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**DEFICIT ATTENTION DISORDER:  
Partisanship, Issue Importance & Concern About Government Overspending<sup>1</sup>**

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## ABSTRACT

Political action and electoral behavior often stem from a conviction that an issue is important. Yet despite a growing literature on partisan bias, it remains unclear whether partisan attachment also affects the perceived importance of various issues. We propose a theory of partisan-motivated issue attention (PMIA), wherein citizens satisfy partisan instincts by shifting the perceived importance of an issue. We apply our theory to an issue involving a fundamental tool of the federal government—the power to deficit-spend—and test the hypothesis that partisans’ concern about government overspending significantly changes depending on which party presides over deficit-spending. Leveraging pre-registered experimental and observational studies, we find strong support for this hypothesis among both Republicans and Democrats. Lastly, using text analytical methods, we also find evidence of PMIA in televised partisan media. Our study thus demonstrates that putative concern about deficit-spending contains a sizable partisan component and, more broadly, uncovers an additional means by which partisan bias guides citizens’ attitude formation on policy-relevant issues in the United States.

*“George [W.] Bush’s policies have taken us from a projected \$5.6 trillion surplus at the end of the Clinton administration to massive deficits and nearly \$4 trillion in new debt today.”*

-- Democratic Presidential Candidate Barack Obama (2008)

*“We’re a debtor nation... We’ve got to get rid of the \$19 trillion in debt.”*

--Republican Presidential Candidate Donald Trump (2016)<sup>2</sup>

Political action and electoral behavior are ultimately rooted in a conviction that an issue, or set of issues, is important. Existing literature demonstrates that perceived issue importance drives a variety of consequential outcomes, including evaluations of political elites and vote choice, and that passion for particular issues undergirds so-called “issue publics” that exert substantial influence upon the policymaking process (e.g., Krosnick 1990).

At the same time, contemporary political behavior research places a strong emphasis on the biasing effects of partisan identification on issue perceptions. Specifically, a wealth of scholarship demonstrates that partisans reason about political issues in a “directional” fashion, reinforcing attitudes that are congenial to their preferred political party and/or antagonistic toward their non-preferred party (Bullock and Lenz 2019; Flynn, Nyhan, and Reifler 2017; Lodge and Taber 2013). On matters involving public policies, this literature has often focused on the influence of partisan attachments on issue stances (Cohen 2003), biases in factual perceptions of those issues (e.g., Achen and Bartels 2016), or the attribution of responsibility for outcomes related to those issues (Rudolph 2006).

Less understood, however, is the extent to which partisanship might also influence the perceived importance of a political issue. In this article, we propose a theory of *partisan-motivated issue importance* (PMIA). Our central argument is that, even when partisans are relatively accurate

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<sup>2</sup> See The New York Times (2008) and Kessler (2016), respectively.

in their perceptions of a particular issue, and also “correctly” assign responsibility for that issue to a responsible elite, the systematic shifting of an issue’s importance represents an additional avenue by which citizens can satisfy the desire for a partisan-congenial worldview (Bisgaard and Slothuus 2018).

To investigate the empirical merits of PMIA, we focus on the case of U.S. federal deficit spending (i.e., government overspending), an issue that fundamentally determines what the federal government can accomplish.<sup>3</sup> In this policy domain, extant research has largely focused on how so-called partisan “perceptual screens” shape attitudes about the *size* of budget deficits (e.g., Achen and Bartels; Bullock et al. 2015; Meirick 2016). Beyond uncovering these biases in partisans’ factual knowledge about an issue, additional research suggests that partisans differ in their *attributions of blame* for government overspending (e.g., Rudolph 2003; 2006). In other words, partisan biases lead citizens to adjust their beliefs about the magnitude of, and responsibility for, government overspending.

But by neglecting the potential for motivated issue attention, extant literature on the politics of government overspending remains underdeveloped. Given the “facts” of budget deficits (e.g., their existence, size, and/or growth over time, etc.), as well as the president’s perceived accountability for deficit spending (Morgan 2009), we hypothesize that partisan attachments will alter citizens’ *perceived importance* of government overspending. Specifically, our theory of PMIA predicts that partisans will exhibit less concern for deficits, and thus be less inclined to prioritize deficit reduction, when an inparty (versus outparty) president occupies the White House.

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<sup>3</sup> We use the term “overspending” simply to mean (government) expenditures exceeding revenue, without any insinuation that outlays are too high and/or tax revenue is too low.

Given that government debt has come to represent an increasingly large share of U.S. Gross Domestic Product (see Figure A1 in the Appendix), this hypothesis stands in notable contrast to a more naïve, yet theoretically plausible, expectation wherein rising deficit spending (and, thus, additional debt accumulation) leads *all* citizens to view overspending—and policies aimed at deficit reduction—as being increasingly important.<sup>4</sup>

To test this hypothesis, we pursue three complementary sets of analyses leveraging experimental, cross-sectional, and panel data, as well as textual data obtained from televised partisan media transcripts. In each of these analyses, we find strong evidence of PMIA, with partisans exhibiting less concern about deficits when an inparty president holds office, and vice versa.

Beyond detecting biased attention on the specific issue of government overspending, our study offers several additional insights: (1) biased issue attention can occur in the mass public even in the absence of explicit cues from partisan elites; (2) the inclination to behave in this biased fashion is stronger for those with stronger party attachment; (3) two distinct mechanisms—attenuation *and* augmentation of perceived importance—operate in tandem to produce these effects. In addition, though fiscal responsibility and limited government are a purported pillar of conservatism (e.g., Feldman and Zaller 1992), we find that Republicans do not substantially differ from Democrats with respect to exhibiting partisan bias on the issue of government overspending.

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<sup>4</sup> For example, public concern about unemployment increased sharply following the 2008 financial crisis (Steinhauser 2009), and concern about climate change has steadily increased alongside global warming itself (Kennedy 2020).

In all, the present study expands our collective understanding of the avenues by which partisan biases manifest themselves in American politics. Our study also contributes to the growing literature on the relationship between partisanship and policy attitudes (Barber and Pope 2019; Mason 2015), with potentially important implications for democratic accountability. Finally, our study offers novel insights into how government deficits can function as a perennial source of political ammunition for parties out of power.

## **ISSUE IMPORTANCE**

Perceived issue importance (i.e., the degree to which citizens attend to, or feel passionately about, particular issues) plays a crucial role in American democracy (Krosnick 1990). It increases the salience of, and weight assigned to, government performance on issues (Fournier et al. 2003), and alters the types of information to which citizens attend and selectively expose themselves (Bolsen and Leeper 2013). Belief about the importance of an issue is also predictive of the strength of attitudes about that issue and, thus, prospects for opinion change, with high-importance issues being more resilient to alternative framing than low-importance issues (Lecheler, de Vreese, and Slothuus 2009).

Citizens' perception that an issue is important also allows for the formation of "issue publics"—i.e., groups of citizens interested in, and often highly politically active on, a particular issue domain (e.g., Hill 2021). Such groups stand to exert substantial political influence. In a similar vein, prior research suggests that public attitudes about budgetary matters are capable of influencing the legislative agenda of Congress (Jones and Baumgartner 2004) as well as the agenda of the president (Canes-Wrone and Shotts 2004).



## ISSUE IMPORTANCE: THE CASE OF U.S. GOVERNMENT OVERSPENDING

Since the 1970s, the federal government has run a deficit nearly every year.<sup>5</sup> Consequently, deficit spending has been a persistent issue in contemporary American political discourse. Debates over major legislative initiatives (e.g., a “Green New Deal”, “Medicare for All”, and the “Tax Cuts and Jobs Act” of 2017) routinely invoke budgetary costs and projected impact on deficits (Levitan 2019; Liu and Eibner 2019), while debates over “raising the debt ceiling” have become a recurring feature of American politics (Dennis 2019; Mann and Ornstein 2013). Further, deficits and debt impose constraints upon presidential agendas (Crosby and Holbrook 2019; Morgan 2009), and presidents of both parties face pressures to discuss the deficit and national debt in public statements (Fisher 2012; Wood 2004). In Congress, requiring a “balanced budget” has been the most frequently proposed amendment to the U.S. Constitution since 1999 (Desilver 2018). And, among members of the public, “the budget deficit” has long ranked among the public’s top policy priorities (Meirick 2016; Pew Research Center 2019; see also Gruszczynski 2020). For example, in a study of public support for a balanced budget amendment between 1978-2014, authors Crosby and Holbrook (2019) find that support has ranged from 60 to nearly 90 percent.

Perhaps because the federal budget is essentially a statement about the “appropriate size and purpose of national government” (Morgan 2009, 7), expressions of concern about deficits have long been prominent among conservative Republicans. For example, such concern took on an even more urgent tone in the 2010s with the rise of the “Tea Party Patriots” movement. This is

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<sup>5</sup> Exceptions were FY1998-FY2001 during the Clinton presidency. We find that, since 1973, the average annual deficit as a share of gross domestic product (GDP) is virtually identical for Republican and Democratic administrations (see Figure A1).

perhaps unsurprising given that a foundational component of conservative political ideology is that of fiscal responsibility, wherein the government restrains its spending to allow private markets to operate more freely (e.g., Feldman 1988; Grossmann and Hopkins 2016, 75–77; Lewis-Beck et al. 2008, 208–9).

Yet, even if Republicans demonstrate relatively more concern about government overspending than do Democrats, all members of the public—regardless of party affiliation—generally view deficits negatively in an absolute sense<sup>6</sup> (e.g., see Wood 2004) and, thus, are unlikely to dramatically change their *stance* on the issue.<sup>7</sup>

Regarding citizens’ perceived *accountability* for government overspending, as with various other macroeconomic outcomes, presidents are likely to be the ones ultimately held accountable (e.g., Kane 2016; Newman 2013; Sirin and Villalobos 2011). This implies that deficits will tend to function as a political liability for presidents and their respective parties. We theorize that such threats to each party’s status and reputation—and thus citizens’ own partisan identities—provide fertile ground upon which partisans may reason about the importance of deficits in a biased fashion.

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<sup>6</sup> Of course, these perceptions gloss over the many nuanced economic debates on the subject. Questions regarding the deficit—e.g., “how big is too big?” and “exactly *when* are deficits bad?” (e.g., see Heilbroner and Bernstein 1989; Krugman 2000)—are likely overlooked by the average voter.

<sup>7</sup> We therefore regard government overspending as more akin to a *valence* issue than a “position issue,” for which policy disagreement (as with crime and corruption) largely stems from particulars concerning *how* to address it vis-a-vis whether there should be less or more of it (e.g., Ansolabehere and Snyder 2000; Lewis-Beck et al. 2008, 195; Stokes 1963).

## PARTISAN-MOTIVATED ISSUE ATTENTION & GOVERNMENT OVERSPENDING

A wealth of literature demonstrates that partisanship guides citizens' attitudes about various political issues (Barber and Pope 2019; Cohen 2003; Kinder and Kalmoe 2017; Mason 2015). Recent work in political psychology has advanced a nuanced theory of partisan bias, wherein citizens balance a need to express partisan-motivated judgments against a desire to accurately evaluate current conditions (e.g., Bolsen, Druckman, and Cook 2014; Leeper and Slothuus 2014).

These rival goals—accuracy and partisan bias—compete in the minds of partisans to produce over-time variation in the extent and direction of partisans' perceptual gaps about objective reality (Bisgaard 2015; Dickerson and Ondercin 2017; Jerit and Barabas 2012). Much of the literature on this phenomenon has specifically analyzed partisans' retrospective economic evaluations (REEs), or overall views on recent economic performance (e.g. De Geus 2019; Gerber and Huber 2009; Jones 2019).

How might partisan bias shape public attitudes toward deficit spending? Again, partisans can draw different conclusions about objective conditions (see also Gaines et al. 2007). Indeed, research on government overspending has largely focused on gaps in Americans' beliefs about the deficit's size (Achen and Bartels 2016; Bullock et al. 2015). Kinder and Kalmoe (2017, 112–13), for example, find that, despite the federal deficit having *decreased* in size between 1992 and 1996, Republicans were far more likely than Democrats to erroneously state that the size of the deficit had increased during this time (see also Meirick 2016). Such biased perceptions of the deficit's size, therefore, vary according to citizens' party identification and the party of the president.

Alternatively, partisans may interpret real-world conditions correctly, yet attribute credit and blame in a systematically biased fashion (Rudolph 2006; Zell, Stockus, and Bernstein 2021). In doing so, partisans develop cognitively effortful justifications to defend their preferred partisan

incumbents from accusations of economic mismanagement. For example, partisans might acknowledge that the budget deficit is expanding under an inparty president, yet assign *blame* for the development elsewhere (e.g., Congress, international factors, the outparty’s obstructionism, etc.; see Bisgaard 2019; Evans and Pickup 2010).

Building directly upon this literature, we argue that partisan bias likely extends beyond misperception of “the facts” and/or motivated attribution of responsibility. Representing an additional path for directional goals to shape political beliefs, our proposed theory of partisan-motivated issue importance (PMIA) states that partisans systematically adjust the *importance* they assign to issues based on the party presiding over those issues. In the realm of government overspending specifically, even if partisans loosely agree on the basic facts of the deficit (its size and growth over time), and similarly attribute responsibility for those facts to political figures (e.g., the president, the president’s party, etc.), they can nevertheless satisfy partisan instincts by attenuating or augmenting the importance of deficit reduction as a policy priority.

Compared to the multitude of studies on the misperceptions of facts, a far smaller number have examined partisan bias in perceived issue importance (cf. Bisgaard and Slothuus 2018; Boninger, Krosnick, and Berent 1995; Mullinix 2016; Slothuus and de Vreese 2010). Moreover, no studies to our knowledge have investigated perceived importance of U.S. government overspending in particular.<sup>8</sup> In applying the logic of PMIA to this specific issue domain, we reason that partisans

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<sup>8</sup> One notable quasi-experimental study by Bisgaard and Slothuus (2018) leveraged a unique five-wave Danish panel survey from 2010-2011. The authors find that Danish Center-Right partisans altered perceptions of the budget deficit in response to explicit party cues, suggesting that

will be inclined to change the *importance* they assign to the issue of deficits, and that this perceived importance will vary systematically based upon which party presides over them via the presidency.

