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Noel D. Campbell

Edward J. Lopez

Tammy M. Rogers

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Further Tests of Legislators Paying to Deviate from Constituent Interests

Noel D. Campbell*

University of Central Arkansas

Edward J. Lopez

San Jose State University

Tammy M. Rogers

University of Central Arkansas

Lopez and Campbell (2004) find a statistically significant, positive relationship between incumbents' deviations from their constituents' preferences and incumbent's subsequent campaign expenditures. We replicate their empirical program using a different measure of incumbent deviation based on Berry, Ringquist, Fording, and Hanson (1998). Using both measures of incumbents' deviations we both confirm and disconfirm the Lopez and Campbell result, implying either the construct of incumbents' deviations from constituents' interests or its operationalization is underdeveloped.

INTRODUCTION

Lopez and Campbell (2004) examine the empirical relationship between vote score residuals and incumbents' campaign expenditures in the subsequent re-election bid. The incumbent's goal is to get re-elected. The literature on legislator voting has consistently shown that deviating from constitu-

* Corresponding author.

ents' preferred policies makes this objective more difficult (Bender and Lott, 1996). Despite this, an incumbent may occasionally deviate from constituents' preferences with good reason (to pursue personal views, to service interest group pressure, to demonstrate loyalty to party leaders, etc.). To deviate while diminishing the costs of deviating, incumbents may increase their campaign expenditures in an effort to convince constituents to vote for them regardless of their policy positions. This interpretation of re-election expenditures has been termed "persuasive" campaigning (Mueller and Stratmann, 1994). If we view congressional seats as an economic good and re-election expenditures as the unit price paid by an incumbent for the good, then incumbents may "buy" some deviation, in the form of diminished electoral punishment, by expending more in their re-election bids. Lopez and Campbell (2004) find a statistically significant positive empirical relationship between incumbents' deviations and their subsequent campaign expenditures for the 1992 through 1998 Congressional elections, indicating persuasive campaign expenditures.

However, to derive their measure of incumbent deviation, Lopez and Campbell rely on the widely used but still controversial "residualization" procedure pioneered by Kau and Rubin (1979). This paper seeks to replicate the empirical program of Lopez and Campbell without recourse to the controversial empirical technique by using a different literature to derive a different measure of incumbent deviation. Berry, Ringquist, Fording, and Hanson (1998) present a framework for producing an alternative measure on congresspersons' ideology based on interest group ratings of congresspersons (like the Kau and Rubin measure) and election results. Using a method similar to that of Berry, *et al.*, we produce an alternative measure of incumbents' deviations from electorate wishes.

Using our new measure of incumbents' deviation from constituents' interests, we replicate the Lopez and Campbell empirical procedure. Contrary to the findings of Campbell and Lopez (2004), we find that our measure of incumbent deviations is not significantly related to incumbents' re-election expenditures. However, we find that more incumbent deviation significantly predicts lower vote margins for the incumbent and lower opponent's expenditures in the incumbent's subsequent re-election bid. Taken together, these findings imply that incumbent deviation does matter, as implied by Bender and Lott (1996). Furthermore, the incumbent is *not* able to "buy back" some of his deviation in a subsequent election bid. Rather, the electorate rewards the challenger with higher voter support regardless of incumbent expenditure.

However, closer inspection of our results is not as injurious to Lopez and Campbell (2004) as first inspection might indicate. Despite the proposition that Lopez and Campbell's deviation variable and our current deviation variable measure the same phenomena, and despite the shared derivation of both measures—adjusted ADA scores for incumbents—the two variables have a low correlation coefficient of 0.049. Furthermore, models applying both deviation variables *both* reconfirms the main Lopez and Campbell (2004) result *and* reconfirms this study's result. These findings imply to us that either the construct of incumbent deviations from constituent's purported interests, or the operationalization of the construct, is underdeveloped.

The remainder of this paper is organized as follows: section two considers background theoretical issues, section three presents the empirical results, while section four discusses and concludes.

THEORETICAL CONSIDERATIONS

Like Lopez and Campbell, we focus on the idea that deviating from the median voter's ideal point, toward the legislator's own ideal point, is presumably of some value to the legislator. We are most interested in whether the incumbent perceives such deviations as making his re-election efforts more difficult. The literature on congressional voting is nearly unanimous in showing that when legislators do deviate from constituents, they are punished fairly quickly at the voting booth.¹ Considering these findings, we ask whether incumbents who deviate more tend to "buy back" the resultant electoral losses by spending more in their re-election bid.

