Editor's Choice: Measuring Candidate Quality using Local Newspaper Endorsements

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Abstract

I construct a new measure of candidate quality differentials using local newspaper endorsements. I argue that political endorsements made by newspapers can be used as expert opinions that reflect quality differences between the candidates in an election. Using a dataset of 21,095 local newspaper endorsements, I simultaneously estimate the quality differences between candidates in 6,432 elections, along with a dynamic measure of the partisan bias of 368 local newspapers. Using the new measure, I show that a one standard deviation increase in relative candidate quality increases a candidate's two-party vote share by 3.4 percentage points, and that candidate quality accounts for about one-fourth of the incumbency advantage. These findings advance debates on the source of incumbency effects and demonstrate the broader electoral impact of candidate quality. I conclude by discussing the potential of these endorsement-based measures to enhance our understanding of candidate quality in electoral politics and governance.

The quality of politicians is an important aspect of the overall quality of representation and has been a topic of interest to political scientists for decades. In formal models of elections, voters use signals of candidate quality and past performance to weed out bad politicians (Dewan and Shepsle 2011), hold politicians accountable (Ashworth 2012), and align politician incentives with their own (Barro 1973; Ferejohn 1986). High-quality candidates make government policy more valuable and effective for citizens, and political parties have incentives to recruit high-quality candidates to increase their chances of winning power. Candidate quality is often discussed in popular media as an important explanation for electoral performance and a party's overall electoral success.

Empirically, however, it is hard to quantify the importance of candidate quality because candidate quality itself is difficult to measure. Many existing measures of candidate quality are narrowly defined and single out only particular characteristics of candidates, such as their professional background or previous office-holding experience, or define candidate quality as electoral performance itself. More holistic measures, such as expert judgments, are typically not available in a way that would allow for a broader assessment of the role that candidate quality plays in elections and governing. The difficulties in observing and quantifying candidate quality limit the ability of political scientists to study important theoretical and empirical questions about the impact that candidate quality has on electoral politics and public policy.

In this paper, I construct a new measure of differences in candidate quality – which I refer to as "candidate quality differentials" – using the political endorsements made by local newspapers.[1] When making endorsements, local newspaper editors act as experts making a recommendation and are good judges of candidate quality because they know much more than the average voter about issues in the election and about the characteristics and qualifications of candidates. Therefore, newspaper endorsements can be used to measure the difference in candidate quality between two candidates in an election.

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1. While the term "challenger quality" is often used in past literature to describe the experience or qualifications of challengers, endorsement-based quality differentials capture a broader concept: the relative difference in quality between two candidates in an election, of which challenger quality is a component.

The simple idea behind the measure is that higher-quality candidates are more likely to be endorsed by local newspapers. Although newspapers and their editors may have partisan biases that affect their endorsement behavior, this bias is actually useful for estimating candidate quality. That is because newspapers that are biased in favor of one party will only endorse a candidate of the other party if that candidate's relative quality advantage is large. These surprising or unexpected endorsements are referred to as "credible" endorsements in the economics literature (Chiang and Knight 2011), and are strong signals of significant candidate quality differences. Conditional on the partisan biases of the set of newspapers making endorsements in a race, higher-quality candidates will be endorsed more often, and the magnitude of their relative quality advantage can be identified by the credibility of the endorsements they earn.

I use a dataset of 21,095 local newspaper endorsements to estimate quality differences between candidates in 6,432 elections, while also estimating and controlling for a dynamic measure of the partisan bias of 368 newspapers published across the United States. The newspaper endorsement-based measure of candidate quality differentials has many benefits over existing measures. First, quality differentials not only indicate which of two candidates is higher quality, but also provide an estimate of the magnitude of that relative quality advantage. This overcomes a major limitation of many proxy measures of candidate quality, and provides for a more nuanced measure of candidate quality. Second, similar to expert ratings, quality differentials are more comprehensive than many common, more narrowly-defined measures of candidate quality. Third, it is possible to calculate quality differentials in any scenario in which political endorsements are made, which is historically quite common among local newspapers in the United States. These quality differentials can be constructed for elections where other expert ratings are unavailable or where obtaining personal and professional background information about the candidates is difficult, such as in historical elections or in local government elections.

To validate the new endorsement-based measures of both partisan bias and quality differences, I first show that the partisan bias of local newspapers based on endorsements is correlated with widely used alternative measures of newspaper bias.[2] This step confirms that the empirical

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2. Specifically, I compare the endorsement-based measure of bias from this paper to partisan bias

framework accurately takes into account the partisan biases of newspapers when estimating the quality differences derived from endorsements. Next, I show that quality differentials are correlated with expert ratings of candidate qualifications and that winning candidates who have large quality advantages in their elections subsequently have higher legislative effectiveness scores and net approval ratings while in office. This provides evidence that the quality differentials from endorsements are predictive of candidates' future governing effectiveness and performance in office. As a final validation, I reestimate quality differentials while explicitly incorporating candidate ideological positions into the model. This exercise reveals that once newspaper partisanship is taken into account, candidate's ideological positions are only a relatively small factor in endorsement decisions and shows that the estimated quality differentials are not simply explained only by the fact that more moderate candidates are more likely to be endorsed.