**Partisan-Motivated Attention Hypothesis (H1):** *Partisans will adjust the importance of deficit spending based upon the party of the incumbent president.*

Yet apart from the question of *whether* partisans exhibit bias in beliefs about the importance of overspending is the question of *when* this bias might occur—i.e., do partisans only lower the importance of deficit-spending when an inparty president is in power, or might they also believe deficit-spending is *more* important when an outparty president is in power? On one hand, the large literature on *cognitive dissonance* (Festinger 1962) implies that, when an inparty president is in power, cognitive pressures will emerge to reduce the dissonance that arises from a positively-viewed actor (the president) engaging in a negative action (presiding over deficit-spending). Therefore, and consistent with social-psychological evidence that individuals engage in “trivialization” (see Simon, Greenberg, and Brehm 1995), we hypothesize that, during instances of an inparty president overseeing deficit spending, the resultant cognitive dissonance can be reduced by reducing the importance of the issue:

**Inparty Attenuation Hypothesis (H1a):** *Partisans will assign less importance to the issue of deficit spending when an inparty president is in power.*

Along similar lines, it is possible that, whatever their baseline belief, partisans are also willing to systematically *increase* their perceived importance of government overspending when the outparty holds office. Partisans generally hold negative affective evaluations of members of the outparty (e.g., Mason 2018), which would naturally include an outparty president. Thus, given

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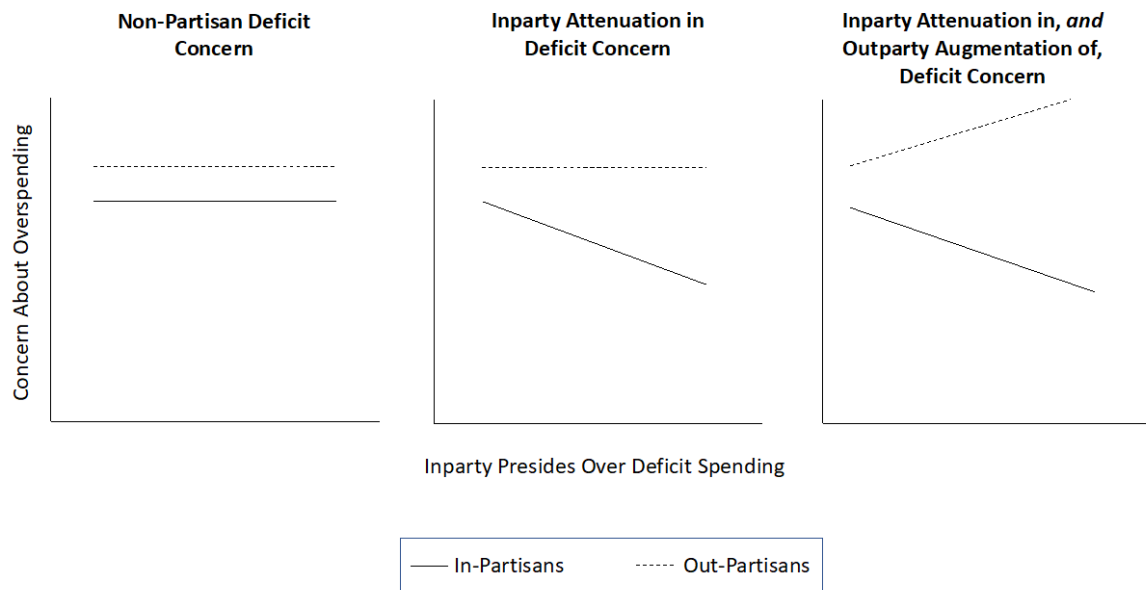
partisans’ perceived importance of current issues, including budget deficits, are responsive to elites and shift as a means of satisfying partisan instincts.

that overspending is also viewed negatively, this compounding of negatively-charged considerations (e.g., Lodge and Taber 2013) likely stands to make overspending appear more problematic (i.e., more negative), and therefore in greater need of being quickly addressed.

**Outparty Augmentation Hypothesis (H1b):** *Partisans will assign greater importance to the issue of deficit spending when an outparty president is in power.*

To visually illustrate this variety of theoretical possibilities, Figure 1 presents three distinct scenarios. The left panel is akin to a null hypothesis wherein, as a new presidential administration begins overseeing deficit spending (see *x*-axis), there is no discernible change in how members of either party regard the importance of overspending (see *y*-axis). The center panel, in contrast, is consistent with **H1a** but not **H1b**: inparty members reduce cognitive dissonance via lowering the importance of overspending, while outparty members exhibit no change. The right panel is consistent with both **H1a** as well as **H1b**: inparty members systematically lower, but outparty members systematically *increase*, the perceived importance of deficit-spending.

**FIGURE 1. COMPETING THEORETICAL POSSIBILITIES**



*Notes:* Panels display potential patterns in partisan bias on the issue of government overspending in light of a president overseeing deficit spending. Left panel indicates no partisan bias in perceived importance of deficit spending. Center panel is consistent with **H1a** but not **H1b**. Right panel is consistent with both **H1a** and **H1b**.

## SURVEY EXPERIMENTS

To test **H1**, we first fielded a survey experiment on Amazon.com’s MTurk (e.g., Thomas and Clifford 2017) in January of 2020 ( $n=1,024$ ), followed by a larger, pre-registered experiment via Lucid (see Coppock and McClellan 2019) in February of 2020 ( $n=5,034$ ).<sup>9</sup> While the former is a convenience sample of U.S. adults, the latter study included quotas to obtain a sample that is nationally representative in terms of age, gender, race/ethnicity, and geographic region (see Supplemental Appendix for demographic information about each sample).

<sup>9</sup> The Lucid study was pre-registered using the Open Science Framework in February of 2020, available at the following link: <https://osf.io/smr6g>

The basic features of the two experiments were nearly identical. Respondents were instructed that they would be reading “a brief excerpt from a forthcoming study of government spending over the past 45 years.” Respondents were also informed that this (fictitious) study excerpt had been “completed by a variety of professional economists, university researchers, and government analysts.” The surveys “blocked” on party identification (Gerber and Green 2012, 71–79), which was measured at the start of the survey using the canonical 7-point scale ranging from “Strong Democrat” to “Strong Republican” (see Supplemental Appendix). We then randomly assigned each (blocked) respondent to read one particular version of the study (see Table 1). The key manipulation is whether the study exclusively focuses on *Democratic* or *Republican* presidents. For partisans, the experimental manipulation is thus designed to assign responsibility for deficit spending and debt to one’s preferred party (i.e., inparty) or one’s non-preferred party (i.e., outparty).<sup>10</sup> Other elements of the vignette—e.g., the long-term average level of deficit-spending, the average budget allocations dedicated to social programs and national defense—remained identical across conditions.<sup>11</sup> In this way, our design minimizes the possibility of

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<sup>10</sup> As the vignettes were more than 800 words in total, manipulating only these two words (“Democratic” and “Republican”) minimizes the risk of confounding (Dafoe, Zhang, and Caughey 2018).

<sup>11</sup> To enable the (fictitious) report to be as believable as possible, we based the purported level of deficit spending (13.5%) on the actual average according to Federal Reserve data. Similarly, we based social welfare and health spending on reports of current levels (see Jacobson 2015).



**TABLE 1. Experimental Vignette Wording**

	<b>Vignette Text Assigned to Respondent</b>
<b>Study Title &amp; Topline</b>	<p><b>Government Spending and Deficits Under [Democratic/Republican] Presidents: 1973-2018</b></p> <p><b>Every [Democratic/Republican] president ran a budget deficit during their time in office, our analysis found. On average, [Democratic/Republican] presidents spent around 13.5% more each year than the federal government took in.</b></p>
<b>Body of Study Excerpt</b>	<p>Government spending is an issue that we often hear about in the United States. While different presidents have different policy priorities, our analysis of [Democratic/Republican] presidents finds several noteworthy consistencies across the 45-year period of 1973 to 2018 (the most recent year for which we were able to obtain data).</p> <p>The majority of federal government spending is on social programs and national defense. [Democratic/Republican] presidents, on average, oversaw approximately 75% of the federal budget being spent on social programs (mainly Social Security, Medicare, and Medicaid, and to a lesser extent other spending on veterans, the poor and the disabled). Approximately 16% of these presidents' budgets were dedicated to defense-related spending.</p> <p>However, on average, government spending during these [Democratic/Republican] presidencies substantially exceeded revenue. In fact, [Democratic/Republican] presidents since 1973 spent, on average, 13.5% more each year than the federal government took in. This means that for every \$100 that [Democratic/Republican] presidents collected in revenue each year, they oversaw \$113.50 being spent.</p> <p>With [Democratic/Republican] presidents having consistently run budget deficits over many years, this has resulted in a steady increase in the national debt, which is the total amount of money owed by the federal government. Again, we find this pattern of increasing the national debt to be remarkably consistent among [Democratic/Republican] presidents since 1973.</p>

*Notes:* Text within brackets represents experimentally manipulated text in the MTurk and Lucid studies.

unintentional confounding whereby, for example, comparing Democratic and Republican presidents may also cue beliefs about how the two parties differ on social welfare and military spending (see Dafoe, Zhang, and Caughey 2018). A variety of post-outcome manipulation checks (Kane and Barabas 2019) confirm these treatments were attended to and functioned as intended (see Supplemental Appendix).

**TABLE 2. Experimental Outcome Measures**

	<b>Question Text</b>	<b>Response Option Range</b>	<b>Values</b>
1	<i>In general, how concerned are you about the federal government running budget deficits?</i>	“Not at all concerned” to “Very concerned”	4
2	<i>In your opinion, how important is the issue of federal budget deficits?</i>	“Not important” to “Extremely important”	5
3	<i>To what extent should the federal government prioritize reducing the deficit over other policies (such as funding defense and social programs)?</i>	“Do not prioritize the deficit at all” to “Greatly prioritize the deficit”	4
4	<i>Currently, the federal government is running another large budget deficit. In your opinion, how quickly does the federal government need to act in order to reduce the size of the national debt?</i>	“Never” to “Immediately”	5
5	<i>As you may know, spending on the military and social programs (such as Social Security, Medicare, and Medicaid) account for the vast majority of all federal spending. To reduce the federal budget deficit, to what extent should we cut spending?</i>	“None at all” to “A great deal”	5
6	<i>Please tell us if you think the following policy should be a top priority, important but lower priority, not too important or that it should not be done: <b>Reducing the federal budget deficit</b></i>	“Should not be done” to “Top priority”	4

*Note:* The sixth item comes from the Pew Research Center, and is featured in the observational analysis below.

Following the experimental vignette, respondents answered a total of six items designed to gauge perceived importance of the deficit. The wording of these various items, as well as information about the response options, are featured in Table 2. Collectively, these survey items measured the extent to which the federal deficit (and debt) is perceived as a problem in itself and, similarly, as a problem that needs to be quickly addressed by policymakers. In both the MTurk and Lucid studies, these items had positive and statistically significant ( $p < 0.05$ ) pairwise correlations, with Cronbach’s alpha ( $\alpha$ ) values of 0.83 in the MTurk study and 0.80 in the Lucid study. As such, we combined these items into a single scale (*Deficit Importance*) ranging from 0

to 1, with higher values indicating greater perceived importance of deficit spending as an issue and the need to address it.<sup>12</sup>

### *Experimental Results*

We first present the results of the MTurk study.<sup>13</sup> The y-axes of Figure 2 indicate the mean values of *Deficit Importance*. The left portion of Figure 2 (Panel A) displays these means (with 95% CIs) for partisans across each of the two experimental conditions. Democratic (Republican) respondents who read the “Democratic (Republican) presidents” version of the experimental treatment are featured in the “Inparty Presidents” column, while Democrats (Republicans) who read the Republican (Democratic) vignettes are included in the “Outparty Presidents” column.

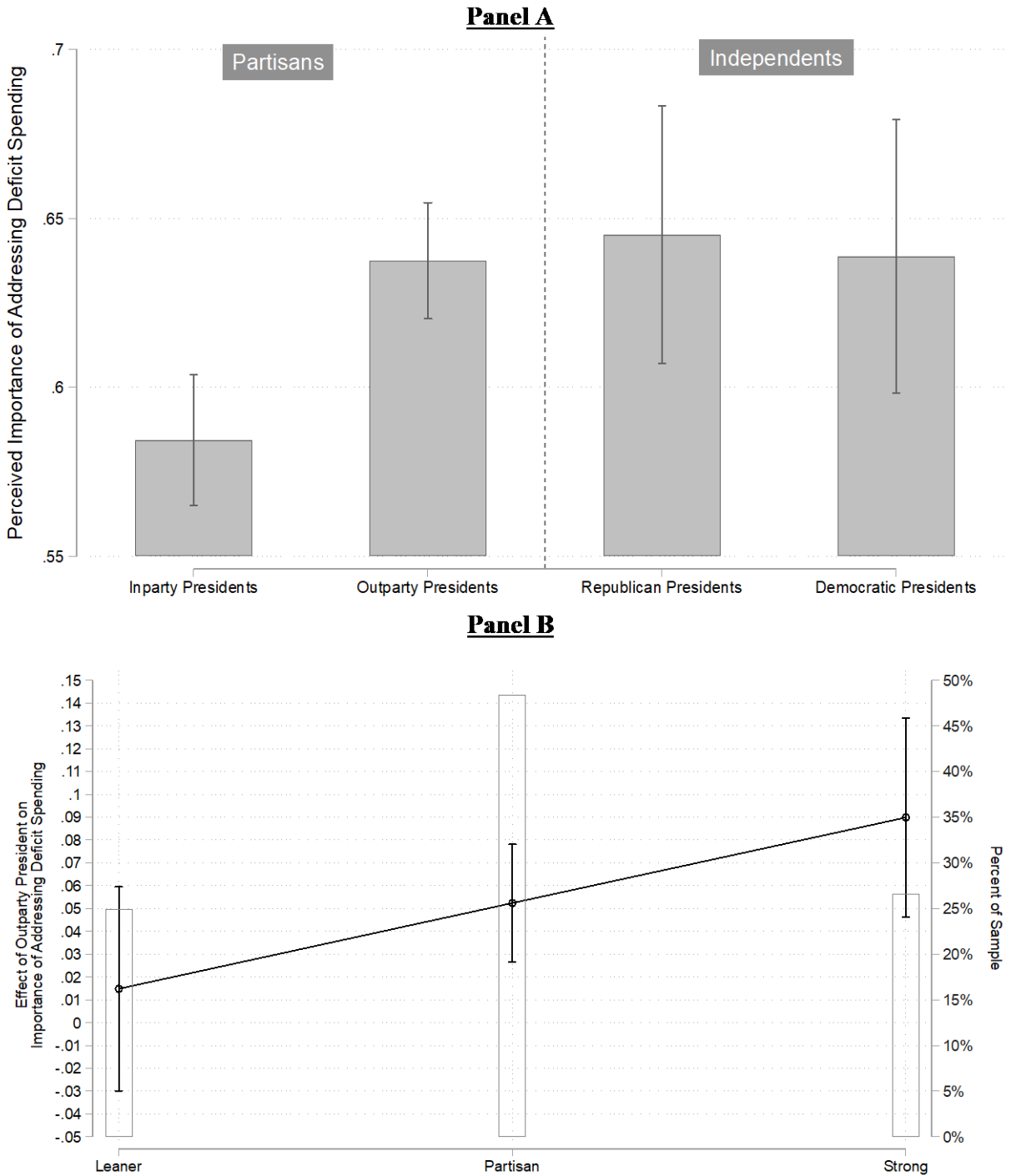
As the left portion of Panel A in Figure 2 reveals, moving from a report about inparty presidents to a report about outparty presidents yields a substantial increase in *Deficit Importance*. This effect slightly exceeded 5 percentage points on the 0 to 1 scale ( $p < 0.001$ ). Subsequent analyses confirmed that Democrats and Republicans responded in a similar fashion to the manipulation, with Democrats (Republicans) exhibiting a treatment effect equal to 5.7 (4.7) percentage points. There was a non-significant interaction between the manipulation and respondents’ party identification ( $p = 0.71$ ).

