The Midsouth Political Science Review

MPSR

Volume 21, 2021

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Do High-Profile Copartisans Help or Hurt? Obama, Beebe and Arkansas's 2012 Legislative Contests

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The positive impact of popular high-profile incumbents on the fortunes of down-ballot co-partisans has been the subject of many examinations. Less explored is the potentially depressive effect of an unpopular – but equally high-profile – same-party incumbent. Here, we look to a state experiencing partisan realignment to probe the influence of two high-profile copartisans – one popular and one not – on state legislative elections. We confine our sample to districts with close contests, offering a stricter test than past examinations. Specifically, we presented Arkansas voters in each of three subnational senate districts with either an approval question for President Obama (an unpopular Democrat), an approval question for Governor Mike Beebe (a popular Democrat), or no stimulus before asking them to select a major party candidate in the down-ballot race. While our pooled results produce the expected effects, both negative and positive, our experiments produced no significant effects. Our findings complicate the growing literature on the powerful influence of national forces on subnational elections.
Keywords: American state elections, low-information elections, coattails

Introduction

The coattails effect — i.e., the ability of a popular candidate at the top of the ticket to improve the fortunes of down-ballot co-partisans — has long been a staple in American political analysis. Although both institutional and attitudinal changes in American politics have resulted in a diminishment of the phenomenon in presidential-congressional elections in recent decades, there is evidence that a voter's affect toward high-profile

politicos strongly influences her vote choice in low-information elections like state legislative races (e.g., Hogan 2005, Rogers 2016). Existing scholarship demonstrates that cues of all kinds become progressively more important as campaign communication and other information is more difficult to acquire. We expect that voter acceptance (or rejection) of a low-profile candidate based on a shared party label with a prominent political figure is exactly the sort of shortcut on which voters are sure to rely, particularly after decades of political nationalization (Hopkins 2018).

The particular circumstances of the 2012 Arkansas election cycle presented a unique opportunity to isolate not only the potential "pull" of a popular incumbent toward support for his down-ballot associates, but also the competing "push" that may be exerted by an unpopular—but also high-profile—party figure. Specifically, we administered a three-way experimental survey in three state senate races to explore the relative influence of Governor Mike Beebe, the state's last wildly-popular Democrat, as compared with that of President Barack Obama, twice rejected in Arkansas by double digits. What we find is that despite a bipartisan, statewide consensus that President Obama's depressive effect on down-ballot Democrats was driving a political revolution in Arkansas and the results of standard multivariate analysis, stimulating voters to think about either Beebe or Obama had no effect on their vote choice in a lower-profile race. Why? We suspect that because the legislative elections we examined were unusually competitive, our respondents likely were immune to our treatments. Further tests are needed.

Low-Information Elections and High-Profile Copartisans

High-profile elections in the United States—those for President, for the most prominent statewide offices, and for the U.S. House—receive the bulk of voter attention. Thus, voters go to the polls with a great deal of information about those races and the candidates on the ballot for them. Still, once there, those voters also cast votes for an array of other low-profile offices—both partisan and nonpartisan. Lacking information on candidate qualities, issue positions, and other information employed in higher-profile elections, voters often must rely upon one of a series of information shortcuts. As Matson (2006) describes it, "voters in low-information elections rely on whatever information is readily available to them in deciding on a vote" (63).

In nonpartisan elections, any differentiating factor can become a potent force in shaping voter decision-making. Taylor and Schreckhise (2003) found for example that candidate differentiation on a single, overarching "easy" issue—a tree preservation ordinance in that case—was particularly important in determining citizens' votes. Examining a unique, "blank slate" election for newly-established zoning boards in Miami-Dade County, Florida, Matson (2006) likewise found that gender was the dominant cue, while ethnicity (operationalized as candidate surname) had a secondary effect; both characteristics outperformed campaign expenditures and ballot position.

Of course, when party is present on the ballot in such elections, it becomes the prevailing determinant of voting decisions. Schaffner and Streb (2002) compared survey answers in such races by providing one group of respondents partisan identifiers while withholding those cues in another group. Using survey data from California, they found voters were far more likely to state a preference in low-information election when they could identify candidates through partisan markers. In the absence of these cues, voters were more likely to not state a preference or to vote randomly.

In addition to the direct power that political parties have in shaping voter decision making in low-information elections, other analyses reveal that voters' perceptions of candidates at the top of the ticket can impact partisans in low-information races lower on the ballot by producing coattails. The most expansive research, naturally, has focused on the potency of the president to shape both the candidate pool and the electoral fortunes of others on the ticket (e.g., Campbell 1960, Jacobson 1989, Carsey and Wright 1998). Simon, Ostrom, and Marra (1991), for example, found significant evidence that presidential approval permeates all electoral systems: "to the extent that the president is seen as successful, the public rewards members of the president's party at all electoral levels" (1188). More recently, Rogers (2016) found that in the U.S. context specifically, presidential approval ratings have three times the impact of state legislative approval on voting decisions in state legislative elections.[1] Comparative accounts also continue to find a robust effect for the influence of presidential candidates on legislative outcomes, although election timing, party size, campaign coordination, and coalitional dynamics condition the relationship (Stoll 2015, West and Spoon 2017, Borges and Turgeon 2019).

[1] Further, while this might be expected among the least educated voters, the finding was true even among voters who knew which party controlled their subnational legislature.

With respect to gubernatorial coattails, Madariaga and Ozen (2015) highlight the potency of the state's highest-profile politician in shaping down-ballot voting patterns in elections where both presidential and gubernatorial elections are on the same ballot. In sum, a strong gubernatorial candidate can provide significant benefit to her party's presidential candidate in the state.[2] Hogan (2005) and Rogers (2016) found a similar impact for gubernatorial vote/approval rating on state legislative voting decisions. Even when controlling for other factors in state elections such as past performance by the party, campaign spending, and/or partisan identification, they show that gubernatorial popularity exerted significant influence on candidate vote margins down the ticket. The effect was most pronounced during competitive gubernatorial races and were less manifest when incumbent governors were running.[3]

Although the impact of *popular* high-profile incumbents on the fortunes of their down-ballot partisan peers has been the subject of regular investigation at the national and state level, the potentially depressive effect of an *unpopular* incumbent remains less fully explored. In addition, existing examinations of up-ballot influences on down-ballot elections rely on statewide – even nationwide – samples in which at least a third of the contests are not contests at all due to chronically-low challenger entry rates in state legislative races (Rogers 2015). Rogers (2016), for example, shows strong positive, and negative, effects for presidential approval on both candidate entry (in legislative elections between 1991 and 2010) and vote choice (using CCES data for 2008, 2010, and 2012, plus samples in the off-year states of New Jersey and Virginia.) While his approach is admirably thorough, the nature of the available data – statewide samples – means respondents included both voters facing competitive and voters facing noncompetitive state legislative races. The latter condition could exaggerate the influence of national forces. That is where our project—inclusive of priming experiments in three hotly-contested state senate contests—stands to contribute to the conversation about high-profile copartisans on down-ballot outcomes.

[2] Interestingly, presidential candidates lack the same positive impact on their fellow partisans running for governor, according to Madariaga and Ozen's analysis.
[3] Meredith (2013) found, however, that gubernatorial voting has a limited impact on other statewide races.

Election Experiments

Election experiments—projects that make use of the random assignment of respondents to either treatment or experimental groups under real-world conditions—allow researchers to explore causal relationships with considerable confidence. Several studies have shown that question presentation in particular has a measurable impact on responses (e.g., Berinsky 2007; Kuklinski et al. 2001; Sniderman and Theriault 2004; Turgeon 2009; Kromer and Parry 2019).

Still, we are mindful that Barabas and Jerit (2010) critique the use of survey experiments as a means of drawing reliable conclusions about expected public opinion shifts when it comes to actual political events, people, or stimuli. Among their concerns is that survey experiments are vulnerable to what Gaines, Kuklinski, and Quirk call an "inflation parameter" (2007). The unrealistic purity of the survey experiment, coupled with the forced exposure to a treatment, they contend, will result in findings ungeneralizable to the stimuli of a messy reality. One way to lessen this concern about whether an experiment is externally valid is to model it after plausible, real world events. We attempt this by using real candidates in a real election, one in which voters could hardly avoid campaign messages or news reports connecting President Obama or Governor Beebe to local, down-ballot candidates.

2012 Arkansas: A Distinctive Electoral Context

The 2012 election cycle in Arkansas presented a distinctive opportunity in contemporary American politics to test the comparative power of the "pull" toward legislative candidates of the same party as a popular, high-profile incumbent officeholder and the "push" away from candidates representing the same party as a deeply unpopular, high-profile officeholder. Not only were both of the highest officeholders—Governor Mike Beebe and President Barack Obama—Democrats prominently featured in electoral communications during the campaign, but an historically-significant battle for control of the legislative chambers was *the* electoral story of the cycle. If the impact of high-profile copartisans—either positive and/or negative—on low-information, low-profile legislative races has an impact on vote decisions, it should be in a political context such as this.

Specifically, although Governor Beebe was not up for re-election and President Obama was, campaign messaging throughout the election

cycle complicated things. With respect to the former, Democrats running for the legislature in 2012 attempted to tie themselves to the governor.[4] In many respects, it was a sound strategy. Arkansas's General Assembly not only had been controlled by Democrats for 138 years, but—for two generations—Arkansas politics had been marked by a pragmatic progressivism that separated the state from others in the region. Prodded by state Supreme Court rulings, for instance, Arkansas has developed a model early childhood program, boosted teacher pay, and overhauled school facilities, producing outcomes like rising test scores and a K-12 education system ranked 5th nationally by *Education Week*. Presiding over such successes during the 2012 election cycle was Mike Beebe, the Democratic governor who not only consistently commanded approval ratings above 65 percent but had won every one of the state's 75 counties in 2010.

On the other hand, state polling in early 2012 provided evidence that President Obama had become even less popular with the Arkansas electorate since his overwhelming 2008 defeat in the state. Consequently, although it was clear there would be no contest for the state's six electoral votes, the President was central to Republicans' efforts to gain control of both houses of the state legislature for the first time since Reconstruction. On paper, Arkansas Republicans promoted a platform they termed the "SIMPLE Plan," a blueprint promising smaller government, lower taxes, voter identification laws, and school vouchers.[5] On the ground however, the Republican campaign was about just one thing: the president. As a billboard in a rural northeast Arkansas county proclaimed: "Save America. Vote Republican. Every Democrat Elected Helps Obama" (Barth 2012). This message was furthered when Americans for Prosperity (AFP) invested $1 million in Obamacare-focused attacks on Democratic state legislative candidates Recipients were asked to "thank [Republicans] for protecting our health care freedom" (Barth 2012).

Democrats countered by attempting to detach themselves from national political dynamics and by emphasizing that the party's candidates were on the team of the popular Beebe. Beebe himself energetically and uncharacteristically joined the fray, bankrolling state Democrats' campaign efforts, appearing in TV spots attacking AFP for "trashing Arkansas," and

[4] Indeed, party leaders attempted to frame the election expressly as a choice between "Beebe or backwards." Report by Democratic Party of Arkansas Chair Will Bond at State Committee Meeting, 8 December 2012.

[5] Arkansas Republican House Caucus website, http://arhouse.org/2012/04/05/the-simple-plan/

making a last-minute campaign swing through counties in the northeast quadrant of the state where many of the most competitive legislative races were found (DeMillo 2012). No matter: the party that had been in the minority since the end of Reconstruction managed to gain control of both houses of the legislature (although the State House control was decided only after a recount in one district).

The conventional wisdom inside the state asserts that the rapid transformation of one of the country's most Democratic strongholds into one of its most Republican was a consequence of the electorate's strong animosity toward President Barack Obama, an animosity that swamped even the express efforts of a popular, same-party gubernatorial incumbent. The conditions of the 2012 election cycle allow us to test the power of their respective influences.

Research Design, Hypotheses, and Data

Our project explores five hypotheses. The first three focus on whether the job performance of highly-visible elected officials exerts the predicted effect on votes for "down ballot" offices. Specifically, we examine whether the perceived job performance of the governor and the president affects candidate choice in state senate races. As noted above, we focus on Arkansas, a case where Governor Mike Beebe, a Democrat, enjoyed widespread job approval that crossed party lines: in 2012, his approval rate was 71 percent among likely voters.[6] By contrast, Arkansas long disapproved of the job performance of President Barack Obama, also a Democrat. At the time of our study, his approval rating was 31 percent, a figure that had held steady since 2010.

Since the governor was a Democrat, our first hypothesis is that individuals who approve of Governor Beebe's job performance would be more likely to support the Democratic candidate for state senate, controlling for other factors. Similarly, our second hypothesis is that since the president was a Democrat, individuals who approved of President Obama's job performance would be more likely to support the Democratic candidate for state senate. Our third hypothesis follows from these: individuals who approved of both the governor's and president's job performance would

[6] For simplicity of interpretation, we raw approval, i.e., the percent of respondents selecting "approve" to the question "Do you approve or disapprove of the way XX is handling his/her job as YY?"

exhibit even higher rates of support for the Democratic candidate for state senate, as both the governor and president were Democrats themselves.

H1: Individuals who approve of Democratic Governor Mike Beebe's job performance will be more likely to support the Democratic candidate for Arkansas senate when compared with the baseline of individuals who do not approve of the governor's or president's job performance.

H2: Individuals who approve of Democratic President Barack Obama's job performance will be more likely to support the Democratic candidate for Arkansas senate when compared with the baseline of individuals who do not approve of the governor's or president's job performance.

H3: Individuals who approve of both the governor's and president's job performance will exhibit the highest levels of support for the Democratic candidate for Arkansas senate.

To explore these hypotheses, we collected survey data on recently-active Arkansas voters. We asked respondents to report vote intention in the upcoming state senate race in addition to their evaluations of the governor's and president's job performance. Using a simple logit regression, we estimate whether these elected officials' job performance was predictive of the probability of voting for the Democratic candidate for state senate. As is standard in models of voting behavior, we include prominent demographic covariates, including age, race, education, and gender.

The remaining two hypotheses concern whether cuing individuals to consider the job performance of high-profile copartisans affects vote choice. Our first expectation is that when a prominent elected official is popular, such as Governor Beebe, individuals stimulated to evaluate him first will be more likely to support his co-partisans on the ballot (in our experiment, the Democrat running for state senate). Our second expectation is that a prominent unpopular elected official, such as President Obama, will have a depressive effect on intended vote choice when individuals are stimulated to consider first his job performance. More formally:

H4: Stimulating individuals to assess Governor Beebe's job performance will increase subjects' support for the Democratic candidate for the Arkansas senate.

H5: Stimulating individuals to assess President Obama's job performance will decrease subjects' support for the Democratic candidate for the Arkansas senate.

To test hypotheses 4 and 5, we conducted a simple experiment in which we randomly assigned respondents into one of three groups. Members of the first group served as the control and were asked to report their intended state senate vote choice before being asked questions about the job performance of the governor and president. The other two groups were exposed to one of two treatments: the first was asked to assess Governor Beebe's job performance and the second was asked to assess President Obama's job performance, both—of course—prior to being asked about vote choice in the state senate race.

To analyze our results, we use a logit regression where the two treatments are coded as dichotomous variables. Since we do not expect the effects to be distributed evenly, we interact the priming variables with party identification.[7] Indeed, recent research on "negative partisanship" (e.g., Abramowitz and Webster 2016) leads us to expect that perhaps Republicans would have a stronger reaction than Democrats to our stimulus because we were referencing Democratic elected officials. These interactions also allow us to examine differences between partisans and independents. In keeping with Huber and Lapinski (2006), we expect partisans to be less susceptible to our stimuls than independents (but see also, Iyengar and Kinder 2010).

We collected data from more than 3,000 likely voters using interactive voice recognition software (i.e., robo-calls) in three competitive Arkansas state senate races (Districts 11, 19, and 34) on November 1, 2012 (the Thursday before the election).[8] Because existing literature on Arkansas politics points to a wide urban-rural divide in party loyalty—i.e., white, rural voters are more likely to ticket-split than other Arkansas voters—we selected one rural district, (District 19 between Democrat David Wyatt and Republican Linda Collins-Smith), one urban district (District 34 between Democrat Barry Hyde and Republican Jane English), and one mixed district (District 11 between Democrat Steve Harrelson and Republican Jimmy Hickey). All of the races proved to be the close contests observers projected;

[7] We also ran a model that used job approval as the interactive term with our treatment, producing similar results. Likewise, we estimated a model that used both party identification and job approval as interactive terms with our treatment; the results were identical.
[8] "Likely voters" include people who had voted in at least two of the last four general elections in Arkansas.

indeed, in the Hyde-English matchup in Little Rock's District 34, only 288 votes ultimately separated the candidates. In two of the three races, the Republican prevailed; Democrat David Wyatt was the exception in District 19. The full survey protocol is in Appendix A.

Results

We present our results in two steps. First, we estimate a simple vote choice model to examine how respondents in our sample voted in their respective state senate races. As we described above, we pool the races into a single outcome — vote for the Democratic candidate — since we collected our data for primarily experimental purposes rather than collecting a representative sample of voters in these districts. We present a vote-choice model first to establish that, by and large, the voters in our study behave in the ways we would predict. We also calculate predicted voting probabilities. Second, we present the results of our experiment: whether asking respondents about a popular – or unpopular – high-profile political figure in advance of asking them about vote choice in a low-profile race has measurable effect.

Table 1 contains the logit regression outcome that examines vote choice. The results largely conform to expectations. With regard to party identification, the self-identified Democrats and Republicans were significantly more likely to support their co-partisan running for the state senate. Job approval for both elected officials — Obama and Beebe — increased the likelihood of voting for the Democratic state senate candidate. The extent to which these effects are uniform across party attachments is impossible to discern with the regression coefficients.

To examine how these effects impact vote choice, we calculate the predicted probability of voting for the Democratic candidate based on the regression results in Table 1 and present the results in Figure 1. The calculations presented in Figure 1 highlight key differences in behavior among our respondents. For Democrats who neither approved of Governor Beebe nor President Obama, the likelihood of supporting the Democratic state senate candidate is only 24.7 percent. When self-identified Democrats approve of Beebe but not Obama, this probability increases to 65.9 percent — an increase of 41.2 percentage points. When the Democratic respondent approves of Obama but not Beebe, the likelihood of supporting the Democratic state senate candidate increases to 86.5 percent. Thus, the approving of Obama's job performance is a substantially better predictor —

by 21.6 percentage points — of state senate candidate preference among self-identified Democrats. This finding suggests that perhaps some Democrats who only support Beebe but not Obama might be better described as old style Arkansan Democrats — the precise kind of voters who would have supported a Blue Dog Democrat — as they do not support the national party's standard-bearer. When the Democrat approves of both Beebe and Obama, the probability of supporting the Democratic legislative candidate is a near certainty (97.4 percent). Independents follow a similar pattern: the probability of supporting the Democratic state senate candidate is just 8.2 percent when a voter disapproves of both Beebe and Obama; approval of Beebe alone raises this probability to 34.6 percent; approval of Obama alone further raises this probability to 63.6 percent; and when she approves of both Beebe and Obama, the probability increases to 91.2 percent.

Interestingly, approval of Beebe seems to have a substantial effect on supporting the Democratic senate candidate for self-identified Republicans, as the probability of supporting the Democratic candidate increases to 17.7 percent. With regards to the effect of Obama's approval and the combined effect of approving both, we are analyzing a substantially small subset of Republican respondents. Indeed, while 55 percent of Republicans approved of Beebe, only 7.8 percent approved of Obama. Only 4.5 percent of Republicans approved of both. While supporting Obama or both Beebe and Obama significant increased the likelihood of voting for the Democrat in the state senate race, the practical impact of the effect is minimal.

Overall, the estimates in Figure 1 suggest Beebe's popularity in the state exerted a positive influence for the Democratic candidate among Independents and Republicans. Furthermore, these estimates suggest that respondents who approved of Obama — a somewhat rare event — are more likely to support the Democratic candidate for state senate. We urge a cautious interpretation of the results for Republicans however, as you would need to ask more than 95 Republicans in Arkansas about Obama's job

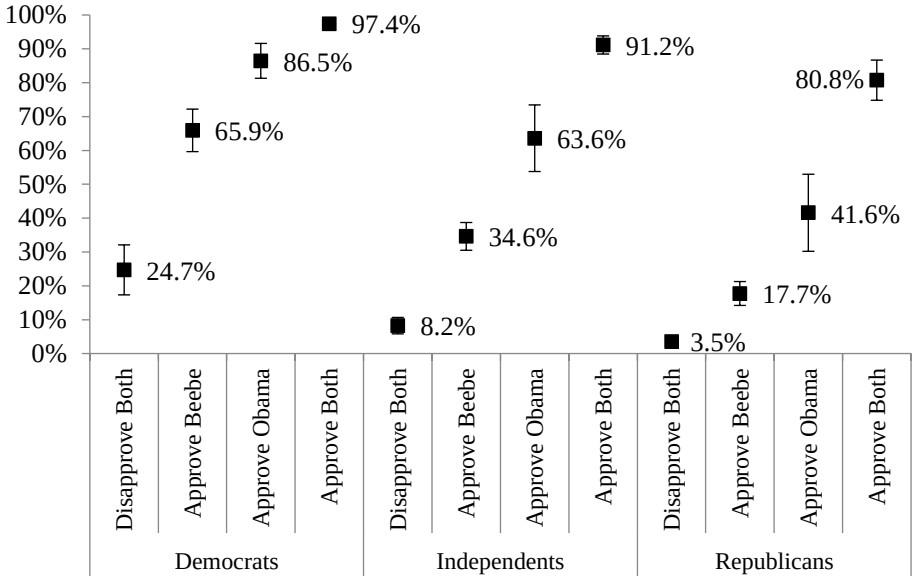
Table 1- Analysis of Votes for the Democratic Arkansas State Senate Candidate

Democrat	1.30***
	(0.16)
Republican	-0.90***
	(0.15)
Approve Obama	2.97***
	(0.17)
Approve Beebe	1.77***
	(0.17)
Age	0.05
	(0.08)
White	0.30
	(0.19)
Education	0.11
	(0.06)
Female	0.21
	(0.12)
Constant	-3.20***
	(0.36)
Pseudo- R^2	.495
N	2540

Note: Dependent variable is vote for the Democratic candidate. The data in the analysis are pooled results for Arkansas state senate districts 11, 19, and 34.
* p<0.05, ** p<0.01, *** p<0.001

performance before finding one who approved of President Obama's job performance. Still, the results provide empirical support for our first three hypotheses and the conventional wisdom of the ongoing political transformation of Arkansas.

Figure 1 – Predicted Voting Probabilities for the Democratic Candidate, Arkansas State Senate



Having established in traditional multivariate analysis that approval of both Governor Beebe and President Obama are predictive of down-ballot Democratic votes even in a sample gathered solely in competitive districts, we turn now to a stricter test of copartisan influence: whether stimulating individuals first to consider their views of high-profile public officials has an effect on their prospective votes in a state senate race. As we described above, we estimate the effect for each of the three districts and then pool the responses into a single dataset.

We present the results of our regression analysis in Table 2. The first column of Table 2 contains the regression results for Arkansas Senate District 11, the contest between Democrat Steve Harrelson and Republican Jimmy Hickey, Jr. For this district, as expected, self-identified Democrats and Republicans were both more likely to support their co-partisans on the ballot. The results also reveal that despite our expectation that asking individuals first to consider their feelings about Beebe or Obama would influence vote choice, there was no overall effect (Beebe Stimulus and

Obama Stimulus) nor was there a specific effect on subgroups of voters (i.e., self-identified partisans).

Table 2- Beebe/Obama Stimulus Results, Vote for the Democratic State Senate Candidate

	Dist. 11	Dist. 19	Dist. 34	All Dist.
Democrat	2.63***	2.99***	2.74*	2.75***
	(0.35)	(0.38)	(0.41)	(0.21)
Republican	-1.44***	-1.76***	-1.60***	-1.62***
	(0.40)	(.34)	(0.40)	(0.22)
Beebe Stimulus	-0.07	-0.06	0.33	0.04
	(0.28)	(0.22)	(0.29)	(0.15)
Obama Stimulus	0.09	0.14	-0.27	0.01
	(0.26)	(0.22)	(0.30)	(0.15)
Dem * Beebe Stimulus	-0.33	-0.20	-0.75	-0.39
	(0.48)	(0.51)	(0.56)	(0.29)
Dem * Obama Stimulus	-0.63	-0.12	0.14	-0.29
	(0.45)	(0.52)	(0.58)	(0.29)
Rep * Beebe Stimulus	0.70	0.91*	-0.75	0.43
	(0.52)	(0.45)	(0.61)	(0.29)
Rep * Obama Stimulus	0.46	0.57	0.22	0.42
	(0.50)	(0.45)	(0.55)	(0.28)
Constant	-0.81***	-0.37*	-0.47*	-0.52***
	(0.20)	(0.16)	(0.21)	(0.11)
Pseudo- R^2	.253	.308	.342	.293
N	1018	1245	830	3093

Note: Dependent variable is a stated vote for the Democratic candidate
* p<0.05, ** p< 0.01, *** p<0.001

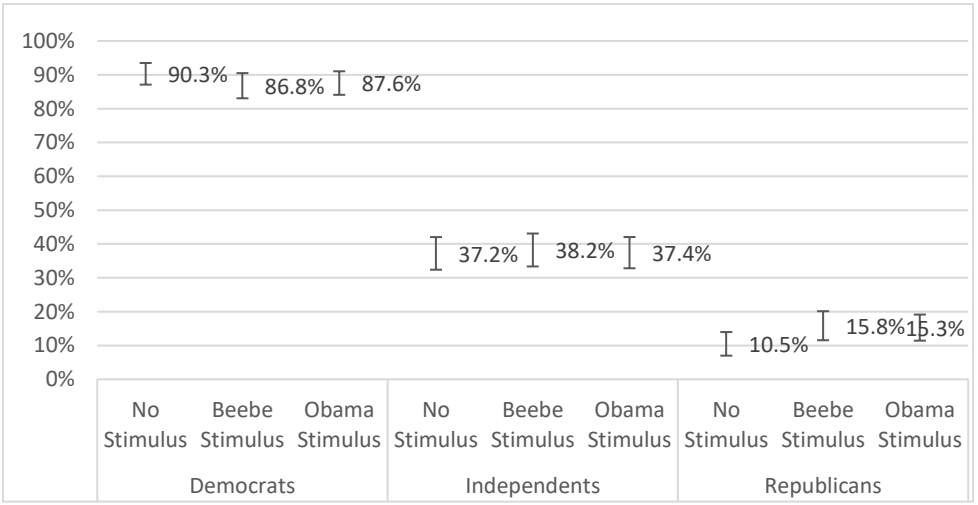
For District 19, where Republican Linda Collins-Smith challenged Democratic incumbent David Wyatt, we see that, again, self-identified Democrats and Republicans strongly preferred co-partisans. While we do not see an overall effect in this district either, we do find that Republicans who received the Beebe question were significantly more likely to support the Democratic candidate. Although this finding conforms to our expectation that Beebe's popularity is helping fellow Democrats on the ballot, it is an isolated result as the interaction with Democrat is not significant.