After validating the endorsement-based quality differentials, I use the measure to explore the relationship between candidate quality, incumbency, and electoral outcomes. I find that a one standard deviation increase in candidate quality is associated with a 3.4 percentage point increase in two-party vote share. Furthermore, I find that candidate quality accounts for roughly one-fourth of the incumbency advantage, while approximately one-third of the effect of candidate quality can be attributed to incumbency status. These results offer new insights into the long-standing debate over the sources of incumbency advantages and suggest that direct benefits of holding office may play a larger role than previously estimated. I conclude by discussing how these measures provide a new lens for examining electoral dynamics and suggest valuable directions for future research on candidate quality and its implications for governance.

Difficulties in Measuring Candidate Quality

Political scientists who study elections often define candidate quality *as* being good at winning elections. As Maisel, Stone, and Maestas (1999) note, the somewhat circular reasoning common in the literature is that "quality candidates are those who receive a lot of votes" (p.1-2). Popular media also tends to measure candidate quality simply as over- or under-performance in an election

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measures developed in Ho and Quinn (2008), Gentzkow and Shapiro (2010), and Puglisi and Snyder (2015).

(Silver 2022; Jain and Sit 2023). This leads scholars to define candidate quality using indicators of (previous) electoral success – such as incumbency status or prior office-holding experience (Jacobson and Kernell 1981; Cox and Katz 1996). Those who do well and win their elections are high-quality candidates, while those who do poorly and lose are not. This *post-hoc* definition of candidate quality can be useful in some cases, for example, to predict future electoral success, but it is not how I conceptualize candidate quality in this article. Although previous electoral success is, of course, an indicator of candidate quality, defining it this way is not useful for studying how candidate quality contributes to incumbent success, understanding how voters identify and reward high-quality candidates, or examining how candidate quality impacts governance.

Instead, I conceptualize candidate quality as the individual characteristics of candidates that will make them effective in the elected position for which they are running. In this conception, candidate quality refers to the qualifications of the candidates, rather than their potential for electoral success *per se*. Factors that make someone more effective at governing can include objective and observable facts about the candidates, such as their education, professional experience, or previous accomplishments, but also may include candidate traits that are difficult to measure, such as a candidate's intelligence, competency, and integrity. The quality of the candidate is defined by whether the candidate will be able to govern effectively, given their individual experiences and personal attributes.

Because measuring candidate qualifications and (potential) governing effectiveness is a difficult task, existing ways of quantifying candidate quality are quite limited. Many researchers use indicators of past electoral success to define candidate quality rather than trying to assess candidate quality directly. For example, previous office-holding experience – including incumbency, prior experience, years of experience, and "relevant" experience (Hirano and Snyder 2019) – is often used to define high-quality candidates. While such indicators do have a theoretical connection to governing effectiveness (gaining experience in office may actually *cause* you to be more effective in that position), they are coarse measures that do not differentiate between high- and low-quality candidates who are incumbents or who have similar levels of experience. The (lack of) scandals is another indicator that some have used as a proxy for candidate qual-

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ity in an electoral context (Puglisi and Snyder 2011; Basinger et al. 2014; Miller and Hamel 2021), although this measure is limited in its ability to identify high-quality candidates before they are elected. Others have argued that campaign donations could be used to measure candidate quality, though Prat, Puglisi, and Snyder (2010) find that donations are only "positive, but weak" predictors of legislator effectiveness, and campaign contributions are also confounded with ideological considerations (Bonica 2014) and competitiveness.

Another way to measure candidate quality is through expert opinions, which includes candidate ratings or rankings made by researchers, political organizations, or professional groups. In theory, expert evaluations of candidate quality can overcome the limitations of proxy indicators, as experts can directly and comprehensively evaluate candidates on their (potential) governing effectiveness based on their qualifications and experiences. The validity and reliability of expert judgments in political science research has been evaluated and verified in previous work (Steenbergen and Marks 2007), and expert judgments have been used specifically in the context of measuring candidate quality. For example, Mondak (1995) calculates quality and competence-integrity scores based on content analysis of legislator biographies paired with undergraduate and graduate student ratings of character traits. Krasno and Green (1988) create a quality index based on candidate backgrounds, composed of "all characteristics which imply attractiveness or skill" (p.912). In other cases, political scientists have used surveys of experts to measure candidate quality. Some examples include Stone et al. (2010), Stone and Simas (2010), and Buttice and Stone (2012), who all use a survey of expert informant ratings of members of Congress to quantify the valence quality of candidates; Luttbeg (1992), who uses expert rankings of "best" and "worst" legislators, from surveys conducted by newspapers, to assess the impact of rankings on election outcomes; Miquel and Snyder (2006), who use a survey of legislators, lobbyists, and journalists who rate the effectiveness of state legislators in North Carolina; and Lim and Snyder (2015), who use the qualification rankings from the American Bar Association to differentiate between judicial candidates of varying quality.

