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Cooperative Media Spending in Senate Campaigns Post-*Citizens United*

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Abstract: Outside groups now represent a major voice in US Senate campaigns, but it remains unclear to what degree outside groups are independent actors or are simply performing the same role once filled almost entirely by the parties. This article investigates whether independent groups distribute media expenditures in ways that mirror the objectives of parties, or if divergent interests cause independent groups to allocate these funds differently. Using a large original dataset of media spending in Senate campaigns from 2010 through 2014, this study specifies how a seat-maximizing strategy will go beyond simply directing money to the most competitive contests; that within similarly competitive races outside groups spend more on media when the candidates spend less. The observed pattern of outside group resource allocation reveals that outside group activity in the aggregate is consistent with the seat-maximizing strategy expected from parties, but one subgroup of outsiders, issue-based independent groups, are less sensitive to these considerations.

Introduction

Interest groups, individuals, unions, and corporations with an interest in influencing elections traditionally directed their resources to candidates and to parties through contributions. It was then up to the parties to decide how to distribute their resources across races. Resources still pass through parties and candidates as contributions from individuals and traditional PACs, but since the 2010 Supreme Court decision in *Citizens United v. FEC* and the federal court decision in *Speechnow.org v. FEC* a large number of separate actors control the allocation of their own dollars. This article assesses whether outside groups' activities seamlessly mesh with the activities and preferences of parties, or if outside spending is a separate and truly independent force in campaigns.

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Independent groups have at times been characterized as unwelcome interlopers or partisan polarizers. A former state party chair said to *The New York Times*, "every time we empower independent third-party groups to do what the party is supposed to be doing, it diminishes the value of the brand and what the party represents" (Confessore 2011). Some scholars have argued that independent groups offer more support to the most extreme candidates, contributing to polarization in government (La Raja and Schaffner 2014).

But outside groups are also closely linked to the formal party apparatus, and are integrated pieces of a broader party network (Schlesinger 1985; Schwarz 1990; Koger, Masket, and Noel 2009; Bawn et al. 2012; Skinner, Masket, and Dulio 2012). Parties are "enduring multi-layered coalitions" that include the independent groups that primarily support one party's candidates (Herrnson 2009). Some prominent independent groups were created by party leaders or close associates, and staffs often migrate between independent groups, candidates, and the formal party organization (Skinner 2005; Farrar-Myers and Skinner 2012).

This article will show that even though the parties no longer directly control most outside money, most outside resources are still distributed in a strategic, office-seeking manner. In particular, this article describes how outside group support for Senate candidates has a compensatory dimension – that within similarly competitive races, outside groups spend more on media where the candidates spend less. The objectives of many independent groups are identical to the seat-maximizing goals of the parties, however one variety of groups, issue-based independent groups, have observable differences in the distribution of their media dollars.

Campaign Actors and Cooperation

Modern campaigns have been variously described as an orchestrated cooperation between parties and independent groups (Kolodny and Dwyre 1998; Dwyre and Kolodny 2014), or as a "team sport" or "elaborate dance" of specialized players working towards the shared goal of electoral success (Magleby, Monson, and Patterson 2007; Magleby 2011, 2014a). A strong partnership among actors should feature cooperative spending that is more sophisticated than simply directing the most money to the closest contests. When making their allocation decisions, outside groups should also consider the spending by candidates.

Campaign actors are defined here as political organizations that engage in mass communication directly to voters. Most broadly, there is a division between *candidates* and *outside groups*. Outside groups are composed of *party committees*

Table 1: Campaign Actors.

Actor	Objective	Allocation Strategy
Candidates	Electoral victory	Devote all resources to own campaign
Parties	Majorities in government	Distribute to maximize seats
Party-Adjacent Groups	Majorities in government	Distribute to maximize seats
Issue-Based Groups	Advance policy goals	Distribute to defend allies and replace opponents
Single Candidate Groups	Electoral victory	Devote all resources to own campaign

and independent groups which, following Magleby (2014b), are divided into three categories: *party-adjacent groups*, *issue-based groups*, and *single candidate groups*.[1] All campaign actors seek to win the elections they are participating in, but most categories of campaign actors have broader objectives that will influence their allocations of resources across races, listed in Table 1.

- **Candidates:** Candidates purely seek electoral victory (Downs 1957; Mayhew 1974). Out of self-interest and risk-aversion, candidates will typically spend all of their resources unless victory is almost certain (Jacobson 1985).[2]
- **Parties:** Parties seek to obtain and maintain majorities in government (Downs 1957; Aldrich 1995). Parties will therefore allocate resources according to a pragmatic, seat-maximizing strategy to win as many races as possible (Snyder 1989; Damore and Hansford 1999). Hill committees, the primary vehicle of party activity in elections, pay little attention to candidates'

1 Party groups in federal legislative races are almost entirely made up of the four Hill Committees: DSCC, NRSC, DCCC, and NRCC. Hill Committees typically have two separate entities – a coordinated campaign component that gives strategic advice to candidates and an independent expenditure component that produces and airs political messages in races. The independent expenditure arm of the Hill Committee cannot communicate with candidates, nor with the coordinated campaign. The independent expenditure arms of Hill Committees are what is referred to here.

