More of the Same: The High-Cost Impotence of

Citizens United [*]

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Abstract

The political debate over *Citizens United* has centered on the exponential increase of independent expenditures financing federal elections. Disagreement over the ruling has primarily been a discussion of the morality of outside actors funneling campaign dollars to candidates or causes of their choice. This debate has failed to account for whether these expenditures have actual substantive effects on electoral outcomes. Using an original dataset on elections from 2004 to 2012, for both the House of Representatives and the Senate, this paper utilizes an OLS regression model to determine the significance and effect of non-party independent expenditures on the share of two-party vote received. In the case of the House, independent spending produces no significant gains or losses for their targeted races. The collinearity of expenditures in these contests, combined with diminishing marginal returns, limits the impact of independent spending. In the case of the Senate, methodological limitations result in inconclusive estimations.

Introduction

In the last two election cycles, American electoral expenditures have grown exponentially. This explosion in spending was brought on by two court rulings in 2010: *Citizens United v. FEC,* 424 U.S. 1 *(*1974) and *SpeechNow v. FEC,* 389 U.S. App. D.C. 424 (2010). The former overturned expenditure limits on independent actors while the latter overturned fundraising restrictions on those actors. The result of these rulings was immediate. In 2008, non-party independent spending was roughly $35 million dollars. In 2010 and 2012, these expenditures rose to $200 million and $450 million respectively. Political commentators have observed that after hundreds of millions spent, many of the groups engaging in this spending, particularly those favoring Republicans, did not get their desired result.[1] However, these discussions have failed to address is why the discrepancy between expenditure and electoral result exists. The substantive significance of these spending levels remains unknown. In this paper, I examine the effects of the historic levels of independent expenditure on electoral outcomes.

Using an original dataset, I measure the effect of independent spending on share of two-party vote received. Previous studies on the effects of *Citizens* and *SpeechNow* have been scant, limiting their scope or suffering from methodological limitations. This paper includes every election cycle between 2004 and 2012, tracing out the effects of independent spending on a time-line basis. The study includes races for the House and the Senate, capturing the differing political environments of both chambers. The estimation provides an expansive model that attempts to avoid the omitted-variable bias that has plagued other authors.

The Federal Election Campaign Act and the Bipartisan Campaign Reform Act

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[1] Neil King Jr., "Super PAC Influence Falls Short of Aims," *Wall Street Journal*, Sept. 24, 2012.

The modern era of American campaign finance began with the passing of the Federal Election Campaign Act (FECA) in 1971. Among its provisions, the law restricted the amount of contributions candidates and parties could receive, as well as the amount of money they could spend. However, the expenditure restrictions of FECA were overturned in *Buckley v. Valeo,* 424 U.S. 1 *(1974). Buckley* resulted in a gulf between the amount of money political actors wished to spend and the amount of money available to them. The subsequent discrepancy created an opening, leading to the advent of "soft money" contributions.

Soft money was a nickname for a class of campaign contributions created by amendments to FECA in 1974. The amendments allowed corporations and unions to provide unlimited contributions intended to go toward so-called "party building activities". It was argued that after FECA, the national parties were abandoning their roles in stimulating political participation and were pushing their now limited dollars exclusively toward partisan activities. Soft money would theoretically give parties the money they needed to engage the public in political activity. In reality, these contributions were almost entirely spent on "issue ads", television spots that avoided directly advocating for the defeat or victory of a candidate but still presented an unambiguously partisan position.[2] While "issue ads" fell within the literal parameters of the law, these expenditures were a loophole through FECA's restrictions.

After years of increasing soft money contributions and issue ads, Congress passed the Bipartisan Campaign Reform Act (BCRA) in 2002.[3] The bill outlawed the use of soft money by the national parties and federal candidates. They were prohibited from accepting, soliciting, or spending soft money while state and local parties were banned from using soft money for

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[2] E.g. "Tell Congressman X to support lower taxes".
[3] $456,878,202 for both parties in 2000 (*Federal Election Commission*).

"federal election activities".[4] Finally, BCRA proscribed corporate and union electioneering communications.[5] To offset the "public service" complaints that created the demand for soft money, BCRA also raised "hard money" contribution limits and indexed those limits to inflation.[6]

Citizens United and SpeechNow

In *Citizens United v. Federal Election Commission*, 558 U.S. 310 (2010), the Supreme Court overturned BCRA's restrictions on corporate and union electioneering communications so long as they did not directly donate money to either the candidates or the parties. The Court reasoned that if this spending was independent of party or candidate influence, it could not be seen as corruptive.[7] While this ruling meant corporations and unions were now free to spend unlimited quantities, they still had to abide by fundraising restrictions. Those fundraising regulations were stripped away by the D.C. Circuit Court in *SpeechNow v. Federal Election Commission*, 389 U.S. App. D.C. 424 (2010). Following the Supreme Court's "non-corruptive expenditure" argument from *Citizens,* the circuit court reasoned that if uncoordinated spending did not equate to corruption, neither did donating to the groups that engaged in such spending. Together, these two rulings allowed independent groups to both raise and spend unlimited quantities for express advocacy.[8] While previous expenditure literature has isolated the effects of spending under

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[4] Included registration and "get out the vote" activities in connection with a federal election amongst other provisions.

[5] Defined as an ad supporting or opposing a candidate that airs within sixty days of a general election.

[6] FECA's fundraising and expenditure limits were not indexed to inflation and had not been raised since the bill's initial passing.

[7] The previous consensus was that the appearance of corruption was enough to justify restrictions on the 1st Amendment's free speech protections.

[8] Television advertisements that directly advocate for the election or defeat of a candidate.

certain conditions, efforts to isolate the significance of independent expenditures following these rulings have been limited. This study seeks to address this omission.

Literature Review

Examining the effects of independent expenditures on electoral outcomes necessarily leads back to a general examination of expenditure effects. American political scientists have widely studied the effect of spending on electoral ventures. Previous scholarship has reached widely varying conclusions due to methodological differences. The first studies concluded that expenditures by challengers result in a statistically significant increase in their share of vote (Jacobson 1978, 1985, 1990; Glantz, Abramowitz, and Burkart 1976).[9] However, there is disagreement on the effects of incumbent expenditures. Jacobson's analysis concluded that spending by incumbent officeholders produces only a marginal effect on the vote received.[10] Others have argued that incumbent expenditures do have a significant effect on electoral outcomes (Green and Krasno 1988, 1990[11]; Gerber 1998[12]). Goidel and Gross (1994) reconciled the two competing theories.[13] Additional studies have reached a broader range of conclusions. Erikson and Palfrey (1998) concluded the effect of incumbent expenditure as being either at

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[9] Constituents are less familiar with challengers than with incumbents. Challengers must then inform voters about themselves. In the extreme case of absolute partisan loyalty, challenger expenditures educate the electorate of a candidate's party membership, raising their baseline of support to every party member in the district/state.

[10] Returning to the absolute partisan loyalty example, incumbents already have the support of every party member and their baseline cannot go any higher. While this does not suppose that rising expenditures would *decrease* the vote received, the consensus explanation for this observed effect is that incumbents increase their spending to match the magnitude of electoral threat they face. If they are spending in sizeable quantities, then the damage to their political fortunes has already been dealt.

[11] The authors fault Jacobson for choosing individual-level analysis over aggregate analysis and for using a dummy variable to measure candidate quality. Jacobson's challenger quality codes candidates as either former officeholders or not. Green and Krasno (1988) propose a challenger metric that includes factors such as public notoriety.

[12] Study focuses on the Senate only.

[13] The authors' model attempt to overcome the simultaneity problem by dividing the campaign into stages. Further, they conclude marginal return on spending for first-term incumbents is near-parity with marginal return for challengers

parity or greater than the effect of challenger expenditure.[14] Ansolabehere and Gerber (1994)

argued that focusing on *total* expenditures rather than just *campaign communication*

expenditures mismeasures the effect of spending.[15] Levitt (1994) concluded that the effect of

expenditure, regardless of incumbency status, is negligible.[16] These conclusions illustrate that

even minor adjustments in methodological approach can significantly change analytical

conclusions.

These studies have provided broad insight into the role and significance of spending in

electoral contests but they pre-dated the widespread introduction of independent expenditures.

Efforts at measuring the latter's effects have been scarce or have methodological deficiencies.

Michael Franz has twice attempted to examine those effects, in 2010 and 2012. His first study in

2010 argues that a separate court ruling in 2007, *FEC v. Wisconsin Right to Life*, 551 U.S. 449

(2007), exerts a stronger effect on the results in 2010 than *Citizens United*. In *Wisconsin*, the

court overturned the previous "magic words" test for express advocacy and replaced it with the

"reasonable person" test.[17] To test his theory, Franz examines the proportion of ads sponsored by

independent groups. There was a notable uptick from 2006 to 2008, but this proportion only

increased marginally in 2010 (Franz 2010). Beyond *Wisconsin*, he observes that when

expenditures from candidates, parties, and independent groups were combined, Democrats

outspent Republicans by $20 million yet still suffered heavy losses. Franz's 2012 paper extends

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[14] Similar to Goidel and Gross (1994), Erikson and Palfrey find a decrease in return on incumbent spending as seniority increases. The authors also find that incumbent spending affects long-term success (i.e. strategic politicians), adding to the incumbency advantage.

[15] Total expenditures include non-vote-capturing expenditures such as travel expenses.

[16] When candidate quality and district-specific characteristics are controlled for.

[17] The "magic words" test determines that an advertisement constitutes express advocacy only if it uses phrases such as "vote for" or "elect". The "reasonable person" test determines an advertisement constitutes express advocacy if a "reasonable person" viewing it would consider it as such. *Wisconsin* therefore weakened the definition of express advocacy. Theoretically, this meant issue ads could now become more explicit, making them more attractive vehicles to influence voters.

his theory to the 2012 elections. Here, he focuses on the presidential election and in particular, the Republican primary process. Differing from his previous conclusion that *Citizens* did not appear to cause a major increase in independent spending, he acknowledges that in 2012, a significant increase did occur. The model he introduces to test spending effects instead focuses on the shifts in vote received by Democrats at the county level under certain thresholds of ad-advantage.[18]

While Franz provides some initial insights, his work is limited in a number of ways. Although, he notes that other political factors can drive expenditures, he does not account for them.[19] His estimation excludes several significant independent variables, including incumbency status, electoral experience, and partisan orientation. Failure to do so necessarily leads to omitted-variable bias. While he acknowledges that their estimation was beyond the scope of his paper, assessing the effects of spending while ignoring significant variables results in hollow interpretation. Additionally, his *Wisconsin* argument is unconvincing. The trajectory of ads sponsored by independent groups did follow Franz's articulation for Senate races but not for House races. Based on Franz's data sourced from the Wisconsin Advertising Project and the Wesleyan Media Project, the proportion of ads sponsored by independent groups flat-lined from 2006 to 2008 but then more than doubled in 2010.[20] While Franz argues the proportion on the House side was higher in 2000 and that this motivated Congress to pass BCRA, this observation provides no support for his conclusion.[21] Additionally, the statistical analysis in his 2012 study measures correlation between ad-advantage and vote shift rather than correlation between

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[18] Franz and Ridout (2010); Vote shift received for every 1000 ad-advantages.
[19] He did not elaborate what he felt these variables were, only that they could affect election outcomes.
[20] Directly contradicting the contention that *Wisconsin* resulted in greater independent activity in 2008.
[21] If anything, it supports the conclusion that BCRA drained resources overall and *Citizens* restored them.

independent spending and vote shift.[22] The paper also focuses on the presidential race which presents unique issues.[23] Finally, his unit of measurement is counties in non-battleground states, severely restricting the number of available observations.[24] As I noted in the Introduction, I will correct for these methodological gaps and present a more expansive model to measure the effect of independent expenditures.

Hypothesis and Theory

Many of the variables that determine electoral outcomes are pre-determined and exert their influence before a single ballot is cast. Presidential vote share, as I explain in the Research Design, establishes a partisan base-line in the respective district or state. In recent elections, presidential vote has been highly correlated with vote-share as cross-over voting has declined significantly. Additionally, the incumbency advantage is well-documented, particularly for House elections where the incumbent re-elect rate is routinely above 90%. While lower for the Senate, the advantage afforded to incumbents including media access, public position-taking, resources both financial and logistical, and ability to deliver to constituents, also apply to Senators. Successful challenges against incumbents are rare but those successful challengers tend to be experienced campaigners with access to financial resources and infrastructure, as well as some previous level of public awareness.

Finally, the growth of independent expenditures has been astonishing but total independent spending is still considerably smaller than candidate expenditures. While the proportion of total expenditures undertaken by independent groups is growing, the majority of

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[22] This could also miss effect shifts that fell below his 1000 ad threshold.
[23] This includes an extensive primary process, strong personal vote, and a contest unconnected to other races.
[24] Battleground states also receive significantly higher levels independent expenditures and could result in different electoral effects.

campaign spending still comes from candidates directly. Given this fact, and given the effects exerted by all those previous variables, I expect that the measured effect of independent expenditures will be in minute changes at the margins, rather than in major shifts on electoral outcomes. I hypothesize that after controlling for these numerous independent variables, presidential vote share in the district or state, the incumbency status of the district or state, the expenditures conducted by the candidates, and the quality of the challengers, the measured significance of non-party independent expenditures on the share of two-party vote will be minimal.

Research Design

The dependent variable (DV) is the percent of two-party vote received in races for the House and the Senate. My independent variable (IV) of primary interest is non-party, independent expenditures.[25] As noted in the Literature Review, previous research have found that expenditures exert different effects in different types of races. Therefore, both the House and Senate will have three separate models with three different iterations of the DV for each election cycle. The first model's DV is the share of two-party vote received by Democrats versus Republicans (H/SDvR).[26] This model averages all of the different races together in a single model. The second model's DV is the share of two-party vote received by incumbents versus challengers (H/SIvC). Expenditures are beneficial for the latter while providing no significant assistance to the former (Jacobson 1978). The third model's DV is the share of two-party vote received by open-seat Republican challengers against open-seat Democratic challengers

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[25] There is no way to divide primary versus general election expenditures, however, spending is beneficial in both stages of a campaign (Jacobson 1976).