Although expert opinions may be more holistic measures of governing effectiveness, they are difficult to collect for a large set of candidates and races and they are often unavailable in many

historical contexts. In Mondak (1995), quality and competence-integrity scores are only available for a single year of sitting U.S. House members, and Krasno and Green (1988) composite ratings were only constructed for U.S. House candidates who challenged incumbents between 1972-1980. The expert informants from Stone et al. (2010), Stone and Simas (2010), and Buttice and Stone (2012) only include judgments of candidates in a few years in a partial sample of Congressional districts. Rankings of effectiveness used in Miquel and Snyder (2006) and Prat, Puglisi, and Snyder (2010) only cover North Carolina state legislators, while Lim and Snyder (2015)'s bar association ratings is limited to judicial candidates. Additionally, manually evaluating candidates and constructing subjective measures of candidate quality or running surveys to collect a large set of expert opinions is often prohibitively time consuming and expensive. These limitations on the creation and collection of expert evaluations make it difficult to use these measures in comprehensive studies about candidate quality, even if they represent a more conceptually valid measure of governing effectiveness.

Newspaper Endorsements as (Biased) Expert Opinions

Typically, newspaper endorsements have been used by political scientists to measure the partisan bias of news, rather than candidate quality (Ansolabehere, Lessem, and Snyder 2006; Larcinese, Puglisi, and Snyder 2011; Puglisi and Snyder 2011, 2015). However, I will argue and show empirically that newspapers decide who to endorse in part based on candidate quality, in addition to partisan alignment. The simple idea is that newspapers are more likely to endorse higher-quality candidates, and therefore newspaper endorsements can be used as expert opinions that measure the differences in quality between two candidates in an election. Notably, in previous work, Hirano and Snyder (2014) and Hirano and Snyder (2019) use newspaper endorsements to identify high-quality candidates in the context of primary elections, where partisan and policy differences between candidates are small, and hence the ideological stances of the papers matter less for their endorsement decisions.

In the United States, it is common for local newspapers to make endorsements of candidates. In many cases, newspapers summarize their endorsements in a list for voters leading up to or on election day. It is also not uncommon for papers to write an entire editorial article explaining

their endorsement of a particular candidate. Figure 1 displays two examples of local newspaper endorsements as printed by the Wisconsin State Journal (panel A) and the Wilmington Evening Journal (panel B). Political endorsements provide a window into a newspaper's own partisan preferences, as they are an explicit political act which requires a newspaper to choose between competing candidates from opposing political parties.

Newspaper editorial boards feel that they are trying to inform the public about the candidates, not in an attempt to manipulate their readers, but rather as an act of public service. They provide information about the policy positions and qualifications of candidates and explain the reasoning behind their endorsement to readers. They claim that they strongly weigh aspects of candidate quality when making their endorsements. They take the time to research the candidates and issues and act as experts expressing informed opinions about who they think is the best candidate. Undoubtedly, editors and reporters know more about elections than the average citizen, and they often have experience evaluating candidates and assessing their past behavior and performance while in office, through both the newspaper's reporting and with the experience of having made endorsements after evaluating candidates in previous races.

Public interviews with editorial board members give insight into the decision-making process that newspapers use to make political endorsements. The following quotations from editorial boards explaining how they make their endorsements is illustrative:

> – *The Arizona Republic*: "The Republic has endorsed candidates for more than 120 years because we believe our choices can inform readers and spur community debate. Let's make this clear: We're not telling you how to vote. We respect the sanctity of your decision, based on your beliefs, research and contemplation. But at the same time, we know you're busy. You may not have the time to meet the candidates, to hear them speak, to cull their election literature and research their records. We do that. We follow the races closely. We talk to the campaigns and candidates. We research their records and explain why we think a certain candidate deserves your vote." (Arizona Republic Editorial Board 2016)

> – *The Boston Globe*: "The Globe endorses candidates to clarify key issues at stake in a political race and to help inform readers who are aligned with the editorial board's positions and values when they are deciding how to vote. We do the work of reporting and analysis that many readers don't have time to do. Particularly for down-ballot (non-Presidential, local) races and for ballot questions, we take the time to learn about the candidates and questions, to interview candidates and proponents, and to deliberate on the tradeoffs. We then transparently share that reasoning and information as a service to readers and voters who don't have the opportunity to meet candidates in person or to vet them as thoroughly as the board." Bina Venkataraman, quoted in Jones (2020)
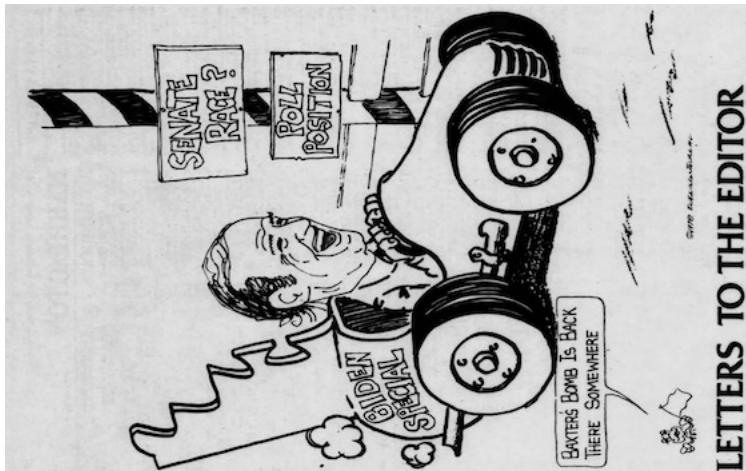
> – *The New York Times*: "The closest analogy to this process may be a job interview. What is it in the candidates' experience that prepares them for the job we're trying to fill? We have all read their résumés and watched their debate performances; their platforms and programs are on their websites. We're trying to get at something different — how they would perform in office and whether they have any idea of how to accomplish whatever goals they've set... Whose platform and record are most consistent with our values? Whose temperament and character are best suited to the demands of the presidency?" Kathleen Kingsbury, quoted in Takengag (2020)