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<sup>12</sup> Details regarding the wording of all response options can be found in the Supplemental Appendix.

<sup>13</sup> Underlying regression model output can be found in the Supplemental Appendix.

**FIGURE 2. Partisanship & Importance of Government Overspending (MTurk)**



*Notes:* Dependent variable is a six-item additive scale, with higher values indicating greater perceived importance of addressing budget deficits. Panel B's y-axis shows treatment effect of "Outparty presidents" treatment relative to "Inparty presidents" treatment; right y-axis displays share of each partisan group in the sample. 95% CIs shown. MTurk data (total N=1,024).

We further investigated the effects of partisanship by stratifying the sample across (1) identification with a party, and (2) party identification strength. First, we examined whether “pure” Independents show significant differences when reading about deficits under Democratic (versus Republican) presidents. Because pure Independents lack a psychological attachment to one particular party, and thus have little reason to exhibit partisan bias (e.g., Lavine, Johnston, and Steenbergen 2012), the importance they assign to addressing the deficit should be relatively unaffected by which party appears to preside over it. Indeed, as the right portion of Figure 2 (Panel A) indicates, Independents exhibited virtually identical scores on the *Deficit Importance* scale regardless of which party they read about ( $p=0.82$ ).

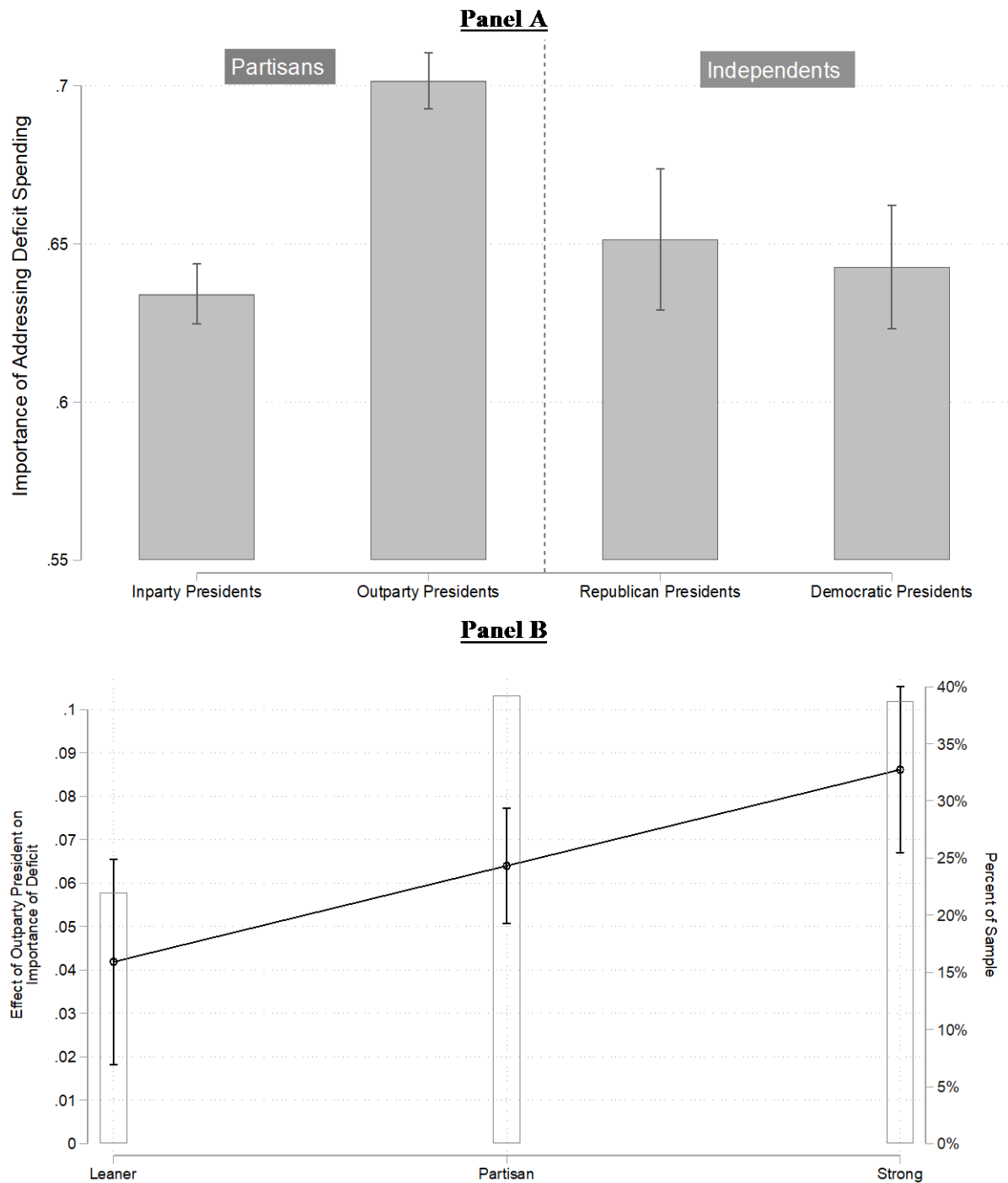
Next, if partisan bias is indeed the key mechanism underlying these results, it stands to reason that partisans with stronger attachment to their party will be more inclined to engage in motivated reasoning, and thus exhibit stronger treatment effects. As shown in Panel B of Figure 2, we indeed find a positive, significant interaction between the treatment and party identification strength ( $p<0.05$ ), with the strongest partisans exhibiting a predicted treatment effect of 9 percentage points on the *Deficit Importance* scale.<sup>14</sup> The MTurk study results thus provide strong initial support for the partisan-motivated attention hypothesis (**H1**).

Turning now to the pre-registered Lucid study, the pattern of results is strikingly similar to that of the previous experiment. As Figure 3 (Panel A) shows, partisans assigned greater importance to addressing deficit spending when reading about outparty (versus inparty) presidents. This effect was approximately 7 percentage points (an 11% increase;  $p<0.001$ ). Subsequent

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<sup>14</sup> The right y-axis of this graph indicates the share of respondents falling into each of the three categories of partisan strength.

**FIGURE 3. Partisanship & Importance of Government Overspending (Lucid)**



*Notes:* Dependent variable is a six-item additive scale, with higher values indicating greater perceived importance of addressing budget deficits. Panel B’s y-axis shows treatment effect of “Outparty presidents” treatment relative to “Inparty presidents” treatment; right y-axis displays share of each partisan group in the sample. 95% CIs shown. Lucid data (total N=5,034).

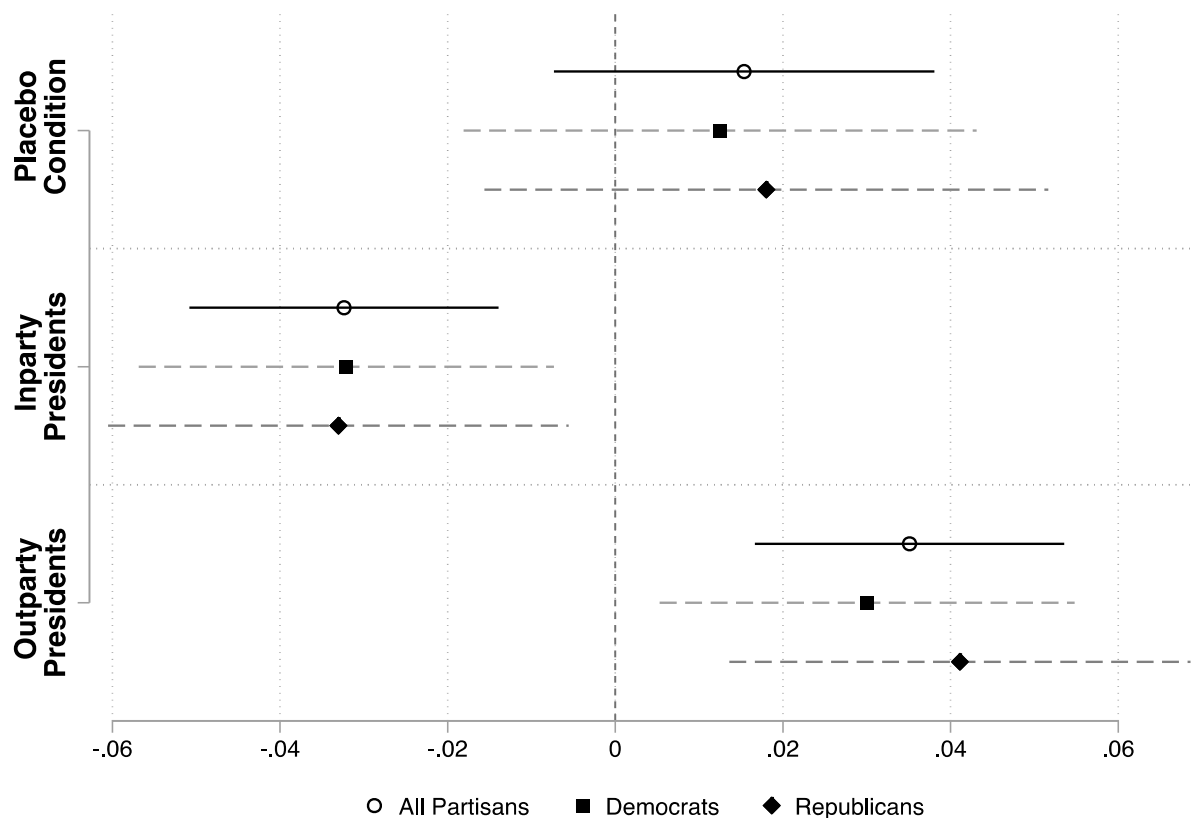
analyses again found that Democrats and Republicans exhibited markedly similar effects (.06 and .07, respectively, with a non-significant interaction between the experimental manipulation and party identification;  $p=0.36$ ). As shown in Figure 3 (Panel A), Independents again showed no significant difference in *Deficit Importance* across conditions ( $p=0.56$ ). Lastly, Panel B of Figure 3 demonstrates that treatment effects significantly increased with partisan strength ( $p<0.05$ ), with the strongest partisans exhibiting a predicted treatment effect of nearly 9 percentage points on the *Deficit Importance* scale.

### *Investigating Mechanisms*

To better understand the precise mechanisms underlying the results above, the Lucid study featured two additional control conditions. These conditions comprise 25% of the total sample ( $n=1,269$ ). One condition was a “pure control,” in which respondents were not assigned to view any vignette, instead proceeding directly to the outcome measures. The other condition served as a “placebo control,” in which respondents were shown a vignette with non-partisan language (“all presidents”) instead of partisan language (“[Democratic/Republican] presidents”). In effect, this design choice enables us to determine whether empirical evidence exists for **H1a** as well as **H1b** or, conversely, if the effects we observe above are primarily due to only one of these hypotheses being correct.

Figure 4 plots OLS regression coefficients (with 95% CIs) for the placebo and two main experimental conditions relative to the pure control condition (which functions as the excluded category), with *Deficit Importance* specified as the dependent variable. Coefficients appear for all partisans, as well as for Democrats and Republicans separately. The figure illustrates, first, that Democratic and Republican respondents exhibited markedly similar treatment effects. Second,

**FIGURE 4. Treatment Effects Involve Both Offensive and Defensive Mechanisms (Lucid)**



*Notes:* Dependent variable is a six-item additive scale, with higher values indicating greater perceived importance of addressing budget deficits. The  $x$ -axis displays the treatment effect of a given experimental condition. Excluded experimental condition is a pure control condition (i.e., respondents were not given any information). “Placebo condition” discussed “all presidents” rather than presidents of one party. 95% CIs shown. Lucid data (total  $N=5,034$ ).

likely owing to its explicit discussion of deficit spending, the placebo condition had a slightly positive effect on *Deficit Importance* (relative to the pure control condition), though this effect was not statistically significant ( $p=.18$ ). Third, relative to the pure control, the “inparty presidents” and “outparty presidents” treatments have roughly symmetric effects: the former lowered *Deficit Importance* by 3.2 percentage points ( $p<.001$ ), while the latter increased *Deficit Importance* by 3.5 percentage points ( $p<.001$ ). However, relative to the placebo control, the main effect observed above appears to be driven somewhat more by inparty (**H1a**), rather than outparty (**H1b**),



considerations: the former effect is 4.8 percentage points ( $p < .001$ ), while the latter is only 2.0 percentage points ( $p < .05$ ).

