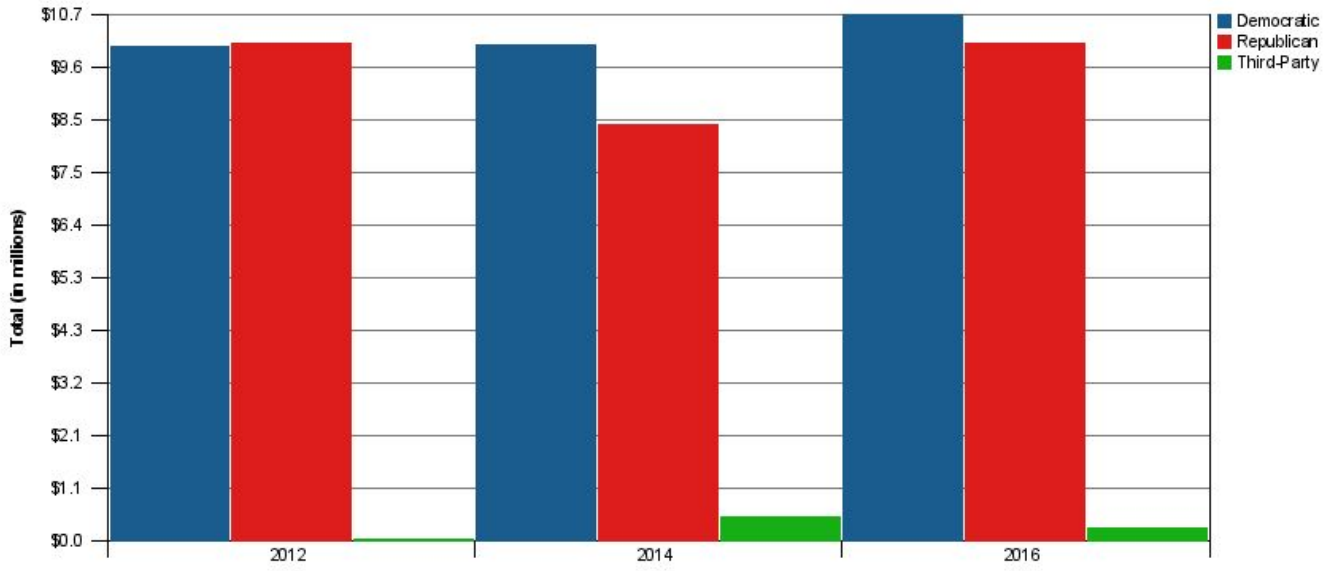


Table 11) Sector Contribution Graph

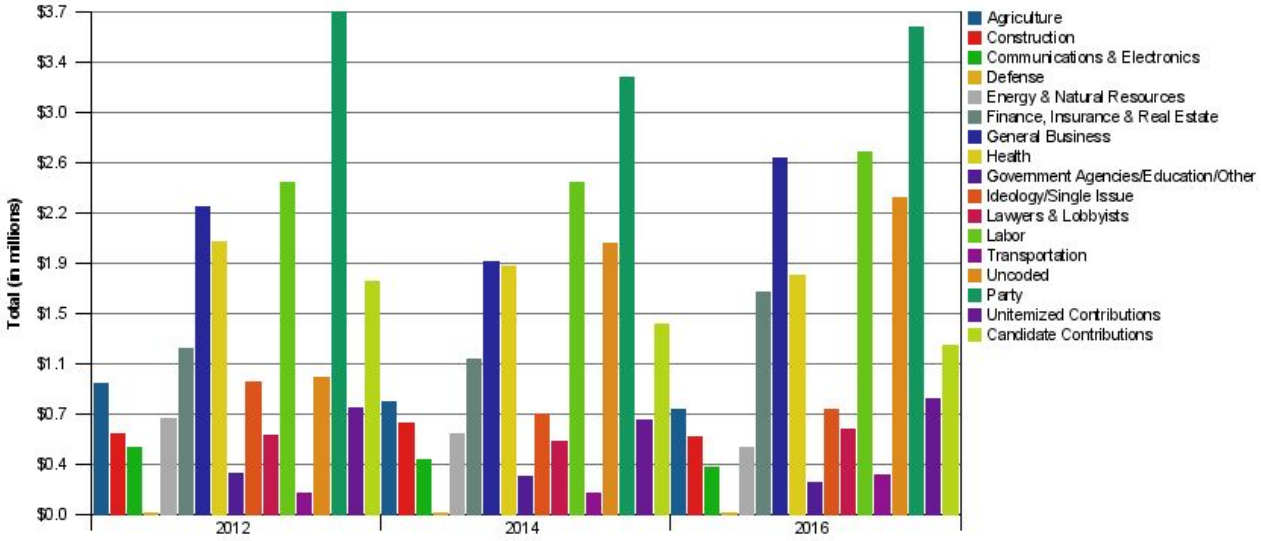
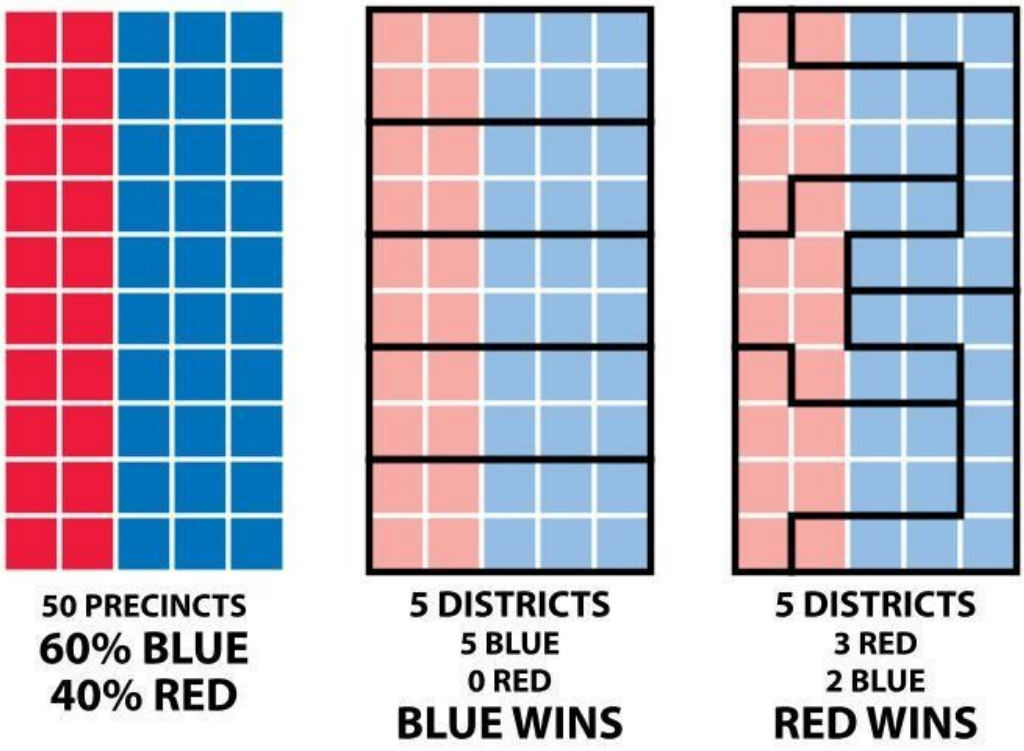