Consider the problem in a simple price-theoretic model. If a legislator values movement away from M_{ki} , the median voter's preferred policy position for district k in time t , toward L_{kt} , the legislator's preferred policy position in district k at time t , then $\mu_{kt} = |L_{kt} - M_{kt}|$, the absolute policy deviation, would be one argument in a legislator's demand function for his congressional seat. If we hold other arguments constant, we may define $q^k [p(\mu_{kt})]$ as the k^{th} legislator's non-negative demand for a congressional seat. The argument (p) indicates the unit price paid to win re-election; that is, the incumbent's re-election campaign expenditures. The "price" is a function of the degree of deviation. If this price-theoretic view is an accurate representation of the incumbent's re-election calculus, we expect greater deviation

¹ Wright (1993) finds that legislators who diverge from constituent preferences lose an average of five percentage points in political support as indicated by primary elections. Lott and Davis (1992) find a significant correlation between shirking and defeat in subsequent election, and Lott and Bronars (1993) show that the House members who lost their reelection bids shirked more in the prior term as a group than those who won reelection. Finally, Kau, and Rubin (1993) argue that insofar as ideological shirking exists, it is costly and punished quickly by the electoral process. For an extensive, critical survey of the shirking literature, see Bender and Lott (1996).

to increase the unit price paid for the seat, *ceteris paribus*. That is, $\hat{\delta}p/\hat{\delta}\mu > 0$.

The now common, yet controversial, technique for isolating incumbents' deviations began with Kau and Rubin (1979) and Kalt and Zupan (1984, 1990). These authors were originally concerned with developing a proxy for legislator ideology and estimating the explanatory power of that proxy in a model of legislator voting. The subsequent empirical literature developed along multiple margins: whether residuals measure ideology or shirking or both, whether legislators shirk, the conditions under which they will shirk more or less, whether and to what extent constituents punish shirking, etc. Many of these contributions use some variation of Kau and Rubin's (1979) measure of deviation from constituent interests: the extent to which the legislator's vote record is unexplained by measures of constituent economic interests. Bender and Lott (1996) provide a useful survey of this large literature.

However, the technique came under immediate criticism in the same literature. The econometric critiques include under-specification of the relevant economic interests of the k congressional districts (Peltzman, 1984; 1985), and omitted variables bias and endogeneity bias on parameter estimates (Jackson and Kingdon, 1992). It is reasonably clear that Kau and Rubin (1979), in some sense, attempts to explain votes with votes. Furthermore, to attach a specific interpretation to a residual, an unobservable, seems to require an intellectual leap.²

Though Lopez and Campbell (2004) modeled incumbents' deviations in the Kau and Rubin (1979) manner, we avoid the problems raised in that literature by calculating deviations from perceived constituent interests by using a different measure. Furthermore, we avoid the "votes with votes" criticism by modeling

² Other criticisms are discussed with detail in Bender and Lott (1996).

expenditures instead of current votes, as did Lopez and Campbell.

Our measure of incumbent deviation is based on Berry, *et al.* (1998), which constructed "dynamic measures of the ideology of a state's citizens and political leaders, using roll call voting scores of state congressional delegations, the outcomes of congressional elections, the partisan division of state legislators...and various assumptions regarding voters and state political elites." (Berry, *et al.*, 1998:327). They identify two "critical" concepts in the literature: "[S]tate citizen ideology, generally conceived as the mean position on a liberal-conservative continuum of the 'active electorate' in a state;" and "[S]tate government ideology—the mean position on the same continuum of the elected public officials in a state, weighted according to the power they have over public policy decisions" (Berry, *et al.*, 1998:327-328). To measure state citizen and government ideology, they develop "measures based on interest group ratings of members of Congress, supplemented by two other sources of information: election returns for Congressional races, and data on the party composition of state legislatures and party affiliation of governors" (Berry, *et al.*, 1998:329).