Consistent with the right panel of Figure 1, these results reveal that two distinct mechanisms underlie the main effects observed above. Specifically, partisans (1) lower *Deficit Importance* when an inparty president is responsible, as well as (2) increase *Deficit Importance* when an outparty president is responsible. In both cases, then, partisan bias systematically guides citizens' perceived importance of the deficit, even in the absence of explicit elite cues to do so, and with Democrats and Republicans being nearly equally susceptible to such partisan instincts.

## **OBSERVATIONAL DATA**

The previous section found consistent experimental evidence for **H1**, both among Democrats as well as Republicans. Yet to what extent do we observe such effects amid the myriad cues and distractions that exist in the real world? To investigate this question, we draw upon two separate data sets, both of which leverage the federal transfer of power from the (Democratic) Obama Administration to the (Republican) Trump Administration in January of 2017.

The first data set includes two separate Pew Research Center (PRC) samples, one interviewed in January of 2016 and the other interviewed in January of 2018.<sup>15</sup> These were randomly selected, nationally representative samples of adults residing in the United States (total  $n$  used in the analysis = 1,545). We selected these two surveys based upon (1) their proximity to the change in presidential administrations, and (2) the inclusion of the same measure of concern regarding deficit spending. Specifically, respondents were asked to indicate the degree to which,

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<sup>15</sup> Details concerning the sampling and interview methodology can be found in the Supplemental Appendix.

for the current president and Congress, “Reducing the budget deficit” should be a “Top priority”, “Important but lower priority”, “Not too important”, or “Should not be done”. Because over 50% of the sample selected “Top priority”, we dichotomized this variable such that 1= “Top priority”, and 0 = any other response, to simplify the analyses below.<sup>16</sup> This binary outcome measure serves as our dependent variable of interest for the PRC analyses.

The second data set comes from the Democracy Fund’s “Voter Study Group” (VSG) 2019 panel data set. The VSG includes nearly 8,000 respondents, repeatedly interviewed (online) in late 2016 (during the Obama presidency), July of 2017 (early in the Trump presidency), and again in January of 2019 (later the Trump presidency), yielding a total  $n$  size of nearly 20,000 for our analysis.<sup>17</sup> In each of these waves, respondents were asked to rate the importance of various issues, including “the budget deficit.” Respondents could rate the budget deficit as “Very important”, “Somewhat important”, “Not very important”, “Unimportant”, or, in rare cases (less than 2% in any given wave) voluntary decline to answer. Similar to the PRC data, over 50% of the sample indicated that the budget deficit is a “very important” issue. Thus, we again created a dichotomous variable for which 1= “Very important” and 0= any other response. This serves as our dependent variable for the VSG analyses.

## *Results*

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<sup>16</sup> As discussed below, we specify logistic regression models; however, the pattern of results remains the same when treating the scale as ordinal and specifying an ordered logistic model (see Supplemental Appendix).

<sup>17</sup> See Supplemental Appendix G for further information regarding these data sets.

If partisans reason about the importance of government overspending in a biased fashion, as per **H1**, the change in presidential administrations should spur changes in partisans' perceived importance of addressing the deficit. Specifically, according to **H1a and H1b**, the change from the Obama Administration to Trump Administration should result in *lower* perceived importance of the deficit among Republicans and *greater* perceived importance of the deficit among Democrats, respectively.

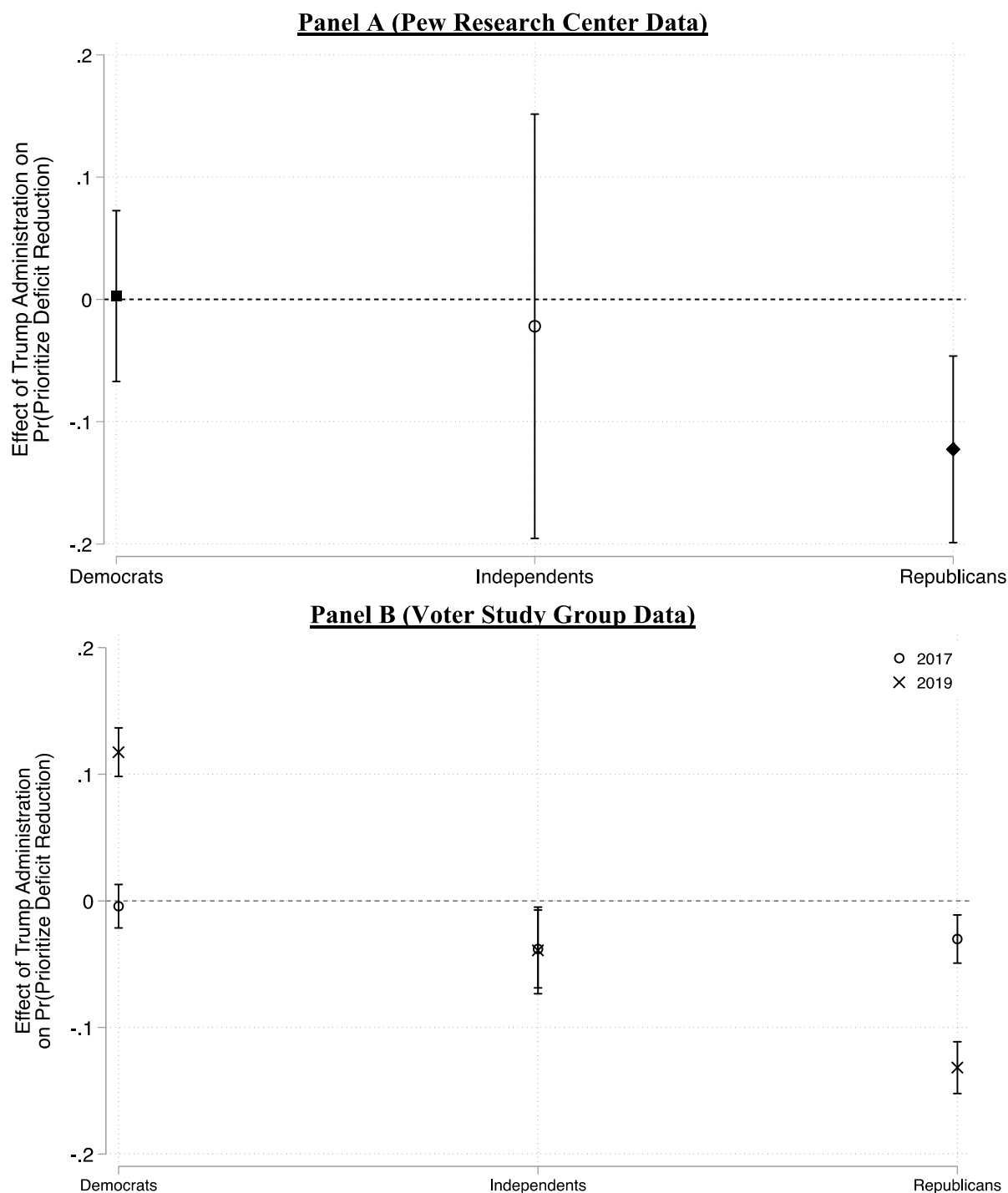
To test these expectations using the PRC data, we specified a logistic regression model featuring an interaction between a trichotomous categorical measure of party identification (Democrat, Independent, or Republican) and the year of the survey (0=2016, 1=2018). To account for any potential imbalances between the two samples, we also included controls for respondents' age, family income, education level, gender identification, racial identification, and ideological self-placement.<sup>18</sup>

The results of this analysis are featured in the top panel of Figure 5. The y-axis displays the marginal effect of changing from the Obama Administration (i.e., the 2016 survey) to the Trump Administration (i.e., the 2018 survey) on the probability of identifying “reducing the deficit” as a top public policy priority. For Republicans, moving from the Obama Administration to the Trump Administration predicts a more than 12 percentage-point *reduction* in the probability of identifying deficit reduction as a top priority ( $p < 0.01$ ). Remarkably, we observe this effect despite only two years having elapsed since the first survey and, perhaps even more importantly, the fact

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<sup>18</sup> Details regarding question/response wording, as well as descriptive statistics, for these variables (in both the PRC and VSG analyses) can be found in the Supplemental Appendix along with regression model output.

**FIGURE 5. Change in Presidential Administrations and Importance of Addressing Deficit**



*Notes:* Dependent variable coded 1=“reducing the budget deficit... is a top priority” (PRC) / “addressing budget deficit is...very important” (VSG), and coded 0 otherwise. PRC data from 2016 and 2018; VSG data are panel data collected in 2016 (baseline year), 2017 and 2019. The y-axis of both figures displays effect of changing from Obama Administration (2016) to Trump Administration on the dependent variable, while the x-axis displays these estimates for each partisan group. N=1,545 (PRC) and 19,559 (VSG).

that the budget deficit had actually *increased* each fiscal year, resulting in an even larger national debt in 2018 than in 2016.<sup>19</sup>

In contrast, among Democrats, Figure 5 shows the estimated effect to be nearly zero ( $p=0.94$ ), indicating essentially no change in perceived importance of deficits compared to 2016. The same is true of Independents, who exhibited a small, non-significant negative effect ( $p=0.81$ ). Thus, Figure 5 provides additional evidence for **H1a**, though, in contrast to the experimental results, no evidence for **H1b**.

We employ a similar methodological approach in examining the VSG panel data. Specifically, we specified a logistic regression model featuring an interaction between a trichotomous categorical measure of party identification (measured in 2016, the baseline wave) and a categorical measure of the three survey waves (2016, 2017, and 2019), with standard errors clustered by respondent.

Panel B of Figure 5 displays the results of this analysis. Like Panel A, the y-axis in Panel B indicates the marginal effect of changing from the Obama to Trump administrations on the probability of identifying the budget deficit as a “Very important” issue. Beginning first with the effect of moving from the baseline year (2016) to 2017 (indicated by the hollow circles), we see that Republicans show a significant decrease in perceived importance, on the order of 3 percentage points ( $p<0.001$ ). Democrats, on the other hand, again showed a near-zero change in perceived importance of the deficit ( $p=0.63$ ). However, if we treat Independents essentially as a baseline (given that they have less reason to engage in partisan-motivated reasoning), it implies that the

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<sup>19</sup> See Federal Reserve data located here: <https://fred.stlouisfed.org/series/FYFSD>

negative effect observed among Republicans in 2017 was not due to partisan bias but, perhaps, to other non-partisan considerations that were also on the minds of political Independents.

Far more dramatic, however, are the results for 2019 (indicated by the “x” symbols in Figure 5). While we observe essentially the same result among Independents, we see that, compared to 2016, the probability that Republicans viewed the deficit as “Very important” *decreased* by more than 13 percentage points ( $p < 0.001$ ). In this case, however, we also observe a marked increase in perceived deficit importance among Democrats, and of nearly identical magnitude: over the same span of time, Democrats exhibited a nearly 12 percentage-point increase in perceived deficit importance ( $p < 0.001$ ). These patterns are precisely in line with both **H1a** and **H1b**, respectively, and strongly suggests partisan bias shapes beliefs about the importance of addressing the federal deficit, both among both Republicans and Democrats.

Thus, across the PRC and VSG data sets, we find strong evidence in support of **H1**. It is important to emphasize, again, that over the time frame we analyzed, both deficits and the total amount of government debt *increased*. This renders the existence of partisan bias all the more notable—perhaps especially in the case of Republicans, who clearly *decreased* perceived importance—insofar as it requires, at least to some extent, disregard for changes in objective reality. These findings therefore also accord with those of Crosby and Holbrook (2019), who find that public support for a balanced budget amendment is not significantly related to the actual size of deficits or levels of debt.

In sum, our experimental results above demonstrate that even without explicit cues from partisan elites, partisans in the mass public can reason about the importance of deficit spending in a biased fashion. Notably, the results of our observational studies display even *larger* effects than did our experiments. This may potentially be because elite partisan cues are also present, further

fueling biases among partisans in the mass public. Thus, the observational data analyses raise the question of whether partisan news media might elevate (or downplay) government overspending as an important issue. To the extent such agenda-setting occurs (e.g., Boydstun 2013), it could help account for some of the sizable shifts in attention to overspending that we observe among partisans in the mass public. Evidence of such efforts would also indicate that, along with citizens, elites operating in partisan media similarly alter attention to the issue of overspending in a partisan-biased fashion. To explore these questions further, in our final section we turn to a large-scale text analysis of televised partisan news media.

## **ANALYSES OF PARTISAN MEDIA**

Applied to the partisan media context, **H1** predicts that media mentions of the deficit should vary depending upon the party of the incumbent president. Specifically, mentions should be more frequent on Republican-oriented (Democratic-oriented) programs when a Democratic (Republican) president is in power.

To investigate these expectations, we performed both automated and manual content analyses of the FOX News Network's *Hannity* television show and MSNBC's *The Rachel Maddow Show*. These programs were chosen due to their relatively long runs on two of the most prominent partisan media sources in U.S. media (e.g., Coe et al. 2008). We obtained a convenience sample of transcripts of both shows from the Nexis Uni database, downloading all available full-text records from the platform for the period spanning the entire Obama administration and the Trump administration up to April 21, 2020 (when initial analysis was performed). This procedure yielded 4,499 unique transcripts from the two news programs. The Supplemental Appendix describes how we selected texts that mentioned budget deficits and the national debt. It also includes a confusion matrix demonstrating the validity of the approach. Our strategy relied upon

simple tools: we used string matches to identify mentions of the words “deficit(s)” and “debt”, and then eliminated as many false positives as possible by parsing the linguistic context of each mention.