These quotes are representative of what other editorial boards say about why and how they make endorsements (Jones 2020), and show that in addition to a candidate's "positions and values", editorial boards evaluate and make their decision about who to endorse based on candidate qualifications and, ultimately, "how they would perform in office." Notably, the focus of these endorsements is on the candidates' ability to govern effectively rather than their chances of winning an election. Editorial boards aim to highlight which candidate is most capable of fulfilling the responsibilities of public office, emphasizing factors such as competence, qualifications, and alignment with community values. Their recommendations are not driven by strategic calculations about electoral success, but rather by an assessment of which candidate they believe will serve the public best. This distinction reinforces the idea that endorsements function as expert evaluations of governing potential, providing a reliable lens for assessing candidate quality.

Data and Empirical Evidence

In this section, I empirically test whether previous measures of candidate quality, such as incumbency or prior experience, predict newspaper endorsements. To do so, I collect and compile a set of 21,095 newspaper endorsements from 368 local newspapers in United States.[3] The dataset includes endorsements from many major regional newspapers and for elected offices ranging from president down to local government positions.

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3. Appendix A describes the data and the data collection procedure in detail.

© Wisconsin State Journal

(A) Editorial List

Wisconsin State Journal, 1982

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(B) Editorial Announcement

Wilmington Evening Journal, 1978

Figure 1: Newspaper Endorsement Examples

Notes: Panel (A) shows a list of endorsements from the Wisconsin State Journal in 1982 for federal, state, and local candidates. Panel (B) shows the Wilmington Evening News endorsement for Joe Biden during his 2nd run for the U.S. Senate in Delaware in an article format.

Table 1 provides summary statistics for the set of all partisan newspaper endorsements that are used in the subsequent analyses. The endorsements span 1950-2020 and come from 368 unique newspapers, and include newspapers from a large majority of state as well as Washington DC.[4] About 13 percent of the endorsements are for Presidential candidates, 9 percent are for candidates for U.S. Senate, 25 percent are for candidates for U.S. House, 34 percent are for candidates for statewide offices, 16 percent are for state legislative candidates, and the remaining 3 percent are for local government offices. In general, Democrats are endorsed 51% of the time, though at a slightly lower rate in presidential races. The summary statistics in Table 1 also reveal evidence of a strong preference for incumbents: incumbents earn the endorsements of newspapers 78 percent of the time, when running for reelection.

Table 1: Newspaper Endorsement Summary Statistics

Office	N	Share	% Dem	% Incs	N Papers	N Elections
President	2,680	0.13	0.40	0.58	351	18
US Senate	1,993	0.09	0.54	0.73	340	481
US House	5,247	0.25	0.52	0.84	307	2,301
Statewide	7,193	0.34	0.50	0.78	353	1,790
State Legislature	3,404	0.16	0.55	0.85	112	1,602
Local Govt	578	0.03	0.53	0.74	70	240
Total	21,095	1.00	0.51	0.78	368	6,432

Notes: N is the number of endorsements for the office type indicated in each row. Share is the share of all endorsements for the office type. % Dem is the percentage of the endorsements that are for the Democratic candidate, while % Incs is the percentage of endorsements that are for the incumbent when the incumbent is running for reelection. N Papers is the number of unique newspapers that make endorsements for the office type. N Elections is the number of unique elections for that office type. See appendix A for additional details.

To test the extent to which newspaper endorsements are driven by candidate quality factors, in Table 2 I predict newspaper endorsements using candidate characteristics related to quality.[5] The outcome variable in Table 2 is an indicator variable for whether the newspaper endorsed a

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4. In appendix A, Figure A1 presents the number of endorsements in the data from each year, Figure A2 presents the main county of circulation for newspapers in the sample, Figure A3 presents the share of endorsements in the sample that were for Democrats in each year, and Table A1 lists all newspapers and the number of endorsements collected from each.

5. The candidate characteristics were in part collected manually along with endorsements, but also

Democrat, and each observation is a newspaper endorsement made in an election. Explanatory variables include incumbency, (any) previous elected experience, and scandal, all of which are coded as 1 when they favor the Democratic candidate (e.g., when the Democrat is the incumbent), −1 when they favor the Republican candidate (e.g., when the Republican is the incumbent), and 0 when there is no difference (e.g., when nobody is the incumbent in an open seat). The decades of experience variables are calculated as the difference in experience between the Democratic and Republican candidates. In all of the specifications, I control for the concurrent or most recent presidential election two-party Democratic vote share in the main county where the endorsing newspaper circulates (Dem Vote Share), to account for potential audience demand-side effects, and in columns 2-6 I include newspaper fixed effects to control for each newspaper's partisan bias (differences across newspapers in their propensity to endorse Democrats).