For District 34, an open-seat contest between Democrat Barry Hyde and Republican Jane English, we find the same results as in District 11, i.e., we find no support for our hypotheses that Governor Beebe's popularity helped Democratic candidates at the polls or that President Obama's

unpopularity hurt them. In the last column, when we pool the results, again, we find no significant effects.

Once again, we calculate the predicted voting probabilities for the appropriate partisan subgroups across our treatments. As before, we calculate these probabilities for the pooled sample, which in this case is the regression result in the fourth column of Table 2. The probabilities we calculate, presented in Figure 2, serve to confirm our regression results: our treatments have no appreciable effect on vote choice, regardless of party identification. In an unreported series of regressions, we also find that it is not just party identification that is immune from effects: job approval interacted with our stimulus measures produces null results too. While our traditional analysis of voting behavior – in a competitive state legislative context – strongly implies that individuals' assessments of the governor's and president's job performance matter for vote choice, our experiment shows that expressly activating these feelings *has no substantive effect on vote choice.*

Figure 2 – Copartisan Approval and Predicted Voting Probabilities for the Democratic Candidate, Arkansas State Senate



Conclusion

Arkansas is not alone in its a statewide, bipartisan consensus that Obama's depressive effect on down-ballot Democrats contributed to the

state's recent political revolution. It is a thesis supported by traditional analysis of pooled responses, and – as shown here – even among respondents exposed to a competitive state legislative race. Our experiments however produced no significant effects. It may be that previous research has overstated the potency of the heuristics created by voters' evaluation of high-profile co-partisans on lower-level races because so many state legislative races are not serious contests. It is also possible our stimulus—simply asking for evaluations of Obama and Beebe before the question regarding the state senate race—was too subtle to create an effect.

A third, and more interesting, possibility is that our sample was immune to the stimulations we attempted. Respondents were, after all, practiced voters asked about unusually-competitive state senate districts during a cycle when party control of the state legislature was hotly contested for the first time in more than a century. Even more, they had been inundated with references to Obama and Beebe for weeks. In other words, if the job performance of the president and governor do swamp other factors in determining vote choice, it may be that these effects *had been cemented far in advance of Election Day* and would not be picked up days before the election. As U.S. Senator John Boozman put it the following spring: "The attempt in Arkansas has been regardless of what office you're running for to try and somehow link that with President Obama and the Obama agenda, which is very unpopular."[9] Under such conditions, we can assume most respondents possessed a fair amount of information, even in a typically-low-profile affair like a state senate race. As Huber and Lapinski (2006), Weber and Thornton (2012) and others have discovered, high levels of information depress experimental effects.

The null results in the second half of our analysis thus leave us with more questions than answers about the power of high-profile copartisans to shape down-ballot races. Only additional research will determine the actual potency of copartisanship in shaping voting behavior in the thousands of low-information elections happening in an increasingly nationalized environment.

[9] Shane Goldmacher, "The Collapse of Arkansas Democrats," *The National Journal* (11 April 2013).

Appendix A[10]

Q1. In the election for state senate, the two candidates are Senator Steve Harrelson/Senator David Wyatt/Representative Barry Hyde, a Democrat, and Jimmy Hickey, Jr./Representative Linda Collins-Smith/Representative Jane English, a Republican. If the election were held today would you vote for:

Press 1 for Steve Harrelson/Senator David Wyatt/Representative Barry Hyde
Press 2 for Jimmy Hickey, Jr./Representative Linda Collins-Smith/Representative Jane English
Press 3 for Don't Know

Q2. Do you approve or disapprove of the job Gov. Mike Beebe is doing?

Press 1 for Approve
Press 2 for Disapprove
Press 3 for Don't Know

Q3. Do you approve or disapprove of the job that President Barack Obama is doing?

Press 1 for Approve
Press 2 for Disapprove
Press 3 for Don't Know

Q4. Just a few more questions. For statistical purposes, please tell us your age.

Press 1 if you are under the age of 30
Press 2 if you are between the ages of 30 and 44
Press 3 if you are between the ages of 45 and 64
Press 4 if you are 65 or older

Q5. Please tell us your ethnicity.

Press 1 for African American
Press 2 for Asian American
Press 3 for Caucasian or White
Press 4 for Latino
Press 5 if you are of another ethnic origin not mentioned here.

[10] The battery presented here represents the sequence to which members of the control group were exposed. One third of the respondents in each district heard the Obama approval prime first, followed by the senate race question, followed by Beebe approval, and another third in each district heard the Beebe approval prime first, followed by the senate race question, followed by Obama approval.

Q6. Generally speaking, do you usually think of yourself as an Independent, a Republican, a Democrat, or other?

Press 1 for Independent
Press 2 for Republican
Press 3 for Democrat
Press 4 for Other

Q7. Which of the following education categories best describes your highest level of schooling?

Press 1 for High School Graduate or Below
Press 2 for Some College
Press 3 for College Graduate
Press 4 for Some Graduate School

Q8. Last question. Please tell us your gender.

Press 1 for Male
Press 2 for Female

Close: Thank you for your time.

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What Determines the Liberal-Conservative Orientations of College Students? A Comparative Study of Two Universities

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This paper tests the impact of socialization variables- the family, in-school environment, and out-of-school environment- on students' liberal-conservative orientations at two midsize public universities located in the red state of Arkansas and the blue state of Illinois. Using survey data from up to 889 students as well as relying on a cross-sectional research design and OLS estimators, we find evidence that the family is the most important determinant of students' liberal-conservatism. The data also suggest that mothers tend to have greater impact on students' political values than do fathers. In addition, in-school- and out-of-school environments seem to have some influence on students' liberal-conservative orientations. On the other hand, regional variation seems to have some but weak impact on students' political orientations. A notable finding of this study is that instead of just "liberalizing," a majority of students has actually become more moderate than liberal.

This paper intends to contribute to our understanding of political orientation by conducting a comparative study of the liberal and conservative values of students pursing their education at two midsize public universities in the red state of Arkansas and the blue state of Illinois. To the best of our knowledge, few, if any, studies have conducted such a comparative study in the United States. We hypothesize that the main factors that influence the variation in students' liberal-conservatism *within* and *between* our two universities are socialization variables- the family, in-school environment, and out-of-school environment. Using survey data of up to 889 students and relying on a cross-sectional research design, we find evidence that the family is the most important determinant of students' liberal-conservatism. The data also suggest that mothers tend to have greater impact on students' political values than do fathers. In addition, in-school

environment and out-of-school environment tend to have some influence on students' liberal-conservatism. Moreover, regional variation seems to have some but weak impact on students' political orientations. A notable finding and contribution of this study is that "rather than "liberalizing," a majority of students (contrary to much of previous findings) has actually become more moderate than liberal. Survey data we have used from the American National Election Studies (ANES) and the General Social Survey (GSS) for the same age- and college-enrolled group seem to corroborate the foregoing finding.

Introduction

Scholarship dealing with the political orientation of college students has a long history. One of the earliest studies was conducted by Theodore M. Newcomb in the 1930s. Relying on a sample of 525 female students at Bennington College, Newcomb (1943; see also Newcomb, Koeing, Flacks, and Warwick, 1967; Alwin, Cohen, and Newcomb, 1991) found that the majority held more liberal values by the time of graduation than when admitted as freshmen.

Dey, Astin, and Korn (1991; see also Dey, 1996) relied on a more extensive survey data of college freshmen, from 1966 to 1990, to examine students' political orientations. The data that they used, compiled by the Cooperative Institutional Research Program (CIRP), had an annual sample size of about 250,000 students studying at about 600 U.S. colleges. Dey, Astin, and Korn (1991, p. 16) reported that the percentage of liberals and the far left was as high as 38.1 % in 1971 but dipped to 24.4% in 1990. Conversely, college students who claimed to have conservative and far right political orientation rose from 14.5% in 1973 to somewhere between 18.7% and 22.8 % between 1973 and 1990. Dey et al. (1991, p. 17) also found that the percentage of moderate students ranged from 45.5% in 1970 to 60.3% in 1983, but declined to 54.7% in 1990.

More recently, relying on the 1999 CIRP Freshman Survey and the 2003 College Student Survey (N=6,807), Mariani and Hewitt (2008, p. 777) found that although there were more freshmen identifying themselves as conservative or far right and liberal or far left, the former group outnumbered the latter by 8% at the time of graduation.

However, relying on the Wabash National Study of Liberal Arts Education pre-college survey data, administered to students of 11 liberal arts and 6 non-liberal arts institutions in fall 2006 and a follow-up study of the

same groups in spring 2010 (N = 2,159), Hanson et al. (2012, p. 361) found that the liberal arts students not only started with higher level of liberal values, the average gain made by the same group was also 0.20 standard deviation about twice as high as the gain made by the non-liberal arts students.

On the other hand, Dey (1997, p. 409-410; see also Dey, p. 1996) used annual survey data from CIRP, with about 25,000 freshmen attending as many as 379 institutions from 1966 to 1991, to examine students' political orientations. He found that "rather than liberalizing," students studying at liberal institutions became more liberal while those pursuing their education at conservative institutions held more conservative values.

Finally, to Dodson (2014; see also Bailey and Williams, 2016), college tends to moderate students' political values. Specifically, "While conservative students do become more liberal as a result of academic involvement, liberals become more conservative as a result of their academic involvement" (Dodson, 2014, p. 156).

In sum, although much of the research seems to suggest that college students tend to hold more liberal values (Hyman, 1959; Feldman and Newcomb, 1969; Ladd and Lipset, 1975; Astin, 1977; 1993; Niemi, Ross, and Alexander, 1978; Pascarella and Terenzini, 1991, p. 2005), recent findings (ex: Dodson, 2014; Mariani and Hewitt, 2008) have disputed such results. In other words, the impact of college on students' liberal-conservatism remains open.

Determinants of College Political Orientation

We hypothesize that the family, in-school environment (pre-college and college experience), and out-of-school environment (ex: church, peers, and the media) significantly determine the political values of college students.

The family is considered one of the most important factors in influencing the political orientation of pre-adults (Hyman 1959; Easton and Hess, 1962; Jennings and Niemi, 1968; Tedin, 1974; Lorence and Mortimer, 1979; Dalton, 1980; Weidman, 1989; Jennings, Stoker, and Bowers, 2009; Hanson et al., 2012). Parent to children political transmission is especially strong in politically active households (Jennings, Stoker, and Bowers, 2009,

p. 787) and when both parents share similar political values (see Hyman, 1959, p. 59). According to Easton and Hess (1962, p. 238), by the age of 12 or 13, a child is capable of learning about complex issues like democracy, voting, and freedom of speech. Many others, however, argue that adolescence (when students are in high school) is when the parent-child political transmission occurs (Lipset et al., 1954; Jennings and Niemi, 1968). By the last year of high school, parent-to-child political-orientation transmission is said to be maximal (Hyman, 1959, p. 46). And at the age of 18, most college freshmen are expected to firmly hold political values passed from their parents (Hyman, 1959; Niemi, Ross, and Alexander, 1978; Mariani and Hewitt, 2008, p. 778; Jennings, Stoker, and Bower, 2009, p. 793). Similarly, Lipset et al. (1954, p. 1146) have argued that the first vote of 18-year-olds is likely to be affected by their parents' political orientation.

As children get older, however, they face influences from outside the home that could make their political beliefs different from their parents (Lipset et al. 1954, p. 1145; see also Hyman, 1959, p. 78). Such changes seem to start occurring in pre-college years (Hymn, 1959, p. 46; Easton and Hess, 1962, p. 235; Tedin, 1974, p. 1582; see also Stouffer, 1963). In addition, variation in parent-child political orientations seems to be observed at the college level (Newcomb, 1943; Hyman, 1959, p. 104; Niemi et al., 1978; Bowen, 1978). In college, in-school environment may include influences coming from faculty, student peers, major field of study, and type of institutions (see Ladd and Lipset, 1975; Lorence and Mortimer, 1979; Weidman, 1989; Dey, 1996, p. 1997). For instance, Mariani and Hewitt (2008) have found that faculty members tend to be predominantly liberal. If so, college students' liberal-conservative orientations may be in part influenced by faculty members' political values (Newcomb, 1943; Ladd and Lipset, 1975; Astin, 1993, p. 150; Dey, 1996; 1997).[1] The influence of faculty on college students' liberalism seems particularly stronger in liberal arts institutions, where the interaction between students and professors tend to be higher and area of studies like humanities and social sciences are emphasized in classrooms (Hanson et al., 2012, p. 366; see also Feldman and Newcomb, 1969; Ladd and Lipset, 1975; Astin, 1977; Weidman, 1989). Specifically, major-field studies, such as sociology, anthropology, and political science, which deal with social issues are believed to be related to college student liberalism more than those like engineering and agriculture that encourage students to interact with conservative business groups

[1] However, Mariani and Hewitt (2008, p. 778) contend that faculty liberalism is not significantly related to student liberalism.

(Feldman and Newcomb, 1969; Ladd and Lipset, 1975, p. 68; Weidman, 1989; Astin, 1993; Hanson et al., 2012). In addition, it is argued that college student liberalism "is associated with attending prestigious institutions" (Astin, 1977, p. 38; Dey, 1997). Elite or prestigious institutions have relatively liberal subcultures that attract a liberal-left faculty (Ladd and Lipset, 1975, p. 91). Furthermore, student-to-student or peer interaction may have some influence on college students' political values (Feldman and Newcomb, 1969; Dey, 1996; 1997; Hanson et al., 2012, p. 357). For instance, Niemi, Ross, and Alexander (1978, p. 512) found that compared to non-college youths, college students tended to be slightly more liberal. Dodson (2014), on the other hand, has found that college experience tends to moderate students' political orientation.

A third attribute of college student socialization seems to be out-of-school environment, including, the media, the church, and society as a whole. The mass media seems to play a role in impacting the political values of children and adults by highlighting certain issues that should be placed in the public agenda (Easton and Hess, 1962; Jennings and Niemi, 1968; Fleishman, 1986, p. 510; Weidman, 1989). Others contend that institutions like the church play a role in making people hold liberal or conservative values (Easton and Hess, 1962; Tedin, 1974; Astin, 1977; Jennings et al., 2009). For instance, whereas Judaism and Catholicism are considered to have some association with the liberal beliefs of college students in the U.S., Protestantism is assumed to have some role in instilling conservative social values (Braungart, 1971, p. 120; Tedin, 1974, p. 1581; Ladd and Lipset, 1975, p. 20; Astin, 1977, p. 37). Moreover, society as a whole may have some influence on college students' liberal-conservative orientations. According to Dey (1997, p. 406; 1996), some of the variation in college student liberalism or conservatism seem to be attributable to parallel changes in American society's liberalism or conservatism. Astin (1993, p. 148) even goes as far saying that rather than college attendance, changes in societal political orientations explain changes in political orientations of college freshmen.

Other possible predictors of college students' political orientations include freshman-senior status, GPA, gender, race/ethnicity, family income, and urban-rural family residence. While seniors are considered more liberal than freshmen (Newcomb, 1943; Astin, 1977; Dey, 1997), high school GPA or ACT is believed to have some positive influence on college student political liberalism (Dey, 1996; 1997; Hanson et al., 2012). In addition, Astin (1977, p.

37) has found that male college students are more liberal than females. However, Dey (1997) and Mariani and Hewitt (2008, p. 778) observe that female students tend to be more liberal than do their male counterparts. It is also found that African American college students tend to be predominantly liberal compared to their white cohorts (Braungart, 1971; Astin, 1977; Dey, 1996; 1997; Hanson et al., 2012). Moreover, greater family income tends to be related to college student political conservatism (Mariani and Hewitt, 2008, p. 778; see also Braungart, 1971; Tedin, 1974; Lorence and Mortimer, 1979; Jennings et al., 2009). Finally, it has been argued that liberals prefer to live in cities, where ethnic diversity is greater, whereas conservatives like to reside in rural areas or small towns with relatively homogenous communities (Dimock et al., 2014, p. 45; see also Walks, 2004; Gainsborough, 2005).

Hypotheses, Data, and Model Specification

We formulated and tested the following hypotheses in this paper:

H1: Family influences college students' liberal-conservative orientations at University of X and University of Z. Specifically, liberal and conservative parents tend to pass their political orientations to their children, respectively.

H2: In-school environments (ex: teachers, fellow students or peers, and books) will likely make students more liberal at University of X and University of Z.

H3: Out-of-school environments (ex: the media, the church, and the community) will likely have positive influence on student conservatism at University of X and University of Z.

H4: Students pursuing their education in the red state of Arkansas at University of X will likely be less liberal than students attending at the blue state of Illinois at University of Z. We assume that region is, in large part, a proxy for the socialization variables that we are testing in H1 and H3 as well as the school peers in H2. In other words, H4 is intended to indirectly test the impact of socialization variables on the political orientations of students pursing their education at the two universities in the states of Arkansas and Illinois.

We relied on survey data with a sample size of up to 889 that we administered at University of X and University of Z in Spring and Fall 2015

and Spring 2016 to test our hypotheses.[2] Specifically, we administered in-class surveys to students who attended our own classes and those of other colleagues in our respective universities. We chose these two institutions for two reasons: the first and obvious one is that two of the authors teach at University of X while one of us teach at University of Z. Second, and more importantly, the midsize public universities of X and Z are located in the red state of Arkansas and the blue state of Illinois, which allowed us to control for regional variation in the study of students' liberal-conservative orientations. Of the total sample size of 889, 559 (62.9%) attended at University of X while 330 (37.1%) at University of Z. The percentages of liberal, moderate, and conservative students at both universities were 33%, 42%, and 25%, respectively. Whereas 57.4% of our students were females, 42.6% were males. In addition, the in-state students at the University of X and Z were 91.6% and 93.1%, respectively. Our surveys asked questions pertaining to students' and their parents' political orientations, religiosity, gender, major field of study, party affiliations, issue positions, and other characteristics (see Appendix A for survey instrument). While most of the analyses that we performed in this paper are based on our own survey data, we also used data from the ANES, 2016, and the GSS, 2016, to compare the distribution of political orientation at our universities with that of the 18-22 year olds in the general U.S. population pursuing college education.

Our dependent variable is liberal-conservative orientation of college students. But what do we mean by liberalism and conservatism? It has been argued that defining liberalism and conservatism has been difficult (Smith, 1990, p. 480; Davis, 1992; Dey, 1997; Jost, Federico, and Napier, 2009). To Fleishman (1986, p. 520), the concepts of liberalism and conservatism are not equivalent to political orientation or ideology, as the former are narrower than the latter. For instance, political orientation may include political knowledge, values, and attitudes (Easton and Hess, 1962, p. 234). Others treat liberal and conservative values as aspects or categories of political orientation or ideology (Ladd and Lipset, 1975; Alwin, Cohen, and Newcomb, 1991, p. 77). Dey (1997, p. 339) contends that political attitudes

[2] Due to missing entries or responses, the maximum sample size that we could actually use in any of our models was 889 or lower. It should also be noted that we were able to decrease the percentage of students who said they "don't know" their own political orientations from 3.9% to 2.9% when we gave them some descriptions and examples of what a "liberal," "moderate," and "conservative" person is before they responded to the survey questions as opposed to when we did not give such guidelines during our initial survey instruments.

(i.e., agreements with specific issues), in addition to liberal and conservative self-identification, are attributes of political orientation [or ideology]. Some others, however, do not treat issues, be they economic or social, as independent entities but as facets or dimensions of liberal-conservative political orientation or ideology (Nie, Verba, and Petrocik, 1976; Lorence and Mortimer, 1979, p. 659; Niemi and Jennings, 1991; Jost, Federico, and Napier, 2009). In addition, Holm and Robinson (1978, p. 242) argue that party identification, besides liberal-conservative values, is a dimension of political orientation. However, while some scholars contend that party identification influences liberal-conservative values (Fleishman, 1986, p. 531), others do not rule out the causal arrow from going the other way around (Levitin and Miller, 1979).

What is less contested by scholars is what liberalism and conservatism refer to. Liberals favor a higher level of governmental intervention in the economy and are open to and supportive of social welfare programs. Conversely, conservatives prefer little or no government intervention in the economy and cherish individual responsibility (Campbell et al. 1964; Conover and Feldman, 1981; Robinson and Fleishman, 1984; Smith, 1990; Davis, 1992; Jost, Federico, and Napier, 2009; Hanson et al., 2012). To Ladd (1976/7, p. 590), "All of the basic understandings of liberal and conservative [ideologies]…revolve around equality." Perhaps it is not just the concern for equality of persons or lack thereof that breeds political conflicts among liberal and conservative citizens of democratic societies. Political conflicts may also arise from disagreeing about the idea of *fairness,* the moral principle that should guide the formulation and implementation of policies appropriate to bring about or maintain a more content society (see also Downs, 1957, p. 112; Rawls, 1999).

In this paper, we will treat liberal-conservative orientation as interchangeable with political orientation or ideology. Historically, scholars have measured liberal-conservative orientation differently either as a dichotomous or a continuous variable, where Likert scales ranging from 3 to 10 points are often used (see Klingemann, 1972; Holm and Robinson, 1978; Levitin and Miller, 1979, Fleishman, 1986; Conover and Feldman, 1981; Robinson and Fleishman, 1984; Sears and Valentino, 1997; Sears and Funk, 1999; Hanson et al., 2012). We measured college students' liberal and conservative orientations by students' self-placement on a 9-point Likert scale. The scale goes from 0 or "Extremely liberal" to 9 or "Extremely conservative," where the in-between categories being "very liberal," "Liberal," Left-leaning moderate," "Moderate," "Right-leaning moderate,"

"Conservative," and "very conservative."[3] Our 9-point scale is highly correlated with a 7-point scale (r = 0.99) that we formed by combining the "extremely liberal" and "very liberal" as well as the "extremely conservative" and "very conservative," categories, respectively. However, we preferred to use the 9-point scale since it added variability to our dependent variable. Parental liberal-conservative orientation, one of the independent variables, is measured by students' placement of their parents' political orientations on the same 9-point Likert scale. Our survey questions also enabled us to create a second measure of liberal-conservatism with three categories - liberal, moderate, and conservative. Each category is measured dichotomously.[4]

In-school environment and out-of-school environment, the second and third independent variables, are measured by simple "yes" or "no" answers emanating from a survey question that we have rephrased here: if your political orientation did not originate from your parents, did it come from your in-school experience or from your out-of-school environment or both? Our sampling strategy here was to isolate the impact of the family on students' liberal-conservatism from those of in-school- and out-of-school environments.

We have also included nine control variables in our models: a dichotomous age category indicating when students first formed their liberal-conservative views (precollege or college years), major-field of study, freshman-senior status, GPA, gender, ethnicity, religiosity, family income, and urban-rural family residence.[5] Of the foregoing, major-field of study,

[3] While some scholars have used the term "centrist" (Levin and Miller 1979) or "moderate" (see Alwin et al., 1991), to refer to the middle category, others have utilized the phrase "middle of the road" (Ladd and Lipset, 1975; Robinson & Fleishman, 1984; 1988; Dey, 1997; Sears & Funk, 1999; Mariani & Hewitt, 2008; Hanson et al., 2012). We prefer the term "moderate" to "middle of the road," for the latter may imply that today's citizens in democratic countries may not have a good grasp of their political values. Consistent with the foregoing, we prefer the terms "left-leaning moderate" and "right-leaning moderate" to "weak liberal" or "weak conservative." The latter phrases seem to be conducive only when the "middle of the road" category is utilized.

[4] For the combined data of students' political orientation at the universities of X and Z, the correlation between the 9-point and 3-point scales (the latter specified as liberal, moderate, and conservative) is also very high, r = 0.87.

[5] Other control variables that scholars have referred to but we do not have data for include historically black- and women colleges (Dey, 1997), financial aid based on need and participating

freshman-senior status, and GPA are hypothesized to have some relationship with the in-school environment variable. In addition, religiosity is likely to be one of the attributes of out-of-school environment. Consequently, we will examine whether or not these control variables have similar effects on students' liberal-conservatism.[6]

Given that our main interest is whether college affects students' liberal-conservatism, we specified age as a dichotomous variable. Specifically, forming political orientation by the age of 18 or after are coded 1 and 0, respectively.[7] We measured freshman-senior status by the number of credit-hours that students accumulated. We measured GPA, gender, and ethnicity by the students' responses to our survey questions pertaining to these variables. While the former is measured as a continuous variable, the latter two are gauged dichotomously. We combined social science, business, science, and humanities subfields and specified each of them dichotomously. Given that our study deals with political orientation, we also elected to gauge the impact of political science majors on the former variable separately.[8] We measured religiosity by the number of times students claimed to have gone to church, synagogue, or mosque every month. Family income is an ordinal level variable measured by the students' estimates of their parents' combined income: less than $40,000, between $40,000 and $80, 000, and greater than $80,000.[9] We obtained data for urban-rural family residence from students' responses to the survey question pertaining to this variable. We measured this variable by the population size of cities and towns, where we obtained such data from the U.S. Census Bureau, 2015.