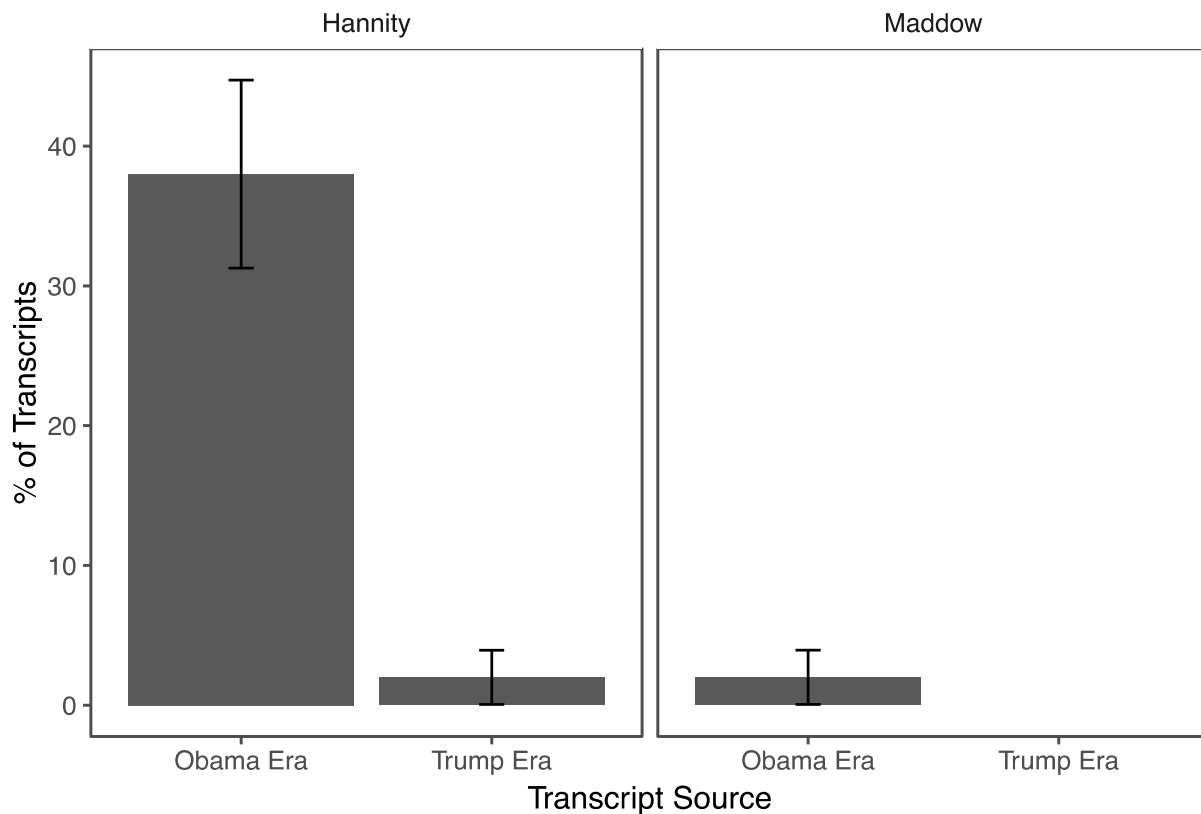
### *Hand-Coded Analysis of Debt and Deficit Mentions*

Media attention to overspending may occur for a variety of reasons. While the full results of our automated content analysis can be seen in the Supplemental Appendix, our primary interest was the *context* of each mention of budget deficits and the national debt. To directly address **H1**, we employ a manual content analysis of a random subset of 200 transcripts. This sample contained 100 *Maddow* and 100 *Hannity* transcripts evenly divided across the Obama and Trump administrations. We employed a simple binary coding strategy that identified whether the federal debt or deficit was mentioned (1=Yes, 0=No), and whether responsibility attributions targeted either the incumbent (1) or any other source, including past presidents (0). This coding strategy allows us to identify the proportion of transcripts for which there was at least one clear mention of overspending that *also* attributed responsibility to the sitting president, across presidential administration and transcript sources. Our coders’ interrater reliability scores were strong: we report a Cohen’s Kappa of 0.91 for the existence of a debt/deficit mention ( $p < 0.01$ ) and a Cohen’s Kappa of 0.82 ( $p < 0.01$ ) for the responsibility attribution measure.

The results of this analysis are presented in Figure 6. The height of the bars in this figure represent the overall percentage of transcripts attributing responsibility for overspending to the sitting president. As this figure reveals, we find clear evidence that *Hannity* made many explicit attributions of responsibility to Obama during his time in office. However, echoing the results of the automated analysis (see the Supplemental Appendix), the same was not true of *Hannity* during



**FIGURE 6. Percent of Hand-Coded Transcripts Containing At Least One Explicit Debt/Deficit Attribution to Incumbent President, *Hannity* vs. *The Rachel Maddow Show***



*Notes:* Overall N = 200; Each of the four columns in Figure 6 represent findings from 50 randomly selected transcripts from each administration/network pairing. As texts were randomly selected, they are distributed across the two time periods reflected in the columns of each facet relatively uniformly. 95% CIs shown (calculated based upon binomial distribution to prevent overlap with 0).

the Trump administration, wherein mentions became dramatically less frequent: explicit responsibility attributions declined from 38% of coded transcripts to a mere 2% of coded transcripts after the change in administration ( $p < 0.01$ ).<sup>20</sup> Again, this pattern is fully consistent with **H1a**.

<sup>20</sup> This is an especially notable finding given that the passage of the unprecedentedly massive \$2 trillion COVID-19 stimulus package (in the Spring of 2020) was included in our analysis.

In contrast, *Maddow* explicitly blames the incumbent 2% of the time during the Obama administration, yet not at all in our subsample spanning the Trump administration. The rate of mentions across the periods on *Maddow* is statistically indistinguishable from zero in both presidential administrations. In contrast to Hannity, the results for *Maddow* are inconsistent with **H1b**: *Maddow*'s discussion is almost never centered on the incumbent's responsibility for developments in those realms, regardless of which party occupies the presidency.

The present analysis suggests that on left-leaning cable television, the party of the president has relatively little effect on discourse surrounding the national debt and federal budget deficits. In contrast, right-leaning partisan media transmit explicit responsibility attributions for debt and deficit issues under Democratic presidents, yet this tendency nearly vanishes when a Republican occupies the White House. Our results thus confirm that, like partisans in the mass public, elites operating in partisan mass media also systematically adjust attention to deficits based on the party of the president. However, in this case, we do find a substantial asymmetry in how partisan media communicate about government overspending to the American public, with conservative media more inclined to adjust attention to deficits than liberal media.

## DISCUSSION & CONCLUSION

Numerous literatures have emphasized the ways in which partisan attachment affects citizens' issue stances, factual beliefs, and attribution of responsibility. In this article, we propose a theory of partisan-motivated issue attention (PMIA), which contends that partisan attachment can also systematically affect the importance that one assigns to a given public policy issue. Such bias can enable citizens to satisfy partisan psychological pressures by changing the degree to which

they regard an issue as one that needs to be prioritized and addressed. We apply this argument to the particular issue domain of government overspending.

In positioning the *party of the president* as a key contextual factor that enables partisan bias to occur, our study finds that across presidential administrations, partisans' attention to the budget deficits varies both substantially and predictably. When one's own party occupies the White House, partisans' attention to overspending declines. Yet we also find that when the outparty occupies the presidency, partisans' attention to overspending increases. Our study contributes to the literature on bias by highlighting attenuated concern *and* augmented concern as two distinct pathways through which partisans readily adjust their beliefs about government overspending.

It is worth highlighting that, because there exist several alternative pathways for partisans to behave in a biased fashion, our tests are likely somewhat conservative. Theoretically, partisans could satisfy their need for congenial interpretations of reality *without* adjusting the importance of government overspending, e.g., by believing the deficit to be smaller than it is reported to be, and/or by rationalizing the attribution of blame for deficits to someone (or something) else rather than to their inparty presidents. That our findings show substantial evidence of bias in perceived issue importance, therefore, underscores the power and adaptability of partisan bias as a psychological phenomenon in contemporary American politics.

We do caution, however, that while we find systematic bias in perceived importance of overspending, citizens' concerns about deficits do not ever completely vanish, regardless of which

party controls the presidency.<sup>21</sup> That said, our findings reveal surprisingly symmetrical effects across Republican and Democratic party identifiers. This symmetry is especially notable given the Republican Party's more overt commitment to fiscal conservatism.

Our study also makes an important contribution to recent debates about the *sources* of bias in citizens' perceptions. Previous research treats cues from partisan elites as central drivers in shaping partisans' beliefs about deficits and their consequences (e.g., Bisgaard and Slothuus 2018). In contrast, our study suggests that partisan bias can occur even among partisans who have *not* been exposed to framing efforts from partisan elites. Democrats, whose aligned media (in this case represented by *Rachel Maddow*) rarely mentioned deficits after Trump assumed office, nevertheless adjust their perceived importance of deficits (as shown in the observational analyses). Thus, partisan bias on the issue of government overspending may be exacerbated by partisan-elite cues, but, even in the *absence* of such cues, the underlying psychological process nevertheless leads partisans to react in predictable ways as presidential power changes hands.

Though future research is needed, we believe that PMIA is likely to generalize to a variety of so-called "valence issues"—i.e., issues for which a given outcome is generally accepted as being positive or negative (e.g., high crime rates, low gas prices, high inflation, etc.), particularly when one party can be plausibly viewed as responsible for it (e.g., via the presidency). This is largely because partisans' ability to change *positions* on such issues is constrained (e.g., in-party members

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<sup>21</sup> In some cases (e.g., the VSG panel data) Republicans were more concerned about the deficit than Democrats regardless of which party held the presidency. However, in the Lucid experimental data, partisan groups were nearly at parity.

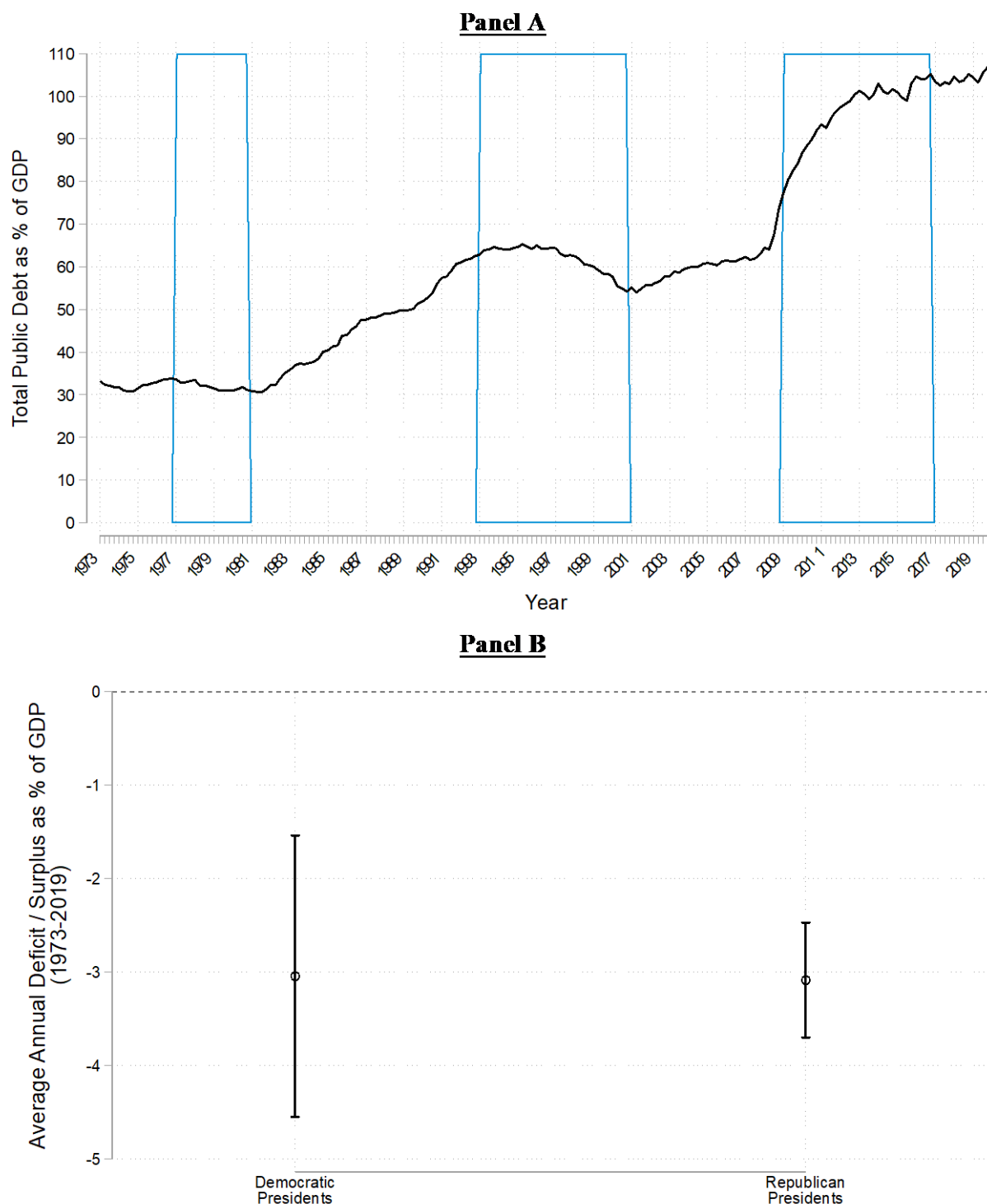
are unlikely to rationalize high inflation as a political accomplishment).<sup>22</sup> That said, future research would also do well to integrate our theory with research on *issue ownership* (Egan 2013). For example, it may be the case that partisans show the largest changes in perceived importance on issues that are generally “owned” (versus not owned) by one party. In-party (out-party) members may be especially motivated, in such cases, to attenuate (augment) the importance of a negative outcome because of the potential reputational consequences of under-performing on an issue that, in part, defines the in-party.

Finally, our findings complicate theories of presidential accountability. With respect to addressing the deficit, it is unsurprising that presidents might opt to “kick the can” instead of resolving shortfalls via unpopular policies such as tax increases or spending cuts. Logically, this willingness to ignore deficits should render presidents more vulnerable to political attacks. Yet if partisans systematically adjust the importance they assign to issues, it potentially undermines the extent to which presidents need to be responsive to public preferences for deficit reduction while seeking to accomplish various policy ends. In the extreme, presidents could (somewhat justifiably) dismiss deficit-related criticisms as biased, potentially weakening the link between citizens’ deficit prioritization and the national policy agenda. Thus, in addition to the attendant politico-economic challenges of reducing government deficits, partisan politicization around the issue of government overspending may well serve to further perpetuate the intractability of deficit reduction.