The authors identify the "ideological" position of each member of Congress using an average of ADA and COPE scores. Subsequently, they estimate citizen ideology (CITIDEO) in each district of a state using the incumbent's ideology score, a challenger's estimated ideology score, and the election returns for that race. Thus:

$$(1) \text{INCIDEO}_{d,t} = \text{INCSUP}_{d,t}$$

$$(\text{INCIDEO}_{d,t}) + (\text{CHALSUO}_{d,t})(\text{CHALIDEO}_{d,t})$$

Where INCIDEO is the incumbent's "ideology" score and INCSUP is his/her percentage of the popular vote. CHALSUP is the challenger's vote percentage. CHALIDEO is "equal to the average ideology score of all incumbents in the state from the same party" as the challenger (Berry, *et al.*, 1998:331). That is, CHALIDEO is the mean of the means of ADA/COPE scores each of Congressional representative from the challenger's party. The authors justify their CHALIDEO construction by assuming "voters perceive the ideological position of a challenger to resemble the typical ideological position of incumbents from the same party in the same state" (Berry, *et al.*, 1998:338). As a possible example, challengers who emerge from a party's primary process are expected to offer positions close to those of their party's incumbent office holders, under standard median voter assumptions.

Thus, our measure of *incumbent deviation* from the median constituent preference is

$$(2) (ABSDEVIATE_{d,t}) = |INCIDEO_{d,t} - CITIDEO_{d,t}|.$$

That is

$$(3) ABSDEVIATE_{d,t} = |(CHALSUP_{d,t})(INCIDEO_{d,t} - CHALIDEO_{d,t})|.$$

Lopez and Campbell find their measure of incumbents' deviations to be a significantly positive predictor of incumbents' spending in subsequent re-election efforts. Likewise, we expect our measure of incumbents' deviation, ABSDEVIATE, to be a significantly positive predictor of incumbent campaign expenditures.

EMPIRICAL APPLICATION

Our data set contains vote records, campaign information, and legislator characteristics for all 1,511 House incumbents seeking re-election in 1992, 1994, 1996, and 1998.³ We also observe constituent interest variables for each of these incumbents' districts in each year. The vote record is provided by the annual ADA score, which measures the frequency on a {0-100} scale of a legislator voting consistently with the ADA's position on a set of key votes during the year. The ADA selects the votes each year and takes a position on each vote that is easily identifiable as liberal, so a higher ADA score indicates a more liberal voting record. The campaign spending data are from Federal Election Commission databases (FEC 2002),⁴ while the legislator-specific variables come from the *Almanac of American Politics* (Barone and Ujifusa 1994-2000). Constituent and/or district variables come from 1990 Census data. Table 1 lists all variables used in this study, with definitions, sources, and descriptive statistics.

We would prefer to use panel estimation methods, but many of our independent variables are taken from 1990 Census data

³ One reader suggested our sample may systematically exclude observations, thus introducing sample selection bias. This can take two possible forms, either by excluding challengers or by excluding incumbents who did not run for re-election. Only incumbents know the true value of in-office deviation from constituent interests and have accurate knowledge of the appropriate price to pay for it. Likewise, only incumbents are able to amass a voting record through vote indices, an opportunity denied to challengers. Still, challengers are effectively included in the model through the variable OPPSPEND, discussed presently in the text. Evidence from Van Beek (1991) and Lott (1987) suggests retiring members do not exhibit systematically different voting records, although they do vote less frequently. Based on this evidence, we do not expect significant bias from our selected sample. In any case, there is no effective way to incorporate retirees into our model of re-election. Their vote score residuals during their last period of office go unexplained by our present model. See Lott (1990), Zupan (1990), and Carey (1994) for empirical analyses of shirking and the last period problem.

⁴ Files used in this study include cansum92.zip, cansum94.zip, cansum96.zip, and cansum98.zip.