We expect that majoring in social sciences (ex: sociology and political science) and humanities (ex: history and English), senior status

in college work-study programs (Astin, 1993), parental education, school climate, and school SES (Jennings et al, 2009).

[6] We have not observed any multicollinearity problem among our independent variables. The maximum r we have obtained is only 0.62, which is the correlation between the political values of our students' parents.

[7] About 91% of our students claimed that they formed their political orientation by the age of 18 and about 68% by the age of 17.

[8] The majors of our students at the two universities are well diverse: social science (23%), science (39%), humanities (26%), business (8%), and undeclared (4%). Of the social science majors, 60% of them major in political science.

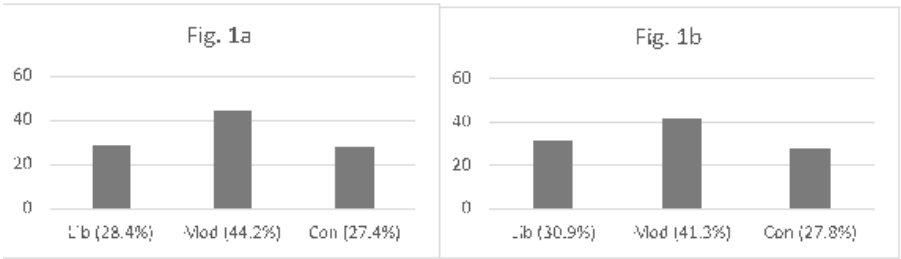
[9] However, we have measured parental income as a dichotomous variable (low income = 0; high income = 1, and the middle-income family group serves as the baseline). In analysis not shown here, the parental income variable measured as an ordinal variable (low income = 0.5; middle-income = 1; and higher income = 1.5) and included in a fully specified model did not perform any better than when this variable was specified dichotomously.

(higher number of credit hours), being African American, low-family income, and urban dwelling to have positive impact on college students' liberalism. Conversely, we expect majoring in fields like the sciences and business or any other non-social science and humanities areas, being freshman, religiosity, higher income, and rural family residence to have positive influence on students' conservatism. Following previous research, we also expect GPA and gender to have positive impact on college students' liberalism.

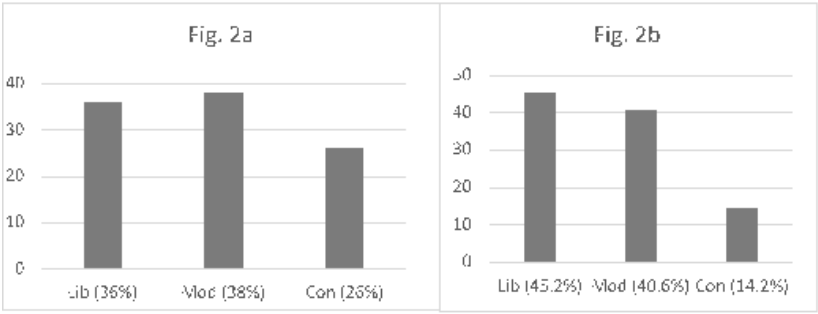
Descriptive Analysis

We first show graphical data for students' liberal-conservative orientations. As shown in Figures 1a and 1b, a majority of students at University of X claimed to hold moderate values. At University of Z, moderate male students were the majority, but females tended to be more liberal (see Figures 2a and 2b). The percentages of students who claimed to be liberals are higher than conservatives at both universities. The graphs also indicate that male and female students tend to be more conservative at University of X than at University of Z.

Figures 1a & 1b: Male and Female Student Liberal-Conservatism at University of X

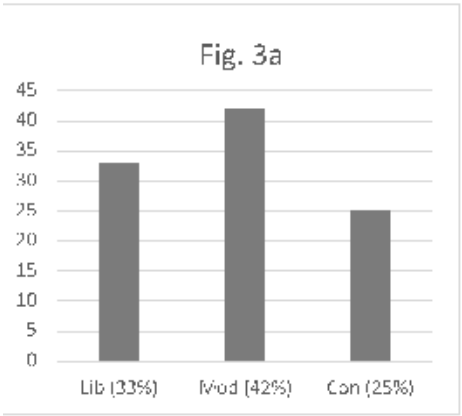


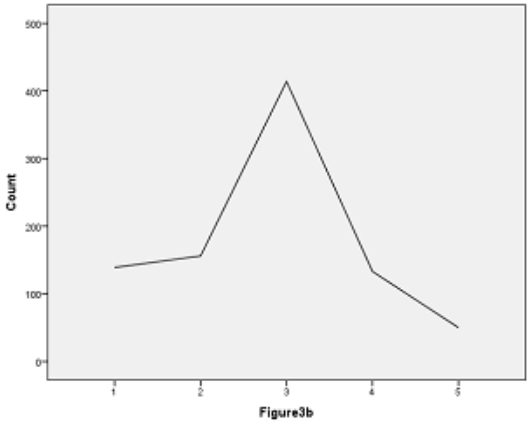
Figures 2a & 2b: Male and Female Student Liberal-Conservatism at University of Z



We then combined the political orientation data of students pursuing their education at the two universities. As shown in Figures 3a, the majority of students at the universities of X and Z have claimed to be moderates (42%). Liberals are the second biggest group (33%), and conservatives are the smallest (25%). Thus, "rather than liberalizing [as much of previous studies have contended]," a majority of students report their views as moderate. The trendline shown in Figure 3b also seems to suggest that the moderate political orientation is the mode of the distribution.

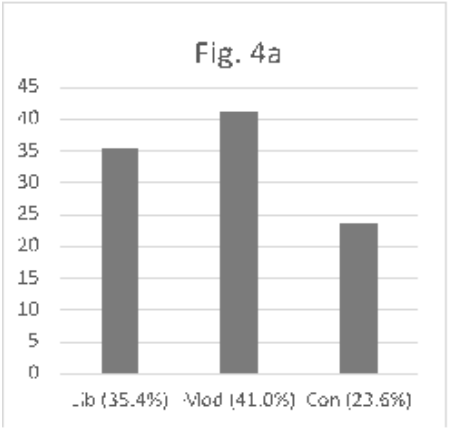
Figures 3a & 3b: Student Liberal-Conservatism (U. of X and U. of Z Data Combined)

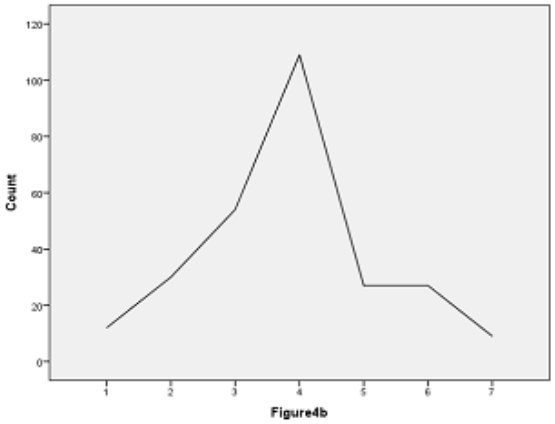




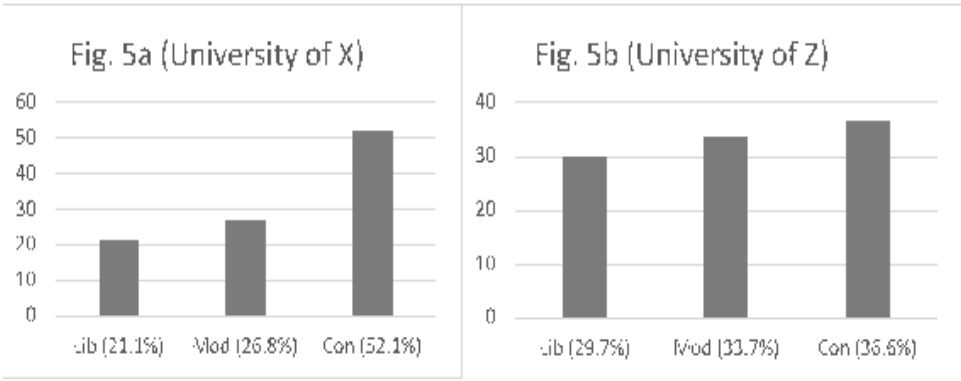
One way of confirming the reliability of our survey responses is to compare them with survey responses from similar or general populations. We used descriptive and graphical methods to determine if our students' distributions of political orientations yield similar results with similar sample groups in the U.S. student population. For the latter groups, we relied on data that we have obtained from the American National Election Studies (ANES) and the General Social Survey (GSS). Figures 4a and 4b show the distribution of political orientations and the trendline for the ANES data for the 18-22 age group pursuing college education in the U.S. And Figures 5a and 4b depict the distribution of political orientations and the trendline for the GSS data for the same age group. The sample size for the ANES data is 73, and the survey was administered in 2016. The sample size for the GSS

Figures 4a & 4b: Political Orientation of 18-22 Year Olds in the United States





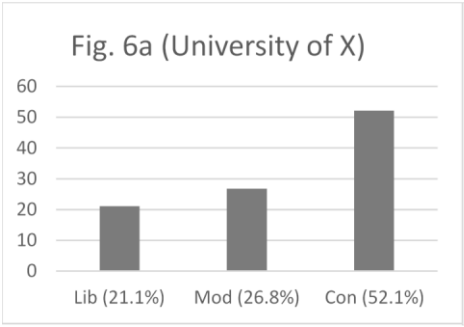
Figures 5a & 5b: Parental Liberal-Conservatism at U. of X and U. of Z

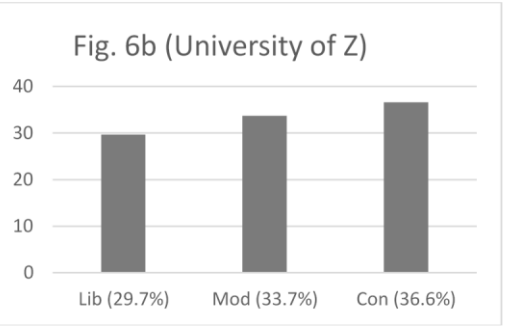


In Figure 6a and 6b, we show the distributions of parental political orientations. Unlike their children, parents of students at the universities of X and Z seem to be more conservative, and the liberal parents are the smallest group. In addition, we can clearly observe that parents in the red state of Arkansas are more conservative (52.1%) than those in the blue state of Illinois (36.6%). data is 94, and the survey was conducted in 2016. It is interesting to observe that the distribution of the students' liberal-conservative orientations at the universities of X and Z (as shown in Figure 3) is consistent with the same age group in the U.S. student population.[10] Interestingly, the trendlines seem to suggest that the distribution of liberal-conservative orientations (measured by a 7-point Likert scale) among the 18-22 year olds in the U.S. student population approximates the normal curve.

[10] In analysis not shown here, we conducted a chi-square test to compare the ANES and GSS data for the 18-22 year olds. We have found that there is no a statistically significant difference between the two datasets, implying that both institutions have produced similar datasets. However, we could not compare our own data with the ANES and GSS datasets since they, due to sample size differences, are not comparable.

Figures 6a & 6 b: Parental Liberal-Conservatism at U. of X and U. of Z





Model Estimation and Analysis

We relied on a cross-sectional research design and ordinary least squares (OLS) estimators to test the impact of socialization on college students' liberal-conservative orientations. Models 1 through 3, in Table 1, deal with analyses of students' liberal-conservative orientations at University of X. In Model 1, we show the impact of parents' political orientation on students' liberal-conservative values. Both parents' political orientations have a positively significant impact on students' political orientation. That is, more conservative parents tend to have more conservative children. Similarly, more liberal parents tend to have more liberal children.[11] However, the slope coefficients suggest that mothers tend to have a greater impact on their children's liberal-conservatism than do fathers. Specifically, for every 1 point of mothers' conservatism, their children seem to gain 0.40 points of conservatism. And for every 1 point of

[11] In an analysis not shown here, we also checked whether both parents' sharing same political orientations has any more effect on students' liberal-conservative values. When we included this variable with the separate parental variables in a model, it became significant but it only added 1% to the variance explained in students' liberal-conservative orientations. In addition, the variance that this variable added to the model is much smaller than what was explained by each of the separate parental variables or that was explained by both parental variables. We also combined the fathers' and mothers' political orientation data and created one index of family political values and correlated it with students' liberal-conservative orientations. However, this variable did not have a higher correlation with students' liberal-conservatism than the separate or additive family political orientation data.

fathers' conservatism, their children tend to gain 0.26 points of conservatism. The variance (r-squared) explaining Model 1 is 0.37.

In Model 2, we added the in-school- and out-of-school environment variables with parental political orientations. Parental political orientations are still significant at the 0.05 level. In addition, the in-school environment variable is negatively related to University of X students' liberal-conservative values. In other words, in-school variables tend to make students more liberal at this university. On the other hand, we did not find a positive and a statistically significant relationship between out-of-school environment and students' liberal-conservatism at University of X.[12] The variance explained in Model 2 is 0.50.

Table 1- OLS Estimates for the Data of Each University

	University of X			**University of Z**		
	Mod. 1	Mod. 2	Mod. **3**	Mod. **4**	Mod. **5**	Mod. **6**
Intercept	0.99**	1.16**	0.07	1.14**	1.24**	1.23**
	(0.26)	(0.24)	(0.40)	(0.30)	(0.30)	(0.36)
Father PO	0.26**	0.29**	0.28**	0.15**	0.15**	0.16**
	(0.05)	(0.05)	(0.05)	(0.06)	(0.06)	(0.06)
Mother PO	0.40**	0.40**	0.35**	0.48**	0.49**	0.44**
	(0.05)	(0.05)	(0.05)	(0.06)	(0.06)	(0.06)
School Inf**l**		-1.79**	-1.53**		-0.44	-0.002
		(0.29)	(0.30)		(0.35)	(0.39)
Outside Inf**l**		-0.10	0.001		-0.51	-0.87**
		(0.27)	(0.27)		(0.33)	(0.38)
Age 18			0.78**			0.26
			(0.33)			(0.38)
Religiosity			0.17**			0.13**
			(0.02)			(0.04)
Pol Sci			-0.19			-.017
			(0.41)			(0.27)
City Size			0.006			0.001
			(0.006)			(0.001)
Low Inc			-0.23			-0.84**
			(0.32)			(0.32)
N	416	416	348	255	255	206
R^2	0.37	0.50	0.58	0.36	0.39	0.41

Dependent variable is student liberalism-conservatism
* p< 0.10, ** p< 0.05

[12] Given that the out-of-school environment variable may include influence from religiosity, in analysis not shown here, we omitted the latter in Models 3 and 4 but the out-of-school environment variable was still insignificant.

In Model 3, we show the best fitting model explaining students' liberal-conservative orientations at University of X. That is, we chose the socialization variables and the five control variables that were (in an analysis not shown here) statistically significant.[13] All of the variables, with the exception of out-of-school environment, majoring in political science, city-size, and low-income family, are statistically significant. The variance explained in this model is 0.58.

We analyzed students' political orientations at University of Z from Models 4 through 6 in Table 1. In Model 4, we show parental influence on students' liberal-conservative orientation. The parental variables are both statistically significant. As in the case of University of X, the slope coefficients suggest that mothers at University of Z tend to have a greater impact on their children's liberal-conservatism than do fathers. In Model 5, we added the in-school- and out-of-school environment variables to parental influences, but, although the first variable showed sign in the expected direction, they were not statistically significant.

Finally, in Model 6 we show the influence of the socialization variables and the five significant controls on students' liberal-conservative orientations. In addition to the parental influences, out-of-school environment, religiosity, and coming from low-income family were statistically significant. Interestingly, the out-of-school environment variable also became significant, but it is inversely related to student conservatism. The in-school environment variable as well as the age, political science, and city size controls, were not significant, however. Why in-school environment was significant at University of X but not at University of Z is not clear.

In Table 2, we combined the data we collected at the universities of X and Z and analyzed students' liberal-conservative orientations. The results are, for the most part, similar to the separate analyses that we have shown for the two universities in Table 1. In Model 1, we tested parental political influence on students' political orientations. Both parental variables are

[13] For the sake of simplicity and clarity, we have not included the control variables that failed to show significance in our models. In Table 1, these variables are major fields of study other than political science, GPA, credit hours, gender, ethnic White, ethnic Black, and high-income family. In the combined data, Table 2, high-income family is included in the model since it, in an analysis not shown here, became significant when all variables were included.

statistically significant.[14] Again, the slope coefficients suggest that mothers have a greater impact on students' liberal-conservatism than do fathers. The

Table 2- OLS Estimates for the Combined Data of the Two Universities

	Mod. 1	Mod. 2	Mod. 3	Mod. 4	Mod. 5
Intercept	1.03**	1.17**	0.67**	4.28**	1.15**
	(0.19)	(0.18)	(0.33)	(0.11)	(0.19)
Father PO	0.22**	0.22**	0.19**		0.23**
	(0.04)	(0.04)	(0.04)		(0.04)
Mother PO	0.44**	0.45**	0.40**		0.44**
	(0.04)	(0.04)	(0.04)		(0.04)
School Infl		-1.25**	-0.89**		-1.24**
		(0.22)	(0.25)		(0.22)
Outside Infl		-0.30	-0.34		-0.31
		(0.21)	(0.23)		(0.21)
Age 18			0.41		
			(0.26)		
Religiosity			0.16**		
			(0.02)		
Poli Sci			0.14		
			(0.40)		
City Size			0.001		
			(0.001)		
Low Inc			-0.38**		
			(0.22)		
High Inc			0.29**		
			(0.14)		
Regional Cntrl				0.50**	0.10
				(0.13)	(0.12)
N	672	672	502	888	669
R^2	0.38	0.46	0.53	0.02	0.46

Dependent variable is student liberalism-conservatism
* p<0.10, ** p<0.05,

[14] Interestingly, students who participated in our survey claimed that they rarely talked about politics at home. Specifically, 64.3% of them said that they discussed politics only "sometimes" and about 12.4% stated that they "never" talked about politics. Only 6.6% of students said that they talked about politics frequently.

variance explained in this model, with N = 672, is 0.38. We added the in-school- and out-of-school environment variables in Model 2. The only variable that is not significant is out-of-school environment.

We show the best fitting model explaining students' liberal-conservative orientations in Model 3. This model includes six control variables (age, religiosity, majoring in political science, city size, low-income family, and high-income family) that became, in an analysis not shown here, significant when we had all the control variables with the socialization variables. The socialization variables, with the exception of out-of-school environment, are statistically significant. Among the control variables, religiosity, high-income family, and low-income family are statistically significant. The latter variable is significant at the 0.10 level. In Model 4, we tested to find out if regional variation influences students' liberal-conservatism. This variable is significant, but the variance it explained is only 0.02. A similar procedure we used, t-test (not shown here), also indicated statistical significance, and the means of students' political orientations at universities of X and Z were 4.78 and 4.28 points (out of 9), respectively. In other words, students at University of X in the red-state of Arkansas, as we have expected, tend to be more conservative than those at the University of Z in the blue-state of Illinois. We also included the socialization variables with our regional control in Model 5. However, the regional control variable became statistically insignificant. The out-of-school environments variable was also not significant.

In sum, the results in Table 2 suggest that whereas parental variables seem to influence conservatism, the in-school environment variable tends to have some impact on students' liberalism. The out-of-school environment variable, on the other hand, seems to have some impact on students' values only at the University of Z, and it tends to show negative signs in all but one

model in Table 1 and 2, which is inconsistent with our hypothesis. Religiosity seems, however, to influence liberal-conservatism.[15], [16]

College Students' Liberal-Conservative Orientations, Party Identifications, and Issues

Studies about liberal-conservatism rarely avoid the discussion of how party identification and issues positions affect the former variable. For instance, it is widely believed that liberal-conservative orientation and party identification are related (see also Converse, 1975; Holm & Robinson, 1978; Levitin and Miller, 1979; Robinson and Fleishman, 1988; Alwin and Krosnick, 1991; Hanson et al., 2012). Specifically, many scholars have argued that both variables help citizens to understand the complexity of politics (Conover and Feldman, 1981; Niemi and Jennings, 1991). Both variables are also assumed to impact the voting behavior of citizens (Holm and Robinson, 1978). And both variables are influenced by same factors like family and family status (Holm and Robinson, 1978, p. 242). Despite the close relationship between liberal-conservatism and party identification, the two concepts seem to be distinct. For instance, Holm and Robinson (1978, p. 242) contend that the two variables are closely associated dimensions of the more general concept, political orientation. On the other hand, Fleishman (1986) has contended that party identification influences liberal-conservative self-identification. However, Levitin and Miller (1979) have argued that the causal arrow between the two variables could go from liberal-conservatism to party identification. And according to Nie, Verba, and Petrocik (1976, p. 50), the two variables do not necessarily move in tandem: while party

[15] One of our survey questions asked students whether their liberal-conservative values were influenced by neither of their parents' political orientations. We were quite surprised to observe that out of 889 students, 303 of them (or 33.9% of the total number of cases) answered positive to the foregoing question. Consequently, we felt that understanding the characteristics of such students would enhance our knowledge of political value formation. As a result, in analyses not shown here, we conducted a number of correlation and regression analyses among the full range of our variables and chose the ones that significantly affected student and parental political dissimilarities. Subsequently, we were able to identify three such variables - student liberalism, student moderatism, and forming political values after the age of 18. The variance explained in the dependent variable by the three variables is, however, only 0.13.

[16] We also conducted multinomial logistic regression analyses using the ordinal-level data of our students' political orientations (liberals [1, 0], moderates [1, 0], and conservatives [1, 0]). The results are strongly consistent with our ordinary least squares (OLS) findings.

identification is on the decline in the U.S., the liberal-conservative orientation has increased from the 1950s to the 1970s.[17]

Many scholars also seem to agree about the existence of a correlation between students' liberal-conservatism and issue positions. However, there is no consensus among scholars on the causal relationship between the two variables. For instance, Robinson and Fleishman (1984, p. 54; see also Bailey and Williams, 2016) have contended that ideology [political orientation] shapes and informs individuals' positions on issues.[18] Other scholars, however, do not consider issues (or political attitudes) as independent entities but as facets or dimensions of liberal-conservative political orientation or ideology (Nie, Verba, and Petrocik, 1976; Lorence and Mortimer, 1979, p. 659; Niemi and Jennings, 1991; Dey, 1997; Jost et al., 2009).

Given the foregoing differences among scholars, our analyses in this paper are limited to only showing correlational relationships among liberal-conservatism, party identification, and issue positions. We measured party identification by the standard 7-point scale. Specifically, we asked students to place themselves into one of the following categories: "strong Democrat," "weak Democrat," "independent-leaning Democrat," "independent," "independent-leaning Republican," "weak Republican," and "strong Republican." We also had a survey question that enabled us to specify party identification as a nominal variable (ex: Democrat, Republican, and Independent). We specified issues by survey questions pertaining to students' positions on LGBT rights, abortion, and welfare entitlements.

In Table 3, we show that students' liberal-conservatism and their party identifications are highly correlated ($r = 0.80$).[19] We also found that the correlations between students' liberal-conservatism and student support for

[17] Bartels (2000), however, seems to suggest that while party affiliation may have declined among non-voters in the U.S., it has increased among voters since the 1970s.

[18] Robinson and Fleishman (1984, p. 55), however, add that individuals tend to be inconsistent with their issue positions and ideological leanings, and that the correlation between the two variables is low.

[19] Interestingly, in an analysis not shown here, we have found that regional variation tends to have a greater influence on students' party affiliations (r-squared = 0.06) than on their political orientations (r-squared = 0.02). Similarly, students at the University of X in the red state of Arkansas tend, on average, to be closely affiliated to the Republican Party while those at the University of Z in the blue state of Illinois claim, on average, to be more of independents.

LGBT rights, abortion, and welfare are moderate (r = -0.61, -0.63, -0.53, respectively). Students' party identification and support for these issues are also moderately correlated (r = -0.51, -0.51, -0.50, respectively).[20],[21]

Table 3- Correlation Matrix: Student Liberal-Conservatism, Party ID, and Issue Positions

	Student PO	Student Party ID	LGBT Support	Abortion Support	Welfare Support
Student PO	1				
Student Party	0.80**	1			
LGBT Support	-0.61**	-0.51**	1		
Abortion Support	-0.63**	-0.51**	0.57**	1	
Welfare Support	-0.53	-0.50**	0.29**	0.29**	1

** p< 0.01; N= 396

Discussion Of Results

We found evidence that the family is the most important determinant of students' political orientation at the universities of X and Z. However, as the slope coefficients consistently showed, mothers tended to have a greater impact on students' liberal-conservatism than did fathers. It is argued, for instance, that mothers tend to do better than fathers in communicating politics with their children more frequently (Acock and Bengtson, 1978, p. 529) and more openly (Shulman and DeAndrea (2014, p. 402). We also found that in-school environment seemed to have some influence on students' liberalism at the University of X. The same was also true for University of Z but only when the data for the two universities were combined. The foregoing suggests that in-school environment may have more influence on the political orientation of students at the University of X than at the University of Z. In general, parents seem to play a significant role in their children's adoption of political identity in line with their own. On the

[20] In analyses not shown here, we also found that the correlations between fathers' liberal-conservatism and their support for LGBT rights and abortion are lower (r = -0.45 and -0.52) than those of their children. The same was the case with mothers (r = -0.45 and -0.46).