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<sup>22</sup> For example, in a recent CBS News Poll, 80% of Republicans viewed Inflation (which rose substantially between 2021 and 2022) as a “Very Important” criterion for evaluating President Biden whereas only 59% of Democrats did so (see <https://www.cbsnews.com/news/inflation-economy-immigration-biden-opinion-poll/> ).

**FIGURE A1: Overspending Across Democratic and Republican Administrations**



*Notes:* Panel A shows quarterly total public debt as a share of GDP from 1973 through 2019; shaded regions indicate Democratic presidencies. Panel B shows average annual deficit/surplus as a share of GDP from 1973 through 2019, with negative values indicating a deficit (Democratic (Republican) mean=-3.09 (-3.04) ( $p=.98$  with SEs clustered by presidency). Data obtained from St. Louis Federal Reserve Economic Data (FRED)).

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# **SUPPLEMENTAL APPENDIX**

## **Deficit Attention Disorder: Partisanship, Issue Importance & Concern About Government Overspending**

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## SUPPLEMENTAL APPENDIX A: ETHICAL STATEMENT & EXPERIMENTAL SAMPLE INFORMATION

Competing interests: The author(s) declare none.

Experimental subjects were treated in a manner that is consistent with the IRB guidelines of the respective universities under which the protocols were approved. This means that participants were remunerated for their time in a way that is consistent with existing research practices and standards for ethical employment practices in the states in which the universities are located. MTurk respondents were compensated in accordance with the [blinded state] minimum wage, which is equivalent to \$11/hr scaled to the length of the survey. The researchers did not compensate Lucid participants directly but, given the \$1 fee per respondent, this would amount to roughly 83% of the federal minimum wage for the 10 minute survey. Table A1 displays descriptive statistics for various demographic and political variables in both of our experimental samples.

**TABLE A1. Sample Characteristics of MTurk and Lucid Studies**

	<b>2020 MTurk Sample (N=1,024)</b>	<b>2020 Lucid Sample (N=5,034)</b>
Median Income	\$40k-49k	\$25k-50k
Median Age (SD)	35 (13)	48 (17)
Female	41.81%	44.26%
White	70.80%	74.83%
Black	11.23%	10.43%
Hispanic	5.76%	6.99%
Democrat	56.15%	44.76%
Independent	14.94%	17.68%
Republican	28.91%	37.56%
Liberal	48.68%	34.05%
Moderate	24.83%	31.01%
Conservative	26.49%	34.94%

*Note:* MTurk and Lucid studies fielded in January and February of 2020, respectively. The Lucid sample was selected to closely mirror U.S. Census data on Age, Race/Ethnicity (White Non-Hispanic; Black Non-Hispanic; Hispanic; Other), Gender, and Geographic Region (West; Midwest; Northeast; South).

## **SUPPLEMENTAL APPENDIX B: EXPERIMENTAL VIGNETTES & MEASURES**

### Experimental Vignette Wording

#### *Introduction*

Now we'd like you to read a brief excerpt from a forthcoming study of **government spending** over the past 45 years. The study was completed by a variety of professional economists, university researchers, and government analysts.

**Please read the information carefully as you will be asked questions about it afterward.**

#### *Placebo Condition (Lucid Study Only)*

##### **Government Spending and Deficits Under U.S. Presidents: 1973-2018**

**Every president ran a budget deficit during their time in office, our analysis found. On average, presidents spent around 13.5% more each year than the federal government took in.**

Government spending is an issue that we often hear about in the United States. While different presidents have different policy priorities, our analysis of U.S. presidents finds several noteworthy consistencies across the 45-year period of 1973 to 2018 (the most recent year for which we were able to obtain data).

The majority of federal government spending is on social programs and national defense. Presidents, on average, oversaw approximately 75% of the federal budget being spent on social programs (mainly Social Security, Medicare, and Medicaid, and to a lesser extent other spending on veterans, the poor and the disabled). Approximately 16% of presidents' budgets were dedicated to defense-related spending.

However, on average, government spending during these presidencies substantially exceeded revenue. In fact, presidents since 1973 spent, on average, 13.5% more each year than the federal government took in. This means that for every \$100 that presidents collected in revenue each year, they oversaw \$113.50 being spent.

With U.S. presidents having consistently run budget deficits over many years, this has resulted in a steady increase in the national debt, which is the total amount of money owed by the federal

government. Again, we find this pattern of increasing the national debt to be remarkably consistent among U.S. presidents since 1973.

### *Democratic Presidents Treatment*

#### **Government Spending and Deficits Under Democratic Presidents: 1973-2018**

**Every Democratic president ran a budget deficit during their time in office, our analysis found. On average, Democratic presidents spent around 13.5% more each year than the federal government took in.**

Government spending is an issue that we often hear about in the United States. While different presidents have different policy priorities, our analysis of Democratic presidents finds several noteworthy consistencies across the 45-year period of 1973 to 2018 (the most recent year for which we were able to obtain data).

The majority of federal government spending is on social programs and national defense. Democratic presidents, on average, oversaw approximately 75% of the federal budget being spent on social programs (mainly Social Security, Medicare, and Medicaid, and to a lesser extent other spending on veterans, the poor and the disabled). Approximately 16% of these presidents' budgets were dedicated to defense-related spending.

However, on average, government spending during these Democratic presidencies substantially exceeded revenue. In fact, Democratic presidents since 1973 spent, on average, 13.5% more each year than the federal government took in. This means that for every \$100 that Democratic presidents collected in revenue each year, they oversaw \$113.50 being spent.

With Democratic presidents having consistently run budget deficits over many years, this has resulted in a steady increase in the national debt, which is the total amount of money owed by the federal government. Again, we find this pattern of increasing the national debt to be remarkably consistent among Democratic presidents since 1973.

### *Republican Presidents Treatment*

#### **Government Spending and Deficits Under Republican Presidents: 1973-2018**

**Every Republican president ran a budget deficit during their time in office, our analysis found. On average, Republican presidents spent around 13.5% more each year than the federal government took in.**

Government spending is an issue that we often hear about in the United States. While different presidents have different policy priorities, our analysis of Republican presidents finds several noteworthy consistencies across the 45-year period of 1973 to 2018 (the most recent year for which we were able to obtain data).

The majority of federal government spending is on social programs and national defense. Republican presidents, on average, oversaw approximately 75% of the federal budget being spent on social

programs (mainly Social Security, Medicare, and Medicaid, and to a lesser extent other spending on veterans, the poor and the disabled). Approximately 16% of these presidents' budgets were dedicated to defense-related spending.

However, on average, government spending during these Republican presidencies substantially exceeded revenue. In fact, Republican presidents since 1973 spent, on average, 13.5% more each year than the federal government took in. This means that for every \$100 that Republican presidents collected in revenue each year, they oversaw \$113.50 being spent.

With Republican presidents having consistently run budget deficits over many years, this has resulted in a steady increase in the national debt, which is the total amount of money owed by the federal government. Again, we find this pattern of increasing the national debt to be remarkably consistent among Republican presidents since 1973.

*Party Identification [Recoded to Democrats/Leaners, Pure Independents, and Republicans/Leaners]*

Generally speaking, do you consider yourself to be a(n):

- ☐ Strong Democrat (1)
- ☐ Democrat (2)
- ☐ Independent, but Leaning Democratic (3)
- ☐ Independent (4)
- ☐ Independent, but Leaning Republican (5)
- ☐ Republican (6)
- ☐ Strong Republican (7)



### *Outcome Measures*

1 [reverse coded]. In general, how concerned are you about the federal government running budget deficits?

- ☐ Very concerned (1)
- ☐ Somewhat concerned (2)
- ☐ Not too concerned (3)
- ☐ Not at all concerned (4)

2. In your opinion, how important is the issue of federal budget deficits?

- ☐ Not important (1)
- ☐ Slightly important (2)
- ☐ Moderately important (3)
- ☐ Very important (4)
- ☐ Extremely important (5)

3 [reverse coded]. To what extent should the federal government prioritize reducing the deficit over other policies (such as funding defense and social programs)?

- ☐ Greatly prioritize the deficit (1)
- ☐ Somewhat prioritize the deficit (2)
- ☐ Give little priority to the deficit (3)
- ☐ Do not prioritize the deficit at all (4)

4 [reverse coded]. Currently, the federal government is running another large budget deficit. In your opinion, how quickly does the federal government need to act in order to reduce the size of the national debt?

- ☐ Immediately (1)
- ☐ Very soon (2)
- ☐ Somewhat soon (3)

☐ Not very soon (4)

☐ Never (5)

5 [reverse coded]. As you may know, spending on the military and social programs (such as Social Security, Medicare, and Medicaid) account for the vast majority of all federal spending. To reduce the federal budget deficit, to what extent should we **cut spending**?

☐ A great deal (1)

☐ A lot (2)

☐ A moderate amount (3)

☐ A little (4)

☐ None at all (5)

6 [reverse coded]. Please tell us if you think the following policy should be a top priority, important but lower priority, not too important or that it should not be done:

**Reducing the federal budget deficit**

☐ Top Priority (1)

☐ Important but Lower Priority (2)

☐ Not Too Important (3)

☐ Should Not Be Done (4)

### *Factual Manipulation Checks*

Our experiments featured several factual and subjective manipulation checks (see Kane and Barabas 2019). Collectively these manipulation check results indicate that the key manipulation, as well as the deficit-related content of the vignettes, were largely perceived by respondents, and that, as intended, the experimental manipulation did indeed affect beliefs about the degree to which Republican/Democratic presidents were perceived as presiding over government overspending.

In the article you read, presidents from which political party were discussed [Response options randomized; correct response depends upon treatment assignment]?

- ☐ Democratic Party (1)
- ☐ Republican Party (2)
- ☐ Another Party (3)
- ☐ No Political Party (4)

According to the article you read, every [Democratic/Republican] president [Response options randomized; highlighted response is the correct response]:

- ☒ Ran a budget deficit (1)
- ☐ Ran a budget surplus (2)
- ☐ Oversaw balanced budgets (3)
- ☐ Ran more budget surpluses than deficits (4)

According to the article you just read, about how much more (on average) did Republican presidents spend compared to the amount the federal government took in? [Response options randomized; highlighted response is the correct response]

- ☒ 13.5% (1)
- ☐ 21.5% (2)
- ☐ 90% (3)
- ☐ 4.5% (4)
- ☐ 0.1% (5)

*Subjective Manipulation Check*

**Please rate your level of agreement with the following sentence:**

In recent decades, [Democratic/Republican] presidents have run budget deficits and increased the national debt.

- ☐ Strongly Disagree (1)
- ☐ Disagree (2)
- ☐ Somewhat disagree (3)
- ☐ Neither agree nor disagree (4)
- ☐ Somewhat agree (5)
- ☐ Agree (6)
- ☐ Strongly agree (7)

## **SUPPLEMENTAL APPENDIX C: MANIPULATION CHECK ANALYSES**

Our experimental studies featured post-outcome manipulation checks. Specifically, both studies featured treatment-relevant and treatment-irrelevant factual manipulation checks (FMC-TR and FMC-TI, respectively) (see Kane & Barabas 2019). In addition, the Lucid study featured a subjective manipulation check (SMC; see Kane and Barabas 2019).

### *FMC-TR*

To ensure that the key manipulation (i.e., the party of the presidents) was perceived, we asked respondents to identify the party that was discussed in the article.

### *FMC-TIs*

We also asked respondents to identify whether, according to the article, [Democratic/Republican] presidents reportedly: ran budget deficits, ran budget surpluses, oversaw balanced budgets, or ran more budget surpluses than deficits. Next, we asked, “According to the article, about how much more (on average) did [Democratic/Republican] presidents spend compared to the amount the federal government took in?”, with responses ranging from “0.1%” to “90%”.

### *SMC*

The Lucid study also featured a subjective manipulation check, which asked respondents for their level of agreement with the following statement: “In recent decades, [Democratic / Republican] presidents have run budget deficits and increased the national debt.” Responses ranged from “Strongly Disagree” (1) to “Strongly Agree” (7).

The FMC-TR results are displayed in Table C1. These results confirm that the party of the president mentioned in the article was accurately perceived by a vast majority of respondents, and that these perceptions significantly covary with treatment assignment. Finding this pattern is crucial given that the experimental manipulation is simply the party of the presidents featured in the article.

**TABLE C1: Treatment-Relevant Factual Manipulation Check (Party Mentioned) Results**

MTurk Study						
Party Mentioned	Democrats		Republicans		Independents	
	Presidents	Presidents	Presidents	Presidents	Presidents	Presidents
	(R)	(D)	(R)	(D)	(R)	(D)
Democratic	10.58%	93.97%	2.04%	77.18%	5.63%	81.71%
Republican	86.01%	2.48%	95.24%	19.46%	88.73%	13.41%
Other	2.05%	1.42%	2.04%	0.00%	2.82%	2.44%
No Party	1.37%	2.13%	0.68%	3.36%	2.82%	2.44%
$\chi^2$ p-value	<.001		<.001		<.001	

Lucid Study						
Party Mentioned	Democrats		Republicans		Independents	
	Presidents	Presidents	Presidents	Presidents	Presidents	Presidents
	(R)	(D)	(R)	(D)	(R)	(D)
Democratic	11.54%	82.23%	2.81%	78.44%	4.36%	69.37%
Republican	79.27%	5.33%	89.76%	14.04%	75.08%	6.31%
Other	3.89%	3.67%	2.52%	2.55%	7.48%	7.51%
No Party	5.3%	8.77%	4.96%	4.96%	13.08%	16.82%
$\chi^2$ p-value	<.001		<.001		<.001	

*Notes:* Figures indicate the % giving a particular response to the question of, “In the article you read, presidents from which political party were discussed?” across the two key experimental conditions (by partisan identification). Bolded percentages indicate the share answering correctly.

The FMC-TI results are displayed in Table C2. These results confirm that large majorities of respondents were attentive to key (non-manipulated) information in each article—namely, that (1) presidents of a given party (Republican or Democratic) were described as having run budget deficits, and (2) that, on average, presidents of a given party oversaw spending that was about 13.5% higher than what the federal government took in via revenues.