2 Safe incumbent candidates sometimes serve a broader party interest by transferring funds out to party candidates in greater peril, but these transfers are done mostly by the safest senior incumbents (Heberlig and Larson 2005). In addition, safe incumbents sometimes prefer to hold their funds with an eye towards future elections. Legislators may plan to seek higher office in the next election cycle (Ansolabehere and Snyder 2000) or they may hold a war chest in an effort to deter the entry of quality challengers (Goidel and Gross 1994; Hersch and McDougall 1994; Box-Steffensmeier 1996) A later analysis by Goodliffe (2001) concluded that war chests had no true deterrent effect, but officeholders may still believe that war chests deter potential opponents and act accordingly.

ideology or past loyalty and instead base allocation decisions on each candidate's electoral chances (Cantor and Herrnson 1997; Kolodny 1998; Nokken 2003).

– **Party-Adjacent Groups:** Party-adjacent groups are often headed by prominent partisan campaign professionals, e.g. Karl Rove and American Crossroads or J. B. Poersch and Senate Majority PAC. Party-adjacent groups, identical to the formal parties, will allocate their resources according to pragmatic a seat-maximizing strategy.
– **Issue-Based Groups:** Issue-based groups are formed around a single issue or a set of issues, or to represent the interests of a subgroup, e.g. League of Conservation Voters or US Chamber of Commerce. Whereas traditional PACs seek access to lawmakers, issue-based independent expenditure groups pursue a replacement strategy to change the composition of legislatures and executive offices (Sorauf 1992; Franz 2011; Issacharoff and Peterman 2013; Dwyre and Braz 2015). Issue-based groups spend in races that are close – to do otherwise would be wasting resources. However, programmatic policy interests can cause them to deviate from a purely pragmatic seat-maximizing strategy pursued by parties and party-adjacent independent groups: e.g. the Sierra Club will support Democrats over Republicans, but when choosing which of several Democrats in toss up races to support, the group should choose the strongest environmental advocate, not necessarily the candidate in the most need of advertising support.
– **Single Candidate Groups:** Single candidate groups, the most recent innovation by campaigns, are expenditure-only groups formed strictly to support a single candidate in a single election, and thus have the identical objective of candidates. A candidate-specific group will pursue electoral victory for the supported candidate and limit all of its activity to the single campaign of interest.

Candidates generally confine their spending to their own campaign, but outside groups can distribute their resources across races as they see fit, and outside groups on balance should be pragmatic seat-maximizers. Outside groups should distribute resources to where they are needed most. They should spend more on races within the same degree of competitiveness where the preferred candidate has spent less.

– **H_1 Compensatory Spending Hypothesis:** Outside groups, holding other factors constant, will allocate media spending in inverse response to supported candidates' media spending.

While parties and party-adjacent groups should be pure seat maximizers, issue-based groups have a programmatic motivation to replace policy opponents and defend policy allies. In general, this objective will still steer more of their funds towards close races since these are the only seats realistically at risk. However, issue-based groups should also consider policy policy criteria when choosing which candidates to support and will be less sensitive to considerations of competition and candidate spending when compared to the purely pragmatic parties and party-adjacent groups.

– **H_2 Issue Bias Hypothesis:** Issue-based independent groups media spending will be more weakly associated with competitiveness and candidate media spending than parties and party-adjacent independent groups.

Campaign actors of all types can easily obtain the information needed to know where support is needed most. Polls and race assessments from the Rothenberg and Gonzales Political Report and the Cook Political Report provide clear pictures of the state of races across the country. Spending, fundraising, and the financial state of campaigns are similarly transparent. Candidate committees file frequent periodic reports with the Federal Election Commission throughout the campaign detailing their financial state. Beginning in 2012 the Federal Communications Commission required the four major network affiliates (ABC, CBS, FOX, and NBC) in the top 50 media markets to report political advertising buys to a public file (Farnam 2012). In 2014 this requirement was expanded to all US markets, meaning that future scheduled advertising by campaigns as well as past advertising is publicly available information. In addition, one of the standard services provided to campaign actors by media buying firms are regular reports (weekly or sometimes daily) of other media buys in relevant markets, making tracking of both opponents' and allies' media buys a simple matter.[3]

In the event that any allied independent groups are not monitoring media buying closely enough, parties communicate spending information to independent groups through press releases that announce media buys and party websites that feature lists of targeted contests (Dwyre and Kolodny 2014). Candidate committees can send out signals about strategic preferences using conference calls with donors. Campaign actors can also synchronize their efforts because actors' behavior is predictable and the decision makers know one another. Campaign staff, Hill Committee leadership, and independent group leaders frequently swap roles and move between independent groups, parties,

3 Based on an interview with a media sales executive responsible for advertising sales to political clients. Interview by author, July 2015.

and candidate committees between election cycles.[4] Through these methods campaign actors can adapt their spending to account for spending by both opponents and allies.