[21] Our correlational analyses do not seem to support Bailey and Williams's (2016) findings that more conservative students tend to have more liberal or less conservative values on social policies.

other hand, the influence of in-school environment tended to make students more liberal. However, the overall impact of the out-of-school environment, if any, did not seem to be to make students more conservative, as we hypothesized. One explanation for the foregoing anomaly could be that the out-of-school environment may consist of attributes that do not necessarily affect students' liberal-conservatism in only one direction. For instance, whereas the liberal media and peers may have a positive impact on students' liberalism, the church and the conservative media may have a positive influence on student's conservatism. Hence, untangling this variable into its specific attributes may potentially lead to more accurate results.

Interestingly, regional variation had some but only weak impact on students' political orientations in the red state of Arkansas and the blue state of Illinois. We are not certain why. It could be the case, however, that the digital-age may have afforded undergraduate students at the U.S. universities to have an equal or nearly equal access to national (or global) political news, events, and issues, thereby, possibly shaping their political orientations more similarly.

Control variables that showed consistent significance include forming political values by the age of 18, religiosity, coming from high-income family, and coming from low-income family. The first three variables seemed to impact students' conservatism, while the last was associated with liberalism.

In addition, we showed some evidence that our students were more moderate and liberal than their parents. Our findings support that of Dodson's (2014) work and suggest that instead of just "liberalizing [as much of previous studies has contended]," a majority of students seems to have actually become more moderate than liberal. In fact, even parents of students at the universities of X and Z were, as Figures 6a and 6b suggest, more moderate than liberal.[22] Given the above observations, we can only suggest

[22] In analyses not shown here, we also found that liberal and conservative students at the universities of X and Z and their parents tend to be more supportive or critical, respectively, of the LGBT and abortion issues than are their moderate counterparts. For instance, the correlation of liberal, conservative, and moderate students and their support for the LGBT are 0.47, -0.48, and -0.03, respectively. For the abortion issue, the correlations for these groups are 0.50, -0.41, and -0.14, respectively. Put differently, moderates as a group are on average less likely to hold antagonistic and diametrically opposite views when dealing with such issues than are liberals and conservatives.

that scholars take "moderatism" seriously and study why many individuals are increasingly becoming so.[23]

Finally, our data suggested that students' liberal-conservatism and party identifications are highly correlated. We also showed that students' liberal-conservatism and party identification are moderately correlated with their issue positions.

Limitations of this Study

Although our findings about students' liberal-conservative orientations seem to be consistent with what we have observed in sample groups surveyed in the ANES and the GSS, a study that deals with more than two universities and over a long period of time will likely lead to more accurate and generalizable results. In addition, surveys that directly ask parents about their political values will likely yield more accurate findings. Finally, a study that specifies in-school environment and out-of-school environment with specific attributes (ex: teachers, books, peers, and the media) rather than one with broad categories like ours may potentially measure more accurate impacts on students' political orientations.

Conclusion

Relying on a sample data of up to 889 students and a cross-sectional research design with OLS estimators, we found evidence that the family is the most important determinant of students' political orientations at the universities of X and Z. However, as the slope coefficients consistently showed, mothers tended to have a greater impact on students' liberal-conservatism than did fathers. We also found that in-school environment seemed to have some influence on students' liberalism at University of X as well as at universities of X and Z when the data were analyzed together. In contrast, impact of the out-of-school environment variable on students' liberal-conservative orientations at the universities of X and Z, if any, is not clear. Lastly, regional variation seems to have some but weak influence on students' liberal-conservatism. A notable finding and contribution of this paper is that instead of just "liberalizing [as previous studies have

[23] Although they have not suggested to take "moderatism" seriously as we do here, several scholars have observed that moderates are the largest category (see Downs, 1957; Klingemann, 1972; Nie et al., 1979; Ladd, 1981; Robinson & Fleishman, 1984; Dey, 1997; Mariani & Hewitt, 2008).

contended],” a majority of students seems to have actually become more moderate than liberal.

Appendix A: Political Orientation Survey Instrument

1. Generally speaking, what is your political orientation?
   a. Liberal b. Moderate c. Conservative d. None of the above e. I don't know
2. More specifically, what do you consider yourself?
   a. Extremely Liberal b. Very liberal c. liberal d. Left-leaning moderate. e. Moderate f. Right-leaning moderate g. Conservative h. Very conservative i. Extremely Conservative j. None of the above k. I don't know
   b. How old were you when you first held your political orientation? _____
4. Which of your parents has influenced your political orientation?
   a. Father b. Mother c. Both d. Neither
5. If you answer "Neither" in Question # 4, do you think your in-school experiences (ex: teachers, students, books) have any influence on your political orientation? Yes_____ No_____
6. If you answer "Neither" in Question # 4, do you think out-of-school experiences (ex: church, media, neighbors, elders) have any influence on your political orientation? Yes_____ No_____
7. With respect to the LGBT (Lesbian, Gay, Bisexual, and Transgender) group, what is your position?
   a. Support/accept b. Tolerate/can live with c. Don't support/accept
8. With respect to abortion, what is your position?
   a. Support b. Tolerate/can live with c. Don't support
9. What is your position with respect to the government's social welfare policy of helping the poor?
   a. Support b. Tolerate/can live with c. Don't support
10. Generally speaking, what is your father's political orientation?
    a. Liberal b. Moderate c. Conservative d. None of the above e. I don't know
11. More specifically, what does your father consider himself?
    a. Extremely Liberal b. Very liberal c. liberal d. Left-leaning moderate. e. Moderate f. Right-leaning moderate g. Conservative h. Very conservative i. Extremely Conservative j. None of the above k. I don't know
12. Generally speaking, what is your mother's political orientation?
    a. Liberal b. Moderate c. Conservative d. None of the above e. I don't know
13. More specifically, what does your mother consider herself?
    a. Extremely Liberal b. Very liberal c. liberal d. Left-leaning moderate. e. Moderate f. Right-leaning moderate g. Conservative h. Very conservative i. Extremely Conservative j. None of the above k. I don't know

14. With respect to the LGBT (Lesbian, Gay, Bisexual, and Transgender) group, what is your father's position?
    a. Support/accept b. Tolerate/can live with c. Don't support/accept d. Don't know
15. With respect to abortion, what is your father's position?
    a. Support b. Tolerate/can live with c. Don't support d. Don't know

16. With respect to the LGBT (Lesbian, Gay, Bisexual, and Transgender) group, what is mother's position?
    a. Support/accept b. Tolerate/can live with c. Don't support/accept d. Don't know
17. With respect abortion, what is your mother's position?
    a. Support b. Tolerate/can live with c. Don't support d. Don't know
18. Do you consider yourself a (an) _____?
    a. Democrat b. Republican c. Independent d. None of the above e. I don't know
19. More specifically, what do you consider yourself?
    a. Strong Democrat b. Weak Democrat c. Independent-leaning Democrat d. Independent e. Independent-leaning Republican f. Weak Republican g. Strong Republican h. Don't know
20. Does your father consider himself a (an) _____?
    a. Democrat b. Republican c. Independent d. None of the above e. I don't know
21. Does your mother consider herself a (an) _____?
    a. Democrat b. Republican c. Independent d. None of the above e. I don't know
22. How often did your family discuss politics at home as you grew up?
    a. Always b. Most of the time c. Sometimes d. Never
23. How many times, if at all, do you go to church (synagogue or mosque) in a month? _____
24. What is your major? _____
25. What is your GPA? _____
26. How many credit hours have you accumulated including this semester? _____
27. What is your gender? _____
28. Do your parents live together? Yes_____ No_____
29. Where do your parents live? City: _____ State:_____
30. What is your ethnicity? a. White American b. Hispanic American c. African American
    d. Asian American e. Native American f. Other_____
31. What is your parents' estimated combined annual income or salary?
    a. Less than $40,000 b. $40,000-80,000 c. Greater than $80,000 d. I don't know

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Quality and Quantity: Government Quality, Capitalist Peace, and Dispute Escalation

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In the current literature examining factors that mitigate international conflict, two theories are rising in popularity: capitalist peace and quality of governance. Both theories fit within the broader paradigm of liberalism, yet there is a lack of works that connect the two in one theoretical framework. Moreover, most capitalist peace works and quality of governance research only analyze escalation in terms of militarized interstate dispute onset or war onset. To add to the conflict literature, we examine cases of displays of force and how often uses of force occur between these states within five years. Following the Steps-to-War approach, we argue that actually using force rather than threatening or displaying it is a critical break in relations that is not fully explored. As such, this research helps fill a missing gap within the process of war conflict model. Examining executive corruption, political corruption, property right protections, state transparency, and contract intensity from 1945 to 2005, we find moderate support that capitalism and government quality minimize interstate escalation towards uses of force after displays of force.

Due to recent conflict escalation studies, theoretical innovations in conflict processes better explain what causes states to escalate to conflict or war. Notably, Senese and Vasquez (2008) present a model on the Steps-to-War, the actions states take over time towards war given that war does not occur automatically. Examining the saliency of territorial issues as well as power politics variables such as rivalries and arms races, Senese and Vasquez (2008) present a realist path to war. Under this paradigm, dyadic variables such as relative power, contiguity, rivalry, major power presence, and regime type explain under what conditions international conflict or war will occur. Rather than emphasize these realist variables in explaining international conflict, we add to the conflict literature by employing a steps-to-war approach to see if variables neoliberals identify as producing peace reduce escalation or explain under what conditions international conflict is

likely to erupt.

The neoliberal variables we examine in this research derive from two rising neoliberal theories of international conflict and cooperation: capitalist peace and quality of governance. Scholars in both the capitalist peace (Gartzke 2007; Gartzke, Li, and Boehmer 2001; McDonald 2007, 2009, 2010; Mousseau 2000, 2009, 2010, 2013) and quality of governance (Bell 2013; Teorell 2015) paradigms offer supporting evidence that free markets, economic development, contract economies, property rights, and government and bureaucracy quality reduce dispute occurrence. Despite both literatures representing new neoliberal theories on when international conflict is likely to occur, they are not fully theoretically connected in current works. To help connect these two literatures, we present a theoretical framework which combines capitalist peace and quality of governance arguments. Additionally, while researchers examine these variables on conflict or war onset, most neglect dispute escalation. To fill this gap, we explore if and when these neoliberal characteristics reduce the likelihood of escalation within militarized interstate disputes (MIDs) using a steps-to-war process.

To do this, we examine MID hostility levels and analyze how executive corruption, political corruption, state transparency, property rights protection, and contract intensity affect escalation from displays of force to uses of force. While states are able to ignore, or tactfully respond to lower levels of hostilities such as verbal threats, displays of force represent a more tangible threat. Once a point is reached where there is a utilization of a display of force, the stakes have been raised. In other words, we surmise that actions taken by either state carry substantially greater weight as the potential of real violence looms on the horizon. As such, it is more likely for displays of force to escalate to uses of force or even war. Thus, we explore what neoliberal factors lead some dyads to retreat from full-scale conflict and what warning signs the world could be looking for today that indicate whether hostility levels will continue to rise. A focus on displays of force to uses of force within MIDs may reveal these indicators. As such, it is worthwhile to determine if capitalist peace and quality of governance variables found to reduce MID onset produce similar peaceful effects in dyads currently embroiled in a MID. This research, then, is also beneficial for explaining under what conditions dispute escalation is likely to occur and what this means for states who wish to prevent escalation.

We begin our research with an overview of the rising neoliberal capitalist peace and quality of governance research within the conflict

literature. We then present our theoretical framework on capitalist and governmental quality traits and their hypothesized ability to mitigate dispute escalation and the steps states take towards war. After presenting our results from multivariate logistic regressions examining dyad-years with MIDs with a display of force from 1945-2005, we conclude that capitalist peace and quality of governance theories are complementary to traditional liberal theories such as the democratic peace in mitigating international dispute escalation. In other words, we argue that states which engage in policy or behavior that increases government quality and strengthens capitalism are able to prevent dispute escalation even if they are unable or unwilling to democratize.

Paths to War

According to realism, international conflict and war emerges due to states' desire for relative gains and power, power which will in turn grant them security and survival (Keohane 1986). For classical realists such as Morgenthau (1967), this desire for power is innate as states have an inherent lust for it. For neorealists today, this desire for power is not due to human nature, but attributed to the anarchic structure of the international system. With anarchy, states live in a self-help world with no one to protect them and their place in the international system. Consequently, states are forced to compete with one another over the balance of power to defend themselves and ensure their survival, making it unclear would win a war (Waltz 1979). Due to this uncertainty, power parity states are risk-averse from warring each other. If one state were to become more powerful, others would balance against it to restore the balance of power (Waltz 1979). Opposing balance of power theorists and power preponderance theorists who argue that parity deters war, power transition theory contends that when parity *and* revisionism are present, war will occur (Organski 1958; Organski and Kugler 1980). With parity, the challenger state dissatisfied with the status quo can match power relative to a dominant power and initiate war. From this perspective, power parity coupled with a revisionist state, increases the likelihood of war. While there is debate whether it is parity or preponderance which conditions war, empirical evidence shows power parity is a strong predictor for conflict and escalation to war (Geller 1993; Houweling and Siccama 1988; Huth 1988; Moul 1988, 2003).

In addition to power, the international conflict literature points to several other dyadic variables which explain conflict and war. First, states that are contiguous are much more likely to engage in conflict because

proximate states interact more and increase the chance of escalating disputes (Bremer 1992; Rasler and Thompson 2006; Senese 2005; Senese and Vasquez 2003). Also, problems that are at a state's doorstep are more salient than problems far away, and the costs of fighting a contiguous state are often lower than the costs of fighting a distant state. It is worth noting, however, that while Rasler and Thompson (2006) found that contiguity is positively and significantly correlated with MID and war onset, Senese and Vasquez (2003) and Senese (2005) found that contiguity is negatively correlated with MID escalation to war. Second, rivalries, particularly enduring rivalries, are more likely to engage in international conflict than allies or non-rivalrous dyads (Colaresi and Thompson 2002; Rasler and Thompson 2000; Rider, Findley, and Diehl 2011; Senese and Vasquez 2008; Vasquez 1996). Third, recognized by several (Ben-Yehuda 2004; Rasler and Thompson 2006; Senese 2005; Senese and Vasquez 2003; Vasquez and Henehan 2001; Wiegand 2011) as one of the most, if not the most, salient issue that leads to escalation, territorial issues have repeatedly been found to positively correlate with MID escalation (Rasler and Thompson 2006; Senese and Vasquez 2003; Senese 2005; Vasquez and Henehan 2001). Regime type is also often a common predictor for international conflict. While dyadic democracy, as explained shortly, is argued to mitigate MID and war onset, Senese (1997) finds evidence that dyadic democracy is positive and significant with escalation of disputes already in progress. Thus, while evidence supports that dyadic democracies are not positively correlated with MID or war onset, there is some evidence that dyadic democracy is positive with escalation within MIDs. With mixed-dyads and dyadic autocracies, however, evidence shows that international conflict is much more likely to occur (Bremer 1992). Finally, the presence of a major power in the dyad increases conflict and war onset as major powers are more likely to get involved in conflicts than minor powers (Bremer 1992).

Given these enabling variables of conflict and war, neoliberals quest for ways to mitigate the horrors of war. Opposing realism and its sole focus on states' goals of maximizing relative gains, liberalism theorizes that while international conflict can occur, international cooperation is much more likely once other actors and institutions are considered. To liberals, states care about absolute gains and are not the only unitary actors in the international system. Because states interact with actors such as international organizations, nongovernmental organizations, and individuals daily and use these actors to communicate with other states, liberals argue they should be included in analyses of international state behavior (Russett and Oneal 2001). Also, while realists find their roots in Thucydides', Hobbes' and

Morgenthau's theories on how states are naturally conflictual, liberals trace their ideas back to Immanuel Kant and his theory of perpetual peace. Framing Kant's theory, Russett and Oneal (2001) construct the Kantian Triangle: the theory that international organizations, economic interdependence, and democracy pacifies interstate relations. By being part of the same organizations, the theory claims, states share similar interests with each other and are unlikely to war each other. International organizations can also act as mediators in disputes between states; enforce punishment on states who violate international law, consequently disincentivizing states from using future force; and help create international norms where shared understandings of behavior deter conflict (Russett and Oneal 2001). States that are economically dependent upon one another are also less likely to war as they rely on each other for goods and services. And when both states in a dispute are democratic, liberals theorize that war is unlikely as democracies do not fight each other.

The empirical evidence on these components of the Kantian Triangle support the theory as studies find that trade interdependence (Oneal, Oneal, Maoz, & Russett 1996; Oneal & Russett 1997, 1999a; Reed 2003), shared international organization membership (Oneal and Russett 2001), and dyadic democracy (Bremer 1993; Dafoe, Oneal, and Russett 2013; Maoz and Abdolali 1989; Maoz and Russett 1993; Oneal, Oneal, Maoz, and Russett 1996; Oneal and Russett 1997) have significant, substantive, and negative effects on international conflict and war occurrence. Of the three Kantian Triangle components, the dominant theorized liberal path to peace is the democratic peace, and its findings are so robust that Levy (1988) claims it is a near empirical law.[1] Yet, there is disagreement regarding the theory underlying the empirical finding. Scholars favoring a structural theory argue that democratic peace is due to the institutional constraints democracies face on using force (Bueno de Mesquita and Lalman 1992). Because democratic leaders have to obtain approval and support from other government officials and from the electorate, the institution of democracy itself constrains leaders' ability to decide to go to war. On the other hand, scholars favoring a normative theory argue that shared cultural values deter democracies from using force against each other (Dixon 1994; Maoz and Russett 1993).

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1. As discussed earlier, however, Senese (1997) finds that dyadic democracies are significant and positively related with escalation within MIDs. Using bivariate and multivariate regressions and examining both ordinal and binary versions of variables, Senese (1997) continuously finds that joint democracy has a positive and significant effect on MID escalation.

Recently, however, the democratic peace faces criticism from other neoliberal scholars favoring a capitalist peace theory (Choi 2011; Gartzke 2007; Teorell 2015). Challenging the idea that it is democratic institutions or democratic norms that cause the pacifying effect of certain dyads, newer studies argue that capitalist norms and economic explanations drive the peace. At the foundation of capitalist peace is the idea that liberal economic factors have a greater ability to reduce the probability of interstate conflict than democratic characteristics or trade interdependence (Gartzke 2007; Gartzke, Li, & Boehmer 2001; McDonald 2010; Mousseau 2000, 2009, 2010, 2013). Incorporating financial openness, economic development, and shared policy interests into analyses, Gartzke (2007) finds that joint democracy loses significance in regressions looking at MID occurrence. Examining contract-intensive economies, Mousseau (2000, 2009, 2010, 2013) concludes that while democratic peace and capitalist peace are not mutually exclusive, capitalist peace displaces democratic peace as the former has a stronger effect on peace than the latter. Rather than democracy being the sole motivating factor for peace, Mousseau (2009, 2013) claims it is contract-intensive economies that foster democracy in the first place and create the capitalist norm of nonviolent interstate conflict resolution. In fact, once contract-intensive economies are included in statistical analyses, democracy is no longer significant and shows little correlation with peace in analyses on wars, MIDs, and crises (Mousseau 2013).

Also advocating that capitalism is a stronger prescription for peace than democracy, McDonald (2009, 2010) focuses on the distribution of property within states. McDonald (2009) finds that states with more public property, or a command economy, are more prone to conflict. Alternatively, states that promote private property ownership, or a competitive market economy, are associated with peace. Building off of that work, McDonald (2010) discovers that the more public property a state owns, the more likely it is to be the target of a MID due to the commitment problems that high public property ownership creates.

While not claiming to be an alternative to the democratic peace or capitalist peace theories, there is also a growing literature examining quality of governance indicators and their effect on international conflict. Contrary to what might be expected, Finel and Lord (1999) conclude in their case studies of international crises that the more transparent a state is, the more likely a crisis will be exacerbated. In their study, transparency is calculated in an index that considers how much competition over ideas occurs in a state, how much control a state has over the flow of information, and how much

and how often states release information to the public. Measuring transparency differently by looking at media freedom and foreign journalists' access to information, Bell (2013) finds statistically significant evidence that the more transparent a state is, the less likely it is to initiate a MID. This finding remains significant even when controlling for democracy. Neither of these two studies investigate the effect of transparency on conflict escalation, but they do show that the effect of transparency on conflict in general is unclear. Additionally, using a quality of government variable that measures government corruption, bureaucracy quality, and strength of a state's rule of law, Teorell (2015) finds that the impact of government quality on peace is nearly equal to the significant impact of democracy on peace. The findings hold even when including Mousseau's (2013) data on contract-intensive economies.

Reviewing the various literatures analyzing what factors mitigate international conflict and war, we find several gaps that our research hopes to fill. First, in the literatures on capitalist peace and quality of government variables and their influence on interstate conflict, we notice that there is a lack of studies examining these variables on escalation. Few studies incorporate escalation within militarized disputes, for most studies examine MID occurrence or war onset. While MID and war onset are arguably forms of escalation as states choose to escalate tensions to the level of a MID or to war, no study has analyzed the impact of numerous capitalist and liberal peace variables or quality of government variables on escalation within militarized disputes. By using a steps-to-war approach and examining escalation from displays of force to actual uses of force, we hope to provide clearer insight into how certain capitalist peace and quality of government ideas influence dyadic behavior within MIDs.

Second, we hope to provide a clearer theoretical and empirical connection between the recently developed liberal peace theories of capitalist peace and quality of government. Both are theoretically and empirically argued to mitigate international conflict, yet no studies as of yet fully incorporate both literatures into one analysis and one theoretical framework. Moreover, capitalist peace scholars argue that it is a stronger liberal theory for peace than the democratic peace. By including capitalist peace and quality of government variables in our theory and analyses, we hope to provide a clear connection between these recent liberal peace theories and their impact on dispute escalation.

Steps-to-War, Capitalist Peace, and Quality of Governance

When states disagree, military force is one of the many tools that can be used to resolve the dispute. States can threaten to use military force, display force, or actually use force to shape how the other state(s) will respond to the disagreement. However, because military force is costly, states usually do not initially engage in an act of using force. Often states first threaten or display force before they use it in order to indicate a high level of resolve or dissatisfaction over the issue at hand. If the conflict remains unresolved, the use of military force becomes a distinct possibility. If force is used, this is known as conflict escalation. It is a significant change in a relationship between states and their likelihood to engage in violent conflict. According to Brecher (1996), it can manifest itself in three distinct ways: 1) a change from a non-threatening relationship to a threatening, 2) from non-violent threats to violent action, or 3) from low-level violence to severe violence.

The steps-to-war escalation model suggests that states follow a pattern of low-level conflict that includes threats and displays of force for some indeterminate time until a shift in pattern occurs which entails low uses of force and then potentially war. Low-level displays of force can include mobilization of forces, re-enforcing borders, non-violent illegal border violations, military and nuclear alerts, and shows of force (Palmer et al 2015). The steps-to-war approach is useful in that it provides researchers a tool to examine how different factors can affect conflict escalation in the future.

We argue that both capitalism and quality of government affect the probability of escalation. Capitalism is an economic system of exchange that demands the government to stay out of the exchange process while also requiring the government to be the positive force in the process by protecting property rights and contracts. Quality of government institutions and bureaucracy matter because a large efficacious bureaucracy that is oriented toward transparency and minimal corruption is necessary for a state to effectively enforce contracts and protect property. For capitalist peace and quality of government scholars, several traits often found within capitalist economies seem to affect conflict onset. Previously investigated traits include trade (Oneal, Oneal, Maoz, and Russett 1996; Oneal and Russett 1997, 1999a; Reed 2003), financial openness (Gartzke 2007), contract intensiveness (Mousseau 2009, 2013), property rights (McDonald 2007, 2009, 2010), corruption (Teorell 2015), and transparency (Bell 2013). Most of these

scholars use a rational choice cost-benefit analysis to explain why capitalist characteristics minimize the incentive for conflict onset.

Mousseau (2013) offers one of the strongest arguments to explain why joint capitalism limits dyadic conflicts. He claims that states develop either an impersonal economy in which exchange of goods and services happens between strangers, or personal economies in which exchange is based on personal relationships and trust. The impersonal economics must be contract intensive and require a strong state to enforce contracts in the place of personal trust. Among other things, these states must have a high degree of transparency, low government corruption, and consistently protect property rights. If they lack these characteristics, the states will not be a strong third-party enforcer of contracts and therefore, economic exchange becomes much riskier for all parties. If that is the case, personal economies become the better option. In fact, personal economies have been the dominant form of economic exchange throughout much of history. They are contract poor and do not require a strong state. Instead, competition for public rents as well as private associations relies heavily on making personal relationships.

This leads to what Mousseau (2013) terms the economic peace. As noted above, contract poor states do not produce public goods (impartial and efficacious bureaucracy) as often or for the same reason as contract rich states. Non-capitalist governments favor particular groups rather than remain unbiased. They produce goods and services only when it helps key groups that are essential for regime legitimacy. In these clientele, corporatist, or command economies, war can benefit the supportive interest groups of the ruling elites and this can motivate rather than disincentivize initiating or participating in a violent conflict. Thus, war can be a way for the elites to maintain political influence and power.

On the other hand, contract intensive states provide public goods that benefit society as a whole and are positive-sum in nature rather than zero-sum found in contract poor states. Capitalist states are often, but not always (e.g. Singapore), democratic and derive legitimacy from overall economic growth. They were created with a strong state apparatus for the purpose of being the unbiased third party that enforces contracts between strangers. Overall economic growth is the most important issue rather than forwarding the goals and benefits of some national or culture groups. Military conquest is costly for society as a whole and as a net negative is disincentivized. Only if bordering states do not keep their markets open (and

are thus contract poor) might capitalist states find some incentive in initiating or escalating conflict. Thus, capitalist states do not fight with each other because the states do not see their primary goal as military conquest to further specialized groups' rents but rather to help economic growth within their territories. They see their job and the other contract intensive states as referees to enforce contracts over particular territories. Because wars are costly, wars between capitalist states are rare and thus the economic cost is a greater concern for these states compared to contract poor states (Mousseau 2013). If they do have a problem, a threat or display of force acts more as a signal to other states about their resolve rather than their desire for violent conflict. If both states are capitalist, a display of force should indicate significant resolve and motivate other capitalist states to minimize the chance for military force rather than exacerbate the problem. However, non-capitalist states may be motivated to escalate the conflict depending on if key special interests who are critical supporters of the regime would benefit from increased conflict. Thus, capitalist states should be less inclined to escalate conflict to force against other capitalist states compared to contract poor states.