Table 12) Redistricting Example



9. Bibliography:

"Campaign Finance Manual." *Oregon Secretary of State,* accessed May 17, 2017, http://sos.oregon.gov/elections/Documents/campaign-finance.pdf.

"Contribution Limit for 2017-2018 Federal Elections." *Federal Election Commission,* accessed, May 17, 2017, https://transition.fec.gov/info/contriblimitschart1718.pdf.

Chirinko, Robert S., and Daniel J. Wilson. "Can Lower Tax Rates be Bought? Business Rent-Seeking and Tax Competition Among U.S. States." *National Tax Journal*, vol. 63, no. 4, 2010, pp. 967–993

Depken, Craig A. "The Effects of Campaign Contribution Sources on the Congressional Elections of 1996." *Economics Letters* 58, no. 2, (1 February 1998): Pages 211-215.

"Election Law Summary." *Oregon Secretary of State,* accessed May 17, 2017, http://sos.oregon.gov/elections/Documents/elec_law_summary.pdf.

Hogan, R. E. "Institutional and District-Level Sources of Competition in State Legislative Elections." *Social Science Quarterly* 84, (2003): 543–560.

Gerber, A. "Does Campaign Spending Work?" *American Behavioral Scientist* 47, no. 5, (2016): 541-574.

Gerber, A. "Estimating the effect of campaign spending on senate election outcomes using instrumental variables." *The American Political Science Review* 92, no. 2, (1998): 401-411.

Jacobson, Gary C. "The Effects of Campaign Spending in Congressional Elections." *The American Political Science Review* 72, no. 2, 1978, pp. 469–491.

Magee C. “Do Political Action Committees Give Money to Candidates for Electoral or Influence Motives?” *Public Choice [serial online]* 112. (September 2002):373-399.

McKay, Amy. "Buying Policy? The Effects of Lobbyists' Resources on Their Policy Success." *Political Research Quarterly* 65, no. 4 (2012): 908-23.

“Mission and History.” *National Institute of Money in State Politics*. https://www.followthemoney.org/about-us/mission-and-history/

Stratmann, Thomas. "Is Spending More Potent for or against a Proposition? Evidence from Ballot Measures." *American Journal of Political Science* 50, no. 3 (2006): 788-801.

Stratmann, Thomas. "What Do Campaign Contributions Buy? Deciphering Causal Effects of Money and Votes." *Southern Economic Journal* 57, no. 3 (1991): 606-20.

Vanberg, Christoph. “‘One Man, One Dollar?’ Campaign Contribution Limits, Equal Influence, and Political Communication.” *Journal of Public Economics* 92, nos. 3–4, (April 2008): 514-531.