[26] As my dependent variable is percent of two-party vote, a model from a Republican point of view would be the inverse.

(H/SOvO). In open seat contests, neither candidate benefits from the incumbency advantage.[27]

An additional set of variables is included as controls with each of the model types.

In the DvR model, the first control is the overall political orientation of the sub-units (districts/states), as measured by the percent of two-party presidential vote received by the Democrat.[28] The second control is the incumbency status of the district/state.[29] These are classified as either Republican incumbent, open seat held by Republicans, open seat held by Democrats, or Democratic incumbent. Next is a control for the quality of the Republican challenger, indicated by prior electoral experience.[30] House Republican challengers are coded as either having held elected office or not. Senate Republican challengers are coded into one of four categories: former statewide officeholder, former representative, former local officeholder, or has never held elected office.[31] The two remaining controls are the expenditures conducted by the candidates directly and their respective parties. For the Senate, all expenditure totals in the model are run as per capita figures.[32] The Senate models also include an additional population control through the number of congressional districts in the respective state.[33]

In the IvC model, the first control is the percent of two-party presidential vote received by the incumbent. The second control is the party identification of the incumbent.[34] The third

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[27] Including the various iterations into a single model would require a large number of interactive variables, unnecessarily complicating the estimation.

[28] This will form the baseline of partisan support in each sub-unit. This is preferable to party registration for a number of reasons: failure of states to report party registration numbers, failure of states to require party registration, and mismatch between self-partisan identification and actual voting behavior.

[29] While other political factors must also be weighed, the incumbency advantage has been well-documented (Jacobson 1978).

[30] There is a strong correlation between the quality of the challenger and that challenger's likelihood of electoral success (Jacobson 2013).

[31] Increasing detail on challenger quality becomes subjective and also produces an insignificant change in the correlation (Jacobson 1990).

[32] To control for the different populations of states, the expenditure totals were divided by the voting-age population; also included in the SIvC and SOvO models.

[33] This control is also included in the SIvC and SOvO models.

[34] This variable controls for the partisan advantage afforded due to the political climate of that cycle.

control is the quality of the challenger.[35] The last controls are the expenditures by both the incumbents and challengers directly, and by their respective parties.

Finally, in the OvO model, the first control is the percent of two-party presidential vote received by the Republican challenger. Next is a single variable for the quality of both the challengers for the seat. For the House, this is coded as either only the Republican challenger has held elected office, both challengers have held elected office, or only the Democratic challenger has held elected office. Senate challengers are coded into one of the following: only the Republican challenger as held elected office, the Republican challenger held a higher elected office than the Democratic challenger, both challengers held an equivalent elected office, the Democratic challenger held a higher elected office than the Republican challenger, and only the Democratic challenger has held elected office. The final controls are the expenditures by the challengers and their respective parties.

For the House, I expand an already-existing dataset from Jacobson to include candidate names, party expenditures and independent expenditures. For the Senate, I compile an original dataset to include the previous variables as well as two-party vote, incumbency status, challenger electoral experience, two-party presidential vote, and candidate expenditures. The figures are drawn from three main sources: CQ Voting and Elections Collection for electoral results, DailyKos for the presidential results, and the Center for Responsive Politics for expenditure totals. The dataset begins in 2004, the first cycle following BCRA and runs until 2012. With a few exceptions, this dataset is a census, encompassing all of the House and Senate races within the time-frame. However, a handful of observations in both chambers need to be excluded. All

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[35] This mirrors the challenger quality measure (for both the House and Senate) in the DvR model but includes Democratic challengers (under the same coding).

excluded observations are those where examining two-party vote share is impossible. Most of these are races where an independent candidate was victorious.[36] One noted exception to exclusions of this type are the 2006 and 2012 Senate races in Vermont.[37] Other cases will be from either Texas, California or Louisiana.[38] The final exclusions are races where there was no opposing candidate from the other major party.[39]

Using an OLS regression model, my goal is to establish whether there is a statistically significant effect of independent expenditures on the percent of two-party vote received, while controlling for the other variables. I only report the models from the 2004, 2010, and 2012 cycles. In terms of independent expenditures, 2006 and 2008 share similarities with the 2004 elections. Unless they differ from the 2004 models substantially, I discuss them only briefly in the text.[40]

Measuring the value of expenditure on electoral outcomes is hampered by variables that are determined endogenously.[41] The behavior of donors and candidates exerts an effect on vote share but the reverse also holds true. Political actors behave strategically, responding to perceptions in addition to shaping them (Jacobson and Kernell 1983; Jacobson 2006). However, the so-called simultaneity problem is better characterized as omitted-variable bias. The appearance of simultaneous change in the estimation theoretically disappears once sufficient variables have

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[36] While all independent candidates elected to Congress caucus with one of the parties, they still face both of the major parties in their elections. All of these cases occurred in the Senate. This includes the 2006 race in Connecticut, the 2010 race in Alaska, and the 2012 race in Maine.

[37] While the victorious candidate in both of those races, Bernard Sanders, ran and won as an independent, he never faced a Democratic candidate, caucused with the Democrats, and can thus be reclassified as such.

[38] These exclusions cover general elections that saw more than one candidate representing one or both of the two major parties.

[39] Where the winning candidate would have received 100% of the two-party vote.

[40] Results of estimation can be found in the Appendix.

[41] A variable that is determined by another variable within the same model.

been included into the measurements.[42] While I do not propose that I have solved the omitted-variable problem, I construct my model aware of the difficulty of this issue but attempt to make it as tractable as possible.[43] The numerous controls included into the model are to ensure a vote change is the result of the independent spending, not because of other factors at play.

The regression models for the House are run with robust standard errors due to the nature of campaign expenditures. Campaign spending varies widely. While expectations drive expenditures, those figures do not have a constant variance. Systemic factors such as political climate, availability of resources, competitiveness, and a slew of other political considerations affect the variation of expenditure investment. Additionally, all expenditure figures are logged. Where candidates reported no spending, they are given a dummy figure of $5000 (the threshold for FEC reporting) while races where the parties or independent groups reported no spending are given a dummy value of $1000.[44] Finally, I caution the reader of a few caveats about the Senate analysis. Previous studies into Congressional elections typically exclude Senate contests and with good reason. Senate seats range from constituencies of under one million to over thirty million. Larger population states are also exponentially more expensive to contest than smaller ones but much cheaper on a per-voter basis. Additionally, the small number of observations limits the weight of any statistical model. As I have said, I attempt to control these issues to as reasonable a degree as possible. However, I emphasize that when attempting to compare senatorial elections across different states, the reader should use caution in interpreting the results of these estimations.

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[42] The shift of expenditures based upon expectations and vice versa doesn't actually occur simultaneously. Statistical modeling only characterizes it as such.

[43] Some authors have chosen to experiment with two-stage regression models to diffuse the simultaneity problem. I use a simultaneous-equations model.

[44] This method is common convention in campaign spending literature.

Data Summary

After the cases previously mentioned are excluded, the number of observations per cycle

are reported in Table 1.

Table 1. Number of Observations for House and Senate

	House	Senate
2004	362	33
2006	373	30
2008	380	34
2010	406	35
2012	362	31

Initial examination of the independent expenditure data across these years mirrors

arguments on the paramount role this spending now plays in electoral contests. Average

independent spending per House district rose from some $20,000 in 2004 to roughly $460,000 in

2012. The increase in average independent spending per Senate seat was equally stark, rising

from $400,000 in 2004 to over $8 million in 2012. Total independent expenditures grew from

roughly $21 million to over $457 million during this period, an increase of over twenty-one

times.[45] The total amount that went to House and Senate races respectively across these cycles

can be seen in Figure 1.

To place this growth into context, consider the increase in expenditures by the candidates

themselves and by the respective parties on their behalf over this period. For both the House and

Senate, these spending figures increased by roughly one-and-a-third times, from $1.1 billion to

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[45] In 2012 dollars.

$1.5 billion in candidate expenditures and $183 million to $236 million in party expenditures.[46]

Both are substantial increases but would have totaled $23 billion and $3.8 billion respectively

under the same growth-rate as independent spending.

Figure 1: Total NP Independent Expenditures (Real Dollars)
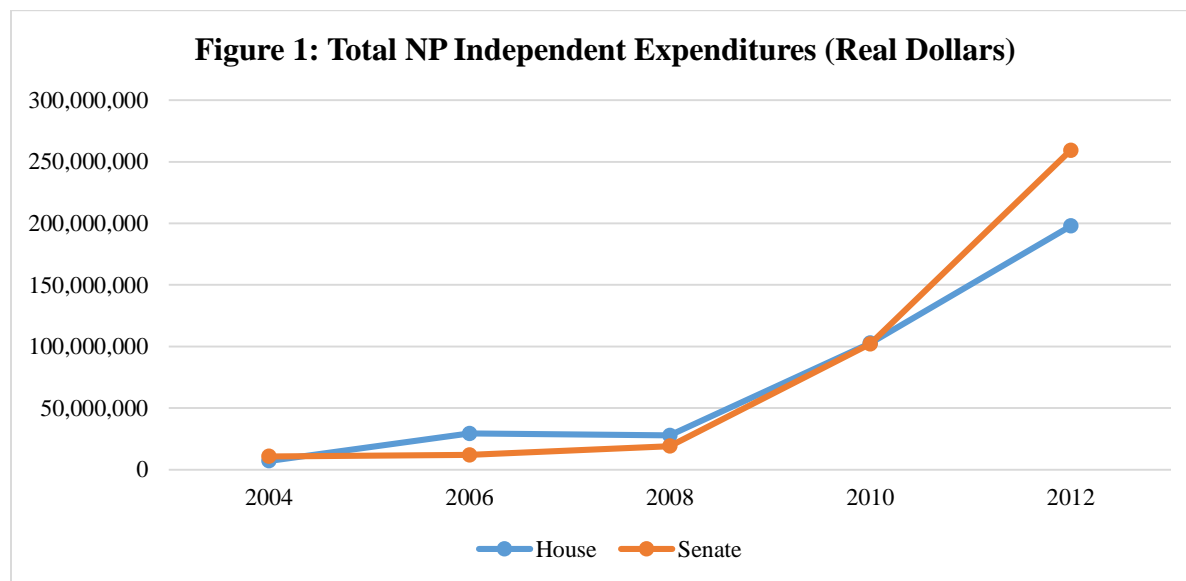
Notably, while *Citizens United* was portrayed as beneficial to conservative interests, the

spending totals posit a more mixed conclusion. In 2010, Democratic groups were outspent $97

million to the Republicans $123 million. In 2012 however, conservative groups were actually

slightly outgunned, spending $229 million to the Democrats $234 million. In fact, if all non-

party independent expenditures are totaled over the entire time sequence, Democratic-aligned

groups are slightly ahead: $406 million to the GOP's $400 million.

The House of Representatives – Democrats versus Republicans

My variables for these models are Democratic candidate expenditures (dcel), Democratic

party expenditures (dpel), Democratic independent expenditures (idel), their Republican

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[46] In 2012 dollars.

counterparts, the incumbency status of the seat (ip2), the quality of the Republican challenger

(rcq), and the Democrats' share of the two-party presidential vote (d2pp). The DV is the

Democrats' share of the two-party vote (d2p). The results of these models are reported in Table

2.

Table 2. Electoral Effects of Independent Expenditures (2004 – HDvR)

	Model 1	Model 2	Model 3
dcel	1.657	1.672	
	(8.71)**	(9.37)**	
dpel	-0.015		
	(0.10)		
idel	0.429		
	(1.82)		
rcel	-1.606	-1.596	
	(7.08)**	(7.78)**	
rpel	-0.057		
	(0.26)		
irel	-0.190		
	(1.03)		
ip2	5.043	5.013	4.920
	(8.59)**	(8.44)**	(8.35)**
rcq	0.214	0.466	0.401
	(0.26)	(0.56)	(0.49)
d2pp	0.505	0.502	0.497
	(15.88)**	(15.34)**	(15.17)**
tdel			1.829
			(10.01)**
trel			-1.782
			(8.48)**
_cons	17.085	17.934	18.780
	(4.15)**	(4.66)**	(4.93)**
R^2	0.94	0.94	0.94
N	362	362	362

*$p<0.05$; ** $p<0.01$

Note: t-ratios are in parentheses.

The first estimation includes all of the aforementioned variables. According to the results

in Table 1, expenditures by both candidates, the incumbency status of the district, and the

presidential vote all show up as statistically significant.[47] Interestingly, neither party

expenditures nor independent expenditures, my IV of primary interest, register as significant, yet

94% of variance in my DV is still being explained by the regression. In Model 2, I remove both

party and independent expenditures and re-estimate the model. Notably, my R-squared holds

steadt at 94% of variance explained. Finally, I collapse all of the expenditures into two spending

variables along party lines: total Democratic expenditures (tdel) and total Republican

expenditures (trel). Here, both of the totaled expenditure variables show as significant while the

R-squared statistic ticks upwards slightly by about one-one hundredth.

The regression models for the 2006 and 2008 cycles produce similar results.[48] Candidate

expenditures, incumbency status, Republican challenger quality, and Democratic presidential

vote share are all significant for both cycles.[49] Neither independent nor party expenditures are

statistically significant in either cycle in any of the three models. Dropping both party and

independent spending variables in Model 2 results in slight decreases in the respective R-squared

statistics. Candidate expenditures remain significant for both cycles in the second model. Finally,

compiling the individual expenditure classifications into two, party-based variables results in a

slight increase in the R-squared statistic.

Superficially, the statistical insignificance of independent expenditures in 2004, 2006,

and 2008 is not a particular surprise. In all three cycles, independent expenditures were far out-

stripped by both candidate and party expenditures. Out of hundreds of millions of dollars in each

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[47] That both of the latter two are measured to be significant is expected. Recall the incumbency advantage has been widely documented (Jacobson 2013). Additionally, the correlation between partisan identification as indicated by presidential vote and vote for Congress was also expected.