H1: Capitalist states are less likely to escalate a conflict with one another compared to other state pairings.

Previous work examined different characters or products associated with capitalism including contract intensiveness (Mousseau 2009; 2013) and property rights (McDonald 2007, 2009, 2010). To test these important characteristics associated with capitalism and conflict escalation, we generate two capitalist peace hypotheses.

H1a: Contract-rich dyads are less likely to escalate a conflict with one another compared to other state pairings.

H1b: Dyads in which both states have strong property rights protections are less likely to escalate a conflict with one another compared to other state pairings.

A capitalist economy needs an impartial and effective bureaucracy to enforce contracts. Furthermore, some have argued that these traits themselves reduce conflict in their own right. Teorell (2015) argues that quality of government indicators are potentially the unifying force behind both capitalist and democratic peace arguments. This includes low levels of corruption and high levels of transparency within the bureaucracy. Highly

transparent and minimally corrupt governments should decrease future escalation between dissatisfied states because it should "reduce information uncertainty … and improve their ability to credibly commit to keeping promises" (Teorell 2015, 649).

H2: High quality of government dyads are less likely to escalate a conflict with one another compared to other state pairings.

Two of the most common indicators used to test how the quality of the government affects conflict are government transparency and political corruption. Following the logic of the bargaining model of war, states should be able to more clearly create solution sets under more transparent circumstances. Peaceful solutions are preferable to all states because violent conflicts are wasteful to overall state success. Minimally corrupt states prefer to resolve disputes through non-violent methods if possible because they are governing for overall state welfare. However, states do not always know their likelihood of winning because they do not know the military capabilities and resolve of their opponent or the overall goal of the opponent (Fearon 1995). Greater government transparency would help both states effectively negotiate non-violent solutions as well as credibly commit to agreed solutions. This would help them avoid the costs associated with escalation of a conflict in the future.

Low corruption in public officials and bureaucrats for both states is also an essential element to minimize the probability of conflict escalation. Elected officials or bureaucrats who are able to embezzle or are bribable may redistribute rents to only a small portion of society rather than govern for the whole. In this case, leaders may be incentivized to escalate conflict because violent force may benefit key interest groups or actors. Considering these above conditions, we generate two quality of governance hypotheses on conflict escalation.

H2a: Highly transparent states are less likely to escalate a conflict with one another compared to other state pairings.

H2b: Minimally corrupt states are less likely to escalate a conflict with one another compared to other state pairings.

Steps-to-War Research Design

In order to test if capitalist peace and quality of governance variables reduce the likelihood of MID escalation from displays of force to uses of force, we use the latest non-directed non-violent dispute dataset (Palmer, et al. 2015). We rely on The Correlates of War's (COW) coding of MID hostility levels where 1 signifies no militarized action, 2 denotes threat of force, 3 indicates display of force, 4 represents use of force, and 5 means war. Our unit of analysis is dyad-years with a MID hostility level of 3, so our data are events-based. The initial coding of the data spans from 1945 to 2005, but some analyses are constrained by available data and the sample size decreases in models testing property rights and contract intensity. We compiled most data using NewGene (Bennett, Poast, and Stam 2017) and used Varieties of Democracy (V-Dem) (Coppedge et. al 2018), Transparency International (2015), The Heritage Foundation (2018), and Mousseau (2019) for the data for the independent variables.

To capture MID escalation, we utilize two dependent variables. The first dependent variable, escalation with reset, codes whether or not a violent MID, hostility level 4 or 5, occurs within five years of the low-level display of force dispute. Five years is also the temporal span Sense and Vasquez (2008) implement in their study of MID escalation to war. Following common practice in the conflict literature (Senese and Vasquez 2008), we dichotomize escalation. Moreover, though, we dichotomize our dependent variables because we are examining escalation from displays of force to uses of force. Since there is no middle category between these two hostility levels, we are unable to code escalation other than determining if escalation to a use of force occurred or not. Thus, if a violent MID occurs, this dependent variable coded is as a 1; otherwise 0. However, if another display of force occurs within the five years before the occurrence of a violent MID, escalation is coded as 0 for the initial display of force, and the next hostility level 3 MID is tested for five years. Following a steps-to-war approach, we hold that using military force rather than displaying it is a critical turning point in international relations. As such, if a dyad experiences a second display of force before a violent MID, this dependent variable acts as the reset to this steps-to-war process. Instead of escalating to uses of force, these dyads that are reset only use threats or displays of force in their next interaction. Therefore, to capture uninterrupted escalation to uses of force, we reset this variable when a second display of force occurs before a use of force.

Like the first dependent variable, the second, total escalation, is

dichotomous. However, it is coded as a 1 if a violent MID occurs within five years of the initial display of force, regardless of the presence of another display of force at any point in the five years. Contrary to the first dependent variable, this method measures escalation in five years between two states in its totality. Due to the dichotomous nature of our dependent variables and due to the fact we are testing numerous explanatory variables in each model, we utilize multivariate logistic regressions to test our hypotheses.

To capture capitalist peace and quality of governance variables and test our hypotheses, we utilize five different indicators of capitalism and quality of governance. Following Mousseau (2013), we use a weak-link approach where the two state scores in the dyad are compared and the weakest score is used as the result. In other words, the variables represent the least capitalistic, least transparent, or most corrupt values in the dyad. With this approach, we use the strictest test of the capitalist peace and quality of governance variables on MID escalation.[2] A more detailed methodology is outlined below for each variable.

Executive and political corruption are the first two independent variables, and both are obtained from the V-Dem dataset (Coppedge et. al 2018; McMann et. al 2016). Executive corruption captures the extent to which executives in a state partake in bribes or favors, embezzle, misappropriate public funds for private use, or perform other corrupt activities. Political corruption is the aggregate of averages of public sector, executive, legislative, and judicial corruption. Put differently, political corruption is the culmination of corruption in all government sectors and branches. The scale in both of these variables is 0 to 1, with higher scores representing higher corruption. To create a dyadic weak-link variable, the value of the state with the highest corruption score is used. Thus, scores closer to 0 reflect a minimally corrupt dyad.[3]

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[2] In the Appendix, Tables 2.1 and 3.1 provide multivariate logistic regressions utilizing binary independent variables constructed at appropriate thresholds. In this coding, a 1 indicates that both states have a strong capitalist characteristic or high quality of government. If only one or neither state has a strong capitalist characteristic or high quality of government, the variable is coded as a 0. This replicates how democratic peace variables are often measured. This seems important to also test capitalist peace this way since several scholars (Gartzke 2007; Gartzke, Li, and Boehmer 2001; McDonald 2010; Mousseau 2000, 2009, 2010, 2013) have argued that capitalist peace rival democratic peace conceptions.

[3] To construct the dyadic binary variable for both corruption variables, the cut-off point of 0.3 is used. Due to lower scores representing low corruption, a state is coded as a 1 when the executive or political corruption score is 0.3 or lower and a 0 when scores are greater than 0.3.

Supplied by Transparency International (2015), the Corruption Perceptions Index (CPI) is used as our measure for state transparency. The CPI reflects the level of a state's corruption as perceived by country analysts and surveys of businesspeople. Some ways these analyses and surveys look at corruption include misappropriations of public funds for private use, embezzlement, bribes and favors in both business and government, and laws on financial disclosures. In essence, these surveys and analyses reveal how corrupt states are perceived to be from an outsider's point of view. Thus, using CPI to determine how transparent a state is in regards to corruption levels is appropriate. The scale of this variable is 0 to 10, with higher scores representing greater transparency. As such, the value of the state with the lowest CPI is used in the dyadic weak-link measurement. Scores closer to 10, then, denotes a highly clean dyad.[4]

Next, protective property rights is obtained from The Heritage Foundation's (2018) Index of Economic Freedom. In the Index which ranges from 0 to 100 on a 10-point interval, property rights are measured as the strength of a state's laws on protecting and enforcing individuals' right to own private property. The higher the score, the more protected property rights are in the state. For the dyadic weak-link variable, the value of the state with the lowest property rights score is utilized. High values in this measure reveal that the dyad has strong property rights[5].

Finally, we employ Mousseau's (2019) Contract Intensity of National Economies (CINE) data for contract intensity. The data capture contract flows that require the state as a third-party enforcer. The data are based on life insurance premiums as they are a non-self-enforcing contract that requires the state's enforcement. As Mousseau notes, these life insurance contracts "are the least likely of all kinds of non-self-enforcing contracts to rely on personal forms of trust, including punishment for violations of trust, because the delivery of service is expected only after the death of the policy holder" (Mousseau 2019, 1). Therefore, using life insurance contracts as a measure for non-self-enforcing contract flows is fitting. A higher contract

Multiplying each state's values, we produce a dummy variable where a score of 1 means both states in the dyad have low levels of corruption.

[4] To generate the dummy variable, states with a CPI score of 8.0 or higher are coded as a 1. After multiplying the state's binary measures, a dyad with a score of 1 demonstrates higher levels of transparency while dyads with a code of 0 represent low levels of transparency.

[5]When dichotomizing the variable, we code states as a 1 if their property rights score is 70 or greater. After multiplying and creating the dyadic dummy measurement, dyads with a code of 1 reflect stronger protective property rights in both states while a code of 0 indicates weak protective property rights.

intensity score represents a contract-rich economy where a state is the third-party enforcer of contracts due to the lack of personal trust in it. Meanwhile, a lower score represents a contract-poor economy where economic exchange operates under personal trust and without a noncorrupt state as the third-party enforcer. Given our theory that contract-poor states produce goods and services to help key groups essential for their regime legitimacy, the value of the state with the lowest contract intensity score is used for the weak-link dyadic variable. Thus, higher contract intensity scores reveal that the dyad is contract-rich and capitalistic.[6]

Additionally, we control for other factors found to influence dyadic escalation and follow traditional coding practices. Critical to the democratic peace literature, we first include a measure for dyadic democracy. If both countries in the dyad have a Polity IV score of 5 or higher, then they are both considered to be democratic, and joint democracy is coded as a 1. Second, the composite indicator of national capabilities (CINC) is used to measure power parity in the dyad. The CINC score of the weaker state is divided over the stronger state's score, resulting in a variable that ranges from 0 to 1. A score closer to 1 signifies power parity while a score closer to 0 indicates power preponderance. Third, if the states are bordering or are separated by 12 miles or less of water, then contiguity is coded as a 1; otherwise 0. Finally, if either state in the dyad is a major power, then major power is coded as a 1.

Results

The five main independent variables were chosen explicitly because they engage different elements of the capitalist peace and quality of governance arguments. Property rights protection, system transparency, corruption (political and executive corruption), and contract intensity come from four different sources, have different start dates, and vary considerably in how they measure their concepts. Political and executive corruption data start in 1945, contract intensity data begin in 1960, protection of property rights data start in 1980, and transparency data start in the mid-1990s. Property rights protection has a 14-point scale with an increasing score

[6] For the dichotomous dyadic variable, we employ Moussea's (2019) contractualist economy measurement. In this measure, states with life insurance premiums greater than $165 are coded as a 1, a contractualist economy, and states with life insurance premiums less than $25 are coded as 0 to reflect a contract-poor economy. States with values in between are deemed transitional economies and are coded 0. Therefore, when constructing the dyadic binary variable, a score of 1 represents a contract-rich and capitalistic economy.

indicating positive protections while the other four variables allow significant detailed measurement with thousands of variation points. Yet, even these still differ. Political and executive corruption have low values for positive peace characteristics while property rights, contract intensity, and transparency have high values. While they measure different elements, all five indicators have much in common as the measurements have a significant degree of correlation.

Table 1 illustrates this high degree of correlation with corresponding significance levels. Transparency and contract intensity are strongly correlated with the other variables, excluding protective property rights. Protective property rights is the least correlated variable, with its correlations to others ranging from 0.47 to 0.56. Political and executive corruption are highly correlated at 0.95, most likely because political corruption includes elements from the executive corruption variable. Political and executive corruption are moderately correlated with the other three variables with correlations as low as -0.54 but as high as -0.82. Table 1 supports the idea that these different measures capture similar elements from the larger capitalist peace and quality of governance conception. At minimum, they are moderately correlated while at maximum they are highly correlated. Yet, they also capture different elements since they have some variance in their correlation with one another. Due to the moderate to high levels of correlation, though, we are unable to test these indicators together in one model. Therefore, each variable is tested alone with the controls in the next 10 models.

Table 1- Pearson's Correlation Coefficients with Significance

	Political Corruption	Executive Corruption	Transparency	Property Rights	Contract Intensity
Political Corruption	1 (0.000)				
Executive Corruption	0.9458 (0.000)	1 (0.000)			
Transparency	-0.7444 (0.000)	-0.7105) (0.000)	1 (0.000)		
Property Rights	-0.5420 (0.000)	-0.5510 (0.000)	0.4707 (0.000)	1 (0.000)	
Contract Intensity	-0.8242 (0.000)	-0.8130 (0.000)	0.7648 (0.000)	0.5621 (0.000)	1 (0.000)

Tables 2 and 3 use multivariate logistic regressions and explore how the five different capitalist peace and quality of governance measures affect escalation to uses of force within five years after an initial display of force. This steps-to-war approach, pioneered by Senese and Vasquez (2008), helps researchers understand under what conditions displays of force are more likely to lead to future uses of force and war between states or when events do not foreshadow future uses of force but rather are just signals for dissatisfaction. Due to multicollinearity, we test each main independent in separate models with the control variables. Once again, all variables are dyadic. We initially included a dyadic joint reciprocity variable as some of the literature on escalation suggested it could be important (Leng 1993). However, the variable never approached significance in any of the models, so we dropped the variable from the analyses.

In Tables 2 and 3, the independent variables are tested in their weak-link operationalization. Tables 4 and 5 in the Appendix provide the multivariate logistic regressions using the dichotomized independent variables. The difference between Tables 2 and 3 involves a slight change in the escalation variable. In Table 2 (and 4), the dependent variable used is escalation with reset. This is the dependent variable that measures escalation to military force in the next five years but codes escalation as 0 if another display of force occurs before a use of force. In Table 3 (and 5), the dependent variable used is total escalation. This variable counts escalation as a 1 if military force is used within five years of the initial display of force, even if another display of force occurs prior to the onset of military force.

Across the five models in Table 2, three of the five main measures are significant and approach significance at the 0.10 level or lower. While transparency is significant at the 0.01 level, property rights protection and contract intensity are significant at the 0.10 level. All three are in their expected directions. Executive corruption barely misses significance at the 0.10 level. Surprisingly, political corruption is highly insignificant, making it considerably less trustworthy compared to executive corruption even though the two variables were highly correlated in Table 1. R-squared values for all models are fairly low around 0.11 to 0.12, but this is common for conflict models.

Table 2- Multivariate Logistic Regression Results on Escalation with Weak-Link Measures

Model Sample		Mod. 1	Mod. 2	Mod. 3	Mod. 4	Mod. 5
Joint Polit Corrupt (V-Dem)	B	0.075				
	Se	0.3113				
Joint Exec Corrupt (V-Dem)			0.430			
			0.2905			
Transparency (Trans. Inter.)				-0.138***		
				0.0478		
Property Rights (Econ Freedom)					-0.012*	
					0.007	
Contract Intensity (CINE)						-0.1092*
						0.0638
Contiguity		1.464***	1.433***	1.413***	1.074***	1.495***
		0.1590	0.162	0.1602	0.2859	0.1725
Power Parity (CINC)		0.745***	0.752***	0.686**	0.795	0.769***
		0.2753	0.2757	0.2766	0.4885	0.2932
Major Power		1.125***	1.153***	1.065***	1.654***	1.236***
		0.1719	0.1680	0.1671	0.2936	0.1800
Joint Democracy (Polity IV)		-0.390**	-0.310*	-0.120	-1.333	-0.297
		0.1658	0.1698	0.1709	0.3022	0.1886
Pseudo R^2		0.11	0.11	0.12	0.12	0.12
N		1180	1180	1180	557	1086
Log Likelihood		-573	-572	-569	-202	-503

Note: * p<0.1, **p< 0.05, ***p<0.01

Table 3 uses the same set of independent and control variables but uses the escalation variable in which another display of force does not reset the count. The capitalist peace and quality of governance variables do a little better with this dependent variable. Transparency is significant at the 0.01 level, executive corruption and contract intensity both are significant at the 0.05 level, and property rights protection is significant at the 0.1 level. Political corruption once again fails to reach significance, but executive corruption achieves significance. Not resetting the escalation data, then, has consequential effects on joint executive corruption as it is significant in Model 7 but not Model 2. Regardless of a second display of force, it is significantly supported that minimally executive corrupt dyads in a low-level MID are less likely to escalate to a violent MID in the next five years. Despite the high collinearity between executive and political corruption, then, each has a different effect on total escalation. Additionally, all five

explanatory variables are in the expected direction, and all R-squared values are higher as they range between 0.16 and 0.18. Overall, the capitalist peace and quality of governance variables, excluding joint political corruption, offer significant support for the argument that joint adherence to capitalist economic norms minimizes the likelihood of interstate armed conflict.

One interesting finding to note is that one of the three models in which joint democracy fails to reach significance is Model 5 in Table 2 which tests Mousseau's (2019) contract intensity variable. Matching Mousseau's findings, we find that the inclusion of contract intensity is stronger and more statistically significant in mitigating conflict than joint democracy. Even in Model 10 in Table 3 measuring total escalation, contract intensity carries greater significance than joint democracy. Out of all 10 models that test the weak-link measures, Models 7, 8, and 10 are the strongest as all variables in the regressions are significant at the 0.1 level or lower. Model 10 has the highest R-squared of 0.18 out of all models while Models 7 and 8 retain the largest N of 1,180 cases. In Model 7 and 10, joint executive corruption and contract intensity are significant at the 0.05 level respectively. In Model 8, transparency is significant at the 0.01 level. For the controls, all but power parity and joint democracy are significant in all models. All control variables in all models, though, are in their hypothesized direction and match findings in the conflict literature. Overall, when utilizing the weak-link measures and controlling for other common predictors of escalation, capitalism and quality of governance variables perform better in tests with the total escalation dependent variable. This may mean that it does not matter if another display of force happens within the five-year period for countries with strong bureaucracies or property protections as these displays are just that, signals of unhappiness, rather than intentions of future force.

Table 3- Multivariate Logistic Regression Results on Total Escalation with Weak-Link Measures

Model Sample (V-Dem)	B Se	Mod. 6 Tot. Escalat.	Mod. 7 Tot. Escalat	Mod. 8 Tot. Escalat	Mod. 9 Tot. Escalat	Mod. 10 Tot, Escalat
Joint Polit. Crpt. (V-Dem)		0.279 0.2982				
Joint Exec. Crpt. (V-Dem)			0.643** 0.2780			
Transparency (Trans. Inter.)				-0.116*** 0.0440		
Property Rights (Econ Freedom)					-0.011* 0.0064	
Contract Intens. (CINE)						-0.1448** 0.0613
Contiguity		1.816*** 0.1602	1.777*** 0.1612	1.779*** 0.1609	1.413*** 0.2705	1.867*** 0.1729
Power Parity (CINC)		0.863*** 0.2717	0.871*** 0.2723	0.813*** 0.2727	0.631 0.4570	0.775*** 0.2897
Major Power		1.582*** 0.1742	1.600*** 0.1711	1.502*** 0.1693	1.903*** 0.2798	1.628*** 0.1835
Joint Democracy (Polity IV)		-0.438*** 0.1594	-0.342** 0.1637	-0.308* 0.1646	-0.488* 0.2767	-0.332* 0.1818
Pseudo- R^2		0.16	0.16	0.17	0.17	0.18
N		1180	1180	1180	557	1086
Log Likelihood		-604	-602	-601	-228	-532

Note: * p<0.1, ** p< 0.05, *** p< 0.01

The Future of Capitalist Peace and Quality of Governance

In this study, we examined capitalist peace and quality of government arguments together in one theoretical framework and how they are related to dispute escalation. We used a steps-to-war model to help explain how non-violent conflict is related to future violent conflict. Previous research on capitalist peace and quality of governance arguments primarily focused on conflict onset but not on MID escalation. Thus, our focus on MID escalation adds to the conflict literature and our understanding of what influences escalation from displays of force to uses of force. We also used

multiple potential indicators of capitalism and government quality. This wide array of tests allowed us to examine the many traits a state has that are often produced under a capitalist system. To our knowledge, no study has taken this broad approach in testing.

Our findings using a weak-link approach are supportive for our theory. Of the five main independent variables in our 10 models, only political corruption fails to reach any significance. And while executive corruption fails to achieve significance when examining escalation with a reset after a second display of force, it is significant when examining total escalation. Additionally, all variables are in their hypothesized direction, lending support for our theory.[7]

To be sure, one of the challenging aspects for research examining the capitalist peace involves operationalizing variables. Two of the four sources we use for capitalist peace start observations in the 1980s or 1990s. While this potentially offers 20 to 30 years of economic data, it does not offer a large number of cases for dispute escalation. Only one source we use in this research codes data before World War II. The good news for future capitalist peace studies is that over eight different sources now measure capitalist ideas. Yet, most of these indicators start their coding in the mid-2000s. Unfortunately for our study, conflict data ends right around this time period.

Since three of our four sources had a small number of cases, they were susceptible to being influenced by crucial cases. There was one case in the year 2000 that produced around 200 potential observations. This crucial case could have made up around half the cases in some models. Because of this, we do not think we can make strong statements about several of our indicators. More time is needed, then, to see how the capitalist peace and quality of government indicators truly affect dispute escalation. However, we are optimistic that continued research into escalation will yield important findings. The executive corruption and contract intensity variables offer more cases than the other significant indicators, were fairly supportive of our theory, and come from two different sources. They examine all of the cases since 1960, if not before, whereas the other explanatory variables begin around the start of the post-Cold War era. Thus, we are especially optimistic for future research on executive corruption and contract intensity on dispute

[7] Results using the dichotomous versions of the independent variables, however, are mixed. These results are presented in Tables 2.1 and 3.1 in the Appendix. Due to these mixed results, additional research should be conducted examining these variables when dichotomized.

escalation.

More interestingly, a puzzle that still remains revolves around distinguishing the importance of quality of governance for capitalism's ability to generate peaceful relations. Teorell (2015) suggested that quality of governance is both an antecedent and complimentary to capitalism. Our analysis would support this conclusion as we found that executive corruption and contract intensity were significant variables on total dispute escalation. Nonetheless, how much capitalism stands on its own compared to quality of governance is still unresolved. In order for capitalist peace and quality of government arguments to develop into a central theory of international cooperation and conflict, additional research is required to uncover the nuances of each theory and their effect on international conflict.

While we are excited to discuss how our paper offers a new analysis about capitalist peace and dispute escalation, because of the above data limitations, we are reticent to argue that it offers definitive results. Rather, it should be viewed as a first take on a new way to consider how capitalist traits affect state relations with regards to violent conflict. This first take offers moderate support for the idea that capitalist characteristics incentivize states to limit escalation to force. Future work should be done to confirm these initial findings. For now, we can say that capitalist peace and quality of governance arguments are complementary to the democratic peace in their effect on dispute escalation. In terms of conflict prevention, this means that democracy is not absolutely necessary to mitigate dispute escalation. From our findings, having a high quality of government and strong contract intensity is negatively correlated with escalation. States that are not necessarily ready for democracy, whether due to a lack of institutions or a lack of popular or governmental support for democracy, can still prevent dispute escalation either through capitalism or high quality of government variables. In other words, states that cannot democratize or are not ready to democratize can work towards increasing government transparency, strengthening property rights, minimizing executive corruption, and strengthening contracts within the state in order to mitigate dispute escalation. In fact, these alternative policy modifications may be more beneficial for these states if democratizing is not perceived to be attainable. With greater transparency, stronger property rights, minimal corruption, and stronger contracts within the society, our findings suggest that states are better able to signal their intentions within disputes or are able to find alternative ways to remedy disputes than through military force. Due to these implications for state behavior and our early findings, we look forward

to future research and further exploring the impact of capitalist peace and quality of governance on dispute escalation.