In column 1 of Table 2, Democratic vote shares of the county where the newspaper circulates are shown to significantly predict its endorsement behavior. This is consistent with evidence from the economics literature which finds that media tends to slant its news coverage in the direction of its audience's preexisting biases (Gentzkow and Shapiro 2010). However, the low R^2 – only 0.025 – shows that it is not very good at explaining the overall variation in individual endorsements. After adding in newspaper fixed effects, in column 2, the R^2 jumps from 0.025 to 0.154, and the adjusted-within R^2 reveals that the Dem Vote Shares variable accounts for only 1% of the variation in newspaper endorsements. In many cities where there is more than one newspaper and a large enough population with heterogeneity in audience partisanship, newspapers may choose to divide up the local market by adopting opposing partisan positions rather than competing for the dominant partisan audience (Mullainathan and Shleifer 2005). For example, in New York City, the *New York Post* is known to be a conservative newspaper that still does well in the city, despite the overwhelmingly Democratic population. So, while there is a tendency for the bias of papers to match the dominant voter's partisanship in the county where the paper circulates, this is only a small factor in explaining specific newspaper endorsements.

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come from Inter-university Consortium for Political and Social Research and McKibbin (1997), Lewis et al. (2022), Klarner (2018), Basinger et al. (2014), Miller and Hamel (2021), Boche et al. (2018), and Bonica (2023).

Table 2: Predicting Newspaper Endorsements

VARIABLES	(1) Endorse D	(2) Endorse D	(3) Endorse D	(4) Endorse D	(5) Endorse D	(6) Endorse D
Dem Vote Share	0.672***	0.698***	0.493***	0.641***	0.541***	0.291***
	(0.030)	(0.049)	(0.044)	(0.072)	(0.075)	(0.082)
Incumbency			0.262***	0.202***	0.291***	0.402***
			(0.004)	(0.005)	(0.008)	(0.009)
Prior Experience				0.250***	0.222***	0.152***
				(0.008)	(0.008)	(0.008)
Decades of Exp.					-0.120***	-0.166***
					(0.008)	(0.008)
(Decades of Exp.)^2					0.055***	0.062***
					(0.002)	(0.002)
Scandal						-0.091**
						(0.046)
Observations	19,481	19,481	18,519	7,648	6,244	4,405
Adjusted R-squared	0.025	0.154	0.343	0.468	0.561	0.631
Adjusted Within R^2	.	0.010	0.228	0.348	0.459	0.556
Newspaper FEs	No	✓	✓	✓	✓	✓

Notes: Outcome variable (Endorse D) is coded as 1 for a Democratic endorsement, 0 for a Republican endorsement, and 0.5 for either a third party endorsement, an explicit non-endorsement, or when the paper endorses both candidates. Dem Vote Share is the concurrent or most recent presidential election results in the main county where the endorsing newspaper circulates. Incumbency is coded as $+1$ for a Democratic incumbent, -1 for a Republican incumbent, and 0 for open seats. Prior Experience is an indicator variable equal to $+1$ (Democratic advantage), -1 (Republican advantage), or 0 (if both or neither have relevant experience). Decades of Experience and (Decades of Experience)^2 is calculated with the difference in decades of experience between the Democratic and Republican candidates. Scandal is coded as $+1$ for a Democratic scandal, -1 for a Republican scandal, and 0 if neither (or both) were in a scandal. Columns 2-6 include newspaper fixed effects. Not all endorsements are included in each regression due to missing candidate data. $^* = p < 0.10$, $^{**} = p < 0.05$, $^{***} = p < 0.01$.

Columns 3-6 add candidate characteristics related to quality to the regression. In column 3, the results show that incumbency is a strong predictor of earning a local newspaper's endorsement: being an incumbent is associated with a 26.2 percentage point increase in the probability of being endorsed by a newspaper. Columns 4 and 5 show that prior experience is also a very strong predictor of being endorsed by a newspaper, and that there are nonlinear effects of length of experience. Column 6 shows that being in a scandal reduces the probability of being endorsed, as expected.[6] Although these common proxies for candidate quality are predictive of newspaper

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6. Because not all candidates who are involved in scandals are included in the regression results, due to the fact that many candidates who are in serious scandals either resign or do not win their primaries,

endorsements, they do not tell the whole story. At best (column 6), these models can explain 63.1 percent of the variation in endorsement decisions. So, while endorsements are related to the characteristics that political scientists typically consider to be related to candidate quality, they are not *only* reflective of existing measures.

Estimation of Partisan Bias and Quality Differentials

When making endorsements, newspapers consider both their partisan preferences and the quality of the candidates. This means that the number and share of endorsements that any particular candidate gets depends not only on their quality relative to their opponent, but also on the partisan preferences and ideological values of the newspapers making endorsements in the race. In order to accurately measure differences in candidate quality between candidates, partisan biases of newspapers must be taken into account.[7]

Others have established that local newspapers have partisan biases (Gentzkow, Glaeser, and Goldin 2006; Ansolabehere, Lessem, and Snyder 2006; Gentzkow and Shapiro 2010). The partisan bias of newspapers is useful, however, because it can help reveal information about the magnitude of the differences in candidate quality. Higher-quality candidates should be more likely to be endorsed by a newspaper, *conditional on the newspaper's partisan bias.* Only if candidate quality differences are large will a strongly biased newspaper endorse a candidate from the party they typically do not prefer. This means that, for example, when a strongly Republican-leaning newspaper endorses a Republican candidate, it is not unexpected, and not much information about candidate quality is revealed. But when that same newspaper endorses a Democratic candidate in an election, it is a much stronger signal of differences in candidate quality – in this example, indicating a relatively high-quality Democratic candidate. This idea of "credible" endorsements – unexpected endorsements, given the partisan lean of the newspaper – has also been utilized in empirical work examining the effects of endorsements on voting.[8]

In the case where a newspaper is very Republican leaning, such that the paper's ideology

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the estimated effects of scandals on endorsements is a conservative estimate of the effect of scandals on getting endorsed.