[48] Results of estimation reported in Table 24 and Table 25 in Appendix.

[49] Challenger quality tends to be less significant for House races than for Senate contests but can still be influential in certain cycles.

cycle, non-party independent spending made up miniscule proportions. Consider then the results

of the 2010 model reported in Table 3, the cycle immediately following the *Citizens United*

decision when independent expenditures first increased by substantial margins.

Table 3. Electoral Effects of Independent Expenditures (2010 – HDvR)

	Model 1	Model 2	Model 3
dcel	1.254	1.014	
	(5.99)**	(4.95)**	
dpel	-0.078		
	(0.76)		
idel	-0.041		
	(0.29)		
rcel	-1.221	-1.517	
	(4.96)**	(6.66)**	
rpel	-0.128		
	(0.92)		
irel	-0.251		
	(1.67)		
ip2	2.739	2.187	2.455
	(5.82)**	(4.99)**	(5.56)**
rcq	1.340	1.817	1.309
	(2.31)*	(3.17)**	(2.28)*
d2pp	0.683	0.707	0.680
	(21.71)**	(23.26)**	(20.64)**
tdel			1.213
			(5.58)**
trel			-1.807
			(7.38)**
_cons	8.950	10.772	13.667
	(2.39)*	(2.86)**	(3.50)**
R^2	0.94	0.94	0.94
N	406	406	406

* $p<0.05$; ** $p<0.01$

Note: t-ratios are in parentheses.

The three models here are run identically to the 2004, 2006, and 2008 models. Similar to

the results reported in Model 1, Table 1, candidate expenditures for both parties, incumbency

status, and presidential vote share all dominate. Additionally, neither party nor independent

expenditures are statistically significant for either party. In Model 2, candidate expenditures,

incumbency status of the district, Republican challenger quality, and Democratic presidential vote share are all significant. Dropping both party and independent expenditures only causes a slight drop in the variance explained. Model 3 finds significance for incumbency status, Republican challenger quality, presidential vote share, and total expenditures by both parties to be significant. Compiling all of the spending classifications into two-party based variables also leads to a modest increase in R-squared. These shifts in the variance explained, mirroring the 2004 models, occurs even with some $100 million in independent expenditures. These findings persist in the 2012 models reported in Table 4, when independent expenditures rose again to $180 million.

Table 4. Electoral Effects of Independent Expenditures (2012 – HDvR)

	Model 1	Model 2	Model 3
dcel	1.110	1.215	
	(6.32)**	(7.64)**	
dpel	0.145		
	(0.96)		
idel	0.292		
	(3.06)**		
rcel	-1.058	-1.147	
	(4.52)**	(5.32)**	
rpel	-0.137		
	(0.94)		
irel	-0.237		
	(1.87)		
ip2	2.129	2.178	2.269
	(4.66)**	(4.59)**	(4.83)**
rcq	0.442	0.282	0.078
	(0.85)	(0.53)	(0.15)
d2pp	0.714	0.707	0.714
	(23.66)**	(23.77)**	(25.93)**
tdel			1.384
			(8.43)**
trel			-1.230
			(6.11)**
_cons	10.487	11.286	9.836
	(3.16)**	(3.61)**	(3.71)**
R^2	0.96	0.96	0.96
N	362	362	362

* $p<0.05$; ** $p<0.01$

Note: t-ratios are in parentheses.

The results in Model 1 broadly mirror the results reported in Table 2 and Table 3. Candidate expenditures, incumbency status, and Democratic two-party presidential vote are all statistically significant. One deviation observed in Model 1, Table 3 that did not occur in any of the previous models is the finding of significance for Democratic independent expenditures.[50] However, its coefficient is still smaller than that of the Democratic candidate expenditures. As such, while this spending is significant in the 2012 cycle, its influence on the DV is weaker than

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[50] See Model 1, Table 1 and Table 2

that of candidate spending. The marginal effect exerted by these expenditures is further illustrated in Model 2. While significant, removing independent expenditures for both parties causes only a modest drop in the variance explained, a decrease of one-one hundredth. Candidate expenditures, incumbency status, and presidential vote share all still dominate. Restoring both independent and party spending indirectly in Model 3 results in an equally modest increase in the R-squared statistic. Both total expenditure variables in Model 3 are significant.

The effects of the variables in the respective models, as determined by the direction of their coefficients, consistently comport with the expectations and findings of previous scholarship. Increases in Democratic candidate expenditures, incumbency status, Republican candidate quality, Democratic share of two-party presidential vote, and total Democratic expenditure all result in increases in the Democratic share of two-party vote.[51] Likewise, increases in Republican candidate expenditures and total Republican expenditures result in decreases in the Democratic share of two-party vote. These findings hold in every single model for all five election cycles. Additionally, as I noted in my Hypothesis and Theory, the observed correlation between presidential vote and party vote has been increasing steadily with each additional election cycle. This reflects the steady rise of party-line voting and the growing partisanship of the American electorate. That growth is illustrated in these models where the coefficient for presidential vote share increases in every cycle, from .505 in 2004, to .683 in 2010, and to .714 in 2012.[52]

Finally, across these five election cycles with three models apiece, candidate expenditures, incumbency status of the district, and Democratic two-party presidential vote are

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[51] Recall incumbency status (coded 0-3) and Republican challenger quality (coded 0-1) become increasingly beneficial to Democrats as they increase.
[52] See d2pp in Model 1 of Table 2, Table 3, and Table 4

consistently significant. Additionally, Republican candidate expenditures are also significant

determinants on Democratic vote-share in the 2006, 2008, and 2010 models. Further, neither

party nor independent expenditures for either party are significant for the 2004, 2006, 2008, or

2010 models. However, Democratic independent expenditures are significant for the 2012

election cycle. Again, based on the estimations reported in Table 4, the effect exerted by this

spending on the DV is isolated to the margins. Removing this significant variable in Model 2

results in a modest decrease in variance explained while using total expenditure variables results

in a modest increase in the r-squared statistic. This mirrors the pattern established in Tables 2

and 3: an initial R-squared level in Model 1, a modest decrease in the variance explained in

Model 2, and a modest increase in the R-squared statistic in Model 3. Given these facts, the

finding of statistical significance for Democratic independent expenditures in Table 4 does not

conflict with the pattern established by the results reported in the previous tables.

In summation, across a period of time in which independent spending increased twenty-

one fold, those expenditures never accounted for a significant shift of the Democratic two-party

vote share. In all fifteen iterations, candidate expenditures and the other IV's impose a stronger

effect on the DV.

The House of Representatives – Incumbents versus Challengers

My variables for these models are incumbent candidate expenditures (icel), incumbent

party expenditures (ipel), incumbent independent expenditures (iiel), their challenger

counterparts, the party of the incumbent (ip3), the quality of the challenger (cq), and the

incumbent party's share of the two-party presidential vote (i2pp). The DV here is the

incumbent's share of the two-party vote (i2p). The results of this regression are reported in Table 5.

Table 5. Electoral Effects of Independent Expenditures (2004 – HIvC)

	Model 1	Model 2	Model 3
icel	-1.274	-1.396	
	(2.37)*	(2.75)**	
ipel	-0.053		
	(0.37)		
iiel	0.529		
	(2.50)*		
ccel	-1.323	-1.435	
	(8.98)**	(9.65)**	
cpel	-0.411		
	(2.01)*		
ice2l	-0.335		
	(1.15)		
ip3	3.846	3.756	3.795
	(8.95)**	(8.51)**	(8.73)**
cq	-0.372	-0.207	-0.430
	(0.64)	(0.36)	(0.75)
i2pp	0.441	0.453	0.444
	(14.51)**	(14.58)**	(14.33)**
tie2l			-1.252
			(2.56)*
tcel			-1.559
			(10.18)**
_cons	73.404	73.462	74.071
	(9.60)**	(9.79)**	(10.29)**
R^2	0.77	0.76	0.77
N	333	333	333

* $p<0.05$; ** $p<0.01$

Note: t-ratios are in parentheses.

Model 1, which includes all of the aforementioned variables, finds candidate expenditures, the partisan identification of the incumbent, and the share of the two-party presidential vote as statistically significant with an R-squared value of 0.77.[53] Both incumbent independent expenditures and challenger party expenditures are also found to be statistically

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[53] The negative coefficients attached the incumbent candidate expenditures is also in-line with previous findings on the effects of incumbent versus challenger spending.

significant. Recall an analogous finding of significance for Democratic independent expenditures in the 2012 HDvR model reported in Table 4. Mirroring those results, coefficients for both incumbent independent expenditures and challenger party expenditures are lower than their respective candidate spending counterparts, indicating a weaker effect. Further illustrating the marginal effect exerted by both of those spending classes are the results reported in Model 2. Removing both the party and independent expenditure variables still only causes a modest drop in the variance explained.[54] Additionally, candidate expenditures, partisan identification of the incumbent, and presidential vote share all remain significant. Finally, compiling all the spending classes into two variables in Model 3, total incumbent expenditures (tie2l) and total challenger expenditures (tcel), results in a slight increase in the R-squared value. Both total expenditure variables are also statistically significant.

The HIvC models for 2006 and 2008 report similar results.[55] In their respective Model 1's, candidate expenditures, partisan identification of the incumbent, share of two-party presidential vote and total expenditures broken down by incumbents and challengers are all statistically significant. Challenger party expenditures are significant in both 2006 and 2008 however, as in the case of Table 5, their coefficients are smaller than challenger candidate expenditures in both models. Additionally, dropping both party and independent spending variables in their respective Model 2's results in a very slight decrease in the R-squared statistic. Again, this illustrates that the significance of this spending on shifts in the share of vote received by the incumbent is confined to the margins. Replacing the individual spending classifications with two, total expenditure variables in Model 3, results in a very slight increase in variance explained.

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[54] Again, this mirrors the results reported in Table 4.
[55] Results of estimation reported in Table 26 and Table 27 in Appendix.

Aside from the extra significances, the HIvC regressions for the 2004, 2006, and 2008 cycles mirror the results from the HDvR models for those years. However, as previously noted, the tiny portion of independent expenditures prior to *Citizens United* may be biasing the ability of these models to properly assess the significance of this spending. Therefore, Table 6 reports the results from the 2010 HIvC model, the first year of major increases in independent expenditure.

Table 6. Electoral Effects of Independent Expenditures (2010 – HIvC)

	Model 1	Model 2	Model 3
icel	-0.469	-0.694	
	(1.91)	(2.72)**	
ipel	-0.178		
	(1.78)		
iiel	0.009		
	(0.07)		
ccel	-1.125	-1.400	
	(6.69)**	(8.55)**	
cpel	-0.180		
	(1.45)		
ice2l	-0.406		
	(2.32)*		
ip3	-8.331	-9.368	-8.726
	(12.76)**	(15.10)**	(13.51)**
cq	-0.286	0.738	0.188
	(0.50)	(1.14)	(0.30)
i2pp	0.616	0.669	0.637
	(16.83)**	(19.95)**	(17.58)**
tie2l			-0.770
			(2.59)*
tcel			-1.544
			(8.44)**
_cons	58.088	53.829	59.575
	(12.24)**	(11.30)**	(10.99)**
R^2	0.88	0.87	0.87
N	365	365	365

* p<0.05; ** p<0.01

Note: t-ratios are in parentheses.

Most of the findings observed in Table 4 carry over into the 2010 regressions. In Model 1, challenger candidate expenditures, partisan identification of the incumbent, and presidential vote share are all statistically significant. One change is the determination of statistical insignificance for incumbent candidate expenditures in Model 1.[56] Another difference is the finding of challenger independent expenditures as significant. However, as is the case with the HIvC estimations, the challenger independent expenditures' coefficient is smaller than the challenger candidate expenditures', indicating a weaker effect. The marginal influence exerted

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[56] This is in line with previous studies which find incumbent expenditures to be ineffective.

by these challenger independent expenditures is, again, further illustrated by Model 2. Removing both independent and party expenditures results in a modest decrease in the R-squared statistic. Additionally, both candidate expenditures, partisan identification of the incumbent, and presidential vote share are significant. In Model 3, the use of total expenditure variables results in a modest increase in variance explained. Along with partisan identification of the incumbent, and presidential vote share, both total expenditure variables are statistically significant.

Thus, the exponential increase of independent expenditure in the first cycle following *Citizens United* contributed very little to the overall electoral fortunes of candidates, regardless of whether they were incumbents or challengers. We move on now to the 2012 models reported in Table 7.

Table 7. Electoral Effects of Independent Expenditures (2012 – HIvC)

	Model 1	Model 2	Model 3
icel	-0.271	-0.490	
	(0.75)	(1.46)	
ipel	-0.160		
	(1.02)		
iiel	0.170		
	(1.33)		
ccel	-0.829	-1.144	
	(5.57)**	(7.92)**	
cpel	-0.411		
	(2.64)**		
ice2l	-0.171		
	(1.49)		
ip3	2.354	2.266	2.183
	(4.95)**	(4.62)**	(4.60)**
cq	0.533	0.860	0.532
	(1.02)	(1.55)	(0.96)
i2pp	0.623	0.644	0.648
	(18.85)**	(20.29)**	(20.82)**
tie2l			-0.345
			(1.02)
tcel			-1.169
			(8.55)**
_cons	42.184	42.496	41.583
	(6.58)**	(6.99)**	(7.12)**
R^2	0.89	0.88	0.88
N	323	323	323

* $p<0.05$; ** $p<0.01$

Note: t-ratios are in parentheses.

Model 1 finds challenger candidate and party expenditures, partisan identification of the incumbent, and incumbent presidential vote share as significant while both independent expenditure variables are insignificant. Another finding of the insignificance of incumbent candidate expenditures is no surprise and has already been widely documented by previous scholarship. An additional finding of statistical significance for challenger party expenditures is again, non-threatening: the shift in the R-squared statistic followings its removal in Model 2 and

indirect restoration in Model 3 follows the same pattern observed in Tables 4 and 5.[57] These shifts in the variance explained, combined with the lower coefficient on the challenger party expenditures variable indicates that while significant, its influence on the vote-share is limited to the margins. Finally, the finding of total incumbent expenditures as statistically insignificant is explained by the inefficacy of any incumbent spending.