Appendix

Table 2.1- Multivariate Logistic Regression Results on Escalation Using Dichotomous Measures

Model Sample		Mod 11: Escal	Model 12: Escal	Model 13: Escal	Model 14: Escal	Model 15: Escal
Joint Polit Corrupt (V-Dem)	B Se_β	0.112 0.1956				
Joint Exec Corrupt (V-Dem)			-0.636*** 0.2086			
Transparency (Trans. Inter.)				0.798 0.8718		
Property Rights (Econ Freedom)					-0.164 0.3611	
Contract Intensity (CINE)						-0.273 0.2903
Contiguity		1.476*** 0.1599	1.400*** 0.1599	0.951*** 0.3429	0.882*** 0.3137	1.468*** 0.1774
Power Parity (CINC)		0.739*** 0.2753	0.727*** 0.2762	0.214 0.6051	0.946* 0.5381	0.633** 0.3083
Major Power		1.097*** 0.1677	1.158*** 0.1673	1.760*** 0.3239	1.588*** 0.3034	1.130*** 0.1823
Joint Democracy (Polity IV)		-0.418*** 0.1604	-0.2607 0.1643	-0.384 0.3263	-0.347 0.3359	-0.179 0.2012
Pseudo R^2		0.11	0.12	0.12	0.10	0.11
N		1180	1180	442	442	906
Log Likelihood		-573	-568	-146	-168	-468

Note: * p<0.1, ** p< 0.05, ***p< 0.01

Table 3.1- Multivariate Logistic Regression Results on Total Escalation Using Dichotomous Measures

Model Sample		Model 16: Tot Escal	Model 17: Tot Escal	Model 18: Tot Escal	Model 19: Tot Escal	Model 20: Tot Escal
Joint Polit Corrupt (V-Dem)	B Se_β	-0.0784 0.1908				
Joint Exec Corrupt (V-Dem)			-0.844*** 0.2008			
Transparency (Trans Inter)				0.531 0.9109		
Property Rights (Econ Freedom)					-0.115 0.3326	
Contract Intensity (CINE)						-0.580** 0.2847
Contiguity		1.818*** 0.1605	1.751*** 0.1613	1.554*** 0.3106	1.289*** 0.2948	1.843*** 0.1824
Power Parity (CINC)		0.858*** 0.2718	0.846*** 0.2737	0.309 0.5411	0.861* 0.5022	0.814*** 0.3086
Major Power		1.553*** 0.1710	1.622*** 0.1721	1.842*** 0.3029	1.767*** 0.2876	1.648*** 0.1915
Joint Democracy (Polity IV)		-0.473*** 0.1541	-0.294* 0.1585	-0.608** 0.2903	-0.398 0.3072	-0.151 0.1954
Pseudo R^2		0.16	0.17	0.17	0.14	0.17
N		1180	1180	442	442	906
Log Likelihood		-605	-595	-170	-190	-485

Note: *p< 0.1, **p< 0.05, ***p<0.01

Overall the results in tables 4 and 5 are less supportive of the capitalist peace and quality of governance hypotheses as few variables reach significance and not all variables are in their expected direction. This lack of support is partly due to the thresholds we set for the dummy variables and to the dyadic interactions. Democratic peace scholars often set a high bar for the quality of democracy to code it a 1, and we followed similar procedures for capitalism and quality of government traits. More interestingly, if we

coded a joint not capitalism variable, the results often flipped and the variables were significant and in the hypothesized expected direction.

All of these results combined yield an interesting puzzle for the capitalist peace and quality of governance theories. The models in Tables 2 and 3 were moderately to highly supportive for our theory when using a weak-link measure of variables, yet the models in Tables 4 and 5 fail to find much significance for the theory that capitalist peace and quality of governance indicators minimize conflict escalation. Taken together, it appears that generally capitalist peace and quality of governance characteristics help reduce future uses of military force, but discrepancies emerge when dichotomizing these indicators at certain thresholds.

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Breaking the Glass Ceiling in New Hampshire: A Test Case for the Effect of a Female Majority

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Introduction

In 2008 voters in New Hampshire elected thirteen women to the New Hampshire Senate. This made the New Hampshire Senate the first majority female legislative body in the world. Previous research conducted on women's representation in state legislatures suggests the presence of women legislators impacts the policy making process (Bratton and Rouse 2011; Bratton 2002, 2005; Bratton and Haynie 1999; Dodson 1991; Lawless and Theriault 2016; Swers 2001; Thomas 1991; Thomas 1994; Werner 1968). Studies suggest women legislators are more likely to approach state-level policy making in a cooperative manner, seeking broad and bipartisan legislative coalitions for legislation (Bratton and Rouse 2011; Dolan and Ford 1995; Rosenthal 1998; Swers 2001, 2005; Thomas 1991; Thomas and Welch 1991, 2001; Vega and Firestone 1995). If women legislators seek broader, bipartisan legislative coalitions, we would expect an increase in bill co-sponsorship with an increase in bipartisan bill co-sponsorship when the chamber is majority female. In addition, we might expect co-sponsored bills and bills with bipartisan co-sponsors to be more likely to pass the chamber, as women legislators might be more willing to reward colleagues who work to build broad and bipartisan support for their bills. However, there are institutional constraints that may prevent these outcomes from occurring. Examining what happened in New Hampshire in the 2009-2010 session (when it was majority female) will help us understand the ability of women legislators to change the chamber when it is majority female.

The impact of women in state legislatures is both timely and relevant. In 2018, a record number of women candidates ran for state legislative offices (Carlsen and Lu 2018; Gibson 2018). As a result, women made up 28.3 percent of all state legislators in 2019, a record high. Voters elected female majorities to the Colorado House of Representatives and the

Nevada Assembly, the second and third legislative chambers to have a female majority. With two state legislative chambers becoming majority female and others likely to become majority female in the near future, examining what happened in the New Hampshire Senate after it became majority female will give us an idea of what to expect in these new majority female chambers.

In this paper, we take a first look at the effects a female majority has on a legislative chamber. We examine the New Hampshire Senate during the 2009-2010 legislative session, when it was majority female, and compare it to the 2007-2008, when the chamber was majority male. We examine whether there was increased cooperation in the chamber and whether there was more bipartisan cooperation in the chamber. We find there was an increase in co-sponsorship of bills when the chamber became majority female and co-sponsored bills were more likely to pass the chamber when it was majority female. However, we find this increased cooperation occurred along party lines, not across party lines.

The New Hampshire Senate

The New Hampshire Senate is made up of 24 members each representing a single district. All members of the New Hampshire Senate serve two-year terms and all seats are up for reelection in even numbered years. The New Hampshire Senate is one of the least professional state legislatures in the United States (Squire 2017). Members are paid a $100 dollar annual salary and receive no per diem. The New Hampshire Senate meets annually, but the state constitution limits its session to meeting only 45 days a year. It usually begins its session in January and the legislature is constitutionally required to adjourn by July 1. During the legislative session, most committees only meet on Tuesdays and the full chamber is usually only in session on Thursdays. Individual senators do not receive their own staff. The presiding officer of the chamber is the President of the Senate. The chamber elects the President of the Senate from amongst its members at the beginning of each session. Historically, the President of the Senate is a member of the majority party and serves as the leader of their party in the Senate.

Our study focuses on the 2007-2008 and 2009-2010 sessions, so it is important to understand how the chamber looked in these two sessions. In both the 2007-2008 session and in the 2009-2010 session the partisan

composition of the chamber was fourteen Democrats and ten Republicans. In the 2007-2008 session, ten Senators were female. Nine of the women Senators were Democrats and one was a Republican. Of the thirteen women Senators in the 2009-2010 session, eleven were Democrats and two were Republicans. During both sessions, the governor was Democrat John Lynch and Democrats controlled the New Hampshire House of Representatives. Democratic Senator Sylvia Larsen served as President of the Senate in both sessions. Democrat Maggie Hansen served as majority leader in both sessions, although there was a change in minority leader between the two sessions. As is common in the New Hampshire Senate, there were a significant number of freshmen members in both sessions, but the two sessions had similar numbers of freshmen. Seven of the twenty-four members were freshmen in the 2007-2008 session, while six of the twenty-four members were freshmen in the 2009-2010 session. Five of the freshmen members were women in the 2007-2008 session while four of the freshmen members were women in the 2009-2010 session.

One might wonder why New Hampshire was the first state to elect a majority female legislative body. While we cannot know exactly why it happened in New Hampshire first, there is evidence that suggests the state's civic culture encourages participation by women. Former New Hampshire governor and current U.S. Senator Maggie Hansen described the state's civic culture as one that promoted inclusion and presented opportunities for women to engage in civic society and political life (Hansen 2016). Hansen also noted that New Hampshire voters are pragmatic and have traditionally been open to electing women to political office (Hansen 2016). Recent history shows this to be the case. Jeanne Shaheen (D) was elected governor in 1996 and reelected in 1998 and 2002. She was later elected US Senator in 2008 and reelected in 2014. Maggie Hansen (D) was elected governor in 2012 and 2014 and elected to the US Senate in 2016. Kelly Ayote (R) was elected Senator in 2010. Besides showing New Hampshire voters are willing to elect women, the presence of women in positions like governor and US Senator has been found to encourage women to run for state legislature (Ladam, Harden, and Windett 2018). Besides political culture, the design of the New Hampshire legislature encourages more women to run for state legislature. Legislative districts in New Hampshire are small (a Senators district is less than 55,000 people) and the cost of elections is therefore low. Given that women

candidates often have to devote more time to the distasteful task of fundraising (Jenkins 2007), the lower cost of campaigns may encourage more potential women candidates to run for office since they have to devote less time towards fundraising and have to raise less money to win. Also, states with low levels of professionalization tend to have more women legislators represented because the lower time commitment reduces the burdens of serving in office (Squire 1992). As mentioned earlier, New Hampshire's legislature is virtually an all-volunteer law-making body, making it one of the least professional legislatures in the United States. Typically, members only need to be at the state capital two days a week when the chamber is in session, so the time commitment is low. Given that evidence suggests the lack of women elected officials is due to women deciding not to seek office (Burrell 1998; Fox, Lawless, and Feeley 2001), the likely reason New Hampshire elected the first majority female legislative chamber is due to the fact in many ways, New Hampshire's political culture and structure encourages women to seek office. Since these two sessions, New Hampshire has usually had more women in its legislature than the most states. Although the number of women in the legislature did significantly decline after the 2010 election (largely due to major losses by the Democrats in that election), the numbers quickly rebounded in the 2012 election. The number of women dropped to six in the 2010 election but increased to 9 in the 2012 election. After the 2018 and 2020 elections, New Hampshire has had 10 women serve in the New Hampshire Senate.

The Impact of Women's Representation in State Legislatures

Historically, few women were elected to representative bodies before the early twentieth century, making it difficult to understand to the fullest extent the influence women have in legislative chambers. Not until the early 1970s did the number of women elected to state legislatures increase from only a small number of legislators. In 1971, only 4.5 percent of state legislators were women; by the early 2000s 22.4 percent of state legislators were women (Carroll 2004, CAWP).

There are two prevailing threads in the literature on women in politics. One focus concentrates on the research of women as candidates and the other on representation. This paper emphasizes the latter, focusing on gender and legislative behavior in particular. Until 1992, the number of women elected to state legislatures was relatively low (Dolan and Ford 1997). Thus, it was difficult to fully appreciate how institutional dynamics,

dominated by male legislators and characterized by paternalistic social norms, affected the legislative behavior of women in public office. When there are few women represented in legislative bodies, women's legislative behavior appears guarded and cautious in terms of setting the legislative agenda due to concerns over legislative marginalization (Githens and Prestage 1977; Reingold 2019; Werner 1968; Dolan and Ford 1997; Whistler and Ellickson 1999). In legislatures where women were (and in some states still are) under-represented, female legislators may hesitate to work on legislation and policy initiatives that solely affect women (Bratton 2002; Osborn 2012; Clark and Caro 2013; Holman and Mahoney 2018; Thomas and Welch 2001). Consequences of political or legislative marginalization gave way to the gendered "double-bind" or the double standards that made it difficult for women to succeed as a minority group represented in an institutional dynamic dominated by masculine norms. In such conditions, women must outperform conventional expectations in order to overcome gendered stereotypes and the affiliated double standards to earn the respect of their male counterparts (Jamieson 1995; Tolleson-Rinehart 2001). Given this historical context, explorations on the question of gender in state legislatures have focused on varied statuses of representation.

Both female and male legislators have consensus on the outlook that women legislators seem to internalize a unique responsibility to represent women's concerns in state legislatures (Center for American Women and Politics 2011; Ford 2017). To begin to understand whether a special responsibility translated into substantive influence on public policy, the influence could only be tested in legislative bodies where women's representation reflected a testable critical mass, before differences could be observed, measured, and tested (Bratton 2005; Ford 2017; Rule 1990; Whistler and Ellickson 1999).

The research amassed on women in state legislatures has suggested that the increased number of women getting elected to state legislatures has made a difference on how men and women prioritize legislative issues (CAWP). With an increase in the number of women in state legislatures and other public offices, there is the potential for a supportive network to work on issues affecting women. Studies suggesting that is the case (Carroll 2001, 2004; Saint-Germain 1989; Tolleson-Rinehart 2001) reveal that when there are

more women in a legislative chamber, they tend work toward legislative agendas addressing issues concerning family, education, and social justice (Volden et al. 2018). While women may often feel they have a civic responsibility to sponsor bills focusing on issues affecting women and children, it is important to note women in public office do not limit themselves to sponsoring bills only addressing problems facing women. Women are involved in working on bills that represent a diverse range of issues (Thomas and Welch 2001; Atkinson and Windett 2019).

Although women are involved in legislating on a variety of policy issues, it is also understood that men and women legislators demonstrate disparate approaches and attitudes on specific policy areas. Women do not typically campaign as "women's issues" candidates, but rather, recognize the areas and issues that affect women in greater proportions than the rest of the constituent population (Ford 2017). There is abundant research informing more recent conclusions about the influence of a legislator's gender on policy-making (Carroll 2001, 2004; Dodson and Carroll 1991; Ford 2017; Stanwick and Kleeman 1983; Swers 2001; Thomas and Welch 2001; Werner 1968;) that suggest gendered differences in representational styles influence the legislative process. As more women are represented in legislative chambers, stylistic differences between men and women in state legislatures are observed (Carroll 2001, Kathlene, Clarke, and Fox 1991, Thomas 1994, and Thomas and Wilcox 1998).

Research suggests women, regardless of party affiliation, tend to gravitate toward more ideologically liberal legislative agendas than their male counterparts. Women representing both political parties are more likely to support moderate or moderately progressive issue positions on topics involving hate crime, same-sex marriage, racial preferences in job hiring, education, and abortion (CAWP). Furthermore, both Republican and Democratic women are more likely to work on legislation intended to help other women because they believe they have a responsibility to advocate for policies that reflect the concerns of women (Carroll 2002; Thomas 1994). The increased number of women serving in legislatures makes it easier for women legislators to work together.

Further research submits that women display leadership traits that lead us to believe they are more likely to be collaborative during the legislative process. Women in politics have been observed as compassionate, nurturing, collaborative, and consensus driven (Pew Research Institute 2014; Rhode and Kellerman 2007). However, there are additional complexities

involved in legislative behaviors that need to be considered here. Women office holders confront obstacles not presented to their male counterparts. These obstacles are traced to gendered stereotypes and conflicted expectations of women. Women legislators encounter competing demands of their positions as women and office holders, especially in legislative bodies where there may not be many women representatives present (CAWP 2011). Therefore, women adopt leadership styles that assist them in building collaborative and cooperative relationships to offset the opportunity costs associated with the challenges of double standards (Barnello and Bratton 2007; Bratton and Rouse 2011; Eagly and Carli 2007; Rhode and Kellerman 2007). Eagly and Carli (2007) conclude that women's leadership styles espouse democratic and participative characteristics, compared with men's tendency toward autocratic and directive styles. The analysis goes on to shore up the conclusion that women's leadership styles relate positively to legislative effectiveness (Saint-Germain 1989).

In addition to the observation that women legislators tend to cultivate collaborative legislative relationships that benefit the policy-making process, women are also observed, in the private domain, as predominant performers of care work—which constitutes an important form of civic activity through unpaid labor associated with childcare, community engagement, volunteerism, and philanthropy (Lachance-Grzela and Bouchard 2010; Heard and Meyer 2002; Lowndes 2004). Often referred to as invisible civic engagement, women cultivate and maintain collaborative networks within civil society intended to achieve civic goals. Once elected to public office, it is reasonable to expect these practices are conveyed in their legislative styles (Saint-Germain 1989; Stolle and Lewis 2002). Utilizing collaborative and communal approaches, women's representation styles help facilitate trust among legislative colleagues inside of legislative institutions. This facilitates more constructive strategies on conflict resolution as well as consensus-building efforts that contribute to successful legislative endeavors. Furthermore, women legislators are likely to belong to at least one woman-focused civic or political organization outside of the legislature (CAWP). Inside the legislature, they are also found to work collectively with other women on policy issues of importance to women, further suggesting that when more women are elected to legislatures, a supportive network of legislative colleagues yield productive policy results (Bratton and Rouse

2011; CAWP; Lawless and Theriault 2016). Therefore, we expect to observe that women in the New Hampshire 2009-2010 session will be collaborative in bill sponsorship and successful in building legislative coalitions.

Co-sponsorship of Bills

Most studies examining co-sponsorship have looked at co-sponsorship in the US Congress (See: Barrello and Bratton 2011; Fowler 2006; Lawless and Theriault 2016; Wilson and Young 1997). There are several different motives members may have to co-sponsor legislation. First, co-sponsorship can help a member's reelection interest. Co-sponsoring a bill is a low-cost action that allows a legislator to take a position on a particular issue. Members are punished or rewarded for the positions they take, so legislators have an incentive to co-sponsor bills, even if the bill has no chance of passing the chamber (Arnold 1994; Bianco 1994; Mayhew 1974). Koger (2003) finds that members often co-sponsor bills for reelection interest and are more likely to do so when they think the chances of a bill passing are slim. Roca and Gordon (2010) find co-sponsorship of bills important to interest groups increases the campaign donations members receive from these groups. While members may co-sponsor bills for electoral reasons, many studies looking at co-sponsorship rates find election margins have little effect on the number of bills a member co-sponsors (Campbell 1982; Kessler and Krehbiel 1996; Krehbiel 1995; Wilson and Young 1993). This may be because members feel "unsafe at any margin" (Mann 1978), so all members engage in similar behavior when it comes to co-sponsorship, which cost little time and effort. Koger (2003) is a rare study that finds closer reelection rates do lead to increased co-sponsorship rates, but he finds this only applies to first term members.

Members may also co-sponsor bills to help improve the likelihood a bill passes. Party leaders and committee leaders usually determine which bills are considered by the chamber. In order to decide which bills to consider, leaders need to know the impact a bill will have on every member's policy goals and the time and effort that will be needed to pass a bill. Co-sponsorship serves as a signal from rank and file members to the leadership about the bill's impact on members' policy and reelection goals. It is also a way for legislative leaders to determine the effort it will take to pass a bill. The number of co-sponsors is a signal to leaders in the chamber that a bill has support, which suggests leaders will need to spend less time getting the bill through the chamber (Cox and McCubbins 1993, 2005). Leaders are

more willing to bring a bill to the floor when it has a large number of co-sponsors. At the same time, a large number of co-sponsors also serves as a signal to party leaders they may need to put a logroll together, which will help several groups of members pass their preferred policies (Cox and McCubbins 1993, 1995). Co-sponsorship is an effective communication tool because it is a low-cost commitment for the legislator and it allows members to clearly give an indication of where they stand on a bill. Co-sponsorship might also help members achieve their policy goals even if the bill does not pass the chamber. Members may co-sponsor legislation to apply political pressure for specific action by one of the other branches of government, otherwise the legislature might take up the issue (Bratton 2005; Koger 2003).

While a higher number of co-sponsors increases the likelihood a bill will pass, members will also seek bipartisan co-sponsors to suggest a bill has broad support and that it will take little effort to pass the bill. Members of the minority party are especially likely to seek out bipartisan cosponsors. Because legislative rules favor the majority party's agenda in most legislatures, having the backing of members of the majority is crucial for a bill's success. Koger (2003) interviews members of Congress and their staff and finds minority members feel co-sponsorship is necessary to get a minority member's bills passed. Koger (2003) finds minority members on average cosponsor 16 more bills per session compared to majority members. However, majority members still seek out minority co-sponsors because it signals passing their bill will take less effort from party leaders and committee chairs.

There is evidence that women's legislative sponsorship and co-sponsorship behavior is different than their male colleagues (Lawless and Theriault 2016). First, women legislators sponsor more bills than their male counterparts (Barnello and Bratton 2007; Bratton and Rouse 2011; Lazarus and Steigerwalt 2018; Rickard 2016). Women legislators have also been found to co-sponsor more bills than their male colleagues (Barnello and Bratton 2007; Bratton and Rouse2011; Bratton 2005; Swers 2005). Holman and Mahoney (2018) find the presence of a women's caucus leads to increased bill co-sponsorship, but only in legislative bodies with a Democratic majority. This indicates a party effect is dampening the impact of women legislators to change the chamber.

Given that female legislators are more likely to co-sponsor bills with members of the other party than their male counterparts, we would expect that we would see greater co-sponsorship when the chamber is majority female (Fowler 2006: Lawless and Theriault 2016). Since women legislators are more likely to seek bipartisan legislative coalitions on a bill, we expect to see greater bipartisan co-sponsorship when women members are a majority of the chamber. If women are more likely to govern in a cooperative manner, we would also expect the chamber to pass more bills that have co-sponsors and more bills that have bipartisan co-sponsors when the chamber is majority female.

Data and Methods

We examine differences between the 2007-2008 and 2009-2010 legislative sessions in our analysis. In 2007-2008 the chamber was majority male, while in 2009-2010 the chamber was majority female. Given the similarities between the two sessions, this case presents a good opportunity to see if cooperation increased in the chamber after it became majority female. The partisan composition was the same in both sessions (14 Democrats and 10 Republicans), so our results cannot be due to which party controls the chamber or the size of the majority. The governor was the same in both sessions and the Democrats controlled the House of Representatives in both sessions, so our results cannot be due to these outside influences. The President of the Senate was the same in both sessions, so the leader of the chamber was the same. The number of freshmen members was similar (seven in the 2008-2009 session and six in the 209-2010 session). Our unit of analysis is bills introduced in the New Hampshire Senate. To test the impact of the chamber flipping to a female majority, we perform a two series of crosstabs.[1] Our first set of crosstabs focuses on all bills introduced in the New Hampshire Senate; while the second set focuses only on bills that passed the chamber. There were 644 bills introduced during the two sessions in our analysis and 436 that passed the chamber. Our first set contains two crosstabs. For our first crosstab, the dependent variable is a binary variable indicating whether the bill has cosponsors. A bill is coded 1 if it is co-sponsored; otherwise, it is coded 0. For our second crosstab, our dependent variable is a binary variable indicating whether the bill has bipartisan

[1] Ideally, we would use a logit regression model. However, data issues prevent us from being able to perform such a test.

cosponsors. A bill is coded 1 if it has at least one sponsor from each party. A bill is coded 0 if it has no sponsor, has only one sponsor, or if all co-sponsors are from the same party. We also perform a t-test comparing the average number of female co-sponsors for bills in both sessions to see if any increase in co-sponsorship is a result of women legislators co-sponsoring more bills with each other. Finally, in this part of the analysis we examine in which policy areas we see more co-sponsorship by women Senators. We use the committee the bill originated from as proxy for the bills policy area. When then perform a series of t-test to see in both sessions what policy areas women were more likely to cosponsor bills.

Our second set of crosstabs only examines bills that passed the chamber. For the first crosstab in this set, our dependent variable is co-sponsorship. A bill with more than one sponsor is coded 1; otherwise, it is coded 0. For our second crosstab, our dependent variable is bipartisan co-sponsors, coded dichotomously. A bill is coded 1 if it has at least one sponsor from each party. A bill is coded 0 if it has no sponsor, has only one sponsor, or all co-sponsors are from the same party.

Our independent variable of interest for all crosstabs is whether the bill was proposed during a session where the chamber was majority female. A bill proposed in 2009 or 2010 (when the chamber was majority female) is coded as 1 and bills proposed in 2007 or 2008 are coded as 0. We expect that bills proposed when the chamber is majority female have a higher likelihood of being co-sponsored. We further expect bills proposed when the chamber has a female majority to have a higher likelihood of bipartisan co-sponsorship. We also expect bills that pass the chamber are more likely to be co-sponsored and are more likely to have bipartisan co-sponsorship.

Results

First, we examine whether there was more co-sponsorship of bills when the chamber was majority female. Increased levels of co-sponsorship would signal greater cooperation among members when the chamber is majority female. Table 1 shows the results of the crosstab between co-sponsorship and whether the chamber is majority female. When the chamber was majority male in 2007-2008, 59.04 percent of bills were co-sponsored. In

2009-2010, when the chamber became majority female, the percentage of bills co-sponsored increased to 76.91percent, an increase of almost eighteen percentage points. The chi-square finds this is a statistically significant difference in the rate of co-sponsorship.

Table 1- Rates of Bill Co-Sponsorship

	Male Majority	Female Majority	Total
Not Co-sponsored	68	100	168
	(40.96)	(23.09)	(28.05)
Co-sponsored	98	333	431
	(59.04)	(76.91)	(71.95)
Total	166	433	599
	(100.00)	(100.00)	(100.00)

Pearson's Chi Squared = 18.9865 Pr = 0.000

Although a larger percentage of bills are co-sponsored, one question is if this due to female members co-sponsoring more with each other. This does appear to be the case. The average number of female co-sponsors for bills during the 2008-2009 session was 1.21. In the 2009-2010 session the average number of female co-sponsors was 2.36. As seen in Table 2, a t-test confirms this is a statistically significant difference between the two sessions.

Table 2- Average Number of Female Co-Sponsors per Bill

	2007-2008 Session	2009-2010 Session
Average Number of Female Co-Sponsors	1.21	2.36
Standard Deviation	1.84	2.45
Observations	166	433

Ha: diff <0 Ha: diff !=0 Ha: diff >0
P= 0.46 P= 0.00 P=0.00

We also observe that women in the chamber are sponsoring more bills with each other. As seen in Table 3, during the 2007-2008 session only

29.52 percent of bills had multiple women co-sponsors. That almost doubles to 57.27 percent of bills during the 2009-2010 session when the chamber was majority female, a statistically significant difference.

Table 3- Bills with Multiple Female Co-Sponsors

	Male Majority	Female Majority
Does Not have Multiple Female Co-Sponsors	117 (70.48)	302 (50.42)
Multiple Female Co-Sponsors	49 (29.52)	297 (49.58)
Total	166 (100.0)	599 (100.0)

Pearson's Chi Square = 39.98 Pr =0.0000

We next examine what types of bills female Senators are more likely to co-sponsor. We perform ANOVA analyses examining the number of female co-sponsors bills received based on the policy area of the bill. We use the committee of jurisdiction to determine a bill's policy focus. Table 4 shows which committees we observed women were more likely to co-sponsor bills. In both sessions we find women were more like to co-sponsor bills that are from the Health and Human Services committee. Given the issues this committee has jurisdiction over (healthcare, social services) are areas women legislators have traditionally focused on in the legislature, this is not surprising. In the 2008-2009 session women Senators are more likely to co-sponsor bills from the Education Committee (another policy area traditionally focused on by women legislators) and from the Finance Committee. The evidence indicates women Senators still somewhat focused on issues that traditionally have been important to women legislators.