Data

The unit of analysis is the *campaign*, defined as the total electioneering activity of candidates and all outside allies in support of the candidate. This study examines total spending on mass media by candidates and outside groups in Senate campaigns from 2010 through 2014 ($N = 187$)[5]. Mass media expenditures in Senate races were assembled using FEC records of all expenditures by major party candidates and independent candidates receiving 15% or more of the general election vote (441,832 reported expenditures) as well as all electioneering communications expenditures and expenditures by independent groups (124,670 expenditures) in the 2010, 2012, and 2014 elections. The expenditures were categorized by the type of activity, allowing the media expenditures to be isolated from all other campaign activities. Expenditures for production and media buys of mass advertising on television, radio, online, and (in theory but rarely in practice) newspapers were classified as mass media (the coding procedure is described in greater detail in the Appendix).

Restricting the study to mass media expenditures in campaigns should offer a clearer picture of compensatory behavior compared to total expenditures. First, outside groups devote the overwhelming majority of their reported spending to mass media (Dowling and Miller 2014), so their compensatory support for candidates should be most closely related to candidates' media spending as opposed to total spending.[6] Outside groups that primarily run television advertising should compensate for a candidate who is falling behind in television spots, but not necessarily compensate for a candidate lagging behind on direct mail or office staff. Second, total spending by candidates is an inefficient measure of the candidates' own campaign activity (Ansolabehere and Gerber 1994). Some candidates may

4 FEC rules require that individuals wait 120 days after leaving employment or contract work for a candidate's campaign committee or a party committee before they can begin work with an independent group (1 CFR 109.21(d)(5)).

5 The sample includes 5 independent campaigns (Florida and Alaska in 2010, Maine and Maryland in 2012, and South Dakota in 2014), several uncontested incumbents, and drops the 2012 and 2014 Louisiana Senate campaigns due to the state's unusual blanket primary and short, late general election phase.

6 Outside groups often have substantial operational expenses (Dwyre and Braz 2015), but these are not reported to the FEC as independent expenditures.

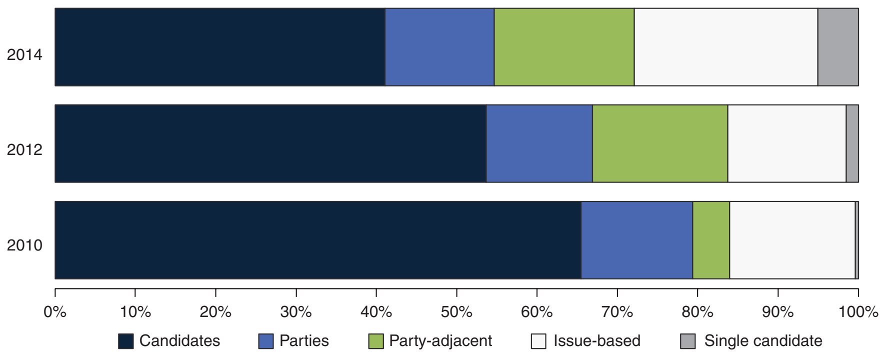

Figure 1: Portion of Media Spending by Group Type in Senate Campaigns, 2010–2014.

spend lavishly on travel and meals while others may spend nearly all resources on television spot buys.

Consistent with earlier findings by Fowler and Ridout (2012), outside group media spending has dramatically increased over the three election cycles since the *Citizens United* and *Speechnow.org* decisions. Figure 1 shows the proportion of total media spending across all campaigns by each category of campaign actor in each election year. Candidates were responsible for two-thirds of media spending in 2010 (65%), half in 2012 (54%), and two-fifths in 2014 (41%). Parties have been consistent in their share of total media expenditures from 2010 through 2014 (14%, 13%, and 14%, respectively). The decline of relative spending by candidates has been at the expense of party-adjacent and issue-based groups. Party-adjacent groups were a trivial part of the 2010 Senate races (5%) but made one sixth of expenditures in 2012 and 2014 (17% in both years). Issue-based groups' share of spending expanded from 15% in 2010 and 2012 to 23% in 2014. Single-candidate groups attract much of the press attention about outside spending because their exceedingly close relationships with candidates seem to be an affront to the spirit of FEC rules regarding coordination. Within Senate races however, this variety of outside group accounts for just a tiny fraction of media spending: <1% in 2010, 2% in 2012, and 5% in 2014.