Recall that the inclusion of the partisan identification of the incumbent variable is meant to document the partisan advantage afforded to one party in a particular election cycle. Changes in this variable across the five cycles, in both the size and direction of its coefficient, mirror shifts in the broader political climate.[58] 2004 and 2012 were fairly flat cycles for House elections. Both were presidential years in which the respective incumbents won re-election by reasonable margins. Only three states changed their previous presidential preference in 2004; in 2012, just two states voted for the party opposite the last election. The House results reflected the relative calm of their respective cycles: in 2004, the Democrats ceded just two seats while they gained only eight in 2012. The modest coefficients in those two cycles, 3.846 and 2.354 respectively, is therefore expected.[59] However, 2010 was a massive wave election, costing the Democrats their control of the House and delivering the largest midterm swing in over sixty years. Unsurprisingly, Democratic incumbents paid heavily that year with a coefficient of -8.331.[60]

As noted in the Research Design, the IvC models are constructed to tease out the expenditure effects that apply differently to incumbents and challengers. We first judge these

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[57] This finding could also be explained by previous studies: expenditures which benefit challengers are much more effective.

[58] Incumbents were coded a 0 if they were a Republican and a 1 if they were a Democrat. The coefficient therefore describes the advantage or disadvantage afforded to Democrats in that cycle.

[59] See ip3 in Table 4 and 6 respectively.

[60] See ip3 in Table 5.

effects through the directions of the respective coefficients. Across all five election cycles and in every model, incumbent candidate expenditures consistently have negative effects on the DV. As noted above, the DV for these IvC models is the share of two-party vote received by the incumbent. Recall from the Literature Review, previous studies have already documented the negative effects of incumbent expenditures on their own electoral fortunes.[61] Additionally, the share of vote received by the incumbent increases alongside the share of presidential vote received by the incumbent's party. Unsurprisingly, the share of vote received by the incumbent decreased when challenger candidate expenditures increase. All of these findings are consistent with expectations. Finally, the observed increase in the presidential vote share coefficient can also be observed in the HIvC models. Again, this increase reflects the decline of crossover voting and the increase of straight, party-line partisanship amongst voters. The presidential vote share coefficient climbs from .441 in 2004, to .616 in 2010, and to .623 in 2012.[62]

In every model for all five election cycles, challenger candidate expenditures, partisan identification of the incumbent, and the incumbent's share of two-party presidential vote are consistently significant in every model in which they are included as variables. Several of the models find statistical significance in their cycles' party or independent expenditures. Again, the size of their coefficients compared to their candidate expenditure counterparts as well as the minute shifts in the R-squared statistic indicate that while significant, this spending only exerts a marginal effect on vote-share.

The House of Representatives – Open Seat Contests

My variables for these models are Republican challenger candidate expenditures (oce1l),

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[61] Again, no one has ever interpreted this finding to mean that incumbent expenditures actually lower their vote totals merely that the dynamics that result in large-scale spending by incumbent candidates result in this statistical conclusion.

[62] See i2pp in Model 1 of Table 5, Table 6, and Table 7.

Republican challenger party expenditures (ope1l), Republican challenger independent

expenditures (ioe1l), their Democratic challenger counterparts, the quality of the challengers

(cq2), and the share of two-party presidential vote received by the Republican challenger's party

(o2pp1). My DV for these models is the share of two-party vote received by the Republican

challenger (o2p1). The results of these models are reported in Table 8.

Table 8. Electoral Effects of Independent Expenditures (2004 – HOvO)

	Model 1	Model 2	Model 3
oce1l	3.137	3.074	
	(3.35)**	(5.73)**	
ope1l	-1.023		
	(0.78)		
ioe1l	-0.434		
	(1.27)		
oce2l	-2.038	-1.932	
	(2.57)*	(4.62)**	
ope2l	1.092		
	(0.74)		
ioe2l	0.139		
	(0.30)		
cq2	-4.516	-4.365	-4.314
	(4.56)**	(5.49)**	(4.85)**
o2pp1	0.358	0.358	0.382
	(4.82)**	(5.19)**	(5.51)**
toe1l			2.769
			(5.42)**
toe2l			-2.002
			(4.54)**
_cons	23.348	20.703	24.187
	(1.68)	(2.33)*	(3.01)**
R^2	0.95	0.95	0.94
N	32	32	32

*$p<0.05$; ** $p<0.01$

Note: t-ratios are in parentheses.

Model 1 finds candidate expenditures, the quality of the respective challengers, and the

share of the two-party presidential vote to be statistically significant with an R-squared value of

0.95. Neither party nor independent expenditures that benefit either challenger are significant.

Removing both of them in Model 2 causes only a tiny drop in the variance explained. Candidate

expenditures, challenger quality, and share of presidential vote remain statistically significant. Finally, compiling all of the spending classifications into two party-based variables for the two challengers (toe1l and toe2l) similarly leads to a modest change in the R-squared statistic in Model 3. Both total expenditure variables also are statistically significant. Variance explained in all three models stays within a range from 0.94 to 0.95.

The models for 2006 and 2008 comport with results of Table 8.[63] Candidate expenditures and presidential vote share are statistically significant while party and independent expenditures exert little if any effect on the share of vote received. The removal of both party and independent expenditures in their respective Model 2's results in slight drops in their R-squared statistics. The replacement of all the individual spending classifications with favor of two, total expenditure variables in their respective Model 3's results in slight increases in their variance explained. Once again however, the minuscule amount of independent expenditures in the 2004, 2006, and 2008 cycles make these findings relatively uninformative. We move now to the results of the 2010 HOvO models reported in Table 9.

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[63] Results of estimation reported in Table 28 and Table 29 in Appendix.

Table 9. Electoral Effects of Independent Expenditures (2010 – HOvO)

	Model 1	Model 2	Model 3
oce1l	2.342	2.053	
	(2.80)**	(4.02)**	
ope1l	-0.625		
	(1.36)		
ioe1l	0.826		
	(1.27)		
oce2l	-1.417	-1.753	
	(2.94)**	(3.45)**	
ope2l	-0.208		
	(0.58)		
ioe2l	0.041		
	(0.13)		
cq2	-1.704	-1.778	-1.363
	(2.20)*	(2.36)*	(2.03)*
o2pp1	0.648	0.712	0.629
	(6.45)**	(9.10)**	(6.24)**
toe1l			2.874
			(3.71)**
toe2l			-2.758
			(3.82)**
_cons	10.252	17.299	23.397
	(1.24)	(2.05)*	(2.41)*
R^2	0.92	0.91	0.92
N	41	41	41

* $p<0.05$; ** $p<0.01$

Note: t-ratios are in parentheses.

As in the case of the HDvR and HIvC models, despite the enormous growth in non-party independent spending in 2010, no statistical significance for these independent expenditures is observed in Model 1, Table 9.[64] Candidate expenditures, the quality of the challengers, and the share of two-party presidential vote all have a statistically significant effect on the share of two-party vote received by the Republican challenger. The removal of party and independent expenditures in Model 2 sees the R-squared drop from 0.92 to 0.91. Candidate expenditures, challenger quality, and presidential vote share all remain significant. Finally, compiling all of the expenditure classifications in Model 3 results in the variance explained returning to its previous

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[64] See Table 3 and Table 6.

value of 0.92. Additionally, both of the total expenditure variables are significant. The last

HOvO models for the 2012 election cycle are reported in Table 10.

Table 10. Electoral Effects of Independent Expenditures (2012 – HOvO)

	Model 1	Model 2	Model 3
oce1l	1.302	1.380	
	(3.84)**	(4.45)**	
ope1l	0.054		
	(0.23)		
ioe1l	0.138		
	(0.78)		
oce2l	-1.356	-1.380	
	(4.59)**	(4.93)**	
ope2l	-0.090		
	(0.46)		
ioe2l	0.059		
	(0.30)		
cq2	-0.597	-0.693	-0.491
	(0.89)	(1.04)	(0.80)
o2pp1	0.782	0.779	0.772
	(13.73)**	(15.94)**	(14.55)**
toe1l			1.650
			(4.57)**
toe2l			-1.657
			(4.48)**
_cons	9.900	11.141	11.243
	(1.90)	(2.46)*	(2.32)*
R^2	0.97	0.97	0.97
N	60	60	60

* $p<0.05$; ** $p<0.01$

Note: r-ratios are in parentheses.

With the exception of the quality of the challengers, all of the previous findings from the

2004 and 2010 models transfer to 2012 as well. In Model 1, candidate expenditures and

presidential vote-share matter while party and independent expenditures do not. Dropping party

and independent expenditures in Model 2 result in R-squared decreasing slightly. Candidate

expenditures and presidential vote share are still significant. Compiling the expenditures in

Model 3 results in a slight increase in variance explained. Both total expenditure variables are

significant. The R-squared statistic straddles 0.97 in all three models.

As is the case for the HDvR and HIvC models, the effects of the variables on the DV, as judged by their respective coefficients, comports with expectations on their behavior. Increases in the candidate expenditures by the Republican challenger result in increases in the DV. Increases in the candidate expenditures by the Democratic challenger result in decreases in the DV. Unsurprisingly, there is also a positive correlation between the vote received by the Republican challenger and the presidential vote received by the Republican challenger's party. While challenger quality is not significant in every model, its coefficient is still consistent in matching expectations. As the variable grows increasingly beneficial for the Democratic challenger, the Republican challenger's vote decreases. Finally, observe the dramatic increase in the presidential vote share coefficient across the HOvO models. The coefficient sits at .358 in 2004, nearly doubling to .648 in 2010, and rising again to .782 in 2012.[65]

In every single model, candidate expenditures and presidential vote share are statistically significant while party and independent expenditures are not. For all five cycles, the removal of the latter two variables causes a modest decrease in the variance explained while the use of total expenditure variables results in an increase in the R-squared statistic. In no model do either of these expenditures account for a large portion of the variation in the DV. These findings of would have been suspect for the 2004, 2006, and 2008 cycles if not for the synonymous findings in 2010 and 2012.[66] In summation, the insignificant effect exerted by independent expenditures on the DV is observed even in races where both candidates are challengers. Recall that open-seat elections are contests that are heavily contested by both parties and where neither candidate benefits from incumbency-based advantages that often overwhelm the effects of campaign expenditures.

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[65] See o2pp1 in Model 1 of Table 8, Table 9, and Table 10.
[66] Due to the lower independent expenditure figures overall.

The House of Representatives – Summary Analysis

Based on the Tables above, for the entire period from 2004 to 2012, independent expenditures provided no significant boost to the fortunes of House candidates. That these patterns persist across a time frame when independent spending exploded in volume suggests that the sum of expenditure is not at issue. An increase of over twenty-one times did not produce an equivalent electoral advantage. Just as important to the sum of expenditure is the potential that this spending could have had different results in different contests. As noted in the Research Design, the purpose of dividing the models into three separate categories is to demonstrate that this finding holds for candidates and contests of all stripes. The HDvR models covered all the races in the dataset but as a result, could have washed out the effect of independent expenditures if, for some reason, they only benefitted a certain type of candidate. The HIvC models and HOvO models ensured that a finding of significance or insignificance held true across all contest-types.[67] As a result, we know that both party and independent expenditures are ineffective in their goals of boosting House candidates, regardless of whether they are an incumbent or a challenger.

The next task then is to answer why after such a huge sum, these expenditures appeared to provide next to no benefit for their respective candidates. The explanation I propose to answer for this conclusion is two-fold: collinearity and diminishing marginal returns. Expenditures by

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[67] This could have been accomplished using a DvR-type model only but would have required a large number of interactive variables that could have unnecessarily complicated the analysis.

parties and independent groups correlate with expenditures by the candidates themselves.[68]

Consider the correlation matrices for the HDvR models reported in Table 11.

Table 11. Correlations for Campaign Expenditures in 2004, 2010, and 2012 (HDvR)

2004	dcel	dpel	idel	tdel	rcel	rpel	irel	trel
dcel	1.0000							
dpel	0.2390	1.0000						
idel	0.3710	0.4913	1.0000					
tdel	0.9948	0.3029	0.4135	1.0000				
rcel	-0.296	0.4280	0.1333	-0.263	1.0000			
rpel	0.3559	0.7507	0.5492	0.4209	0.3579	1.0000		
irel	0.1217	0.5178	0.2962	0.1655	0.3984	0.5671	1.0000	
trel	-0.262	0.4852	0.1764	-0.223	0.9934	0.4352	0.4462	1.0000

2010	dcel	dpel	idel	tdel	rcel	rpel	irel	trel
dcel	1.0000							
dpel	0.3035	1.0000						
idel	0.5226	0.6488	1.0000					
tdel	0.9841	0.3932	0.6112	1.0000				
rcel	-0.119	0.4388	0.3171	-0.068	1.0000			
rpel	0.3977	0.6940	0.6604	0.4783	0.3224	1.0000		
irel	0.4286	0.6470	0.6893	0.4980	0.4736	0.6806	1.0000	
trel	-0.047	0.5345	0.4256	0.0154	0.9667	0.4587	0.5905	1.0000

2012	dcel	dpel	idel	tdel	rcel	rpel	irel	trel
dcel	1.0000							
dpel	0.4015	1.0000						
idel	0.4045	0.6273	1.0000					
tdel	0.9579	0.5046	0.5641	1.0000				
rcel	-0.242	0.3621	0.1993	-0.176	1.0000			
rpel	0.3818	0.8347	0.6128	0.4741	0.3569	1.0000		
irel	0.2436	0.6206	0.6905	0.3651	0.4012	0.6280	1.0000	
trel	-0.159	0.4691	0.3368	-0.075	0.9676	0.4701	0.5503	1.0000

While there is no official minimum threshold as a sufficient condition to establish

collinearity, generally a coefficient above 0.4 demonstrates collinear variables. Democratic

independent expenditures are collinear with candidate expenditures for the 2006, 2008, 2010 and

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[68] Political actors spend money based on the expectation that it will deliver on the investment. In other words, financial backers are most likely to push their dollars toward the most winnable or contestable districts. This would include the parties and independent expenditure groups.