**TABLE C2: Treatment-Irrelevant Factual Manipulation Checks**

	<b>Democrats</b>		<b>Republicans</b>		<b>Independents</b>	
	<i>Presidents (R)</i>	<i>Presidents (D)</i>	<i>Presidents (R)</i>	<i>Presidents (D)</i>	<i>Presidents (R)</i>	<i>Presidents (D)</i>
<b>Question</b>	“According to the article you read, every [Republican/Democratic] president...”					
<i>% Answering Correctly (MTurk)</i>	85.67%	86.17%	82.99%	80.54%	85.92%	84.15%
<i>% Answering Correctly (Lucid)</i>	78.68%	72.72%	76.72%	79.01%	73.21%	74.17%
<b>Question</b>	“According to the article you just read, about how much more (on average) did [Republican/Democratic] presidents spend compared to the amount the federal government took in?”					
<i>% Answering Correctly (MTurk)</i>	86.69%	88.30%	82.99%	79.87%	84.51%	86.59%
<i>% Answering Correctly (Lucid)</i>	78.21%	78.79%	78.54%	80.85%	76.01%	78.08%

*Notes:* Figures indicate the % giving a particular response to (1) the question of, “According to the article you read, every [Republican/Democratic] president...” with the correct answer being “Ran a budget deficit.”, and (2) the question of, “According to the article you just read, about how much more (on average) did Republican presidents spend compared to the amount the federal government took in?” with the correct answer being “13.5%”. Results are shown by partisan group across the two key experimental conditions, separated by study (MTurk or Lucid).

The results for the SMC are featured in Table C3. These analyses reveal that, as intended, treatment assignment affected perceptions of whether presidents of a given party (Democratic or Republican) have indeed presided over deficit spending. These significant effects (approximately 1 pt. on the 7-point agreement scale) were observed for both partisan groups in our Lucid sample, and occurred for perceptions of both Democratic and Republican presidents. These findings serve to confirm that perceptions of parties’ performance were indeed affected by the manipulation.

**TABLE C3: Subjective Manipulation Check (Lucid)**

<b>Rating For...</b>	<b>Democrats</b>		<b>Republicans</b>	
	<i>Democratic Presidents</i>	<i>Republican Presidents</i>	<i>Democratic Presidents</i>	<i>Republican Presidents</i>
<b>Party in Treatment</b>				
<i>Democratic</i>	4.48	5.07	5.86	3.94
<i>Republican</i>	3.34	5.83	4.99	4.89
<i>Difference</i>	+1.14	-.76	+.87	-.96
<i>p-value</i>	<.001	<.001	<.001	<.001

*Notes:* Respondents for their level of agreement with the following statement: “In recent decades, [Democratic/Republican] presidents have run budget deficits and increased the national debt.” Responses ranged from “Strongly Disagree” (1) to “Strongly Agree” (7). Columns indicate rating of each party’s presidents, disaggregated by partisan group (Democrats and Republicans). Results show that, among both Democratic and Republican respondents, assignment to article about Democratic vs. Republican presidents significantly affected perception that presidents of a given party were responsible for overspending.



**SUPPLEMENTAL APPENDIX D:  
EXPERIMENT REGRESSION OUTPUT**

**TABLE D1: Regression Output for MTurk & Lucid Experiments**

<b>MTurk Study</b>				
	<b>All Partisans</b>	<b>Democrats</b>	<b>Republicans</b>	<b>Independents</b>
<b>Party Mentioned</b>				
<i>Outparty Presidents</i>	0.05*** (0.01)	0.06*** (0.02)	0.05* (0.02)	-0.01 (0.03)
Constant	0.58*** (0.01)	0.56*** (0.01)	0.64*** (0.01)	0.65*** (0.02)
N	871	575	296	153
<b>Lucid Study</b>				
	<b>All Partisans</b>	<b>Democrats</b>	<b>Republicans</b>	<b>Independents</b>
<b>Party Mentioned</b>				
<i>Placebo Control</i>	0.02 (0.01)	0.01 (0.02)	0.02 (0.02)	0.02 (0.02)
<i>Inparty President</i>	-0.03*** (0.01)	-0.03* (0.01)	-0.03* (0.01)	0.00 (0.02)
<i>Outparty President</i>	0.04*** (0.01)	0.03* (0.01)	0.04** (0.01)	0.01 (0.02)
Constant	0.67*** (0.01)	0.65*** (0.01)	0.68*** (0.01)	0.64*** (0.02)
N	4144	2253	1891	890

*Notes:* OLS coefficients with SEs in parentheses. In MTurk study, “Outparty Presidents” is coded as 1 (0) for Outparty (Inparty) Presidents treatment. In Lucid study, excluded category is pure control condition. For independents, “Outparty Presidents”=Democratic presidents in MTurk study; in Lucid study, “Inparty President”=Democratic Presidents treatment, while “Outparty President”=Republican Presidents treatment. \*\*\* p<0.001, \*\* p<0.01, \* p<0.05.

**TABLE D2: Interaction Between Outparty (vs. Inparty) President & Partisan Identity Strength**

	MTurk Study	Lucid Study
<i>Outparty Presidents</i>	0.01 (0.02)	0.04*** (0.01)
<i>PID Strength</i>	-0.04** (0.01)	0.01 (0.01)
<i>Outparty Presidents X PID Strength</i>	0.04* (0.02)	0.02* (0.01)
Constant	0.62*** (0.02)	0.63*** (0.01)
N	871	3111

*Notes:* OLS coefficients with SEs in parentheses. “Outparty Presidents” is coded as 1 (0) for Outparty (Inparty) Presidents treatment. Models include partisans only. “PID Strength” is coded as leaner=0, partisan=1, strong partisan=2. \*\*\* p<0.001, \*\* p<0.01, \* p<0.05.

**SUPPLEMENTAL APPENDIX E:  
OBSERVATIONAL REGRESSION OUTPUT & ALTERNATIVE MODELS**

**TABLE E1: Binomial and Ordered Logistic Regression Model Output (PRC Data)**

	<b>Binomial Model</b>	<b>Ordered Model</b>
<i>Independent</i>	0.21 (0.26)	0.26 (0.24)
<i>Republican</i>	0.87*** (0.17)	0.84*** (0.16)
<i>Trump Administration</i>	0.01 (0.15)	-0.02 (0.14)
<i>Independent X Trump Administration</i>	-0.10 (0.40)	-0.24 (0.38)
<i>Republican X Trump Administration</i>	-0.55* (0.23)	-0.51* (0.22)
<i>Age</i>	0.00 (0.00)	0.00 (0.00)
<i>Income</i>	0.01 (0.02)	0.01 (0.02)
<i>African-American</i>	0.52** (0.19)	0.43* (0.19)
<i>Asian</i>	0.31 (0.32)	0.41 (0.30)
<i>Mixed Race</i>	0.15 (0.28)	0.26 (0.26)
<i>Other Race</i>	-0.36 <sup>†</sup> (0.22)	-0.37 <sup>†</sup> (0.20)
<i>Female</i>	-0.22* (0.11)	-0.17 (0.10)
<i>Education</i>	-0.12*** (0.03)	-0.11*** (0.03)
<i>Ideology</i>	0.32*** (0.06)	0.34*** (0.06)
<i>cut1</i>	--	-3.21*** (0.33)
<i>cut2</i>	--	-1.52*** (0.30)
<i>cut3</i>	--	-1.26*** (0.29)
<i>cut4</i>	--	0.75** (0.29)
Constant	-0.68* (0.31)	--
N	1,545	1,545
Pseudo-R <sup>2</sup>	.07	.05

*Notes:* Logistic regression coefficients with SEs in parentheses. Dependent variable asks respondents about the importance of “reducing the budget deficit” on a 5-point scale ranging from 1= “should not be done” to 5= “top

priority” (“Don’t Know” ( $n=51$ ) is coded as 3). Binomial model recodes dependent variable to 1= “top priority” and 0 otherwise. Democratic party identification, Obama Administration, and white racial identification are the excluded categories. “Ideology” ranges from liberal to conservative. Data are from January of 2016 and January of 2018 (collected by Pew Research Center). \*\*\*  $p<0.001$ , \*\*  $p<0.01$ , \*  $p<0.05$ , †  $p<0.10$ .

**TABLE E2: Binomial and Ordered Logistic Regression Model Output (VSG Panel Data)**

	Binomial Model	Ordered Model
<i>Independent</i>	1.23*** (0.07)	1.26*** (0.07)
<i>Republican</i>	1.86*** (0.05)	1.96*** (0.05)
<i>2017</i>	-0.02 (0.04)	0.01 (0.03)
<i>2019</i>	0.51*** (0.04)	0.58*** (0.04)
<i>Independent X 2017</i>	-0.14† (0.08)	-0.15* (0.07)
<i>Independent X 2019</i>	-0.67*** (0.08)	-0.71*** (0.08)
<i>Republican X 2017</i>	-0.13* (0.06)	-0.15** (0.06)
<i>Republican X 2019</i>	-1.11*** (0.06)	-1.15*** (0.06)
<i>cut1</i>	--	-2.68*** (0.06)
<i>cut2</i>	--	-1.01*** (0.04)
<i>cut3</i>	--	0.92*** (0.03)
Constant	-0.85*** (0.04)	--
N	19,559	19,559
Pseudo-R <sup>2</sup>	.09	.07

*Notes:* Logistic regression coefficients with SEs (in parentheses) clustered by respondent. Dependent variable asks respondents about the importance of “the budget deficit” on a 4-point scale ranging from 1= “unimportant” to 5= “very important”. Binomial model recodes dependent variable to 1= “very important” and 0 otherwise. Democratic party identification and Obama Administration (2016) are the excluded categories. Data collected by Voter Study Group (January 2019 release) across three time points (2016, 2017, and 2019). \*\*\*  $p<0.001$ , \*\*  $p<0.01$ , \*  $p<0.05$ , †  $p<0.10$ .

## **SUPPLEMENTAL APPENDIX F: PARTISAN MEDIA CONTENT ANALYSIS DETAILS**

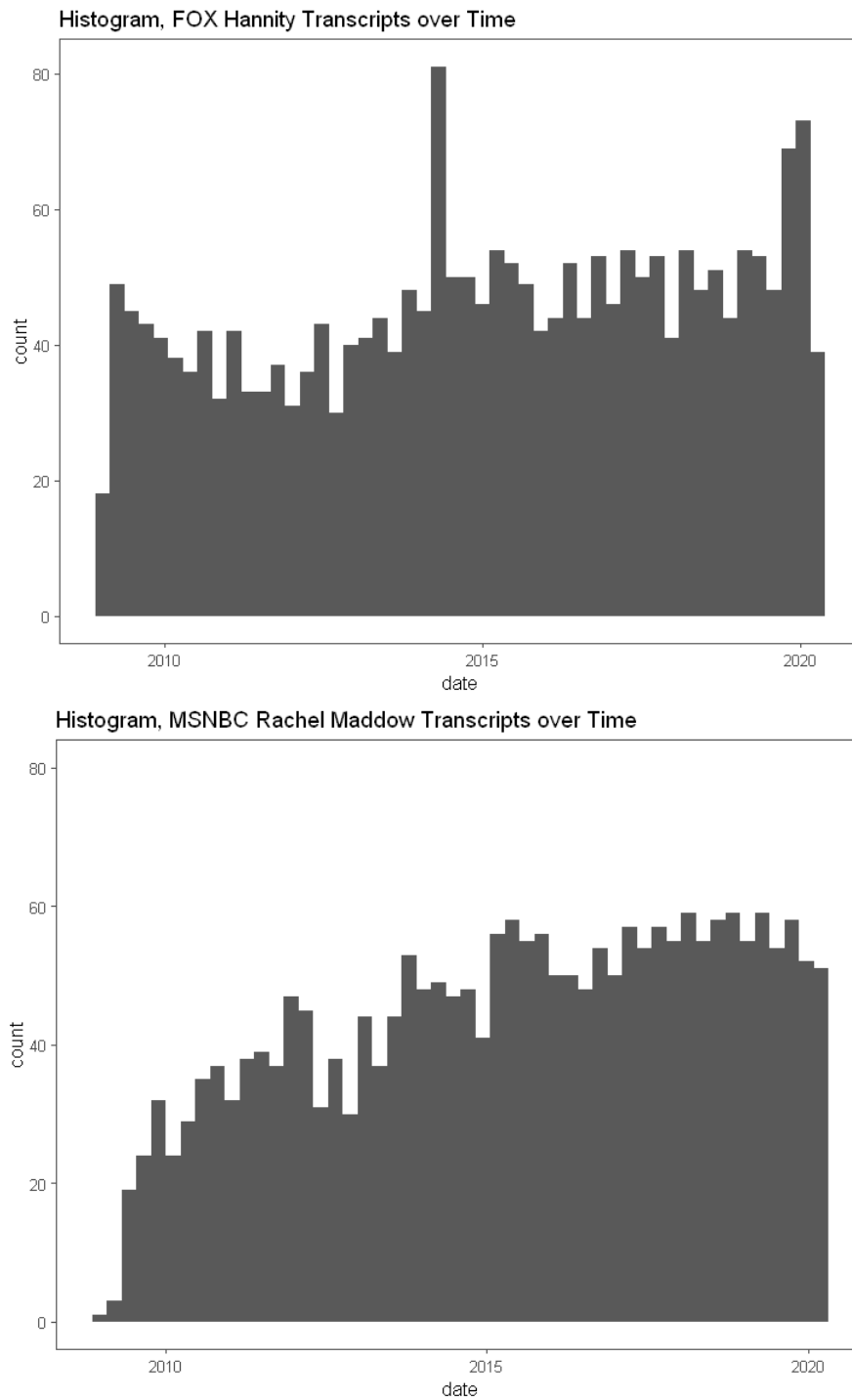
### *Description of Sample*

4,499 transcripts from MSNBC's *The Rachel Maddow Show* and FOX News' *Hannity* were collected from the Nexis Uni (formerly LexisNexis) database. These files reflect full-text transcripts of television shows, including host discussion, guest discussion, voiceovers, and any other spoken words. They do not include commercials, still image text, scrolling marquees, or audio from video clips played during the broadcast.