Analysis

The hypotheses are tested using models to estimate the level of outside media spending in Senate campaigns as a function of several variables listed in Table 2. The dependent variable, *outside media*, is the spending in dollars by outside

Table 2: Summary Statistics for Model of Outside Spending.

	Mean	Std. Dev.	Min.	Max.
Dependent Variable				
Outside Media	4,430,061	7,368,863	0	36,943,720
Independent Variables				
Candidate Media	4,785,927	4,975,101	250	26,973,317
Race Competitiveness (for the distribution see Table A1, Appendix)				
Opposing Media	9,432,724	10,091,383	0	45,263,471
Incumbent Candidate	33%	–	0	1
Democratic Candidate	47%	–	0	1
Republican Candidate	50%	–	0	1
Independent Candidate	3%	–	0	1
Size of Media Markets	926	890	77	5504
N	187			

groups on media in each Senate campaign. Outside group spending for each campaign was calculated as the total media spending designated as supporting the candidate plus the total media spending designated as opposing that candidate's opponent. Electioneering communications are not labeled in the FEC records as supporting or opposing the candidates they mention. The supported candidate for these expenditures was determined by comparing the ideology of the group engaging in the communication with the party affiliation of the mentioned candidate, and if necessary consulting news reporting on the race.

The independent variable of interest is *candidate media* spending, also measured in dollars. Holding other factors constant, the compensatory spending hypothesis expects that when a candidate spends less on media outside groups will increase their supportive spending, or when a candidate spends more on media outside groups will provide less support. Therefore this variable should have a negative relationship with outside spending.

The compensatory spending hypothesis predicts a reciprocal relationship between candidate and supporting outside group spending within similar classes of races. Therefore, it is necessary to control for other major contextual factors, especially competitiveness of the contest. Competitiveness is accounted for in the model with race ratings from the Rothenberg Political Report from the first week of October in each election year. Folding Rothenberg's scale creates a five-point competitiveness scale. The folded race rating is treated as an ordinal measure and included as a set of four dummy variables, *toss up*, *tilting*, *competitive*, and *less competitive*, with the category *non-competitive* omitted.

The total *opposing media* spending measures the intensity of activity by the opposing side(s). Outside groups should reinforce candidates with supporting advertising more strongly when the opposing side spends more on media, thus this variable should have a positive effect on outside spending. Opposing media is measured in dollars combining the total media expenditures by opposing candidates and the opposing outside groups supporting that candidate.

Senate contests occur in states with very different media costs to reach the voters. New Hampshire has about 666,000 registered voters, but to reach them campaigns must advertise in the very costly Boston market as well as the Manchester and Burlington markets. In contrast, Georgia has about 4,076,000 registered voters who can be reached more efficiently and economically via Atlanta and several small markets such as Augusta and Macon. Outside groups should spend more on media when the media markets are larger and more expensive. To account for this difference, a value for the size of the media markets is calculated as the total number of television homes in the market obtained from Neilson, weighted by the number of ads from Senate races in that market, taken from data from the Wesleyan Media Project for 2010 and 2012 (Fowler, Franz, and Ridout 2014, 2015).[7] Because advertising costs are closely tied to the size of the media markets, this variable can be thought of as capturing the average cost of the average television advertisement for a Senate campaign (The media market size values for the above example are 2302 for New Hampshire and 631 for Georgia).

Incumbent candidates often attract more direct contributions from PACs and often receive more party support. Super PACs and other independent groups may also prefer to back incumbents, so *incumbency* is included as a dummy variable in the model to account for this possibility. In the immediate aftermath of the 2010 court decisions Republicans were faster to adapt to the change in the campaign finance environment and more reliant on independent expenditure support in their campaigns, so party affiliation is included as a categorical variable (the omitted category in the estimated model is Democrat).

Finally, to provide sufficient statistical power for the hypothesis tests, this is a pooled model of three election cycles. Independent group spending expanded dramatically after the 2010 election, so election years are included as two dummy variables (omitting 2014) to account for this increase.