2012 cycles and are on the cusp of collinearity for the 2004 elections.[69] Republican independent

expenditures are with candidate expenditures for 2006, 2010, and 2012 and on the cusp of

collinearity for 2004 and 2008. Both parties have lower correlation coefficients between

candidate and party expenditures.[70] However, party spending is significantly lower than either

candidate or independent expenditures.[71] Additionally, while they do not meet the 0.4 threshold,

their coefficients are still above zero.[72] Equally important is the correlation coefficient between

the three individual spending classifications (candidate, party, independent) and the total

spending variables for both parties. Based on the coefficients, we can conclude collinearity

between the total expenditure variables and the three individual spending classifications for both

parties in all five election cycles.[73] Now consider the correlation matrices for the HIvC models

reported in Table 12.

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[69] Once again, non-party independent expenditures were inconsequential until after the *Citizens United* decision in 2010. Given that groups of this type were not significant players at the time, it is possible the lower correlation reflects strategies of financial investment that differ from the strategies employed by independent groups post-*Citizens*. Independent expenditures did grow by 2006 and 2008 although not by the same explosive factors post-2010.

[70] Democratic candidate expenditures are collinear with party expenditures for the 2012 cycle only.

[71] Additionally, candidates can coordinate with their respective parties over the most efficient distribution of funds whereas independent groups, by legal mandate, cannot. The latter can only act on its own political calculations and expectations of competitiveness, of which well-funded candidates is one indicator.

[72] A coefficient of zero would indicate no correlation between two variables.

[73] Since total spending is just a composite of the three spending classifications, their respective, individual correlation coefficients should be high.

Table 12. Correlations for Campaign Expenditures in 2004, 2010, and 2012 (HIvC)

2004	icel	ipel	iiel	tie2l	ccel	cpel	ice2l	tcel
icel	1.0000							
ipel	0.3641	1.0000						
iiel	0.3546	0.5083	1.0000					
tie2l	0.9867	0.4604	0.4258	1.0000				
ccel	0.4754	0.4662	0.3785	0.5130	1.0000			
cpel	0.4570	0.6822	0.5687	0.5463	0.5610	1.0000		
ice2l	0.3187	0.4847	0.3075	0.3894	0.3591	0.5896	1.0000	
tcel	0.5004	0.5097	0.4128	0.5458	0.9935	0.6255	0.4065	1.0000

2010	icel	ipel	iiel	tie2l	ccel	cpel	ice2l	tcel
icel	1.0000							
ipel	0.3147	1.0000						
iiel	0.5180	0.6217	1.0000					
tie2l	0.9555	0.4904	0.6626	1.0000				
ccel	0.4749	0.5224	0.6234	0.5827	1.0000			
cpel	0.4110	0.6810	0.6583	0.5530	0.5314	1.0000		
ice2l	0.4543	0.6628	0.7090	0.5901	0.6517	0.7191	1.0000	
tcel	0.5091	0.5967	0.6911	0.6334	0.9725	0.6329	0.7460	1.0000

2012	icel	ipel	iiel	tie2l	ccel	cpel	ice2l	tcel
icel	1.0000							
ipel	0.4172	1.0000						
iiel	0.4770	0.6604	1.0000					
tie2l	0.9514	0.6071	0.6645	1.0000				
ccel	0.4635	0.5740	0.4939	0.5540	1.0000			
cpel	0.4170	0.8500	0.6717	0.5924	0.6350	1.0000		
ice2l	0.3890	0.6235	0.7223	0.5518	0.5026	0.6596	1.0000	
tcel	0.4955	0.6489	0.6248	0.6194	0.9492	0.7171	0.6676	1.0000

First, incumbent independent expenditures are correlated with candidate expenditures for the 2006, 2008, 2010 and 2012 cycles, but not for 2004. Additionally, incumbent candidate expenditures are collinear with party spending for the 2006 and 2012 elections but not for 2004, 2008, or 2010. Finally, the three incumbent expenditure variables are each individually collinear with the total spending variable in all five cycles. There are then four instances where the correlation coefficients did not meet the general standard to establish collinearity. All four of

those cases have coefficients just shy of the 0.4 threshold.[74] For challengers, the correlation

coefficients indicate collinearity between both independent and candidate spending, and party

and candidate expenditures for the five cycles. Furthermore, each of the three spending classes

are collinear with the total expenditure variable in all five elections. Finally, we observe the

correlations for the HOvO models reported in Table 13.

Table 13. Correlations for Campaign Expenditures in 2004, 2010, and 2012 (HOvO)

2004	oce1l	ope1l	ioe1l	toe1l	oce2l	ope2l	ioe2l	toe2l
oce1l	1.0000							
ope1l	0.5341	1.0000						
ioe1l	0.5311	0.3049	1.0000					
toe1l	0.9700	0.6809	0.5563	1.0000				
oce2l	-0.036	0.5827	-0.079	0.0476	1.0000			
ope2l	0.5868	0.9839	0.3318	0.7152	0.5716	1.0000		
ioe2l	0.0516	0.3566	0.1089	0.1081	0.6390	0.3183	1.0000	
toe2l	0.0253	0.6742	-0.033	0.1328	0.9886	0.6595	0.6385	1.0000
2010	oce1l	ope1l	ioe1l	toe1l	oce2l	ope2l	ioe2l	toe2l
oce1l	1.0000							
ope1l	0.3539	1.0000						
ioe1l	0.6376	0.7446	1.0000					
toe1l	0.9777	0.5112	0.7612	1.0000				
oce2l	0.0092	0.5242	0.2460	0.0982	1.0000			
ope2l	0.4551	0.7792	0.6051	0.5631	0.4165	1.0000		
ioe2l	0.1672	0.5570	0.3884	0.2575	0.3513	0.5398	1.0000	
toe2l	0.1268	0.7298	0.4503	0.2468	0.8988	0.6469	0.6289	1.0000
2012	oce1l	ope1l	ioe1l	toe1l	oce2l	ope2l	ioe2l	toe2l
oce1l	1.0000							
ope1l	0.4292	1.0000						
ioe1l	0.4374	0.5518	1.0000					
toe1l	0.9362	0.5722	0.6375	1.0000				
oce2l	-0.035	0.2754	-0.061	0.0066	1.0000			
ope2l	0.3739	0.7974	0.4159	0.5074	0.4015	1.0000		
ioe2l	0.0632	0.5935	0.4083	0.2235	0.3898	0.5929	1.0000	
toe2l	0.0221	0.4212	0.0425	0.0980	0.9456	0.5245	0.5830	1.0000

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[74] As noted before, neither the greater diversity of non-party independent spending in 2004, nor the greater diversity of party spending in general are particular concerns and they do not pose a significant hurdle to the final conclusion.

First, Republican challenger independent expenditures are collinear with candidate expenditures for all five election cycles. Party and candidate expenditures are collinear for 2004, 2006, 2008, and 2012, but not for the 2010 elections. All three Republican challenger spending variables are collinear with total expenditures in all five cycles. Next, Democratic challenger independent expenditures are collinear with candidate expenditures for 2004, 2006, and 2008. The correlation coefficient is on the cusp of the 0.4 threshold in 2012. Party and candidate expenditures are collinear in all five cycles. Finally, all of the expenditure classifications are individually collinear with the total expenditures variable.

The importance of this analysis is to establish that expenditures of the varying classes are largely going to the same races. However, we know that the effects of campaign expenditures are not strictly linear but are subject to diminishing marginal returns (Jacobson 1985).[75] The collinearity of expenditures, combined with those diminishing marginal returns, means that expenditures by the candidates themselves are already getting them so far along that the addition of party and independent dollars provide an insignificant boost to vote share. Consider two extreme illustrations of this phenomenon. First, assume the two sides have infinite funding and invest all of it. Practically, they would still be limited by a finite number of ad spots in television, radio, and electronic and print media. Second, assume that broadly, partisans cast ballots for their own party and the persuadable middle only makes up a tiny portion of the electorate.[76] Money then performs a singular function of informing the partisans of the party identification of the candidates. Besides turning out supporters, once every voter is aware of that partisan identification, the roof of electoral support has already been reached. This interpretation explains

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[75] A candidate cannot receive more than one-hundred percent of the vote.
[76] Previous studies have already proven this is increasingly the case in American elections.

why after so many hundreds of millions of independent expenditures poured into the electoral process, House candidates are not receiving an equivalent boost in vote-share.

The Senate – Democrats versus Republicans

As I noted in the Research Design, issues unique to Senate elections make these contests inherently difficult to study and the results of any study must be considered with that fact. That being said, I begin with the 2004 election cycle reported in Table 14.

My variables for these models are per capital Democratic candidate expenditures (pcdcel), per capital Democratic party expenditures (pcdpel), per capita Democratic independent expenditures (pcidel), their Republican counterparts, the incumbency status of the seat (ip2), the quality of the Republican challenger (rcq), the logged number of House districts in the state (cdl), and the Democratic share of the two-party presidential vote (d2pp).[77] The DV is the Democratic share of two-party vote (d2p).

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[77] Again, all expenditure totals are logged.

Table 14. Electoral Effects of Independent Expenditures (2004 – SDvR)

	Model 1	Model 2	Model 3
pcdcel	0.029	0.030	
	(2.81)*	(3.63)**	
pcdpel	0.018		
	(2.82)**		
pcidel	-0.001		
	(0.08)		
pcrcel	-0.042	-0.040	
	(3.60)**	(3.80)**	
pcrpel	-0.006		
	(1.01)		
pcirel	-0.012		
	(1.99)		
ip2	-0.001	0.006	0.004
	(0.07)	(0.36)	(0.28)
rcq	0.014	0.021	0.021
	(1.16)	(1.70)	(1.70)
cdl	-0.011	-0.005	-0.006
	(0.78)	(0.36)	(0.43)
d2pp	0.476	0.451	0.454
	(2.63)*	(2.45)*	(2.51)*
pctdel			0.033
			(3.94)**
pctrel			-0.041
			(4.03)**
_cons	0.414	0.368	0.355
	(2.57)*	(2.59)*	(2.62)*
R^2	0.90	0.85	0.86
N	33	33	33

* $p<0.05$; ** $p<0.01$

Note: t-ratios are in parentheses.

As in the case of the House regressions, Model 1 includes all of the expenditure categories individually. This first regression finds Democratic candidate and party expenditures, Republican candidate expenditures, and the presidential vote to be statistically significant. The R-squared statistic stands at 0.90. So far, the findings are largely in line with the first HDvR

model.[78] However, the finding of incumbency status as insignificant is anomalous.[79] The significance for Democratic Party expenditures also conflicts with expectations. Removing party and independent expenditures for both parties in Model 2, we see the variance explained drop by a larger degree than it did for the HDvR models (down 0.05). However, candidate expenditures and presidential vote share are still being found as significant and 85% of the variance in the DV is still being explained. However, compiling the spending classifications into two party-based variables (pctdel and pctrel) in Model 3, only sees the R-squared rise slightly. Both total expenditure variables are statistically significant, as is the presidential vote share.

The 2006 regression broadly mirrors the patterns observed in the HDvR models.[80] In Model 1, candidate expenditures are significant while party and independent expenditures are not. In Model 2, dropping party and independent expenditures results in a slight decrease of the R-squared statistic while candidate expenditures are still significant. Finally, compiling the spending classifications together in Model 3 causes a slight increase in the variance explained. Unlike the results in Table 14, the shifts in the R-squared statistic are not larger-than-expected and Model 4 is not required. In Table 15, I report the regression models for the 2008 election cycle as it differs substantially from the HDvR models.

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[78] See Table 1.

[79] Recall that incumbency status of the seat was consistently significant in the HDvR models. A potential explanation is the different contours of Senate races: these are almost always hotly contested elections that draw top-talent challengers while incumbents are not as well-trenched as their House counterparts.

[80] Results of estimation reported in Table 30 in Appendix.

Table 15. Electoral Effects of Independent Expenditures (2008 – SDvR)

	Model 1	Model 2	Model 3	Model 4
pcdcel	0.007	0.019		0.005
	(1.08)	(2.91)**		(0.88)
pcdpel	0.000			
	(0.06)			
pcidel	0.017			0.023
	(2.65)*			(4.83)**
pcrcel	-0.021	-0.019		-0.021
	(2.84)**	(2.25)*		(3.11)**
pcrpel	0.008			
	(2.39)*			
pcirel	-0.015			-0.012
	(3.38)**			(2.75)*
ip2	-0.009	0.009	0.010	-0.003
	(0.59)	(0.42)	(0.49)	(0.20)
rcq	0.036	0.016	0.018	0.027
	(1.86)	(0.71)	(0.78)	(1.56)
cdl	0.016	0.017	0.017	0.017
	(1.79)	(1.36)	(1.44)	(1.83)
d2pp	0.277	0.421	0.379	0.268
	(2.12)*	(2.49)*	(2.26)*	(1.92)
pctdel			0.021	
			(3.28)**	
pctrel			-0.020	
			(2.33)*	
_cons	0.384	0.247	0.249	0.405
	(4.94)**	(2.70)*	(2.81)**	(4.94)**
R^2	0.93	0.83	0.84	0.92
N	34	34	34	34

*$p<0.05$; ** $p<0.01$

Note: t-ratios are in parentheses.

Model 1 finds candidate expenditures for the Republicans, presidential vote share, and independent expenditures for both parties as significant. The variance explained in this model sits at 0.93. Dropping independent and party expenditures in Model 2 causes R-squared to drop to 0.83, though both candidate expenditures and presidential vote share still remain statistically significant. Moreover, replacing all of the spending variables with two party-based expenditure variables in Model 3 only brings R-squared up to 0.84. Unlike the previous models, I include a fourth regression, a different iteration which includes candidate and independent expenditures,

but excludes party expenditures.[81] In Model 4, the significances mirror Model 1's: Republican candidate expenditures, independent expenditures for both parties, and presidential vote share are all statistically significant. Additionally, R-squared rises all the way to 0.92. This would imply that independent spending played a sizeable role during the 2008 elections. Now we turn to the 2010 SDvR model reported in Table 16.