Our search of this database was limited to the beginning of the Obama administration (January 3, 2009) through the Spring of 2020. When sampling the database we sought to include as many unique transcripts across as many air dates as possible in this time period. While this search yields many transcripts, the search function in Nexis Uni is not without flaws, nor is this sample completely balanced over time. We encountered some duplicates and some transcripts of other shows on the respective networks; these were filtered out using the metadata described below.

Figure F1 shows the distributions of the transcripts over time. While *Hannity* is a relatively long-running show, and therefore has the appealing property of having relatively complete coverage over the time period, our *Maddow* transcripts are sparse in 2009. Nevertheless, these two shows give us a large amount of content from the same hosts over two presidencies, allowing for a test of the present hypothesis.

**FIGURE F1. A Comparison of Maddow and Hannity Transcripts Over Time**



### *Methodology: Automated Content Analysis*

To further process the corpus, which included over 19 million words, transcript text was tagged by speaker using a custom parser.<sup>1</sup> Having determined the speaker of each sentence, we then filtered the corpus to include only words spoken by hosts Sean Hannity or Rachel Maddow, respectively (as we are primarily interested in hosts', not guests', framing). We next used a simple lexicon of terms designed to comprehensively identify mentions of the national debt or the federal budget deficit.

Content analysis was performed using the *tm* library in R (Version 3.5.1). The content analytical methodology relied on a simple keyword search. After preprocessing (see below for details), texts were analyzed to determine the occurrence of several exact terms. We sought to capture mentions of budget deficits and the national debt with as broad a set of terms as possible, before identifying false positives in early testing and eliminating them. The N-grams we used to measure mentions was as follows:

*Deficit*  
*Deficits*  
*Debt*

We then sought to exclude N-gram mentions that were made in service of non-debt and non-deficit-related discussions. Because our keywords could be used in other ways, we sought to excise any mentions that used the following linguistic conventions:

*Deficit In*  
*Deficits In*  
*Trade Deficit*  
*Personal Debt*  
*Student Debt*  
*Loan Debt*  
*Debt of Gratitude*  
*His Debt*  
*Her Debt*  
*Their Debt*  
*A Debt*  
*Debt Relief*  
*Have Debt*  
*Blood Debt*

This list of excluded N-grams substantially improves our ability to recognize real mentions of budget deficits. As we will see below in Section X.4, we achieve a high rate of correct

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<sup>1</sup> For each passage we were able to identify the speaker using regular expressions that searched for fully capitalized words followed by colons.

identification of budget deficit and national debt mentions. What's more, our broad search terms mean we are also unlikely to miss mentions.

### *Text Pre-Processing and Metadata Collection*

Texts were ingested as Microsoft .docx files and analyzed as plain text. Metadata about each file were collected and tabularized by relying on the file structure of each Nexis Uni transcript. Different lines of the transcripts contain different pieces of metadata; for example, the show title is always listed on one line, and the date of the transcript is always listed on another.

The body of each text was also analyzed and filtered, in order to arrive at a more precise estimate of Hannity and Maddow's statements about the debt and the deficit. Relying upon the fact that each transcript includes each speaker's name in all caps followed by a colon, we were able to write a regular expression that identified text chunks between each new speaker. Having tagged the text as Maddow/Hannity spoken text and "other speaker" text, we next filtered out all lines without the Maddow/Hannity tag. This reduced the size of the overall corpus substantially, but we were left with only statements spoken on air by the respective speakers.

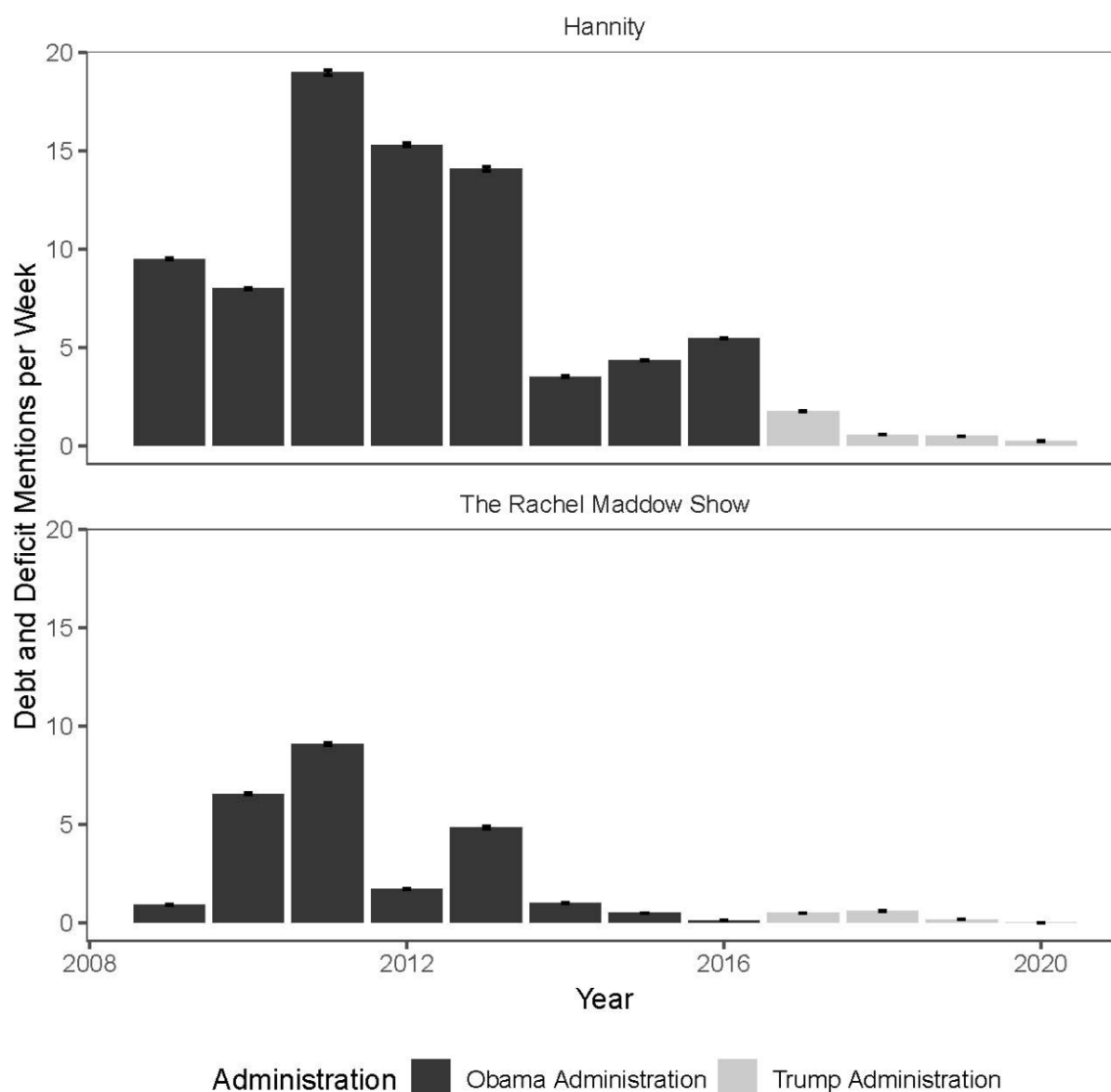
### *Automated Content Analysis: Results*

Figure F2 allows for a comparison of transcripts from *Hannity* and *The Rachel Maddow Show* across the Trump and Obama administrations. As per our automated protocol, Figure 6 reports weekly mentions in each year from 2009 to 2020. The counts are weighted by transcript length to ensure a fair comparison (*Hannity* transcripts were somewhat longer than *Maddow* transcripts on average).

In this initial exploratory analysis, mentions of deficits/debt on *Hannity* appear more strongly related to presidential incumbency than the mentions made on *The Rachel Maddow Show*. We find clear and statistically significant differences across the shows and eras (significance tests were performed using *t*-test comparisons of weekly average mentions of debt and deficit issues). Beginning with the top panel of Figure 6, *Hannity* mentions the debt and deficits substantially more during the Obama administration than during the Trump administration, as mentions peaked in 2011 at 11.9 per week and remained high throughout the remainder of the Obama years. 2011 is a salient year for debt and deficit discourse, given the debt-ceiling crisis that was eventually resolved by the Budget Control Act in August of that year. In the wake of those events (and the similar circumstances of 2013), mentions remained relatively high on *Hannity*. The election year (2016) also witnessed a significant increase in debt and deficit mentions on *Hannity* relative to 2015 ( $p < 0.01$ ).



**FIGURE F2. Mentions of Debt and Deficit per Week, *Hannity* vs. *The Rachel Maddow Show*, 2008–2020**



*Notes:* The *Hannity* dataset included 2,280 unique transcripts (around 3.9 per week) and the *Rachel Maddow* dataset included 2,212 unique transcripts across 586 (around 3.8 per week). Content is aggregated by week. Each transcript is filtered to include only transcript text spoken by the respective hosts of the programs. 95% CIs shown.

But in 2017, once Donald Trump assumed the presidency, *Hannity*'s mentions of the debt and deficit declined from around 2.98 per week to about 1.01 per week ( $p < 0.01$ ). In subsequent years, mentions fell even further, as 2018, 2019, and 2020 (an election year for the Republican incumbent) all witnessed fewer than one mention per week of the debt or deficits on *Hannity*. This

sudden and dramatic decline in attention to government overspending is fully consistent with **H1a** and, again, is especially notable given that the federal government continued to run sizable deficits, and thus further increased the total amount of public debt, throughout the Trump presidency.

On *The Rachel Maddow Show* (see bottom panel of Figure F2), mentions of the debt and the deficit also declined from the late 2000s to the late 2010s. But while mentions peaked at around 7.4 per week in 2011 amid the budget crisis (much akin to coverage on *Hannity*), the change in presidential administration did not, in contrast to *Hannity*, and contrary to **H1b**, lead to a dramatic change in attention to overspending.

Comparing the two hosts' coverage of overspending, we find that *Hannity* exceeded Maddow's coverage by around 6.8 mentions per week during the Obama Administration ( $p=0.001$ ). Yet, the same was not true during the Trump administration, a period during which *Hannity* aired only a negligibly greater amount of debt and deficit coverage relative to *Maddow* ( $\delta=0.5$  mentions per week;  $p=0.001$ ). This relatively more dramatic attenuation observed for *Hannity* is consistent with **H1a**. However, in order to examine these results more fully, we next turn to a manual content analysis of these media transcripts.

#### *Automated Content Analysis Validation*

One important task for any content analysis is validation. Our simple lexical identification task was validated using a hand-coded sample of 50 texts. Each text was manually read for any and all mentions of the deficit and the national debt—whether those mentions were included in our dataset or not. For each transcript we checked these manually identified mentions against those included in the automated sample. The result is a confusion matrix, which charts the false positive and false negative error rate. As seen below in Table F1, this confusion matrix reports the accuracy of the classifier.

**TABLE F1. Confusion Matrix, Automated Content Analysis Validation Test**

<b>Deficit</b>	<b>Count</b>	<b>Percentage</b>
True Pos:	29	
Auto Pos:	28	
False Pos:	1	0.03
False Neg:	2	0.07
<b>Debt</b>	<b>Count</b>	<b>Percentage</b>
True Pos:	39	
Auto Pos:	36	
False Pos:	2	0.05
False Neg:	5	0.13

### *Hand-Coded Sample: Details and Validation*

The hand-coded sample was collected as a random sample of the broader transcript dataset described above. This sample included 200 texts, and was subdivided into *Maddow* (50%) and *Hannity* (50%) transcripts. The sample was further subdivided into Obama-era and Trump-era transcripts, resulting in four groups for comparison: Maddow/Obama, Maddow/Trump, Hannity/Obama, and Hannity/Trump.

Coders were trained to use the “find” tool in Microsoft Word to identify instances in the (lengthy) transcripts of the terms “debt” and “deficit”. Once those terms had been located, coders read the context surrounding the instance to determine:

1. Whether Hannity [Maddow] was the speaker in the instance
2. If so, whether this explicit reference was made in service of a negative valence mention of the debt or the deficit
3. If so, whether the host made an explicit reference to the incumbent president

If criteria 1 and 2 were satisfied, but not criterion 3, the coder would increase the count of “debt/deficit mentions” in a worksheet. If all criteria were positively determined, the coder would increase “debt/deficit mentions” *and* the count of “responsibility” mentions in the worksheet. These “responsibility” mention counts therefore only include those which are made explicitly in service of the statement that the incumbent has had a negative effect (or at least did not remedy) the debt/deficit—i.e., that the incumbent president is responsible for the deficit/debt.

A comparison of the coders’ efforts revealed a Cohen’s Kappa of 0.91 for the identification of “debt/deficit mentions”, as well as a Cohen’s Kappa of 0.82 for “responsibility” mentions. These statistics indicate that the coders’ accuracy in identifying mentions and attributions of responsibility were acceptable for the present purposes.

## **SUPPLEMENTAL APPENDIX G: DATA AND CODE AVAILABILITY STATEMENTS**

### **DATA AVAILABILITY**

#### **Experimental Analyses**

Data that support this study's experiments are currently available at the Political Behavior Dataverse (<https://doi.org/10.7910/DVN/ZWLFWO>) or from the corresponding author upon reasonable request.

#### **Observational Survey Analysis**

Data that support this study's observational analyses are available for public download from the sources indicated in the main text. Specific data citations can be found below:

Pew Research Center (2016). January Political Survey.  
<https://www.pewresearch.org/politics/dataset/january-2016-political-survey/>

Pew Research Center (2018). January Political Survey.  
<https://www.pewresearch.org/politics/dataset/january-2018-political-survey/>

Democracy Fund (2019). Voter Study Group Panel Dataset.  
<https://www.voterstudygroup.org/publication/2019-voter-survey-full-data-set>

#### **Media Analysis**

Data that support this study's media analyses experiments are currently available at the Political Behavior Dataverse (<https://doi.org/10.7910/DVN/ZWLFWO>) or from the corresponding author upon reasonable request.

### **CODE AVAILABILITY**

Replication materials (codebook, analysis do-files and scripts) are currently available at the Political Behavior Dataverse (<https://doi.org/10.7910/DVN/ZWLFWO>) or from the corresponding author upon reasonable request.