Table 1
Variable Names, Definitions, Sources, & Descriptive Statistics

Description (Source)	Units	Mean	SD	Min	Max
TOTSPEND Incumbent Campaign Expenditures ¹	\$1000s	582.8	436.9	6.6	6541.3
ABSDEVIATE Absolute% deviation from constituents	Percent	54.9	43.1	0.0	950.7
OPSPEND Challenger Campaign Expenditures ¹	\$1000s	184.7	301.1	0.0	3325.9
VOTEMARG Incumbent less challenger vote share ¹	Percent	33.1	25.5	-100.0	100.0
TENURE Incumbent years in office ²	Years	9.5	7.7	1	51.0
GENDER =1 if incumbent female ²	{0,1}	0.1	0.3	0.0	1.0
MAJPARTY =1 incumbent Democrat ²	{0,1}	.6	0.5	0.0	1.0
HHIE Economic Concentration (authors' calculations) ⁴	{0-0,000}	200.0	48.9	76.7	381.3
PCTBLACK Constituents' race ³	Percent	11.8	15.9	0.0	73.9
PCTCOLLG Constituents' education ³	Percent	18.3	6.6	5.3	48.3
PUBEMP% public employees	Percent	2.2	1.2	0.63	11.2
MEDINC Constituents' income ³	\$1,000s	30.9	8.3	15.05	57.2
CHBEGIN Challenger beginning cash ¹	\$1,000s	3.5	30.0	0	670.9
CHCORP Challenger corporate contributions ¹	\$1,000s	7.7	26.0	-0.5	396.2
CHLABOR Challenger labor contributions ¹	\$1,000s	15.7	40.0	-1.0	2.3
OPENPRIMARY = 1 open or blanket primary (Westley <i>et al.</i> 2004)	{0,1}	0.5	0.5	0.0	1.0
PEROT92% voting Perot 1992 ²	Percent	18.3	6.0	3	33
WINNER =1 if Incumbent wins	{0,1}	0.9	0.2	0	1

¹Federal Election Commission (various years).

²Barone and Ujifusa (various years).

³United States Census Bureau (various years).

⁴HHIE is a Herfindahl-Hirschman index on U.S. Census data for employment in seventeen industries. The higher the index, the more concentrated is the employment in certain industries, indicating more concentrated economic interests and greater political effectiveness in the district, *ceteris paribus*. HHIE varies by district from a low of 77 (New York, 16th) to a high of 381 (California, 15th). The former occupies most of the Bronx and is the most economically diverse district in the country according to this index. The southeastern part of Kentucky is similarly diverse, scoring a mere 80 HHIE. The latter is California's Silicon Valley around the city of San Jose, a presumably economically concentrated region. Similarly, Virginia's 8th District around the Pentagon in Arlington scores a 363, and New York's 14th District, the east side of Manhattan, scores a 360.

and do not vary over our sample years. Therefore we treat the data as a pool of four cross-sections over time, and we use both year and state dummies to capture possible intercept effects.

Our first step is to obtain the measure of incumbents' deviation, based on the measures of Berry, *et al.* (1998). Rather than average ADA and COPE scores, we exclusively use the ADA score. Berry, *et al.*, make no apparent correction for "drift" in ADA scores overtime. Such drift occurs because the vote scores are calculated each year on a set of votes unique for that year. As identical bills under identical circumstances do not present every year, a correction must be made to ADA scores to allow cross-year comparisons. Since we are making intertemporal comparisons of ADA scores, while the set of votes used to assign ADA scores is not constant over time, we have adjusted the raw ADA scores using the linear transformation method from Groseclose, Levitt, and Snyder (1999). If the k^{th} legislator's raw ADA score in year t is y_{kt} then the adjusted ADA score is $\hat{y}_{kt} = (y_{kt} - a_t) / b_t$ where a_t and b_t are maximum likelihood parameter estimates from Groseclose, Levitt, and Snyder (1999). The a_t and b_t estimates provide an index for converting raw ADA scores in any year to adjusted ADA scores for that year—similar to how a price index is used to convert nominal to real economic variables.⁵ CITIDEO, CHALIDEO, and ABSDEVIATE are calculated according to the text. As discussed earlier, we are interested only in the *degree* of deviation, not the direction. Therefore we convert these differences to their absolute values and assign the

⁵ For example, Representative Herb Callahan (Alabama, District 1) shows a raw ADA score of 5 in 1992. For the House, $a_{1992} = 7.27$ and $b_{1992} = 0.97$, so the adjusted ADA score is -2.34 . This reflects a liberal shift of the scale in 1992 relative to other years, so that a score of 5 understates the conservativeness of Rep. Callahan's 1992 vote record, which is more accurately reflected in the score of -2.34 . An up to date list of a_t and b_t estimates is provided on Tim Groseclose's website at Stanford University (<http://faculty-gsb.stanford.edu/groseclose/archive.htm> at the time of this writing).

variable name ABSDEVIATE, which is our explanatory variable of primary interest in the next estimation.