The dependent variable in the model, outside media spending, is bounded at zero. More specifically, outside groups must first decide whether to spend in support of a candidate, and then if they decide to spend they must decide how much. This type of process is represented well by a tobit model (Wooldridge 2003). A linear regression model, in addition to making impossible negative predictions

7 2014 advertising data is not yet available from the Wesleyan Media Project, one major reason why this study uses media expenditures instead of ad counts.

for some campaigns, would yield biased and inconsistent parameter estimates whereas the tobit model estimated using maximum likelihood provides consistent parameter estimates (Long 1997). The base model takes the following form:

$$outmedia_i \begin{cases} y_i^* \, if \, y_i^* > 0 \\ 0 \, if \, y_i^* \leq 0 \end{cases}$$

$$\begin{aligned} y_i^* = \beta_0 + \beta_1 canmedia_i + \sum_{j=2}^{5} \beta_j rating_i + \beta_6 oppmedia_i + \beta_7 marketsize_i \\ + \beta_8 incumbent_i + \beta_9 rep_i + \beta_{10} ind_i + \beta_{11} 2010_i + \beta_{12} 2012_i + e_i \end{aligned}$$

In addition to this base model, a partisan model is estimated which includes an interaction between Republican and candidate media spending to look for differences in the inverse relationship of spending between candidates and outside groups by party. Because Republicans more readily embraced super PACs and 501(c)s than Democrats, the strength of association between candidate and outside media spending may be stronger for Republicans.

Results

The coefficients from the tobit models are shown in Table 3. These coefficients represent the linear effect of the independent variables on the latent y^* not on the observed dependent variable, so they cannot be interpreted in the same way as OLS estimates. To better describe the substantive effects of the key independent variables on outside media spending, marginal effects are calculated and shown in Figures 2 and 3.[8]

The results support the compensatory spending hypothesis that outside media spending has an inverse association with the supported candidate's media spending. The association between candidate media spending and outside group media spending is negative and statistically significant. The marginal effect of candidate media spending on the predicted level of outside group media spending to support that candidate is shown in Figure 2. Holding other factors constant, one standard deviation decrease in candidate media spending ($4,975,101) is associated with $1,039,503 in greater media spending by outside groups.

8 The marginal effects reported here are for an unconditional expected value of outside media spending evaluated at the means of the other independent variables.

Table 3: Tobit Model of Outside Media Spending, Senate 2010–2014.

Independent Variables	Base Model	Partisan Model
Candidate Media Spending	−0.21**	−0.23^{+}
	(0.08)	(0.12)
Less Competitive Race	2,782,578**	2,485,229*
	(1,000,888)	(1,006,542)
CompetitiVe Race	4,210,677**	4,068,863**
	(1,279,184)	(1,286,821)
Tilting Race	6,624,610***	6,692,530***
	(1,285,569)	(1,288,646)
Toss Up Race	7,728,999***	7,680,393***
	(1,369,665)	(1,406,434)
Opposing Media Spending	0.51***	0.51***
	(0.05)	(0.05)
Incumbent Candidate	2,126,536**	2,133,581*
	(800,092)	(826,373)
Republican Candidate	3,291,361***	3,004,249**
	(689,290)	
Independent Candidate	−2,790,606	–
	(2,166,118)	
Republican × Candidate Media	–	0.05
		(0.13)
Size of Media Markets	−188	−150
	(362)	(362)
2010	−3,326,123***	−3,252,722***
	(852,454)	(859,838)
2012	−1,866,379*	−2,003,126*
	(809,368)	(824,683)
Intercept	−3,598,041**	−3,459,174**
	(1,056,047)	(1,092,771)
Uncensored Observations	143	142
Left-Censored Observations	44	40
χ^2	260.25***	257.43***

Standard errors in parentheses.
$^{+}$ $p < 0.10$;*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$; two-tailed tests.

The intensity of the race has the expected strong association with outside spending. Each of the four dummy variables for the included categories of race competitiveness are significant, and each has a stronger effect as they move farther from a non-competitive race. More intuitively, the marginal effects graphed in Figure 3 show the effect of increasingly competitive contests on outside group media spending in that race. The association is roughly linear, with outside spending increasing about $2 million for each category of competitiveness.

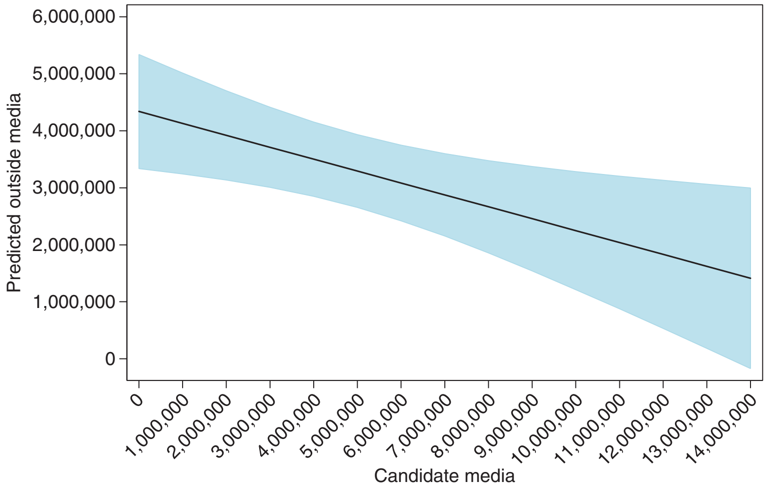

Figure 2: Marginal Effect of Candidate Media Spending.