7. I present a formal model of newspaper endorsement decisions in appendix B.

8. For examples, see Ladd and Lenz (2009), Chiang and Knight (2011), Leon (2013), Casas, Fawaz,

is close to the ideological position of the Republican candidate, then the Democratic candidate would need to be much higher quality (or the Republican candidate much lower quality) in order for the paper endorse the Democratic candidate. The same would be true of Democratic leaning papers – for a Republican to win a Democratic newspaper's endorsement, the Republican candidate would have to be much higher quality relative to the Democratic candidate. More unbiased or neutral newspapers will seem to care more about differences in candidate quality, since their ideological position will be closer to the midpoint between the parties, and hence differences in quality will be more likely to determine endorsement decisions.

Empirical Estimation

The large number of endorsements in my dataset allow me to empirically estimate the partisan bias of newspapers and differences in candidate quality simultaneously. Observing many endorsements from a single newspaper reveals that paper's partisan bias, while observing many endorsements in a single contest *across multiple newspapers* reveals candidate quality differentials in that particular race. I use a simple linear probability model along with high-dimensional fixed effects to estimate both newspaper partisan bias and candidate quality differentials.[9] In total, I use 21,095 endorsements to estimate the partisan bias for 368 newspapers and candidate quality differentials in 6,432 elections (see Table 1). The main model specification is:

$$(1) \qquad E_{n,j,t} = \alpha + (\beta_{1,n} + \beta_{2,n}t) + \gamma_{j,t} + \varepsilon_{n,j,t}$$

Where $E_{n,j,t}$ is newspaper n's endorsement for office j in year t, coded as 1 for a Democratic endorsement, 0 for endorsing the Republican, and 0.5 for explicitly endorsing neither candidate, for endorsing both candidates, or for endorsing a third party candidate. The $(\beta_{1,n} + \beta_{2,n}t)$ term captures the newspaper's partisan bias – its propensity to endorse Democratic candidates across *all* its endorsements, in a particular year. The $\gamma_{j,t}$ are contest-specific fixed effects which capture the relative likelihood of the Democratic candidate being endorsed in that particular electoral

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and Trindade (2016), Fowler and Kim (2022), and Schuster (2023).

9. In appendix C, I try a variety of empirical specifications and show that the quality differentials estimates are robust to alternative and more flexible estimation procedures.

contest. These contest-fixed effects are the measure of the relative differences in candidate quality. Because $E_{n,j,t}$ is an indicator variable for a Democratic endorsement, it means that positive values for the estimated bias and contest-specific fixed effects indicate a pro-Democratic bias or a pro-Democratic quality advantage, and negative values indicate pro-Republican bias or pro-Republican quality advantage.

The estimate of the newspaper's partisan bias in any particular year captures the newspaper's propensity to endorse Democratic candidates, while also controlling for differences in candidate quality. The $\beta_{2,n}t$ term allows this partisan bias to change over time (linearly). These trends broadly accommodate longer-term changes in a newspaper's editorial board ideological positioning, which may affect its propensity to endorse Democrats over the paper's endorsement history. After estimation, I standardize the newspaper partisan bias estimates to have unit variance, and I center the newspaper partisan bias measure around 0 so that a neutral newspaper that is equally likely to endorse Democrats or Republicans has a partisan bias measure equal to 0.

The contest-specific fixed effects, $\gamma_{j,t}$, capture the effect of quality differences between the two candidates running for office j in year t on the endorsement behavior of newspapers. They measure how likely it is that the Democratic candidate is endorsed among all newspapers making endorsements in the electoral contest, while controlling for those newspapers' partisan bias. I refer to this contest-specific effect as the "quality differential" in that election. The quality differentials estimated from this model are election-specific fixed effects that pick up *relative* quality differences between candidates, rather than the absolute value of the quality of each candidate. Positive values of $\gamma_{j,t}$ indicate that the Democratic candidate running for office j in year t is relatively higher quality than the Republican candidate, while negative values indicate that Republican candidate running is relatively higher quality. A large quality differential between candidates could be due to the higher-quality candidate being a very good candidate, or due to the lower-quality candidate being a particularly bad candidate, or both. I standardize the quality differential estimates to have unit variance for ease of interpretation, so that a one-unit increase in the quality differential corresponds to a one-standard deviation increase in the propensity of newspapers to endorse the Democratic candidate in that race.

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In the linear probability model, I assume that newspapers only care about the party affiliation of the candidates, so ideological extremity or moderation does not factor into the endorsement decision. While this is a strong assumption, I do this because in many elections in the data there are no estimates of the ideological scores of *both* candidates, so they cannot be incorporated into the model. Later in the paper and also in appendix D, I use a more limited set of elections where measures of the ideological positioning of both candidates are available to show that directly incorporating ideological positions into the endorsement model results in very similar partisan bias and quality differential estimates.