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[81] The larger-than-expected drop in the R-squared statistic occurs when the independent expenditure variable is removed from the mode. Model 4 therefore re-inserts independent expenditures. The results in Table 14 also record a larger-than-expected drop in the variance explained. However, re-inserting independent spending back into the model did not raise R-squared for that cycle.

Table 16. Electoral Effects of Independent Expenditures (2010 – SDvR)

	Model 1	Model 2	Model 3
pcdcel	0.019	0.015	
	(1.93)	(2.25)*	
pcdpel	0.003		
	(0.41)		
pcidel	0.002		
	(0.21)		
pcrcel	-0.021	-0.029	
	(1.52)	(2.72)*	
pcrpel	-0.003		
	(0.66)		
pcirel	-0.009		
	(0.86)		
ip2	-0.002	0.001	0.002
	(0.08)	(0.03)	(0.13)
rcq	0.017	0.017	0.017
	(1.42)	(1.51)	(1.49)
cdl	0.001	-0.001	0.000
	(0.12)	(0.06)	(0.04)
d2pp	0.585	0.647	0.630
	(2.92)**	(3.85)**	(3.73)**
pctdel			0.017
			(2.27)*
pctrel			-0.029
			(2.77)**
_cons	0.207	0.255	0.247
	(1.41)	(1.87)	(1.85)
R^2	0.83	0.81	0.81
N	35	35	35

*p<0.05; ** p<0.01*

Note: t-ratios are in parentheses.

Model 1 deems only presidential vote share to be statistically significant. The absence of significance for either party's candidate expenditures deviates from all of the HDvR models and strays from expectations. However, in Model 2, candidate expenditures for both parties and presidential vote share are significant and R-squared drops slightly from 0.83 to 0.81.[82] However, variance explained rises again in Model 3 under total party expenditures. In that

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[82] This suggests the finding of significance of candidate expenditures was being buried in the first model.

model, presidential vote share and both total party expenditure variables are significant. Finally,

the results of the 2012 SDvR models are reported in Table 17.

Table 17. Electoral Effects of Independent Expenditures (2012 – SDvR)

	Model 1	Model 2	Model 3
pcdcel	0.019	0.016	
	(1.82)	(3.41)**	
pcdpel	-0.000		
	(0.06)		
pcidel	-0.003		
	(0.36)		
pcrcel	-0.021	-0.022	
	(2.25)*	(3.02)**	
pcrpel	-0.002		
	(0.43)		
pcirel	0.002		
	(0.30)		
ip2	0.021	0.020	0.025
	(1.62)	(1.75)	(2.20)*
rcq	0.005	0.008	0.008
	(0.41)	(0.94)	(0.83)
cdl	-0.001	-0.001	-0.003
	(0.14)	(0.19)	(0.45)
d2pp	0.397	0.434	0.465
	(3.07)**	(5.07)**	(5.44)**
pctdel			0.015
			(3.25)**
pctrel			-0.019
			(2.72)*
_cons	0.336	0.337	0.297
	(3.18)**	(3.91)**	(3.50)**
R^2	0.92	0.91	0.91
N	31	31	31

* $p<0.05$; ** $p<0.01$

Note: t-ratios are in parentheses.

Model 1 finds presidential vote share and candidate expenditure by Republicans to be

statistically significant. Variance explained is at 0.92. In Model 2, both party's candidate

expenditures are significant, as is the presidential vote share. R-squared dips just slightly, down

to 0.91. Model 3 has both parties' total expenditures, the presidential vote share, and the

incumbency status as statistically significant. Here, the R-squared statistic rises slightly.

Despite the broader range of findings in the SDvR models, the directions of the coefficients and hence the effects of the respective IVs on the DV are still aligned with predictions. Democratic candidate expenditures, where significant, increases the vote received by Democrats while Republican candidate expenditures, decreases the vote received by Democrats. Additionally, democratic two-party presidential vote share positively relates to Democratic two-party vote share. Another difference in the SDvR models is the strength of correlation between presidential vote and party vote share. Recall from the House models, the presidential vote share coefficient increases over time from each election to the next, reflecting the steady decrease in crossover voting that has already been widely documented. In the SDvR models, the Democratic presidential vote share coefficients not only shift erratically from cycle-to-cycle, they are also lower than their House counterparts. This is further evidence of a major difference between Senate and House elections. Whereas the latter are typically low-information, heavily partisan contests, the former have strong personal support components in their candidates, leading to a higher rate of crossover voting.

In the SDvR models, commonalities in the significances across all five cycles are harder to discern but are still present. The Republican candidate expenditures and share of the presidential vote received by the Democrats is consistently significant in all five cycles. Democratic candidate expenditures are significant in at least the Model 2's of every election cycle. Finally, all five Model 3's total expenditure variables are significant.

Except the differing conclusions reported in Models 14 and 15, the SDvR models reported results that mirror their House counterparts. In 2006, 2010, and 2012, each Model 1 gives an opening R-squared level, the respective Model 2's result in a modest drop in the variance explained, and finally the Model 3's result in an increase in the R-squared statistic.

Thus, even with the difficulties inherent in comparing across the different-sized states of Senate contests, the shift of variance explained in four of the five cycles matches the HDvR regressions. Notably, models for both the cycles following *Citizens United,* where diminishing marginal returns would have occurred, find independent expenditures to be insignificant factors.

However, the 2008 regressions present a conflict with this conclusion. Assuming the pattern observed in those models is not a statistical anomaly due to the irregularities of the Senate, it is possible that independent expenditures in 2008 did actually make a difference. That cycle saw a concurrent presidential election which draw resources away from Congressional contests. That combined with the fact that independent expenditures had not grown so exponentially yet could imply that expenditures overall had not yet reached maximum diminishing marginal returns. While they were not measured as significant in 2004, the larger-than-expected drop in the R-squared statistic could imply a similar effect in that cycle. Supporting this conclusion are the raw expenditure figures for those cycles: in 2006 midterms, senatorial candidates spent a combined $535 million while the 2004 and 2008 presidential cycles saw $390 million and $430 million in expenditures respectively.[83] By 2012, the natural growth of candidate and party expenditures over time, combined with the effects of *Citizens United,* pushed overall spending so high that diminishing marginal returns had taken hold.[84]

The Senate – Incumbents versus Challengers

My variables for these models are per capita incumbent candidate expenditures (pcicel), per capita incumbent party expenditures (pcipel), per capita incumbent independent expenditures (pciiel), their challenger counterparts, the partisan identification of the incumbent (ip3), the

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[83] Presidential cycles see greater spending overall but see smaller amounts devoted to Congressional elections.
[84] This potential explanation assumes the model was correct even in the face of the irregularities of the Senate.

quality of the challengers (cq), the logged number of Congressional districts in the state (cdl),

and the incumbent party's share of the two-party presidential vote (i2pp). The DV is the

incumbent's share of the two-party vote (i2p). The results of the 2004 SIvC models are reported

in Table 18.

Table 18. Electoral Effects of Independent Expenditures (2004 – SIvC)

	Model 1	Model 2	Model 3	Model 4
pcicel	0.026	-0.003		0.019
	(1.25)	(0.18)		(1.06)
pcipel	0.004			
	(0.69)			
pciiel	-0.020			-0.019
	(2.18)*			(2.23)*
pcccel	-0.021	-0.026		-0.019
	(2.23)*	(2.96)**		(2.70)*
pccpel	-0.003			
	(0.47)			
pcice2l	-0.013			-0.013
	(2.26)*			(3.03)**
ip3	0.030	0.051	0.052	0.029
	(1.12)	(1.65)	(1.72)	(1.15)
cq	-0.015	0.011	0.010	-0.014
	(1.15)	(0.76)	(0.71)	(1.14)
cdl	-0.000	0.011	0.011	0.001
	(0.03)	(0.75)	(0.80)	(0.13)
i2pp	0.208	0.332	0.338	0.177
	(1.38)	(1.91)	(1.99)	(1.30)
pctie2l			-0.003	
			(0.15)	
pctcel			-0.027	
			(3.03)**	
_cons	0.585	0.671	0.671	0.661
	(2.54)*	(3.17)**	(3.19)**	(3.54)**
R^2	0.82	0.60	0.62	0.81
N	25	25	25	25

* $p<0.05$; ** $p<0.01$

Note: t-ratios are in parentheses.

In Model 1, incumbent independent expenditures, challenger candidate and independent

expenditures are statistically significant. The R-square statistic is at 0.82. Consistent with the

HIvC models and previous studies, incumbent candidate expenditures are not significant.[85]

However, the finding of presidential vote share as insignificant is surprising. A correlation

matrix between incumbent party vote share and incumbent party presidential vote share shows a

coefficient of just 0.2662 in 2004. The correlation coefficient stands at 0.7446 for the HIvC

models in 2004.[86] The partisan identification of the incumbent is also statistically insignificant.

Recall this variable controls for the political climate in the current cycle and is consistent for the

HIvC models. However, as previously noted, the incumbency advantage tends to be weaker for

Senate races. In Model 2, only challenger candidate expenditures are statistically significant, but

the variance explains drops significantly to 0.60. Model 3, using per capita total incumbent party

expenditures (pctie2l) and per capita total challenger party expenditures (pctcel), only raises R-

squared slightly to 0.62.

Similar to the 2004 and 2008 SDvR regressions in Tables 14 and 15, we move to a fourth

model. I return to the individual spending variables, dropping only party expenditures for both

incumbents and challengers. Here, challenger candidate expenditures are statistically significant

but, like the first model, so are the two independent expenditure variables, albeit with the wrong

direction on its coefficient. Variance explained rises back to 0.81. This suggests that in 2004,

independent expenditures, small as they were, did have a substantive effect on the DV. It is

possible that because this type of spending was still under-utilized, diminishing marginal returns,

as explained in the House summary analysis, had yet to kick-in.[87]

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[85] See Model 1, Tables 4-6.

[86] Again, this is another demonstration of the difficulty in studying Senate elections. Whereas House district presidential partisanship will tend to filter down and correlate heavily with party vote, Senate seats encompass far more diverse and complicated electorates where a larger number of factors aside from partisanship can sway voter choice.

[87] A small dataset and the irregularities of the Senate make drawing concrete conclusions difficult.

The 2006 and 2008 models mirror the 2004 SIvC regression in Table 18.[88] In their Model 2's, variance explained drops significantly when independent and party expenditures are excluded. In their Model 3's R-squared rises slightly when the individual spending classifications are dropped in favor of total expenditure variables. However, the respective Model 4's that drop party expenditures only, show R-squared statistics rising to a level between their Model 1's high value and their Model 2's low value.[89] Overall, the 2006 models explain more of the variance than the 2008 regressions. Again, given the low level of independent spending overall, we move to the SIvC models for the 2010 election cycle reported in Table 19.

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[88] Results of estimation reported in Table 31 and Table 32 in Appendix.
[89] This could reflect the natural growth of independent expenditures during those two periods, slow as it was.

Table 19. Electoral Effects of Independent Expenditures (2010 – SIvC)

	Model 1	Model 2	Model 3	Model 4
pcicel	0.052	0.030		0.043
	(2.58)*	(1.85)		(3.10)**
pcipel	0.002			
	(0.24)			
pciiel	-0.012			-0.010
	(1.21)			(1.16)
pcccel	-0.007	-0.013		-0.004
	(0.73)	(1.67)		(0.57)
pccpel	0.004			
	(0.65)			
pcice2l	-0.013			-0.009
	(1.35)			(1.32)
ip3	-0.057	-0.086	-0.082	-0.069
	(1.70)	(2.79)*	(2.52)*	(2.68)*
cq	-0.006	-0.003	-0.004	-0.003
	(0.43)	(0.24)	(0.26)	(0.23)
cdl	-0.005	-0.013	-0.013	-0.006
	(0.43)	(1.07)	(1.05)	(0.52)
i2pp	0.345	0.807	0.805	0.467
	(1.28)	(4.48)**	(4.43)**	(2.55)*
pctie2l			0.029	
			(1.73)	
pctcel			-0.015	
			(1.82)	
_cons	0.056	-0.016	0.021	0.047
	(0.37)	(0.09)	(0.12)	(0.34)
R^2	0.89	0.80	0.80	0.89
N	21	21	21	21

$* p<0.05; ** p<0.01$

Note: r-ratios are in parentheses.

Model 1 finds everything but incumbent candidate expenditures to be statistically insignificant with an R-squared value of 0.89. That insignificance conflicts with previous findings and expectations.[90] Model 2 finds presidential vote share and the partisan identification of the incumbent as significant with 80% of the DV's variance explained. The latter is a smaller drop than in the 2004 regressions but still larger than the HIvC models. Model 3, using total

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[90] Challenger expenditures are significant whereas incumbent expenditures are not. Moreover, previous studies have concluded that the effect of incumbent expenditures should be negative.

expenditures, sees a modest rise in the R-squared statistic but not to the same level as the first

regression. Like the results in Table 17, I include a fourth model which drops only party

expenditures and just as in the case of those regressions, the variance explained returns to the

first model's level. It is possible that given the nature of Senate elections and given that 2010

was the very first cycle independent expenditures played a sizeable role, diminishing returns had

not taken complete hold. Again, any conclusion drawn from these results must be carefully

weighed against the realities of analyzing senate elections. However, the regressions using only

candidate expenditures still can explain 80% of the variance, a sizeable portion. Finally, the

results of the 2012 models are reported in Table 20.