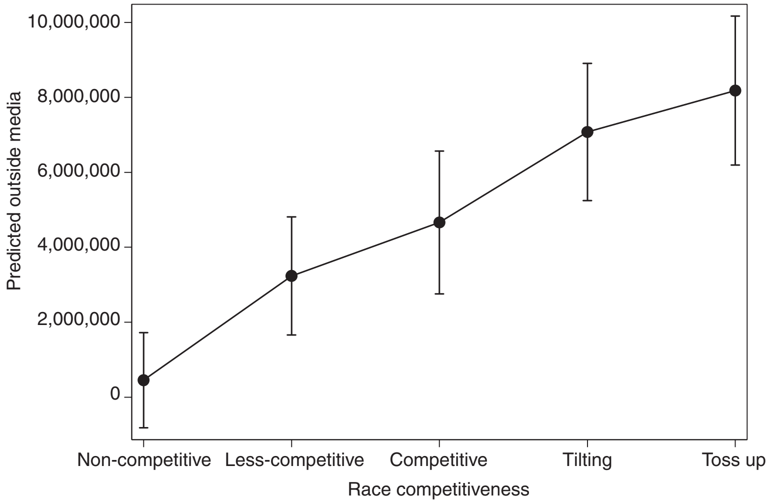

Figure 3: Marginal Effect of Race Competitiveness.

Several other control variables also had significant effects in the anticipated direction. Media spending by the opposing side is associated greater media spending by supporting outside groups. Incumbents have significantly more support from outside media. Just as incumbents are able to attract more interest group donations, they also benefit from more outside media support than challengers. The size of the media markets in each race did not have a relationship with outside media spending levels. Senate races occurring where the cost of media buys is higher are not associated with greater outside spending. Outside groups will spend just as heavily on media in Iowa as in New Jersey if the state of the race and the supported candidate's level of spending demand it.

As expected, Republicans have also enjoyed greater support than Democrats from the current system of independent expenditures. Republican candidates receive $2,247,315 more in outside media support on average than Democratic candidates (marginal effect calculated from base model).

Moving beyond this main effect, the partisan model interacts partisanship with supporting attacks (for simplicity the five independent candidates were dropped from this model). The results of the interaction model demonstrate that the relationship between outside and candidate media spending is nearly the same in both Democratic and Republican campaigns. First, the coefficient for candidate media spending is nearly the same in the base model (–0.21) as in the interactive model (–0.23), the latter coefficient representing the association between candidate media and outside media among Democratic campaigns. Second and more formally, a Wald test of this interaction finds that it is not significant ($F=0.16$, $p=0.69$), meaning that there is no statistically significant difference in the inverse spending relationship between outside groups and candidates, whether the campaign is Democrat or Republican.

The issue bias hypothesis predicts that issue-based independent groups will be less sensitive to the context of the race than parties or party-adjacent independent groups. To evaluate this hypothesis an additional set of models is estimated of outside spending separately for each major category of outside group. The models estimated in Table 4 are similar to the main model, except that the dependent variable for each is media spending by parties, party adjacent groups, and issue based groups, respectively. A fourth model for single candidate groups is not estimated since these groups account for only a tiny fraction of outside group activity in Senate campaigns.

Issue based group spending, unlike parties and party-adjacent groups, is insensitive to candidate spending. Coefficients for parties and party-adjacent groups are negative and significant, indicating that these groups allocate media dollars in inverse response to candidate media spending. But issue-based group media spending has no association with candidate spending.

Figure 4 displays the marginal effects of race competitiveness on outside spending by each type of outside group, estimating effects only for races where that group type made media expenditures in campaigns. Issue-based groups still direct more media spending to closer races, but the strength of the relationship between race competitiveness and media spending is weaker for issue-based

Table 4: Outside Media Spending by Group Type, 2010–2014.