Our next step is to estimate the incumbent expenditures equation. There is a well-known simultaneity problem in models of campaign spending. With incumbent spending as the dependent variable, both challenger spending and margin of victory are theoretically significant variables. However, it is also expected that incumbent spending, challenger spending and the vote margin are endogenously determined. Intuitively, as a race becomes tighter and the challenger spends more, the incumbent will be motivated to spend more as well. At the same time, as the incumbent spends more, he or she will increase the margin of victory, which may in turn compel the challenger to spend less.

Therefore, we approach this problem using the following three-equation system:

$$(4a) E_{kt} = \beta_0 + \beta_1 ABSDEVIATE_{kt} + \beta_2 CHS_{kt} + \beta_3 M\hat{A}R_{kt} + \beta_j X_{jkt} + \varepsilon_{kt}$$

$$(4b) CHS_{kt} = \gamma_0 + \gamma_1 ABSDEVIATE_{kt} + \gamma_j X_{jkt} + \theta_C Z_{Ckt} + r_{Ckt}$$

$$(4c) M\hat{A}R_{kt} = \delta_0 + \delta_1 ABSDEVIATE_{kt} + \delta_j X_{jkt} + \theta_M Z_{Mkt} + r_{Mkt}$$

The subscripts k and t indicate congressional district and year, as before, and j indicates the j^{th} exogenous explanatory variable. Equations (4b) and (4c) are the reduced form expressions for the endogenous explanatory variables, namely challenger spending and margin of victory, respectively. Hence Z_C and Z_M are the instrumental variables (i.e. exclusion restrictions) used in the first stage equations. Following standard practice, we assume $E(r_C) = E(r_M) = 0$ and $Cov(r_C, \varepsilon) = Cov(r_M, \varepsilon) = 0$. We do not assume independence between r_C and r_M . As with all 2SLS estimations the quality of Z_C and Z_M , which are subject to data limitations,

determine the value of this correction procedure over OLS estimates. We first describe the variables, then discuss the IV equations, and then proceed to the second stage results.

The endogenous variables are

- TOTSPEND: total expenditures by the incumbent;
- OPPSPEND: total expenditures by the incumbent's foremost challenger; and
- VOTEMARG: incumbent's vote share less the challenger's vote share (this takes a negative value when the challenger wins).

Our instrumental variables for OPPSPEND are

- CHBEGIN: challenger's cash on hand at beginning of election campaign;
- CHCORP: total corporate contributions to the challenger; and
- CHLABOR: total labor union contributions to the challenger.

These variables represent the fundraising successes of the challenger.

Our instrumental variables for VOTEMARG are measured as:

- OPENPRIMARY: a binary variable coded 1 for states that allow open or blanket primary elections;
- PEROT92: percent of a district's vote going to H. Ross Perot in the 1992 presidential election; and
- WINNER: binary variable coded 1 for incumbent who is reelected.

With these variables we attempt to measure effects on the margin of victory distinct from their having an effect on TOTSPEND. States with open/blanket primaries typically have more highly contested races. WINNER adds explanatory power, and we use Perot's vote share to proxy coattail effects.

Finally, in the exogenous X_j matrix we include a typical campaign-spending model with variables measured as:

- MAJPARTY: binary variable coded "1" if the legislator is a member of the majority party, e.g., for Republicans it equals "0" in 1992 and 1994, but "1" in 1996 and 1998;
- TENURE: number of years incumbent has been in the House;
- GENDER: binary variable coded "1" if incumbent is female;
- HHIE: a measure of economic concentration by district. See Table 1 for full explanation;
- PCTBLACK: district race variable, as listed by the Census Bureau;
- PUBEMP: number of public employees in the district;
- PCTCOLLG: percent of the district population with a college degree; and
- $\ln(\text{MEDINC})$: natural log of the district's median income.

We present a variable correlation matrix in Table 2.

We present model estimates in Table 3, treating the data as a pool of cross-sections over time. We include year dummies to capture intercept effects. The estimates correct for heteroskedasticity and cluster the data by state. Our rationale in using state (not district) effects is that because state delegations work together in various capacities, and many campaign and elections laws are determined at the state level, we expect more of an effect across states than congressional districts. We report results treating both CHSPEND and VOTEMARG as endogenous.