Table 4- Policy Areas that Receive Greater Female Co-sponsorship

Committee	2007-2008 Session	2009-2010 Session
Election Law and Veterans Affairs		
Finance	**	
Energy, Environment, and Economic Policy		
Education	**	
Commerce, Labor, and Consumer Protection		
Ways and Means		
Public Municipal Affairs		
Transportation		
Health and Human Services	**	**
Agriculture		*
Executive Departments		
Capital Budget		

* p< 0.1, ** p< 0.05, ***p< 0.01

The next important question is whether this increase in co-sponsorship is being driven by incoming female members or by returning members. The evidence suggests that returning members are driving the change. The average number of freshmen female co-sponsors is not statistically different between the two sessions and the percentage of bills that have a freshman female member serve as a cosponsor is not statistically different between the two sessions (see Tables 5 and 6).

Next, we examine whether there was greater bipartisan co-sponsorship when the chamber was majority female. Greater bipartisan co-sponsorship would indicate the chamber being majority female encourages cooperation across party lines. Conversely, if bipartisan co-sponsorship does not increase when the chamber is majority female, this would indicate the increased cooperation is only among party members. Table 7 presents the results of the crosstab between bipartisan co-sponsorship and whether the chamber is majority female.

Table 5- Average Number of Freshmen Female Co-sponsors

	2007-2008 Session	2009-2010 Session
Average Number of Freshmen Female Co-Sponsors	0.52	0.46
Standard Deviation	0.99	0.74
Observations	166	433

Ha: diff < 0 Ha: diff != 0 Ha: diff>
P= 0.76 P= 0.47 P= 0.24

Table 6- Bills with a Female Co-sponsor

	Male Majority	Female Majority	Total
No Freshmen Female Co-sponsor	115 (69.28)	279 (64.43)	394 (65.78)
Freshmen Female Co-sponsor	51 (30.72)	154 (35.57)	205 (34.22)
Total	166 (100.00)	433 (100.00)	599 (100.00)

Pearson's Chi Square = 1.2502 Pr = 0.264

As shown in Table 7, there was no statistically significant difference in bipartisan co-sponsorship when the chamber was majority female; 36.14 percent of bills had bipartisan co-sponsors when the chamber was majority male versus 39.95 percent when the chamber was majority female. These findings indicate while the chamber being majority female led to more cooperation in the chamber, it did not lead to more cooperation across party lines

Table 7- Rates of Bipartisan Bill Co-sponsorship

	Male Majority	Female Majority	Total
No Bipartisan Co-sponsors	106 (63.86)	260 (60.05)	366 (61.10)
Bipartisan Co-sponsors	60 (36.14)	173 (39.95)	233 (38.90)
Total	166 (100.00)	433 (100.00)	599 (100.00)

Pearson's Chi Square = 0.7326 Pr = 0.392

Our next set of crosstabs examines bills that passed the chamber. First, we examine whether the bills that passed were more likely to be cosponsored when the chamber was majority female. Table 8 presents the results of this crosstab.

The results indicate bills that passed the chamber were more likely to be co-sponsored. As the crosstab shows, the percentage of bills that passed the chamber with co-sponsorship increased from 65.32 percent to 79.17 percent, an increase of almost fourteen percentage points. The chi-square shows this is a statistically significant increase. These findings indicate the chamber was more likely to reward cooperation among members when the chamber was majority female.

Table 8- Rates of Co-sponsored Bills that Passed the Chamber

	Male Majority	Female Majority	Total
Not Co-sponsored	43 (34.68)	65 (20.83)	108 (24.77)
Co-Sponsored	81 (65.32)	247 (79.17)	328 (75.23)
Total	124 (100.00)	312 (100.00)	436 (100.00)

Pearson's Chi Square = 9.1263 Pr = 0.003

Next, we look at whether bills that passed the chamber were more likely to have bipartisan co-sponsorship. The results of this crosstab are shown in Table 9.

Table 9- Rates of Bills with Bipartisan Co-sponsors that Passed the Chamber

	Male Majority	Female Majority	Total
No Bipartisan Co-Sponsor	74 (59.68)	166 (53.21)	240 (55.05)
Bipartisan Co-Sponsor	50 (40.32)	146 (46.79)	196 (44.95)
Total	124 (100.00)	312 (100.00)	436 (100.00)

Pearson's Chi Square = 1.5021 Pr = 0.220

As shown in Table 9 there is not a statistically significant difference in the percentage of bills that passed the chamber with bipartisan co-sponsors when the chamber was majority female. Combined with the results from Table 3, the evidence suggests cooperation increased, but only within party lines.

In summary, the results show increased cooperation in terms of bill co-sponsorship when the chamber was majority female, but this cooperation did not occur across party lines. This increased cooperation was driven by female members and especially by returning female members. Likewise, cosponsored bills were more likely to pass the chamber when the chamber was majority female, but this reward for cooperation only occurred within party lines. Combined, these findings indicate there are some partisan constraints to the effect a female majority has on the chamber.

Conclusion

This paper examines if cooperation between members increased when the New Hampshire Senate became majority female. The results provide some support that this may have occurred. We find the number of bills that had cosponsors increased when the chamber became majority female. Additionally, a greater percentage of bills that passed the chamber had co-sponsors. The evidence suggests this increased cooperation was mostly between female members that had previously served in the chamber. This suggests it is the fact the chamber is majority female that is increasing cooperation in the chamber. However, the evidence suggests this increased cooperation occurred within party lines, not across party lines. The percentage of bills that had bipartisan cosponsors did not change when the chamber became majority female. Also, bills that passed the chamber where not more likely to have bipartisan co-sponsors when the chamber was majority female.

The results raise several important questions. Why was there greater cooperation between members when the chamber was majority female? One possibility is women legislators understand the difficulty they face winning reelection, so they work with each other to help each other win reelection. Another possibility is female legislatures are more willing to work with their colleagues than their male counterparts and so when the chamber became majority female, cooperation increased. It is also possible this finding is due to the partisan breakdown of female members; eleven of the thirteen women

Senators were Democrats. The results might be different if both parties had majority female caucuses or if a vast majority of women Senators were Republicans.

Further, the results indicate there may be a partisan constraint on cooperation when a legislative chamber is majority female. While cooperation increased in the New Hampshire Senate, it did not increase across party lines; bills with bipartisan cosponsors were as likely to pass the chamber when it was majority male. These findings indicate while cooperation may increase when women are a majority of a legislative chamber, there are institutional constraints which may limit how much and how women legislators cooperate.

One might wonder if New Hampshire is an outlier or would we expect to see similar results in other legislatures. With the small amount of time legislators in New Hampshire spend together, it is possible this makes it harder for cross-party cooperation since members do not get to know their opposite party colleagues as well as legislators serving in professional legislatures. It is also possible that more professional legislators with stronger party structures would make it even more difficult for cross-party cooperation.

Since there have been no other majority female legislative bodies, we lack any comparison cases. However, this is about to change. Two other state legislative bodies, the Colorado State House and the Nevada Assembly (Nevada's lower house), elected female majorities in 2018. In 2020, Nevada voters again elected a female majority to the Nevada Assembly. Future cases may help us understand why we see the results we see in New Hampshire. Future cases will allow us to investigate if institutional differences (level of professionalization, partisan control, etc.) produce different effects when legislative chambers are majority female.

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Identifying State Competitiveness with Pre-Existing State Conditions for the U.S. Presidential Elections

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Identifying pre-existing components that influence the level of competitiveness in an individual state is a critical step in designing a campaign strategy. While most states are locked up by one party over time, recent presidential elections show inconsistency of state competitiveness. This study focused on non-campaign elements to determine a predisposition of being the competitive states in a presidential election. Using data from the prior seven presidential elections from 1992 to 2016, the regression results suggest that a state legislature's partisan composition, a primary election schedule, state economy, and the previous election outcomes significantly influence the changes in the vote margin between two major candidates from one election to the next. As an extension to the findings, this study proposes the difference between actual and predicted values to be used as an alternative measure of campaign effects.

Key Words: Presidential Elections, State Competitiveness, Non-Campaign Factors, Polarization, Frontloading, State Economy, Forecasting

Introduction

Red and blue coloring on the U.S. map on Election Day reflects the emphasis on individual states to project the winner of the long-term battle. From the campaign perspective, a state-by-state calculation of the chance of winning is critical in order to rationally allocate limited resources in the hunt to achieve more than 270 electoral votes (Shaw 2006; Edward 2004; Shaw 1996; Bartels 1985; Brams and Davis 1974). Thus, limited resources leave long-term Democratic and Republican stronghold states ignored by candidates, while competitive states receive significant attention as a stepping-stone for winning (Gimpel, Kaufmann, and Pearson-Merkowitz. 2007). Voters in states that are classified as quite secure may rarely see a presidential campaign advertisement on local television networks and may never hear about presidential candidates visiting nearby (McClurg and Holbrook 2009).

While identifying states to target is the very first step in designing game rules, it doesn't mean that campaigns always target the same states election-by-election. For example, in 1976, Jimmy Carter had a twenty-six-state strategy to run intensive mobilization campaigns. In 2008, Barack Obama aggressively targeted all 50 states, calling "a 50-state strategy" by expanding the electoral map to traditionally Republican safe states based on strong grassroots organizations and fundraising. Even though recent presidential election campaigns tend to be nationalized (Hopkins 2018; Wekkin and Howard 2016), advance knowledge of state-level electoral factors is still predominant in campaigning. We have observed how Georgia turned blue in the 2020 presidential election and how Democrats have gradually expanded in Texas. Thus, traditionally being carried by one of the parties doesn't mean states always vote the same. Some states may keep their safe or battleground status over time, while some may move across classifications rapidly or gradually.

However, there is a lack examination of states' electoral behavior as "laboratories of democracies" in this era of nationalization. National party organizations have become much stronger with regard to financial security and adaption of candidate-centered campaign politics. As a result, institutionalized national committees have strengthened, modernized, and professionalized weakened state and local party organizations. Even these local entities vocalize over national issues with state-specific issues in elections (Herrnson 2010; Wekkin and Howard 2016). However, this top-down nationalization in the American election system is not the only flaw in projecting the national election results. The Electoral College system is considered a bridge between federal and national democracies. The president in the United States is elected by a system that mixes the popular vote with an indirect vote via individual states (Diamond 1992). The Electoral system requires modern campaigns to include individual states with different outlooks on the natural environment, the economy, and policies in designing the winning map. Fifty states in the United States individually behave as having their own electorate.

Typically, candidates assume that there are solidified base states that have historically voted for one party over time even before general election campaigns begin. However, the status of being a base state is not permanent. In 2016, the Republican presidential candidate, Donald Trump, won in Michigan, a state that had traditionally voted for Democrats, with a very

narrow vote margin of .22 percent. How did the Republican candidate, Trump, classify Michigan as a target state to allocate campaign resources even though it is traditionally locked-up by Democrats? More broadly, how do campaigns determine which states will become competitive so that campaigns focus on them throughout the election?

State electoral behaviors can be explained by pre-existing measures of competitiveness, but not many studies have empirically examined how states' characteristics project the electoral competitiveness in presidential elections (Brace and Jewett 1995; Jewell 1982). Instead, studies have focused on how campaigns affect the competitiveness in states or effects of competitiveness in electoral behavior. In recent years, presidential elections have been getting more competitive than before, and states behave somewhat differently from one election to the next. Non-competitive states may be competitive for other races at the presidential level, while competitive states may end up as non-competitive states. Indiana and North Carolina, for example, switched sides between the 2008 and 2012 presidential elections. No presidential candidate has won the White House without carrying Ohio since 1964, as described as "as Ohio goes, so goes the nation." In 2020, Ohio voted for the Republican candidate, Donald Trump, but the Democratic presidential candidate, Joe Biden, won the White House. Despite the different patterns of the state's competitiveness in the electoral field, there has been little discussion explaining why some states are more competitive than others and what elements campaign strategists consider to determine in which states they should maximize their resources. State-level pre-existing components, therefore, should be reemphasized to project the electoral margin in the presidential election.

For that purpose, this study focuses on non-campaign elements to explore the level of competitiveness in individual states. I expect that the state-level components are decisive for the level of competitiveness in a pre-election period. To analyze these factors, I employed data from the prior seven presidential elections from 1992 to 2016, and findings suggest that a state legislature's partisan composition, a primary election schedule, state economy, and the previous election result are significant deterministic factors to predict the state's level of competitiveness between two major candidates in the presidential elections.

State Competitiveness and Campaigns

Concentrating candidate resources on particular geographic areas creates different electoral environments between battleground and non-battleground states. This disproportionate attention in states affects voters' political behavior (Lipsitz 2009; Gimpel et al. 2007; Wolak 2006; Hill and McKee 2005). For example, residents of battleground states are exposed to campaign contents such as campaign advertisements, yard signs, billboards, and bumper stickers and are contacted by party organizations more often (Garber and Green 2000). Moreover, candidates are more likely to visit battleground states than non-battleground states. In 2016, Trump made the most visits to crucial battleground states such as Florida, Pennsylvania, Ohio, North Carolina, Michigan, and Wisconsin. However, the consequences of presidential campaigns for turnout remain debatable. Wolak (2006) argued that the partisan environment of a state is more influential on the intention to vote in battleground states. She concluded that a state's competitiveness does not significantly influence campaign activity. In contrast, a handful of studies claim that the distinct campaign environment of a battleground state yields a surge in participation and political knowledge (Gimpel, Kaufmann, and Pearson-Merkowitz. 2007; Wattenberg and Brians 1999; Wichowsky 2012).

It is unclear how a state is identified as a battleground state or a non-battleground state prior to the general election. Shaw (1999) interviewed campaign strategists to analyze how the candidates saw the electoral battlefield before the general election. But the mechanism to define targeting states tends to be inconsistent and blurred. For example, state polls or CNN rankings before the start of the general election have been used to measure state competitiveness (Holbrook and McClurg 2005; Huber and Arceneaux 2007), but these measures are not available for all 50 states or earlier elections. Moreover, they fluctuate quite easily, especially when a party nominee lacks a national reputation.

The terms battleground states and competitive states are used interchangeably. State competitiveness can be explicitly assessed by state polls or vote margins. This state competitiveness can be used as a significant indicator of campaign activities and the likelihood of political engagements. Shaw (2006) developed a weighted algorithm to identify a state's status for the Bush campaign in 2000 by using six factors: past statewide voting

history, polling number, organizational development and endorsements, a state race campaign, issues, and native-son effects. These quantified factors are used to label each state as either a battleground or base state. Shaw (2006) also ranked states by the expected level of competitiveness. In 2000, 24 states were identified as battleground states. However, his insightful observations of the process of building campaign strategies concluded that many campaigns lack an identifiable, systematic process to determine which states ought to be targeted. Even though his algorithm worked well in the 2000 election, the reliability of this algorithm has not been empirically tested for other presidential elections.

Election studies prefer to use the term competitiveness, but little empirical analysis has been provided as to why states are competitive or not if we consider each individual state as an independent unit. Mayer (2008) suggested that demographics, such as a population of the millennial generation or Catholics, are the key to understanding whether a state may become a swing state. Wekkin and Howard (2016) addressed the intra-state electorate cluster between urban and rural areas, such as the difference between downtown Houston being "blue" and outlying communities being "red." There may be a correlation between demographics and voting, which needs to be understood to define swing states. However, Erikson, Weight, and McIver (1993) point out that state socioeconomic variables do not drive the ideology to explain why some states are liberal while others are conservative. Furthermore, the distinctiveness of battlegrounds is a product of the partisan divisions between Democrats and Republicans (Wolak 2006). These studies suggest that more systematic and empirical research is needed to understand the elements that affect the conditional level of competitiveness prior to the general election.

Measurements

This study includes measures of state components to explain why some states are more competitive than others. The OLS regression estimates of the level of competitiveness incorporate the prior presidential elections from 1992 to 2016 in 50 states by treating each state in a particular election year as an independent measurement unit. The measures of competitiveness in presidential elections are various. For example, Shaw (1999) measured it as the margin of victory in the state in previous elections, while Bergan et al. (2005) used CNN rankings, and Benoit et al. (2004) employed the number of

ads aired in the state. However, none of them has a clear advantage over others. The previous margin of victory fails to capture dynamics in the current election year. CNN rankings and campaign advertisements include campaign effects and are measured during or after the election and with a limitation of data accessibility for earlier elections. In this study, the level of competitiveness is measured as the absolute value of margin in the two-party vote share. Although this measure includes campaign effects since the margin of victory is calculated after the election, the state vote margins allow the model to measure the differences between the predicted values and actual outcomes, or the so-called campaign effects. In other words, this study will extend assessing the model by comparing the actual and predicted two-party vote margins of each state.

To make the pre-existing measures independent from campaign effects, lagged state characteristics are employed to explore effects on the level of competitiveness. In the model, these lagged measures reflect the candidates' attention to a state that has made it competitive. At first, the state's partisan divisions reflect the ideological polarization of the state that is not accurately captured through the national vote results. For example, in at least four elections, Georgia voted for all four Republican candidates, but the level of competitiveness increased over time. The margin of the two-party vote in the state was 12 percent, 17 percent, 5 percent, 8 percent, and 5 percent in 2000, 2004, 2008, 2012, and 2016, respectively. The fluctuation within Georgia may be explained by the partisan shift as a form of realignment in electorates. In 2000, the lower chamber of the Georgia legislature was controlled by Democrats holding 102 seats while Republicans held 78 seats. However, the majority party of the lower chamber has shifted to the Republicans, capturing 113 seats in 2012 and 120 in 2016. The two-party competition in the state legislative house has changed, especially in southern states. In 1960 the Democrats won 94 percent of all races in the South, but by 2002 their success had fallen to 53 percent. In 2002 the Republicans claimed majority control in 10 southern states (Gray and Hanson 2004). Furthermore, the percentage of seats won by the two parties in non-southern states has also fluctuated. In other words, in states where parties are competitive, the election outcomes are affected by the partisan makeup of the district (Wekkin and Howard 2016; Holbrook and La Raja 2017). In this analysis, this ideological or partisan tendency in the state legislature was measured as the proportion of partisan division in the lower

chamber.[1] For example, Hawaii, Idaho, and Utah are one-party dominant states, while Indiana and Iowa have experienced a chamber much polarized by two parties. These party compositions are correlated to the percentages of vote margins.

Second, to find the linkage between the general election competitiveness and nomination elections, I have focused on "frontloading" to describe states moving their primary to the front end of the calendar. Since 2008, four states – Iowa, New Hampshire, South Carolina, and Nevada –have been allowed to hold their primaries and caucuses earlier than the first Tuesday of February. Fifteen states chose to move their events to the front end of the nominating calendar on Super Tuesday in 2008, and 22 states lined up on Super Duper Tuesday, allocating more than half of the delegates. By scheduling primaries and caucuses early, states expect to receive a high volume of media attention and to increase voter turnout (Mayer and Busch 2004) and political engagements. Besides these advantages of states hosting early primaries, candidates also concentrate their campaigns in those states to mobilize voters in the nomination elections. Candidates who won in either Iowa or New Hampshire immediately jumped into the Super Tuesday contest, which featured many delegates needed to secure the nomination (Mutz 1997; Norrander 2000). More than one-third of the total delegates are allocated to the Super Tuesday states. To carry more delegates in the early states, candidates allocate much of their campaign resources to persuade voters. Media Markets in Iowa, New Hampshire, and South Carolina, for example, were flooded with advertising, but other states such as Alaska, Idaho, and Nebraska saw no advertising. For example, about 6,600 advertisements were broadcast in Iowa by Democratic candidates in 2004, while only one ad aired in Pennsylvania (Ridout and Rottinghaus 2008). Exposure to the higher intensity of campaigning increases political engagement and interest (Gimpel, Kaufmann, and Pearson-Merkowitz. 2007) and consequently influences the nature of the political competition. Therefore, I hypothesize that an earlier primary or caucus schedule increases

[1] All states except Nebraska have a bicameral legislature. To measure partisan composition, I only calculated the percentage differences between Democrats and Republicans in the lower chamber as a reflection of the voter partisan composition at the state level. However, as the Nebraska state legislature is unicameral, the one-house body has been used to measure the partisan composition.

competitiveness in states. Operationally, I coded the frontloading states as 1 if they have their primaries or caucuses before or on Super Tuesday, and 0 otherwise.

Third, the Electoral College makes the presidential selection process a state-by-state adventure (Powell 2004). Presidential campaign visits or events are confined to only a handful of states to maximize the limited resources, and campaign resource allocations tend to be assigned to larger states. Presidential campaigns are practically interested in choosing battlegrounds in states with a large number of electoral votes (McLean 2015), such as Florida, with 29 electoral votes or Ohio with 18 votes. However, this does not mean that the more Electoral College votes a state has, the more competitive the campaign is. For example, California, which has the greatest number of Electoral College votes, is a lock-up base for the Democrats. The reason candidates visited California often, even though this state historically voted for Democrats, is mainly fundraising. Larger-state versus small-state status does not drive campaign strategies, but it cannot be ignored in determining target states. Even some smaller and medium-sized states could play a decisive role (Wright 2008). Florida and Iowa tend to be competitive, but rational candidates will visit Florida more often than Iowa because of a different size of electoral votes or the impact of outcomes. Therefore, I include the size of electoral votes to control the bias of the Electoral College. I expect that states with more Electoral College votes will have more competitive elections.

How a state will vote in the next election is related to how it voted in the past. In other words, voting preference and turnout are strongly related to partisan attachments as a consistent cue of voting behavior (Campbell et al. 1966). For example, Florida was competitive from 1992 through 2012, while Oklahoma has always been a one-party dominant state because of consistent partisan alignments with the Republican Party. If a state has consistently been competitive, I expect that the state will behave in a relatively similar way in the next election because the short-term voting behavior at the state level is less likely to change the results dramatically election by election. For example, to design the Electoral College strategy of the Bush campaign in 2000, Shaw (2006) began by assuming that states carried by Robert Dole in the 1996 presidential election were base states. These base states tend to behave similarly from election to election because strong partisans are more likely to vote in the general election on a straight

party line. Thus, deviations in past state voting records may be informative of the partisan electoral dispositions of the state. For this reason, the margin of the two-party vote in the previous presidential election was included in the model.

Last, competitive elections generally lead to higher voter turnout. In 2012, the four states with vote margins of less than 5 percent averaged a voter turnout of 64.6 percent, while the four least competitive states averaged 54.8 percent. A state's competitiveness affects political motivation by increasing the value of one vote, which reduces the chance of wasted votes. Campaigns in competitive states actively reach out to voters and mobilize them to turn out (Lipsitz 2009). Campaigns and parties in battlegrounds are generally more effective in targeting likely voters to get-out-the-vote (GOTV) on Election Day (Panagopoulos and Wielhouwer 2008). Therefore, including the turnout rate from the previous election year in the model predicts the underlying cumulated campaign GOTV efforts that have been stimulated at the state level before the immediate general election.

In addition, demographic characteristics – the percentage of the nonwhite population and the state unemployment rate – were added to the model. States with a large population of nonwhites increase a chance of holding competitive pre-election status because of the heterogeneity of states. Mobilization and turnout among nonwhite electorates are noticeable features when the elections are decided by a small margin like most recent elections. Thus, demographic diversity measured as the percentage of the nonwhite population will contribute to creating the perceived competitive race in states. In recent years, both Republican and Democratic parties have been aware of not only the African American but also the Latino influence in the general election and continue to highlight these demographic voting blocs (Barreto, Collingwood, and Manzano 2010, Wekkin and Howard 2016).

A state's economic condition is one of the typical variables for forecasting presidential elections. Klarner (2012) measured it by the percent change in real disposable income from the third quarter of the year prior to the election to the first quarter. Berry and Bickers (2012) added both change in real per capita income and unemployment figures to predict election results. State economic status influences retrospective evaluations of the incumbent party's governance of the economy (Fiorina 1981). State economic indicators affect U.S. elections; in particular, there is a Democratic advantage

when an unemployment rate is high (Wright 2012). However, the relationship between state unemployment and competitiveness has not been fully explored for U.S. elections. For that purpose, I measured a state's economic status as an average unemployment rate of the election year. A higher rate of unemployment will increase competitiveness in the state.

The state vote may be influenced by a short-term force such as "favorite son" advantages of presidential and vice-presidential candidates. Indeed, candidates receive significant extra points of the vote in their home states (Lewis-Beck and Rice 1983; Rosenstone 1983; Garand 1988; Powell 2004), while the advantage of vice-presidential candidates is slightly smaller. Therefore, this home state effect was measure by a binary variable and added to the model. However, this advantage differs according to the size, diversity, and population of the state, and candidates' performances in native states. Al Gore, a Democratic candidate in 2000, could have won the election if he had successfully locked up his home state, Tennessee.

Determinants of State Electoral Competitiveness

If a state's condition as swing or solid state did not vary election by election, identifying target states would be straightforward. However, the recent changes in competitive conditions show visible dynamics occurring within the state. Mayhew (1974) recognized the declining competitiveness of many races across the country, at least when it comes to congressional races. In the presidential campaigns, the polarization of American politics and the changes in the political composition of the two major parties has led to the recognition of changes in the status of competitiveness. For example, the solid Democratic South has transformed into the Republican South (Lublin 2004). Most recent elections are highly competitive[2] and experience a decline in the real number of competitive states. In 2008, the Obama campaign identified Virginia – traditionally a Republican state – as a swing state and heavily campaigned in the state. Their efforts turned out to be worthwhile.