Table. 20. Electoral Effects of Independent Expenditures (2012 – SIvC)

	Model 1	Model 2	Model 3	Model 4
pcicel	0.018	0.026		0.017
	(0.76)	(1.53)		(0.75)
pcipel	-0.000			
	(0.09)			
pciiel	0.009			0.004
	(0.93)			(0.46)
pcccel	-0.016	-0.016		-0.020
	(1.53)	(2.66)*		(2.06)
pccpel	-0.011			
	(1.48)			
pcice2l	0.002			0.002
	(0.32)			(0.27)
ip3	0.059	0.075	0.073	0.082
	(1.61)	(2.81)*	(2.58)*	(2.72)*
cq	0.005	0.009	0.010	0.017
	(0.27)	(0.88)	(0.89)	(1.04)
cdl	-0.018	-0.019	-0.018	-0.017
	(1.47)	(1.71)	(1.65)	(1.43)
i2pp	0.432	0.471	0.513	0.468
	(3.24)**	(3.99)**	(4.32)**	(3.61)**
pctie2l			0.027	
			(1.47)	
pctcel			-0.016	
			(2.45)*	
_cons	0.268	0.160	0.123	0.241
	(1.06)	(0.79)	(0.55)	(0.96)
R^2	0.85	0.81	0.80	0.81
N	22	22	22	22

$* p<0.05; ** p<0.01$

Note: t-ratios are in parentheses.

Model 1 finds presidential vote share significant with an R-squared of 0.85. Model 2 sees challenger candidate expenditures, partisan identification of the incumbent and presidential vote share as significant with R-squared dropping slightly to 0.81. Unlike both the 2004 and 2010 models, these findings are within previous expectations. Model 3 finds partisan identification of the incumbent, presidential vote share and total challenger expenditures as statistically significant, combined with a slight dip in the variance explained at 0.80. The drop in the R-squared statistic, while subtle, differs from the HIvC models. However, Model 4, unlike any of

the previous cycles, does not see a significant shift in the variance explained. This finding is in line with the conclusions drawn from the HIvC models as it demonstrates the overall insignificance of independent expenditures in the 2012 cycle.

While it does register as significant in most of the regressions for the five elections, the coefficient of the partisan identification of the incumbent, like the HIvC models, illustrates the general partisan advantage, cycle-to-cycle. As stated before, incumbents were coded zero for Republican and one for Democrat. This means the ip3 coefficient advantage or disadvantage is only levied on Democratic incumbents. As in the case of the House regressions, the coefficient correctly identified the overall partisan direction in each cycle.[91]

The coefficients in the SIvC models stray from predictions in one crucial way. Setting aside significance, incumbent candidate expenditures should have a negative coefficient. As noted in the HIvC models, previous scholarship has consistently found that spending by incumbents has a negative relationship with the vote they receive. This is not to say that the more incumbents spend, the worse off they do. Rather, incumbents tie the amount of spending they engage in to the magnitude of electoral threat they face by the challenger. Since highly vulnerable incumbents spend massive quantities and safe incumbents spend almost nothing, this results in the finding of a negative effect of those expenditures. In the SIvC models above, the incumbent candidate expenditure variable is positive in several places. Other coefficients match expected behavior: challenger candidate expenditures relate negatively to the DV whereas incumbent presidential vote share relates positively. Unlike their SDvR counterparts, the presidential vote share coefficient in the SIvC models do increase gradually, although modestly,

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[91] Given that the Senate numbers are logged, interpreting the actual magnitude of advantage/disadvantage is difficult from these models.

across the five election cycles, from .208 in 2004, to .345 in 2010, to .432 in 2012.[92] That being

said, these coefficients are still significantly lower than their HIvC counterparts.

The SIvC models have fewer consistent significances than any of the previous models.

Generally, challenger candidate expenditures are significant while incumbent candidate

expenditures are not. This comports with previous findings as well as the HIvC models.

Presidential vote share tends to be less significant in the SIvC models. However, correlation

matrices demonstrate that Senate elections overall, report weaker correlations between party vote

share and presidential vote share. The significance of partisan identification is inconsistent across

the cycles.

These sets of models also illustrate, much more strongly than the SDvR regressions, the

difficulty of analyzing senatorial elections.[93] The incumbency advantage as well as challenger

difficulties are different in the context of statewide contests. Senate contests have a stronger

"personal vote" component that often does not exist in low-key, low-information House

elections. Additionally, costs and populations vary enormously state-to-state. Moreover, the

dollar-to-voter ratio is not constant across the country. Smaller states are exponentially cheaper

states to contest as well. The conclusions and arguments I have advanced for these models must

be weighed against all those considerations.

The Senate – Open Seat Contests

As I have already said, the small number of Senate contests makes any analysis difficult.

In the case of open-seat contests, the number of observations were simply too low to conduct

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[92] See i2pp in Model 1 of Table 18, Table 19, and Table 20.
[93] Several of the models give statistical conclusions that conflict with widely-researched expectations and cannot be explained.

cycle by cycle regression models.[94] As a result, I combined all of the data from 2004 through 2012 into a single model. I include a control for the cycle but the reader should use caution in interpreting broadly from these results. The total amount of expenditures has grown wildly and unevenly in that time frame and the political contours of different elections cannot simply be averaged out.

My variables are per capita Republican challenger candidate expenditures (pcoce1l), per capita Republican challenger party expenditures (pcope1l), per capita Republican candidate – independent expenditures (pcioe1l), their Democratic challenger counterparts, the quality of the challengers (cq2), the logged number of Congressional districts in the state (cdl), and challenger one's share of two-party presidential vote (o2p1). Additionally, there is a control for the year of the election. The DV is the Republican challenger's share of two-party vote (o2pp1). The results of this combined SOvO model are reported in Table 21.

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[94] The observations were so low and the number of variables were so high, the model either accounted for 100% of the variance or could not be run at all.

Table 21. Electoral Effects of Independent Expenditures (Combined – SOvO)

	o2p1	o2p1	o2p1	o2p1
pcoce1l	0.029	0.041		0.024
	(1.85)	(3.19)**		(1.70)
pcope1l	0.006			
	(1.53)			
pcioe1l	0.015			0.018
	(1.77)			(2.32)*
pcoce2l	-0.025	-0.022		-0.018
	(1.79)	(2.33)*		(1.41)
pcope2l	-0.005			
	(0.85)			
pcioe2l	-0.010			-0.015
	(1.10)			(1.70)
cq2	-0.015	-0.023	-0.021	-0.017
	(1.60)	(2.61)*	(2.31)*	(1.87)
cdl	0.004	0.001	0.005	0.007
	(0.32)	(0.09)	(0.45)	(0.61)
o2pp1	0.532	0.659	0.641	0.564
	(4.02)**	(5.06)**	(5.14)**	(4.33)**
pctoe1l			0.049	
			(3.46)**	
pctoe2l			-0.033	
			(2.86)**	
_cons	0.163	-0.000	0.021	0.133
	(1.08)	(0.00)	(0.15)	(0.92)
R^2	0.82	0.77	0.78	0.81
N	39	39	39	39

* $p<0.05$; ** $p<0.01$

Note: t-ratios in parentheses.

Model 1 finds only the Republican candidate party's presidential vote share as significant while R-squared sits at 0.82. Model 2 finds candidate expenditures by both challengers and presidential vote share as significant but variance explained drops down to 0.77. The total expenditures model (pctoe1l and pctoe2l) in Model 3 finds the presidential vote share and both the overall spending variables to be significant but the R-squared statistic only rises slightly to 0.78. I also include the fourth model that drops only the party expenditures. In Model 4, independent Republican challenger expenditures and the presidential vote share are significant. Additionally, the inclusion of the independent spending variables increases the variance

explained to 0.81.

The direction of the coefficients comports with expectations. Expenditures by the Republican challenger increase the Republican challenger's vote share. Expenditures by the Democratic challenger decrease the Republican challenger's vote share. Finally, presidential vote share is positively related to the Republican challenger's share. As I have said, I leave any potential conclusions to the reader. The combination of different elections into a single model makes these results suspect.

The Senate – Summary Analysis

Broadly, the Senate DvR models were in line with their House counterparts while the IvC regressions differed in several ways from the HIvC models and went against established expectations of expenditure effects, drawn from previous scholarship. The SDvR regressions support the argument that candidate expenditures have taken such a huge step into diminishing returns, little room remains for party or independent actors to boost or hurt their targets. Recall in the case of the House regressions, this reasoning is supported by the collinearity of expenditures that occurred in House campaigns. The correlation matrices for the SDvR regressions, reported in Table 22, support such a conclusion as well.[95]

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[95] As in the case of the House, I briefly discuss the 2006 and 2008 correlation matrices but I will not report them.

Table 22. Correlations for Campaign Expenditures (SDvR)

2004	pcdcel	pcdpel	pcidel	pctdel	pcrcel	pcrpel	pcirel	pctrel
pcdcel	1.0000							
pcdpel	0.5621	1.0000						
pcidel	0.7326	0.6690	1.0000					
pctdel	0.9976	0.6067	0.7556	1.0000				
pcrcel	0.0681	0.5795	0.3255	0.1034	1.0000			
pcrpel	0.4682	0.7245	0.6315	0.5041	0.6455	1.0000		
pcirel	0.1808	0.7130	0.4109	0.2165	0.6006	0.7130	1.0000	
pctrel	0.1183	0.6141	0.3691	0.1553	0.9954	0.7011	0.6296	1.0000

2010	pcdcel	pcdpel	pcidel	pctdel	pcrcel	pcrpel	pcirel	pctrel
pcdcel	1.0000							
pcdpel	0.5779	1.0000						
pcidel	0.7649	0.8092	1.0000					
pctdel	0.9929	0.6443	0.8079	1.0000				
pcrcel	0.2722	0.4565	0.4550	0.2757	1.0000			
pcrpel	0.4877	0.6319	0.6305	0.5261	0.4884	1.0000		
pcirel	0.4977	0.7277	0.8275	0.5437	0.6753	0.7262	1.0000	
pctrel	0.3413	0.5823	0.5837	0.3622	0.9728	0.5989	0.7887	1.0000

2012	pcdcel	pcdpel	pcidel	pctdel	pcrcel	pcrpel	pcirel	pctrel
pcdcel	1.0000							
pcdpel	0.4932	1.0000						
pcidel	0.6505	0.7263	1.0000					
pctdel	0.9679	0.5549	0.7755	1.0000				
pcrcel	0.1490	0.4905	0.6967	0.2557	1.0000			
pcrpel	0.4244	0.7566	0.6940	0.4746	0.4453	1.0000		
pcirel	0.5549	0.6870	0.9134	0.6623	0.7408	0.6978	1.0000	
pctrel	0.2215	0.6095	0.7841	0.3381	0.9754	0.5906	0.8377	1.0000

Recall that collinearity is generally established by a correlation coefficient of at least 0.4. Based on these matrices, we can conclude that both party and independent expenditures are collinear with candidate expenditures, for Democrats and Republicans, in all three cycles. In fact, the correlations for the Senate are even stronger than the expenditure correlations for the House. All three spending classifications are also individually collinear with the party-based total expenditure variable in all three elections. These collinearities also hold in the 2006 and 2008 cycles. This illustrates the broad similarities between the HDvR regressions and the SDvR

models and provide further evidence that diminishing marginal returns have limited the significance of independent expenditures. Finally, observe the coefficient between independent Democratic expenditures (pcidel) and independent Republican expenditures (pcirel) in Table 22. In the 2010 and 2012 matrices, these two variables are heavily correlated. In other words, in addition to diminishing returns, the parties' respective independent expenditure groups also had to contend with the diminishing effects of opposing expenditures in near-equal magnitude.

The SIvC regressions present a swath of statistical data that conflict, not only with established expectations, but with an argument in favor of diminishing returns. Table 23 reports the correlation matrices for the IvC models that illuminate whether those models present something closer to the truth or merely reflect the inherent difficulties of Senate analysis.

Table 23. Correlations for Campaign Expenditures in 2004, 2010, and 2012 (SIvC)

2004	pcicel	pcipel	pciiel	pctie2l	pcccel	pccpel	pcice2l	pctcel
pcicel	1.0000							
pcipel	0.2556	1.0000						
pciiel	0.6905	0.4876	1.0000					
pctie2l	0.9944	0.3277	0.7221	1.0000				
pcccel	0.5368	0.7155	0.5712	0.5794	1.0000			
pccpel	0.5986	0.6182	0.6960	0.6340	0.6770	1.0000		
pcice2l	0.1377	0.6332	0.3877	0.1663	0.4401	0.6130	1.0000	
pctcel	0.5579	0.7180	0.5842	0.6005	0.9977	0.7148	0.4546	1.0000

2010	pcicel	pcipel	pciiel	pctie2l	pcccel	pccpel	pcice2l	pctcel
pcicel	1.0000							
pcipel	0.4139	1.0000						
pciiel	0.5013	0.7255	1.0000					
pctie2l	0.9788	0.5289	0.6250	1.0000				
pcccel	0.6592	0.7886	0.6998	0.7122	1.0000			
pccpel	0.3124	0.6265	0.5862	0.4079	0.5891	1.0000		
pcice2l	0.5438	0.7891	0.8843	0.6667	0.7733	0.7201	1.0000	
pctcel	0.6354	0.8282	0.7521	0.7130	0.9911	0.6398	0.8302	1.0000

2012	pcicel	pcipel	pciiel	pctie2l	pcccel	pccpel	pcice2l	pctcel
pcicel	1.0000							
pcipel	0.4734	1.0000						
pciiel	0.7350	0.6779	1.0000					
pctie2l	0.9712	0.6204	0.8410	1.0000				
pcccel	0.5944	0.6091	0.7991	0.6636	1.0000			
pccpel	0.5879	0.7078	0.8723	0.7300	0.7100	1.0000		
pcice2l	0.6761	0.6119	0.8928	0.7663	0.8528	0.8058	1.0000	
pctcel	0.6400	0.6418	0.8479	0.7185	0.9904	0.7632	0.9034	1.0000

Recall that the SIvC models generally found that independent expenditures were at least mildly predictive of DV variation in 2004, 2006, 2008, and 2010, but not in 2012. For the sake of simplification, first assume that the models are correct, but the significance of independent spending in the first three cycles are due to the exponentially smaller amounts of such expenditures in those years. With those cycles excluded, that leaves 2010 as an election cycle with clearly higher levels of independent expenditures but still predictive of DV variation. The correlation coefficients, for both incumbents and challengers, between independent and candidate expenditures, reflect collinearity, sitting at 0.5013 and 0.7733 respectively.