Instrumenting for opponent's spending in Model 1, ABSDEVIATE was positively related to incumbents' re-election expenditures, TOTSPEND, but the coefficient was insignificant. Instrumenting for vote margin in Model 2, ABSDEVIATE failed to approach any standard level of statistical significance. Even

Table 2
Correlation Matrix

	TOTSPEND	OPSPEND	VOTEMARG	ABSDEVIATE	AGE	TENURE	GENDER	MAJPARTY	PCTBLACK	PCTCOLLG	HHIE	lnMEDINC	SPENDVAR
TOTSPEND	1.0												
OPSPEND	0.291	1.0											
VOTEMARG	-0.283	-0.507	1.0										
ABSDEVIATE	0.033	-0.001	-0.151	1.0									
AGE	-0.006	-0.076	0.065	-0.035	1.0								
TENURE	0.074	-0.137	0.069	-0.031	0.545	1.0							
GENDER	0.018	0.101	0.017	-0.010	0.063	-0.145	1.0						
MAJPARTY	0.101	0.036	-0.195	0.050	-0.044	-0.024	-0.038	1.0					
PCTBLACK	-0.129	-0.099	0.233	0.016	0.041	-0.057	0.061	0.021	1.0				
PCYCOLLG	0.095	0.091	0.029	-0.084	0.073	0.003	0.171	-0.057	-0.217	1.0			
HHIE	0.096	0.081	-0.062	-0.083	0.023	0.009	0.109	-0.029	-0.275	0.673	1.0		
lnMEDINC	0.121	0.087	-0.032	-0.108	0.060	0.026	0.110	-0.057	-0.308	0.767	0.705	1.0	
SPENDVAR	0.005	-0.043	0.039	0.025	0.021	0.004	-0.006	-0.029	-0.012	-0.028	-0.038	-0.028	1.0

Table 3
IV (2SLS) Regression with Robust Standard Errors

	Model 1 <i>TOTSPEND</i>	Model 2 <i>TOTSPEND</i>	Model 3 <i>TOTSPEND</i>
OPSPEND	0.39†	0.24	0.39†
S.E.	0.12	0.25	0.15
VOTEMARG	-2648.86†	-4780.09	-2802.36
S.E.	1028.16	6054.25	2438.61
ABSDEVIATE	235.26	105.16	224.40
S.E.	155.75	372.24	181.59
AGE	-2512.67†	-2487.86†	-2505.95†
S.E.	1209.65	1197.82	1184.91
TENURE	8114.99†	8078.41†	8163.81†
S.E.	1653.80	1926.58	1730.43
GENDER	30667.42	42149.47	30522.97
S.E.	27169.52	30805.65	27005.47
MAJPARTY	58046.39†	42440.72	56469.89*
S.E.	21945.47	60070.88	29995.34
PCTBLACK	-74631.74*	-27415.14	-68423.32
S.E.	44406.35	154770.10	68076.47
PCTCOLLG	183365.90	308012.60	190402.90
S.E.	277151.60	417284.60	308797.60
PUBEMP	-1.24	-1.25	-1.25
S.E.	1.63	1.65	1.64
HHIE	-239.85	-289.05	-245.04
S.E.	317.27	387.31	332.51
lnMEDINC	129398.10*	112425.70	127830.60*
S.E.	65981.75	73556.05	68169.50
1992	-34887.06†	-22082.32	-34302.22
S.E.	16617.70	37262.60	21850.23
1994	96066.98*	115944.10	96291.54
S.E.	49731.71	69877.31	54905.34
1996	-49287.87	-35207.25	-48003.16
S.E.	32255.54	62456.08	40525.92
Constant	-691060.90	-434010.70	-670881.30
S.E.	648442.10	877487.80	708143.00
Number	1511	1511	1511
F(15, 49)	30.49	36.16	22.41
Prob>F	0.00	0.00	0.00
R-squared	0.18	0.18	0.18
Clusters	50.00	50.00	50.00

¹Instrumented: oppsend; Instruments: chbegin chcorp chlabor statfund

²Instrumented: votemarg; Instruments: openprim perot92 statfund

³Instrumented: votemarg oppsend; Instruments: openprim perot92 statfund chbegin chcorp chlabor

* Significant at the 90% level;

† Significant at the 95% level

‡ Significant at the 99% level.

after instrumenting for both opponent's spending and vote margin in Model 3, ABSDEVIATE is not significantly related to incumbents' re-election expenditures. Thus, our results fail to support those of Lopez and Campbell (2004).