Although the concept of battleground or swing states is widely used, there is no clear sense of how to define this concept. Gimple et al. (2007) defined battleground states as the states where considerable campaigning

[2] The average margin for two-party candidates in the 21st century is 3.24, while the average margin in the 1980s and 90s was 9.94.

takes place. Primary battleground states do vary somewhat from year to year, depending on what the parties decide. They identified only seven states that fell into the battleground category for both parties in 2004 and 13 in 2000. Generally, competitive states are those where the Democratic and Republican popular vote totals fall within five percentage points (James and Lawson 1999). On average, Florida, Nevada, New Hampshire, and Ohio have been categorized as highly competitive states since 1992. In 2016, 11 states were defined as highly competitive. In 2012, Florida, North Carolina, Ohio, and Virginia were classified as competitive. In 2008, it was seven states.

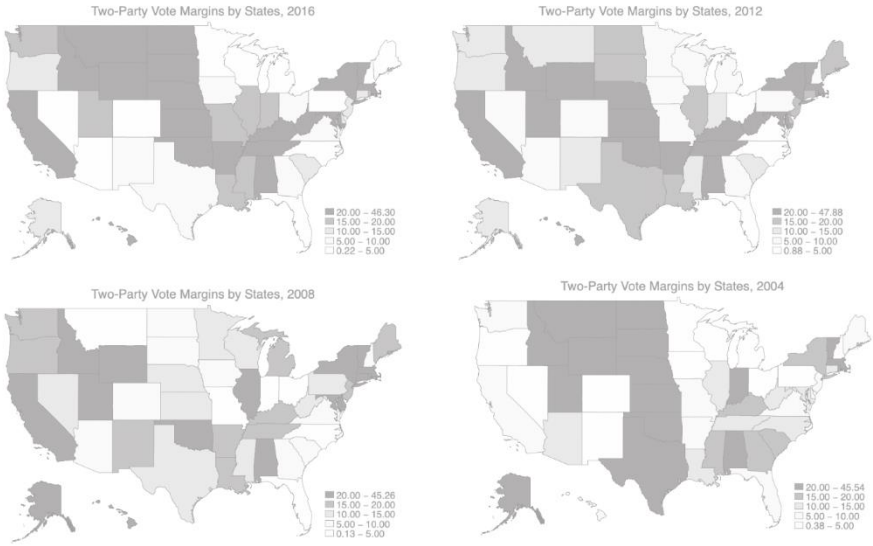
As presented in Table 1, several competitive states – with a margin within 5 percent – have changed. Moreover, some states posit consistently in a competitive category but some shift election to election. For example, the two-party vote margin for Georgia in 2016 was 5 percent, but it was 17 percent in 2004. Figure 1 shows changes in competitiveness using categorical identifications in the four most recent election years. As the maps display, the vote margin of states changes. For example, the competitiveness maps in 2004 and 2008 are recognizably different from each other. Despite controlling a condition of an open-seat race, the 2008 and 2016 state-level competitiveness is significantly distinguishable.

Table 1- Categorical State Competitiveness in Presidential Elections, 1992-2016

Year	Highly Competitive (Margin ≤5%)	Somewhat Competitive (5% <Margin ≤10%)	Less Competitive (10%<Margin≤15%)	Not Competitive ((Margin <15%)
1992	AZ, CO, FL, GA, KY, LA, MT, NE, NV, NH, NJ, NC, OH, SD, TN, TX, VA, WI	AL, AK, CT, DE, IN, IA, KS, ME, MI, MS, OK, OR, PA, SC, WY	CA, HI, ID, IL, MD, MN, MO, ND, WA, WV	AR, MA, NE, NY, RI, UT, VT
1996	AZ, CO, GA, KY, MT, NV, NC, SD, TN, TX, VA	AL, FL, IN, MS, MO, NH, NM, ND, OH, OK, OR, PA, SC	CA, IA, LA, MI, WA, WV, WI, WY	AK, AR, CT, DE, HI, ID, IL, KS, ME, MD, MA, MN, NE, NJ, NY, RI, UT, VT
2000	FL, IA, MN, MO, NV, NH, NM, OH, OR, PA, TN, WI	AZ, AR, CO, LA, ME, MI, VT, VA, WA, WV	AL, CA, DE, GA, IL, NC	AK, CT, HI, ID, IN, KS, KY, MD, MA, MS, MT, NE, NY, NJ, ND, OK, RI, SC, SD, TX, UT, WY

2004	CO, IA, MI, MN, NV, NH, NM, OH, OR, PA, WI	AR, CA, DE, FL, HI, ME, MO, NJ, VA, WA	AZ, CT, IL, LA, MD, NC, TN, WV	AL, AK, GA, ID, IN, KS, KY, MA, MS, MT, NE, NY, ND, OK, RI, SC, SD, TX, UT, VT, WY
2008	FL, IN, MO, MT, NC, OH	AZ, CO, GA, IA, NH, ND, SC, SD, VA	KS, MN, MS, NE, NV, PA, TX, WV, WI	AL, AK, AR, CA, CT, DE, HI, ID, IL, KY, LA, ME, MD, MA, MI, NJ, NM, NY, OK, OR, RI, TN, UT, VT, WA, WY
2012	FL, NC, OH, VA	AZ, CO, GA, IA, MI, MN, MO, NV, NH, PA, WI	AK, IN, MS, MT, NM, OR, SC, WA	AL, AR, CA, CT, DE, HI, ID, IL, KS, KY, LA, ME, MD, MA, NE, NJ, NY, ND, OK, RI, SD, TN, TX, UT, VT, WV, WY
2016	AZ, CO, FL, ME, MI, MN, NV, NH, NC, PA, WI	GA, IA, NM, OH, TX, VA,	AK, CT, DE, NJ, OR, SC	AL. AR, HI, ID, IL, KS, KY, LA, MD, MA, MS, MO, MT, NE, NY, ND, OK, RI, SD, TN, UT, VT, WA, WV, WY
Avrg.	FL, NV, NH, OH	AZ, CO, GA, IA, MI, MN, MO, NM, NC, OR, PA, VA, WI	DE, IN, LA, ME, MS, MT, NJ, SC, TN, TX, WA	AL, AK, AR, CA, CT, HI, ID, IL, KS, KY, MD, MA, NE, NY, ND, OK, RI, SD, UT, VT, WV, WY

Figure 1- Map of Two-Party Vote Margin, 2004-2016



The classification using the 5 percent or 10 percent cut-off point could blur the dynamics of changes in competitiveness. Rather than being treated as an ordinal variable, it is measured as a continuous variable in the competitiveness model. Table 2 presents the OLS regression estimates of state competitiveness in presidential elections from 1992 and 2016 as a full model[3]. The results show that the state-level factors significantly determine the status of competitiveness in the immediate election. In particular, the state legislature party composition positively associates with the increased probability of intensifying competitiveness in states. Increasing one percent of the partisan gap increases .13 percent of the vote margin, and this value is statistically significant. Substantially, if the party composition in the state legislature leans toward one party, the state will be less competitive. The more divided the state legislature, the more competitive in the presidential elections.

[3] This model was also estimated using a random-effects panel regression, and results in terms of the sign and significance of the coefficients were identical. Accordingly, I present the OLS regression model results.

The result also shows that frontloading affects the level of competitiveness significantly. As expected, frontloading states in the nomination election were more competitive than other states with their primaries or caucuses after Super Tuesday. The coefficient on this variable indicates that the frontloading status reduces a vote margin of 1.68 percent, and this estimate is significant. This finding contributes to explaining the linkage between the primary election and the general election. In electoral studies, the divisive primary hypothesis posits that when a party's primary is competitive, the party struggles and likely loses in the general election (Gurian et al 2016). However, the effects of the divisive primary on election outcomes are conditional and debatable. In practice, the connection between primaries and general election outcomes can be assumed rationally, but the empirical evidence is mixed due to the real-time variables during general election campaigns. Despite barriers controlling factors that affect the linkage between the two steps of the presidential election, this study found that primary elections, especially scheduling, conditionally determine the status of competitiveness in states.

The previous vote margin in each state is highly determinative when controlling others. The coefficient on this variable indicates that for each point of vote margin in a state in the prior presidential election, the vote margin in the immediate election will garner .60 points of the two-party vote. This result suggests that previous election outcomes are associated with the next election results. Using the previous election as a basis for identifying competitive states is a rational assumption to make campaign strategies.

The other variable, the state unemployment rate, also influences competitiveness, as I expected. State unemployment significantly affects the status of states being competitive. A one percent increase in state unemployment decreases a vote margin by .49 percent, holding others constant, and the impact of state-level unemployment on the vote is statistically significant. A handful of studies have focused on the effects of the national economy or sociotropic concerns and personal financial situations or pocketbook in voting decisions. Most studies found that sociotropic concerns are more direct and consequential for incumbent support (e.g., Kinder and Kiewiet 1981; Kramer 1983; Markus 1988).

Table 2- OLS Regression Model on State Competitiveness, 1992-2016

State-Level Variables	Pooled Model
State Legislature Party Division	.13***
	(.02)
Front Loading	-1.68**
	(.81)
Prior State Vote Margin	.60***
	(.04)
Prior Voter Turnout	.13*
	(.06)
% of Non-White	.05
	(.03)
State Unemployment Rate	-.49**
	(.25)
# of Electoral College Votes	.004
	(.05)
Home State	.96
	(2.15)
Constant	-2.19
	(4.44)
Observations	350
Number of States	50
R^2	.49
Adj R^2	.48

Note: Standard errors reported in parentheses.
*p<.10, **p<.05, ***p<.01

However, there has been a lack of focus on how state-level unemployment affects electoral competitiveness. The result in the model suggests that state economic condition, as a retrospective perspective, is positively related to the aggregated level of competitiveness in states. If a state unemployment rate is high in the election year, the state is more likely to have a close election than the state with a lower unemployment rate.

The coefficients for other controls are not significant. The regression suggests that the number of Electoral College votes, the percent of nonwhite population, and the home state effect are not statistically significant in this model. These variables do not affect the level of competitiveness in states by disproving the association.

The voter turnout rate in the previous election statistically affects the level of competitiveness, but the direction of the coefficient contradicts the expectation. I assume that increased voter turnout in the previous election year, as a benchmark rate of voter turnout in the immediate election, would make a state more competitive. But the result indicates that lagged higher voter turnout decreases competitiveness. Studies suggest that closeness is associated with increased voter turnout (Blais 2000; Frankli6n 2004), but this does not mean that the previous level of closeness between two candidates carries on to the next election. For example, voters will have different preferences than those during the former election, and this may alter the election in question if they vote (Martinez and Gill 2005). Besides, higher voter turnout might advantage of one party over another, and consequently, it widens a voting gap between two-party candidates. Existing studies suggest that Democratic candidates typically do better when voter turnout is high (DeNardo 1986; Nagel and McNulty 2000; Hansford and Gomez 2010). Therefore, higher voter turnout does not guarantee increasing competitiveness in the states because higher voter turnout can be either narrowing or widening two-party vote shares depending on which groups are more mobilized.

Predicted State Competitiveness

The regression model produces a close fit to the data. One indicator of this is the model's R-squared presented in Table 3. The R-squared of the full model equals 49 percent. The estimator accounts for nearly 50 percent of the variance in the state competitive level over seven elections. Compared with other forecasting models, in terms of "goodness of fit," the equation performs less strong[4]. However, most studies predict election outcomes by

[4] For example, Berry and Bickers' state-level economic model in 2012 shows the R-squared value of .89, and Campbell's state-level model in 1992 has a value of .85. However, they predicted the election outcome, not the state-level closeness.

accounting for the state-level compositions rather than the level of competitiveness. Therefore, it may be inconclusive to claim that the R-squared value of .49 is weaker in justifying the competitiveness model than other prediction models for state-level election outcomes. Moreover, the competitiveness model is strong to predict more recent election years. Table 3 displays the year-by-year model's R-squared. It illustrates, for example, the R-squared of the 2012 presidential election is .91 and .98 for the 2016 election. This model explains that over 90 percent of variances can be predicted for the closeness of election outcomes at the presidential level (See Appendix A).

The average error for election years between actual election vote margins and predicted margins are presented in Table 3. In terms of the errors, the elections that deviated much from the average are 2000 and 2008. The difference in those elections from the rest is the incumbency that might affect the nature of campaign fields[5]. The conditional retrospective voting theory explains that voters apply partial credits or blame for national conditions more strictly to incumbents seeking reelection than to successor candidates (e.g., Key 1966; Fiorina 1981; Campbell et al. 2010). Open-seat races may produce more intense campaigns than incumbent running elections. The open-seat race for the presidency means that a wide array of candidates in both parties seek the nomination, and consequently, this heavy campaigning widens errors between the expected margins and actual margins. For example, the 2008 presidential election was the election that a sitting or former president or vice president was not on the ballot of one or both parties. This consequently led to huge campaign involvement. Barack Obama raised more than $750 million for his presidential campaigns, and the amount spent in this race alone was $2.4 billion, recorded as the most expensive election ever. These campaign activities, such as advertising or GOTV efforts, contribute to generate a significant size of errors in the predicted model of competitiveness. However, at the state level, having much deviation from the average indicates the uncertainty involved in the nature of much larger campaigns in the open-seat presidential elections; thus, pre-existing conditions have less power to predict the status of competitiveness since the vote margin in the immediate election was used to measure electoral closeness.

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[5] The results from both time-series-cross-sectional and pooled regressions show that the dummy variable of incumbent running elections is not statistically significant.

Table 3- Model Justifications and Average Differences Between Actual Margins and Predicted Margins, 1992-2012

Election Year	Model Justification (R^2)	Average Differences (Absolute Value of Average Errors)
1992	.17	3.85 (2.66)
1996	.63	3.92 (3.08)
2000	.32	7.37 (5.31)
2004	.86	3.22 (2.61)
2008	.40	6.25 (4.26)
2012	.91	2.64 (2.03)
2016	.98	.78 (1.42)
Total	.49	5.84 (4.54)

Table 4 lists the average predicted error for individual states ranked according to the error size. The competitiveness model including data from 1992 and 2016 election years predicts the average error for Maryland, Washington, Colorado, Missouri, Pennsylvania, and Iowa, which are ranked on the top. The average errors of those states are less than 4 percent. This demonstrates the general accuracy of the equation using state-level variables in predicting the level of competitiveness, which is measured as the absolute value of the vote margin. However, the largest error between actual margins and predicted values from the regressed model occurs in one-party dominant states such as Utah, Vermont, Hawaii, Wyoming, or Oklahoma. Those states are heavily skewed and locked-up by one party. The effects of state-level variables in those states might be exaggerated or underrated by electoral competitiveness since absolute values of margin were used in the model blurring the directionality.

Figure 2 displays plots of individual state vote margin on a predicted regression line in the most recent two election years. The year-by-year model presented the highly accurate predictions in 2012 and 2016, with R-squared of .91 and .98, respectively. As shown in the figure, most states are aligned near the predicted regression line, as expected. In particular, a group of states located under the line on the left side are definite battleground states – e.g., Florida, Nebraska, Nevada, North Carolina, Ohio, and Virginia. For example, Florida's predicted vote margin in 2012 was 7.63 percent of two-party votes, and the actual margin was .88 percent. The difference between the two values is 6.75 percent. This difference can be explained as

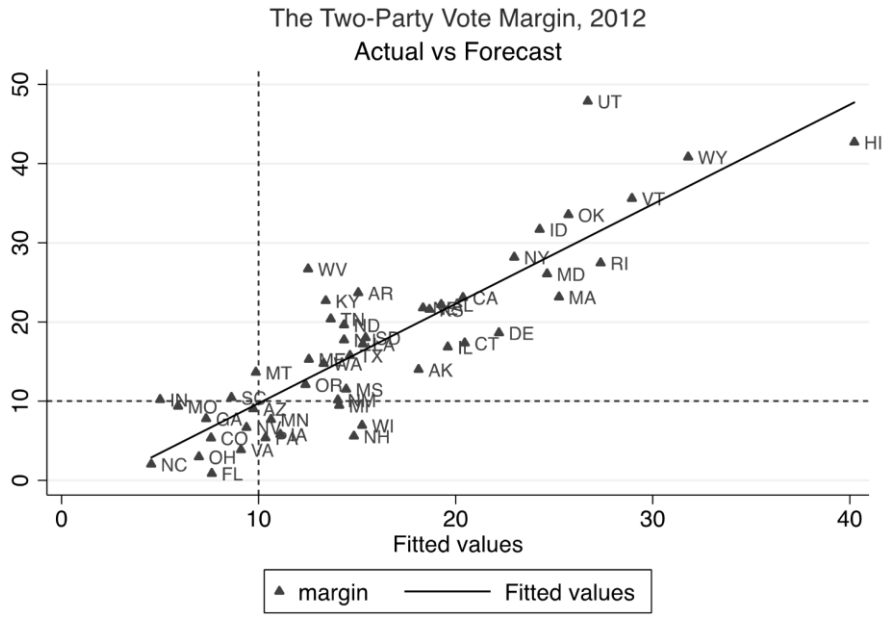
Table 4- Forecast Error by State, 1992-2016

Rank	State	Absolute Mean Errors	Rank	State	Absolute Mean Errors
1	Maryland	2.74	23	Nebraska	5.82
2	Washington	3.10	24	Virginia	5.87
3	Colorado	3.52	25	Maine	6.01
4	Missouri	3.78	26	New Jersey	6.04
	Pennsylvania	3.78		New York	6.04
5	Iowa	3.98	27	Alabama	6.07
6	Oregon	4.00	28	South Dakota	6.20
7	Connecticut	4.11	29	North Carolina	6.37
8	Nevada	4.13	30	Idaho	6.49
9	Arizona	4.18	31	Wisconsin	6.63
10	Ohio	4.34	32	Arkansas	6.75
11	Massachusetts	4.39	33	Kentucky	6.80
12	Minnesota	4.48	34	Indiana	6.98
13	Illinois	4.76	35	West Virginia	7.03
14	California	4.78	36	Montana	7.15
	Kansas	4.78	37	Georgia	7.19
	South Carolina	4.78	38	Florida	7.28
15	Louisiana	4.80	39	Alaska	7.04
16	Rhode Island	4.86	40	New Hampshire	8.03
17	Michigan	4.92	41	North Dakota	8.22
18	New Mexico	4.98	42	Oklahoma	8.48
19	Mississippi	5.19	43	Wyoming	8.62
20	Texas	5.36	44	Hawaii	9.00
21	Tennessee	5.56	45	Vermont	9.39
22	Delaware	5.79	46	Utah	10.97

campaign effects by making the state competitive. Campaign studies have tried to measure campaign effects using various measures such as campaign spending, television advertising, or candidate appearances in the race. Alternatively, this study suggests the gap between the forecasting vote margin and the actual margin as a measure of campaign effects at the state-level. In 2012, both candidates, Barack Obama and Mitt Romney, spent nearly six times as much money on advertising in Florida as in the 40 non-swing states, and 99 percent of the campaign visits were in top battleground states, including Florida (Traugott 2014). The correlation between states receiving intensive campaign attention and states identified as battleground

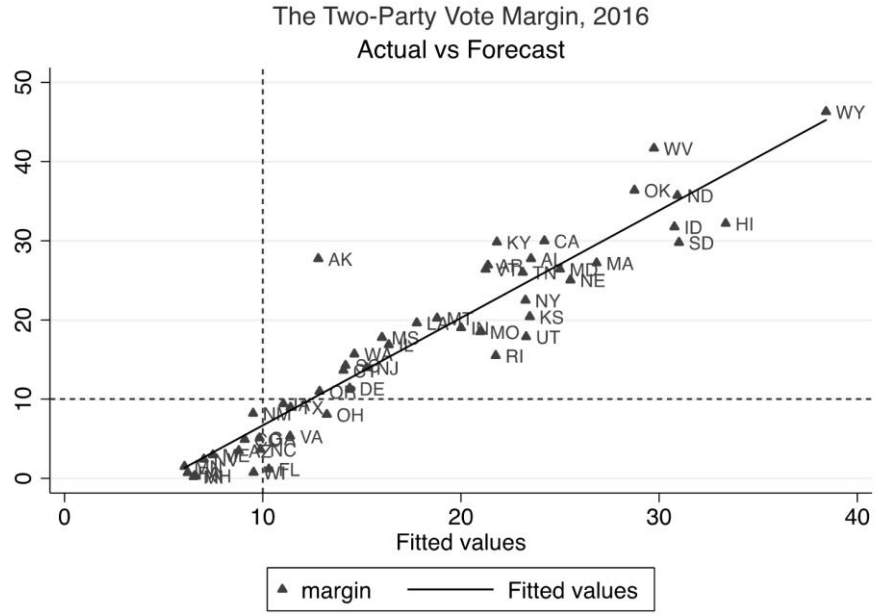
states in the competitiveness model suggests a new direction of measuring campaign effects state by state.

Figure 2



Discussion

The results of this study have implications for explaining the variability of state competitiveness by using pre-existing state variables. Since the states' voting patterns are consistent, the state-by-state election results are predictable. In the 2020 presidential election, predictions of Utah for the Republican candidate and California for the Democrat would be reasonably accurate. However, the competitiveness of states has shifted and has become less consistent (Johnson 2005). The list of competitive states varies from election to election and candidate to candidate. However, most studies focus on the effects of campaigns on electoral behavior or election outcomes rather than the variation of the status of being competitive. By employing lagged state variables, regression results for the seven elections spanning 1992 to 2016 reveal significant effects of those state variables in determining the electoral competition state-by-state.



The initial finding from the competitiveness model is the linkage between the partisan composition of the state legislature and the national level of election results. As a reflection of electoral polarization, the lower chamber's polarization projects the state closeness. The more divided the state legislature, the more competitive the presidential election. Shor and McCarty (2010) measured polarization of the state legislature using the roll call voting data similar to DW-NOMINATE scores. As an alternative measure of state polarization, I used their state scores by replacing the measure of partisan division, but the variable was not significant in the competitiveness model. The elite and electoral polarization mismatch at the state level. Instead of the roll call-based measure, the proportion of partisan divisions captures electoral polarization more effectively in this analysis.

The finding also captures the association between the nomination and general elections by using the frontloading primary schedule. The empirical evidence of the linkage in the two-stage elections was limited to the divisive primary hypothesis. This study, however, adds to the literature

by considering the implication of frontloading in the nomination election in the explanation of being competitive in the general election.

The state unemployment rate is important in determining state voting patterns in a presidential election, consistent with the sociotropic economic voting hypothesis. When state unemployment increases, the level of competitiveness increases as a reflection of strong requests for economic improvement that may affect voters' motivation to turnout.

This study emphasizes the identification of state variables that affect the state competitiveness in the presidential elections. In addition to the association, the predictability of the model was examined in this study. While the model explains the variability of state competitiveness election by election, the prediction errors involve the uncertainty of this model. However, the model prediction was improved in the most recent elections, particularly the 2012 and 2016 presidential elections. Alternatively, the errors between actual and predicted values can be used as a measure of campaign effects. How can campaigns contribute in changing the level of competitiveness? Can presidential campaign effects empirically be measured by the errors? Can those errors be used as the assessment of good or bad campaigns? There are still outstanding questions about campaign effects on state competitiveness. Although the findings of campaign effects are preliminary, this study provides a foundation for future research.

Appendix

Table A- Year-by-Year Regression Analysis on State Level Competitiveness

State-Level Variables	1992	1996	2000	2004	2008	2012	2016
State Legislature Party Division	.07 (.045)	.08* (.05)	.25** (.10)	-.039 (.05)	.25*** (.08)	.09** (.04)	.01 (.02)
Front Loading	.04 (1.64)	.76 (1.78)	-2.57 (3.08)	.20 (1.44)	1.34 (2.56)	-2.52** (1.12)	.95* (.54)
Lagged State Vote Margin	-.08 (.11)	1.01*** (.17)	.33 (.22)	.90*** (.07)	.27** (.13)	.76*** (.07)	99*** (.03)
Lagged Voter Turnout	.25 (.17)	.37** (.16)	.20 (.33)	-.36*** (.13)	.37 (.27)	-.64*** (.12)	.04 (.06)
% of Non-White	-.02 (.08)	.08 (.08)	.03 (.14)	-.20*** (.06)	.27** (.12)	-.24*** (.049)	01 (.02)
State Unemployment Rate	.21 (.56)	.66 (.80)	-.73 (1.73)	.52 (.74)	.16 (1.13)	-1.04*** (.38)	.80** (.32)
# of Electoral College Votes	.05 (.11)	.10 (.10)	-.02 (.18)	-.07 (.83)	-.07 (.15)	.01 (.07)	-.05 (.03)
Home State	1.74 (3.96)	1.84 (4.38)	5.11 (7.77)	1.86 (3.59)	1.87 (6.27)	-1.92 (2.87)	.99 (1.91)
Constant	-7.56 (11.97)	-27.01** (11.42)	-2.71 (19.42)	25.03*** (8.71)	-24.20 (20.89)	55.72*** (8.97)	-5.68 (4.91)
Observations	50	50	50	50	50	50	50
R^2	.17	.63	.32	.86	.40	.91	.98
Adj R^2	.01	.56	.20	.83	.30	.89	.98

Table B- Averages Differences between Predicted Values of the Full and Yearly Models

Election Year	Average Differences (Absolute Value of Average Errors)
1992	7.20 (6.44)
1996	4.08 (3.03)
2000	2.50 (1.81)
2004	4.04 (3.12)
2008	3.87 (2.93)
2012	6.60 (4.53)
2016	3.50 (2.61)

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The Midsouth Political Science Review
Volume 21, 2021

The Midsouth Political Science Review (ISSN: 2330-6882 [print]; 2330-6890 [online]), is the official journal of the Arkansas Political Science Association. It is published and copyrighted by the Association. Subscription rates are $30.00 for individuals and institutions. Subscriptions may be obtained by writing or e-mailing to:
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