Endorsement-Based Partisan Bias Estimates

I use the linear probability model to estimate the partisan bias of 368 newspapers across the sample. The bias measure for each individual newspaper can change linearly, to reflect potential changes in a newspaper's editorial stance over time. Figure 2 graphs density plots of the standardized estimates of newspaper partisan bias in the 1950s and in the 2010s. The partisan bias distributions show that local news was Republican-leaning in the 1950s, and also that distribution has become flatter (more varied) and also more Democratic-leaning in the most recent decade. This is consistent with other findings in the literature, which document a heavily Republican bias in newspaper endorsements in the 1950s and 1960s that becomes more neutral over time (Ansolabehere, Lessem, and Snyder 2006), and provides initial evidence that the newspaper fixed effects with linear trends are accurately picking up the expected changes in local news partisan bias over this time period. Each newspapers' average partisan bias along with its time trend is presented in appendix Table A1.

To validate that the endorsement-based partisan bias measure is an accurate reflection of each newspaper's bias, I compare the endorsement-based estimates to three different empirical measures of media slant from the political science and economics literature on media bias. The first is the "slant" measure that comes from Gentzkow and Shapiro (2010), in which slant is estimated based on how similar the text in a newspaper is to language used in legislator speeches in the Congressional record. The second set of newspaper bias measures comes from Ho and Quinn (2008), who estimate the ideal points of newspapers by classifying the editorial positions

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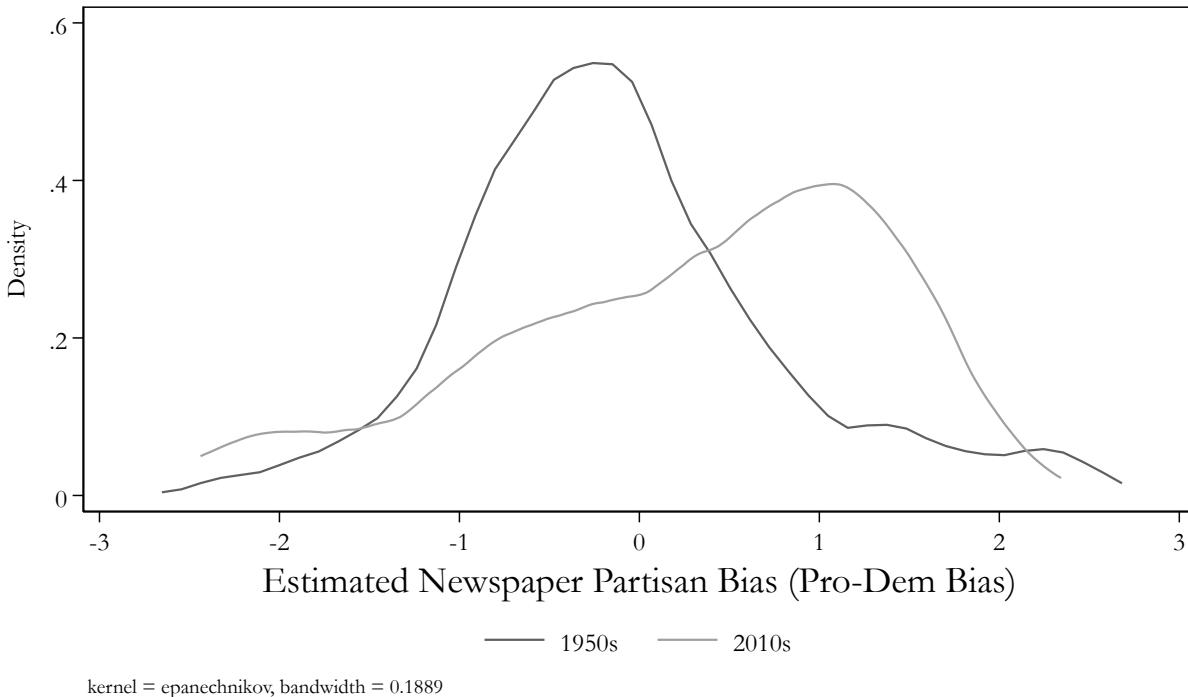
Figure 2: Partisan Bias of Local Newspapers, 1950s and 2010s

taken by newspapers on major Supreme Court cases and comparing the newspaper positions with the votes of Supreme Court justices on the same set of cases. The third measure of bias comes from Puglisi and Snyder (2015), who use newspaper endorsements of ballot propositions to place newspapers on an ideological scale relative to the interest groups and to the median voter's ideological position in each newspaper's state. I compare the endorsement-based partisan bias measures to all cases where alternative partisan slant or bias measures are available for newspapers in each dataset, and plot the correlations between the endorsement-based bias measure and each of the three alternative bias measures in Figure 3.