DISCUSSION

In their survey of the legislator shirking literature, Bender and Lott (1996) point to four areas of relative consensus regarding legislator voting: (a) legislators almost always represent their constituents' interests; (b) when legislators do diverge from constituent interests, the adverse economic effects on constituents are trivial; (c) when legislators do not attempt re-election, their attendance rates fall; and (d) even small deviations from constituent interests quickly leads incumbents to lose re-election. Lopez and Campbell (2004) built on this last result by investigating whether incumbents who deviate more frequently or further from their constituents' interests tend to increase their total campaign expenditure to retain their seats, *ceteris paribus*. Using data from four recent congressional elections and measuring the residuals from a regression of constituent characteristics on the legislator's vote record, they found incumbents are able to "buy back" some deviation through higher re-election campaign expenditure.

However, to derive their measure of incumbent deviation, Lopez and Campbell rely on the widely used but still controversial "residualization" procedure pioneered by Kau and Rubin (1979). To avoid that controversy, we attempted to create a different measure of incumbent deviation based on the ideology measures of Berry, *et al.* (1998).

Using this new measure of incumbent deviations, we substantially replicated the empirical program of Lopez and Campbell (2004). However, our findings are substantially different from theirs. After controlling for endogeneity with opponent spending and victory margin in a typical model of campaign

spending, we find that incumbents' deviations from constituent preferences—as measured by ABSDEVIATE—are not significant predictors for incumbent expenditure in subsequent re-election campaigns.

There could be numerous reasons for this result. However, to focus on ABSDEVIATE's failure in the 2SLS regression is to ignore its impact on the "first stage" regressions, an impact which has a natural interpretation.

In the VOTEMARG instrumental regression, ABSDEVIATE's coefficient is negative and significant at the 95% level. Its coefficient regression falls below customary levels of significance in the OPPSPEND regression. Thus, we find that although our measure of incumbent deviations is not significantly related to incumbents' re-election expenditures, more incumbent deviation significantly predicts lower vote margins for incumbents in their subsequent re-election bids.

Table 4
Models for VOTEMARG & OPPSPEND
Regression with robust standard errors

	Model 1 VOTEMARG	Model 2 OPPSPEND
ABSDEVIATE	-0.070†	118.52
S.E.	0.03	135.27
AGE	0.04	-394.32
S.E.	0.08	1468.62
TENURE	0.28†	-4113.26†
S.E.	0.13	1751.14
GENDER	-0.17	7653.10†
S.E.	2.85	32877.50
MAJPARTY	-9.913‡	36171.61†
S.E.	1.17	14530.54
PCTBLACK	38.23†	-224434.30†
S.E.	6.50	51950.60
PCTCOLLG	47.38	155129.70
S.E.	26.36	206754.10
PUBEMP	0.00	0.42
S.E.	0.00	1.22
HHIE	-0.03	131.36
S.E.	0.03	272.24
lnMEDINC	-9.94	27584.66
S.E.	5.23	41872.95
1992	4.077†	26972.16
S.E.	1.99	16637.88
1994	2.42	96489.60
S.E.	1.61	21212.41
1996	8.16†	-21627.53
S.E.	2.09	16718.96
Constant	130.15†	-133154.90
S.E.	53.65	434917.40
Number	1511.00	1511.00
F(15, 49)	26.57	12.47
Prob>F	0.00	0.00
R ²	0.16	0.07
Clusters	50.00	50.00

* Significant at the 90% level;
 † Significant at the 95% level
 ‡ Significant at the 99% level.

To provide further evidence, in Table 5 we present estimates of probit models of the variable WINNER. To include VOTEMARG, OPPSPEND, and TOTSPEND, we generate an additional variable:

$$(5) \text{ SPENDVAR} = \frac{\text{TOTSPEND}}{\text{OPPSPEND} \cdot \text{VOTEMARG}}$$

Model 1 of Table 5 has a log likelihood of (-) 46.72 and a "pseudo R-squared" of 0.86. The coefficient on SPENDVAR is positive and significant at the 99% level, arguing for its inclusion in the model. Of more interest, the coefficient on ABSDEVIATE is again negative and significant at the 95% level, implying the greater incumbent deviation, as per our measure, implies lower likelihood of winning re-election.