Independent Variables	Parties	Party-Adjacent	Issue-Based
Candidate Media Spending	−0.20**	−0.16**	−0.04
	(0.06)	(0.05)	(0.04)
Less Competitive Race	2,617,481**	2,204,059**	1,668,882**
	(929,757)	(634,514)	(516,392)
Competitive Race	4,312,750***	3,734,642***	2,081,809**
	(998,776)	(752,097)	(654,240)
Tilting Race	6,708,021***	3,988,667***	2,506,849***
	(1,024,299)	(773,545)	(659,575)
Toss Up Race	6,327,151***	4,491,569***	2,649,140***
	(1,048,099)	(802,299)	(704,444)
Opposing Media Spending	0.18***	0.20***	0.19***
	(0.03)	(0.03)	(0.03)
Incumbent Candidate	564,091	550,496	616,311
	(598,621)	(507,614)	(417,015)
Republican Candidate	−980,658*	1,678,102***	2,037,848***
	(478,144)	(408,052)	(360,120)
Independent Candidate	−4,212,834**	−1,246,235	−772,148
	(1,549,938)	(1,213,486)	(1,092,922)
Size of Media Markets	−235	−176	114
	(410)	(240)	(184)
2010	−824,513	−2,042,278***	−1,158,394**
	(667,144)	(533,524)	(440,335)
2012	−82,650	−365,409	−1,081,890**
	(595,232)	(474,103)	(418,475)
Intercept	−3,877,167***	−3,240,740***	−2,351,587***
	(1,001,737)	(674,005.5)	(565,895.7)
Uncensored Observations	64	88	134
Left-Censored Observations	123	99	53
χ^2	199.99***	212.05***	196.91***

Standard errors in parentheses.
*p < 0.05; **p < 0.01; ***p < 0.001; two-tailed tests.

groups than for parties and party adjacent groups. Much of the difference lies in the lowest two categories of competitiveness. When issue-based groups spend in non-competitive and less competitive races, the model estimates that they support the candidates more robustly than parties or party-adjacent groups (and interestingly, parties are predicted to spend more media dollars in tilting races instead of toss up races).

The relationship between issue-based group spending and opposing group spending is no different than the association between party and party-adjacent

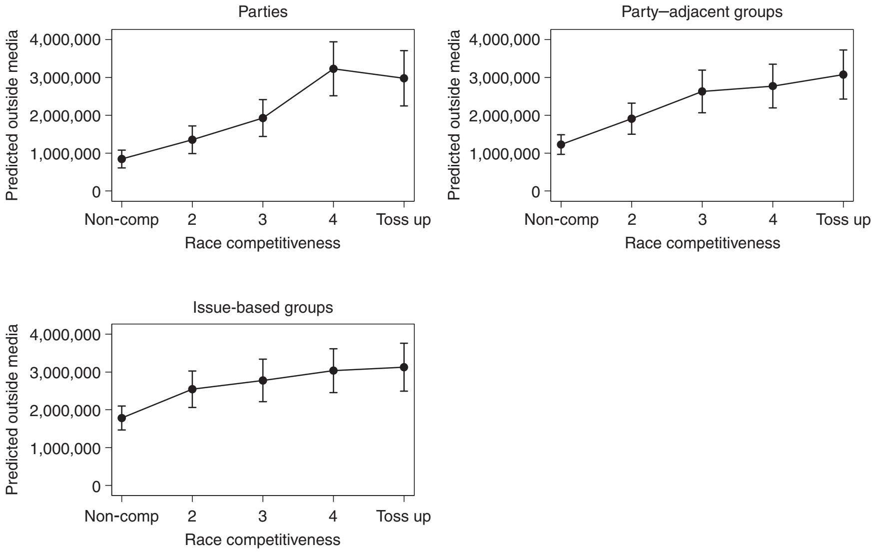

Figure 4: Marginal Effect of Race Competitiveness by Group Type.

groups and opposing spending. Media spending from all three group types have an equally strong positive association with the media spending from the opposing side of a campaign.

Also noteworthy are several coefficients in the second set of models that reflect the differences in the roles played by the different categories of groups. The dummy variables for year reflect that party spending over time has remained mostly stable, while independent group media since the 2010 cycle has played a much larger role. The estimates for the effect of Republican candidates reflect that Democrats tend to support their candidates through formal party groups and Republicans tend to benefit from party-adjacent and issue-based group spending.

Conclusion

Ample prior research has documented that party resources are rational and mostly flow to the closest contests. When the era of super PACs began in 2010 it carried the risk that bringing in new actors would disrupt the distribution of resources. This study has shown that most outside groups are able to account for candidates' spending and will allocate their own spending within similarly competitive races to support the candidates who could best benefit. Furthermore, this study has described slight but important differences in allocations by spending source.

First, this study illustrates that outside money rationally pursues majorities and that outside money is well informed. Seat-maximizing resource allocation is more complex than simply funneling funds to close contests; it includes an inverse response to candidate media spending within similarly competitive Senate campaigns. The changes in the control over the distribution of campaign resources that occurred in the wake of the *Citizens United* and *Speechnow.org* decisions have not created a chaotic system of financing Senate contests. Furthermore, this study includes the 2010 election that occurred just months after the *Speechnow.org* decision. Independent expenditure groups had little time to form and develop allocation strategies for this new landscape. Even including the campaigns from this cycle, the results show a compensatory system of candidate support by outside groups.

An important caveat is that support for the hypothesis of compensatory spending does not, by itself, demonstrate a causal relationship where lower candidate media spending causes higher outside spending. However, the opposite direction of causation seems much less likely: that candidates reduce media spending when outside groups spend on their behalf. Candidates in contested races typically spend all of their available cash, not hold back.