Correlations of that size would support an argument in favor of diminishing marginal returns and yet the 2010 model still finds that independent expenditures account for a sizeable portion of the variance explained. However, several of these models also find incumbent expenditures to be both significant and with a positive coefficient, while finding challenger expenditures to be insignificant. Both of these findings conflict with conclusions, albeit based on House elections, which have been widely researched for decades. Given those facts, it is safe to conclude that some of the statistical limitations in these SIvC models are due to the intractable problems of analyzing Senate contests. Any conclusions drawn from this data carries those peculiarities.

That being said, the 2012 matrix, combined with the regression model, does provide *some* support for the diminishing returns argument. There is clear collinearity between independent and candidate expenditures and party and candidate expenditures for both incumbents and challengers. That combined with the fact that independent expenditures did not account for an increase of variance explained in the 2012 SIvC models does imply that in that cycle, independent spending was not significant.[96] Additionally, observe the coefficient between incumbent independent expenditures (pciiel) and challenger independent expenditures (pcice2l) in Table 23. These increases in the correlation between these two variables in the SIvC matrices mirrors the increases in the SDvR matrices. This pattern supports a conclusion that as both parties increased their independent expenditures, they targeted the same contests. Thus, in addition to diminishing returns then, the benefits of one side's independent expenditures are being restrained by the other party's spending.

Given the issues regarding the SOvO model previously explained, I will not report the

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[96] However, the 2012 SIvC model found challenger expenditures to be insignificant (although it also found incumbent expenditures to be insignificant as well).

correlation matrix for those contests.

Conclusion

The OLS regression models for the House of Representatives support an unambiguous conclusion that independent expenditures were not significant factors in any of the five cycles, in any types of races, and in any of the different models using different combinations of spending variables. In none of the forty-five iterations did independent expenditures ever account for a major shift in variance explained. Additionally, correlation matrices for those models demonstrate that party and independent expenditures were largely collinear with candidate spending in all those elections. Therefore, we can conclude that due to diminishing marginal returns, the effects of party and independent spending, on top of already massive candidate expenditures, only exerted an effect at the margins.

In contrast, the Senate models presented a more conflicting picture. The SDvR models, broadly speaking, did produce results similar to their House counterparts. Generally, independent expenditures only accounted for minute shifts in the R-squared statistics while candidate spending made up the bulk of DV variance explained. However, the SIvC regressions produced data directly conflicting against the conclusions drawn from the House models and against expenditure effects concluded by previous scholarship. The SOvO regressions were impossible to run on a cycle-by-cycle basis due to a small sample size and the compromise model presented its own problems. Given these host of issues, it is impossible to draw any concrete conclusions from the Senate models.

Past studies on expenditure effects have used only the House and with good reason. As has been stated multiple times in this paper, Senate analysis involves what can be summarized as an apples-to-oranges comparisons. No two states are alike, with broad, diverse electorates, high

rates of cross-over voting, different populations, and different electoral costs. In contrast, House districts are low-information contests with higher levels of partisan voting behavior. They have restricted population ranges, low cross-over voting, and broadly similar electoral costs.

While this paper concludes, that at least for the House, independent expenditures on the whole do not matter, there is still room for potential research. This study only encompasses two election cycles since the floodgates opened to independent spending. Future work should include the 2014 elections, testing the reach of the patterns discerned here. Additionally, as previously discussed, these House models tested the significance of independent spending in the aggregate, averaging the effects to all 435 contests across the five cycles. The implication of diminishing marginal returns is that different levels of spending yield different returns on investment. Future studies could seek to isolate the effect of independent expenditures to those second- or third-tier contests that do not draw as heavy investment from political actors. These effects, if they exist would not have shown up in this study. Conventional wisdom has held that these expenditures hold an outsized influence over electoral outcomes. The results of these models determine these conventions to be false.

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Appendix

Table 24. Electoral Effects of Independent Expenditures (2006 – HDvR)

	Model 1	Model 2	Model 3
dcel	1.594	2.376	
	(7.54)**	(12.31)**	
dpel	0.262		
	(1.67)		
idel	0.449		
	(1.94)		
rcel	-2.242	-1.794	
	(9.04)**	(7.94)**	
rpel	0.251		
	(1.26)		
irel	-0.122		
	(0.67)		
ip2	3.500	2.915	2.904
	(5.08)**	(4.98)**	(4.92)**
rcq	1.467	1.985	1.928
	(1.53)	(2.36)*	(2.29)*
d2pp	0.438	0.438	0.432
	(13.50)**	(13.05)**	(12.86)**
tdel			2.549
			(13.09)**
trel			-1.942
			(8.23)**
_cons	27.617	19.206	19.164
	(7.30)**	(5.61)**	(5.73)**
R^2	0.94	0.93	0.93
N	373	373	373

* $p<0.05$; ** $p<0.01$

Note: t-ratios are in parentheses.

Table 25. Electoral Effects of Independent Expenditures (2008 – HDvR)

	Model 1	Model 2	Model 3
dcel	1.824	1.982	
	(7.52)**	(9.13)**	
dpel	0.202		
	(1.31)		
idel	0.083		
	(0.37)		
rcel	-1.893	-1.797	
	(6.93)**	(7.36)**	
rpel	-0.082		
	(0.39)		
irel	0.025		
	(0.18)		
ip2	2.861	2.701	2.582
	(5.36)**	(5.26)**	(5.20)**
rcq	1.931	2.062	1.919
	(2.46)*	(2.64)**	(2.53)*
d2pp	0.495	0.494	0.483
	(13.94)**	(14.32)**	(14.39)**
tdel			2.214
			(10.11)**
trel			-2.104
			(8.95)**
_cons	19.748	18.426	20.204
	(4.93)**	(4.90)**	(5.75)**
R^2	0.93	0.93	0.93
N	380	380	380

*$p<0.05$; ** $p<0.01$

Note: t-ratios are in parentheses.

Table 26. Electoral Effects of Independent Expenditures (2006 – HIvC)

	Model 1	Model 2	Model 3
icel	0.448	-0.640	
	(0.76)	(1.25)	
ipel	-0.003		
	(0.02)		
iiel	0.119		
	(0.58)		
ccel	-1.463	-1.882	
	(8.67)**	(10.96)**	
cpel	-0.765		
	(3.72)**		
ice2l	-0.201		
	(0.98)		
ip3	8.446	8.634	8.489
	(14.31)**	(16.28)**	(16.22)**
cq	0.970	1.733	1.311
	(1.48)	(2.39)*	(1.93)
i2pp	0.374	0.372	0.367
	(9.59)**	(9.90)**	(9.88)**
tie2l			-0.661
			(1.59)
tcel			-1.946
			(11.68)**
_cons	54.297	66.029	68.535
	(5.93)**	(7.83)**	(9.61)**
R^2	0.82	0.80	0.81
N	340	340	340

* $p<0.05$; ** $p<0.01$

Note: t-ratios are in parentheses.

Table 27. Electoral Effects of Independent Expenditures (2008 – HIvC)

	Model 1	Model 2	Model 3
icel	0.657	-0.220	
	(1.13)	(0.37)	
ipel	-0.221		
	(1.43)		
iiel	0.021		
	(0.15)		
ccel	-1.205	-1.700	
	(6.45)**	(7.81)**	
cpel	-0.847		
	(4.06)**		
ice2l	-0.004		
	(0.02)		
ip3	3.330	3.137	3.147
	(5.57)**	(5.33)**	(5.44)**
cq	0.624	1.297	1.048
	(0.87)	(1.73)	(1.45)
i2pp	0.461	0.465	0.455
	(13.28)**	(13.22)**	(13.05)**
tie2l			-0.136
			(0.24)
tcel			-1.895
			(8.63)**
_cons	48.097	56.309	58.736
	(6.13)**	(7.18)**	(7.96)**
R^2	0.81	0.79	0.80
N	344	344	344

* $p<0.05$; ** $p<0.01$

Note: t-ratios are in parentheses.

Table 28. Electoral Effects of Independent Expenditures (2006 – HOvO)

	Model 1	Model 2	Model 3
oce1l	3.659	3.024	
	(3.96)**	(4.30)**	
ope1l	-0.217		
	(0.33)		
ioe1l	-0.280		
	(0.37)		
oce2l	-2.593	-2.663	
	(2.62)*	(3.23)**	
ope2l	0.430		
	(0.71)		
ioe2l	-0.867		
	(1.54)		
cq2	-2.498	-1.578	-2.182
	(1.92)	(1.52)	(1.74)
o2pp1	0.437	0.531	0.530
	(3.89)**	(5.01)**	(3.90)**
toe1l			2.633
			(3.26)**
toe2l			-1.339
			(2.67)*
_cons	21.222	15.132	-2.474
	(1.49)	(1.44)	(0.35)
R^2	0.92	0.91	0.87
N	33	33	33

* $p<0.05$; ** $p<0.01$

Note: t-ratios are in parentheses.

Table 29. Electoral Effects of Independent Expenditures (2008 – HOvO)

	Model 1	Model 2	Model 3
oce1l	3.919	3.692	
	(3.62)**	(2.73)*	
ope1l	0.706		
	(1.69)		
ioe1l	0.890		
	(1.65)		
oce2l	-2.787	-3.564	
	(2.69)*	(3.94)**	
ope2l	-0.872		
	(2.23)*		
ioe2l	-0.652		
	(0.86)		
cq2	-1.412	-2.086	-3.003
	(1.13)	(1.85)	(2.46)*
o2pp1	0.313	0.425	0.495
	(2.76)*	(3.56)**	(3.03)**
toe1l			2.592
			(1.53)
toe2l			-1.371
			(1.66)
_cons	19.675	28.062	5.336
	(1.47)	(2.34)*	(0.44)
R^2	0.85	0.81	0.75
N	36	36	36

$* \ p<0.05; \ ** \ p<0.01$

Note: t-ratios are in parentheses.

Table 30. Electoral Effects of Independent Expenditures (2006 – SDvR)

	Model 1	Model 2	Model 3
pcdcel	0.039	0.049	
	(2.36)*	(3.89)**	
pcdpel	0.001		
	(0.16)		
pcidel	0.008		
	(0.66)		
pcrcel	-0.037	-0.037	
	(2.46)*	(3.68)**	
pcrpel	0.003		
	(0.46)		
pcirel	-0.008		
	(0.55)		
ip2	0.016	0.013	0.016
	(0.60)	(0.56)	(0.70)
rcq	0.010	0.011	0.011
	(0.50)	(0.59)	(0.62)
cdl	0.004	-0.001	-0.000
	(0.29)	(0.10)	(0.03)
d2pp	-0.007	0.008	-0.001
	(0.03)	(0.05)	(0.01)
pctdel			0.048
			(4.13)**
pctrel			-0.037
			(3.80)**
_cons	0.437	0.362	0.372
	(2.44)*	(3.12)**	(3.31)**
R^2	0.83	0.81	0.82
N	30	30	30

*$p<0.05$; ** $p<0.01$

Note: t-ratios are in parentheses.

Table 31. Electoral Effects of Independent Expenditures (2006 – SIvC)

	Model 1	Model 2	Model 3	Model 4
pcicel	0.040 (3.48)**	0.052 (4.21)**		0.047 (3.55)**
pcipel	-0.014 (3.25)**			
pciiel	0.003 (0.59)			-0.005 (0.81)
pcccel	-0.018 (1.85)	-0.035 (4.46)**		-0.013 (1.11)
pccpel	-0.000 (0.12)			
pcice2l	-0.006 (0.67)			-0.017 (1.79)
ip3	0.048 (2.52)*	0.052 (2.35)*	0.049 (2.16)*	0.034 (1.51)
cq	0.021 (2.25)*	0.033 (3.14)**	0.033 (3.14)**	0.019 (1.65)
cdl	-0.022 (2.86)*	-0.017 (1.74)	-0.014 (1.49)	-0.014 (1.54)
i2pp	-0.113 (1.08)	0.000 (0.00)	-0.014 (0.10)	0.021 (0.17)
pctie2l			0.046 (3.87)**	
pctcel			-0.035 (4.43)**	
_cons	0.460 (3.82)**	0.285 (2.31)*	0.347 (2.78)*	0.273 (2.13)*
R^2	0.91	0.80	0.79	0.84
N	27	27	27	27

$* p<0.05; ** p<0.01$

Note: t-ratios are in parentheses.

Table 32. Electoral Effects of Independent Expenditures (2008 – SIvC)

	Model 1	Model 2	Model 3	Model 4
pcicel	0.021	0.011		0.017
	(1.55)	(0.70)		(1.26)
pcipel	-0.014			
	(1.87)			
pciiel	0.008			0.002
	(0.90)			(0.33)
pcccel	-0.013	-0.012		-0.002
	(1.21)	(1.79)		(0.34)
pccpel	-0.004			
	(0.46)			
pcice2l	-0.004			-0.018
	(0.40)			(3.53)**
ip3	-0.013	0.047	0.040	0.008
	(0.54)	(1.86)	(1.55)	(0.36)
cq	-0.007	0.012	0.008	0.009
	(0.53)	(0.82)	(0.57)	(0.76)
cdl	-0.009	-0.017	-0.016	-0.019
	(0.77)	(1.47)	(1.41)	(1.96)
i2pp	0.110	0.397	0.357	0.309
	(0.56)	(2.16)*	(1.96)	(1.92)
pctie2l			0.011	
			(0.68)	
pctcel			-0.014	
			(2.12)*	
_cons	0.533	0.349	0.411	0.343
	(2.43)*	(1.49)	(1.80)	(1.78)
R^2	0.83	0.64	0.66	0.79
N	29	29	29	29

*$p<0.05$; ** $p<0.01$

Note: t-ratios are in parentheses.