These findings imply that incumbent deviation does matter, as implied by Bender and Lott (1996). Contrary to Lopez and Campbell (2004), the incumbent is *not* able to "buy back" some of his deviation in a subsequent election bid. Rather, the electorate rewards the challenger with a larger vote margin.

A serious consideration is whether the Lopez and Campbell measure of deviation and our current measure of deviation—both purport to measure the

Table 5
Probit Estimates

	Model 1 WINNER
ABSDEVIATE	-0.01†
S.E.	0.00
SPENDVAR	15.39‡
S.E.	1.79
AGE	0.01
S.E.	0.02
TENURE	0.03
S.E.	0.03
GENDER	0.15
S.E.	0.49
MAJPARTY	-1.10‡
S.E.	0.36
PCTBLACK	-0.04
S.E.	0.88
PCTCOLLG	-2.38
S.E.	3.65
PUBEMP	0.00
S.E.	0.00
HHIE	0.00
S.E.	0.01
lnMEDINC	-0.03
S.E.	0.92
1992	0.32*
S.E.	0.39
1994	0.81
S.E.	0.42
1996	0.17
S.E.	0.43
Constant	1.36
S.E.	8.84
Number	1206
LR Chi2(14)	551.84
Prob>Chi ²	0.00
Log likelihood	-46.72
Pseudo R ²	0.86

* Significant at the 90% level

† Significant at the 95% level

‡ Significant at the 99% level

same construct—are measuring the same phenomena. Without recourse to labeling either measure “ideology” or “legislator shirking,” both are technically constructed as measures of incumbent deviations from constituent’s purported political interests. At root, both are constructed from adjusted ADA scores. However, the correlation coefficient between the Lopez and Campbell measure and our current measure is only 0.049. This fact alone casts doubt on the assertion that both variables measure the same phenomena. To further this line of reasoning, we present estimates in Table 6, applying both our measure of deviation, ABSDEVIATE, and a reconstruction of the Lopez and Campbell measure, ABSRESID.

Model 1 of Table 6 confirms the Lopez and Campbell (2004) result. In Model 2 of Table 6, ABSDEVIATE is added to the model. The Lopez and Campbell result is again confirmed, as is the main result of this paper, that ABSDEVIATE is not a significant predictor of incumbent’s reelection expenditures.

Table 6
Using Both Measures of Deviation

	Model 1	Model 2
	TOTSPEND	TOTSPEND
ABSRESID	70.72†	70.80†
S.E.	20.79	20.70
ABSDEVIATE		-0.01
S.E.		0.17
OPPSPEND	0.50†	0.50†
S.E.	0.08	0.08
VOTEMARG	-0.58*	-0.58*
S.E.	0.35	0.35
MAJPARTY	93.26†	93.27†
S.E.	20.89	20.80
GENDER	22.52	22.58
S.E.	28.86	28.70
TENURE	8.05†	8.05†
S.E.	1.76	1.75
AGE	-2.47†	-2.47*
S.E.	1.27	1.27
HHIE	-0.05	-0.05
S.E.	0.32	0.32
PCTBLACK	-108.37*	-108.13*
S.E.	64.80	64.31
PCTCOLLG	15.53	15.77
S.E.	258.50	259.02
lnMEDINC	137.89†	137.80†
S.E.	62.46	62.70
1994	-47.78	-47.82†
S.E.	16.37	16.18
1996	87.55*	87.49*
S.E.	46.31	46.31
1998	-64.42†	-64.48
S.E.	29.81	29.83
Constant	-939.90	-938.52
S.E.	610.24	614.34
Number	1511	1511
F(15, 49)	37.67	35.29
Prob>F	0	0
R ²	0.17	0.17
Clusters	50	50

* Significant at the 90% level
 † Significant at the 95% level
 ‡ Significant at the 99% level

This implies to us that the underlying construct, incumbent's statistical deviations from constituent's purported interests, by any name, is either not sufficiently well-defined or not sufficiently operationalized. Immediately this calls to mind Peltzman's (1984) critiques of Kau and Rubin (1979) that the vector of constituent interests is underspecified, etc. Without further theoretical development, the most prudent conclusion seems to be limited almost to the point of disinterest: the absolute values of the residuals of a Kau and Rubin-style regression are significantly and positively related to incumbent's re-election campaign expenditures. The absolute value of a series constructed from incumbent's adjusted ADA scores and election returns is not significantly related to incumbent's re-election expenditures.

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