Second, the results here indicate that issue-based groups can best be described as allies but not full partners. Many issues are well-sorted between the parties, so most issue-based groups confine their spending to support candidates of one party or the other. But unlike the formal parties and party-adjacent groups, within similarly competitive contests issue-based group spending is not higher where candidates are spending less on media on their own. In addition, while these groups are still sensitive to the competitiveness of the contests, issue-based groups are more likely to allocate some media spending to non-competitive races.

Third, although the share of media spending by parties has steadily declined in the last three election cycles, party-adjacent groups have filled in the gaps. These independent groups also behave as seat-maximizers, and thus the proportion of outside money that is purely pursuing legislative majorities has remained stable in the first three elections since 2010.

Finally, the level of sophistication in outside group support should be noted. Candidate media spending is publicly available so there is no reason to think that anything about the behavior described here violates FEC rules about coordination between candidates and expenditure-only groups. However, these patterns of support indicate a closeness of the relationship between outside actors that belies the description of these groups as "independent."

Appendix: Measurement of Variables

Media Expenditures:
Coding campaign expenditures by the type of activity, even with computer assistance, is a labor-intensive process. FEC forms provide activity codes for committees to use when reporting their expenditures, but committees almost never actually use them. Committees must write in descriptions of the expenditures, however. Campaign expenditures are coded using these brief descriptions.

Media expenditures are first coded automatically based on the appearance of certain character strings: advertis, ads, spot, television, tv, video, radio, newspaper, media, broadcast, adwords. Afterward, all expenditures not automatically coded were inspected by a human researcher and coded. The accuracy of the coding process was verified by manually recoding 1000 randomly selected expenditures. The manual recodes were identical in 99.8% of cases. Neither error involved media expenditures, and both errors were cases of direct voter contact that was miscoded as other expenses.

Outside Groups:
Outside groups were coded based on the stated objectives of the group on its own website, profile information from opensecrets.org, and press accounts if available. Groups were placed into categories based on the following:
- **Party Committees:** Groups explicitly connected with one of the two major parties.
- **Party-Adjacent Groups:** Groups that refer to a broad platform of issues all consistent with one party, or refer to electing Republicans/conservatives or Democrats/progressives, and allocate resources across multiple races all on one partisan side.
- **Issue-Based Groups**: Groups that are affiliated with an interest group or industry, offer memberships, or advocate for narrow policy goals. Note that

Table A1: Competitiveness of Senate Races, 2010–2014.

	Count	Percent
Toss Up	26	14%
Tilting	26	14%
Competitive	21	11%
Less Competitive	28	15%
Non-Competitive	86	46%
Total	187	

Tea Party groups are included in this category despite seemingly broad issue interests due to their tendency to oppose Republican incumbents in primaries and references to "true conservatives." Most Tea Party expenditures are related to direct contact of voters via mail and post for fundraising and advocacy, and little has been spent on mass media.
- **Single Candidate Groups:** Groups created to support a single candidate in a single Senate election.

Race Ratings:
The Rothenberg and Gonzales Political Report rates the likelihood of each party winning the presidency, House, Senate, and gubernatorial contests using a nine-point scale, from safe Republican to safe Democrat. The ratings are created by interviewing "more than 150 congressional candidates every cycle and talk with key partisan decision-makers in Washington and astute political observers in the states. We also rely heavily on data, including past electoral history and trends, current polling (public and private, partisan and nonpartisan), as well as national surveys" (Gonzales 2015). Rothenberg's nine category scale reflects the probability that one party or the other will win the seat, not the expected vote share. Folding Rothenberg's scale to creates a five-point competitiveness scale: non-competitive, less competitive, competitive, tilting, toss-up. The resulting scale for Senate races is distributed as shown in Table A1.

A potential concern is that the race competitiveness variable is endogenous to the spending variables in the models estimated in this study. Gonzales makes no mention of campaign spending when describing how ratings are determined, but campaign spending could be factored into the ratings through Rothenberg's discussions with "key partisan decision-makers … and astute political observers." There is little evidence that the Rothenberg staff update or alter race ratings based on suddenly announced large media buys or other campaign activity. Instead, polls, and past performances in the states are the strongest drivers of these ratings. For these reasons it is reasonable to treat the competitiveness ratings as sufficiently exogenous to political spending.

Size of Media Markets:
The size of the media markets for each senate race express the average size of the media market where Senate general election broadcast television ads ran in the 2010 and 2012 elections, weighted by the number of spots that ran in that market. Total airings for each Senate contest were obtained from the Wesleyan Media Project and the size of each market in that election year (expressed as thousands of television households) was obtained from Nielson.

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