The endorsement-based bias measures are positively correlated with all alternative bias measures. The lowest correlation is with the Gentzkow and Shapiro (2010) slant measure; this is likely because their measure reflects a more nuanced form of partisan slant, based on similarities of phrases used by newspapers and members of Congress, rather than on explicit political positions taken by newspaper editors. In contrast, the Ho and Quinn (2008) and Puglisi and Snyder (2015) measures are based on editorial boards' explicit position taking on policy posi-
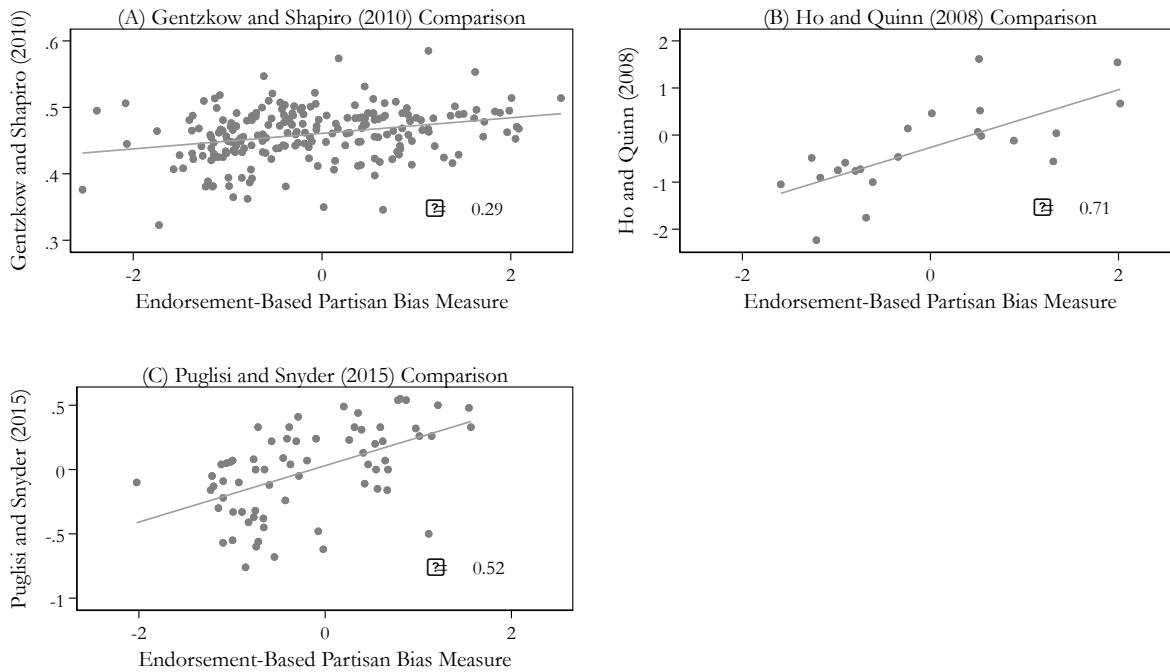
Figure 3: Comparison to Alternative Media Bias Measures

tions, and hence are more representative of the same ideological decision making newspapers make when endorsing candidates in partisan elections. In general, the correlations suggest that the endorsement-based partisan bias measure is picking up on the same underlying partisan and ideological preferences as previous measures of bias widely cited in the literature on media bias. In appendix C, I try numerous alternative endorsement models to measure the partisan bias of local newspapers in more flexible ways, and show that the partisan bias estimates (and, importantly, the quality differentials from the contest-specific fixed effects) are robust across a range of specifications.

Endorsement-Based Quality Differential Estimates

Using the same linear probability model of endorsements, I estimate the candidate quality differential for each of the 6,432 elections in the newspaper endorsement sample. These are contest-specific quality differences – as the candidate pairings change, or the year or office in which the candidates are competing changes, the candidate quality differential can change as well (i.e., even the same candidate pairings can have a quality differential that varies across

years). Although the results in Table 2 provide initial evidence that newspaper endorsements are correlated with common proxy measures of candidate quality, in this section I validate the empirically estimated quality differentials from the econometric model by comparing them to other expert judgments, legislative effectiveness scores, and net approval ratings, to assess the extent to which quality differentials are related to indicators of governing ability.

Expert Informant Judgments

In the first validation of the quality differentials, I use the expert informant ratings of U.S. House candidates from the UC Davis Congressional Election Study (UCD-CES). Informant rankings for candidates' ideological positions as well as their valence characteristics derived from this survey have been used in numerous papers that explore the relationship between ideological positioning, candidate valence characteristics, and electoral outcomes (Stone et al. 2010; Stone and Simas 2010; Adams et al. 2011; Buttice and Stone 2012; Simas 2013; Adams et al. 2017).

The survey asks two sets of "valence" characteristic questions of the expert informants. The first are "campaign-valence" items, which Stone and Simas (2010) defined as "the skills and resources instrumental to waging an effective campaign" (p.373). The campaign valence items are factors like name recognition and fundraising ability, which are important for electoral success but are more situational rather than about the candidates themselves. The second set of valence questions asked are "character-valence" items, which are defined as "the bundle of qualities and skills that relate to character and job performance" (p.373). There are seven character valence questions in total. One of the items in the valence category directly asks experts to judge to what extent candidates have the "qualifications to hold office", which mirrors my definition of candidate quality and the language that newspaper editors use to describe their endorsement considerations. Because the character-valence items are more related to the intrinsic qualities of candidates, I compare endorsement-based quality differentials to the informant character valence index and the "qualified for office" question as a validation exercise.

In total, there are only 76 U.S. House elections in the 2006 and 2010 UCD-CES survey data that overlap with cases where I am able to estimate endorsement-based quality differentials (which is 25% of their sample of elections). For each election, I calculate the average informant
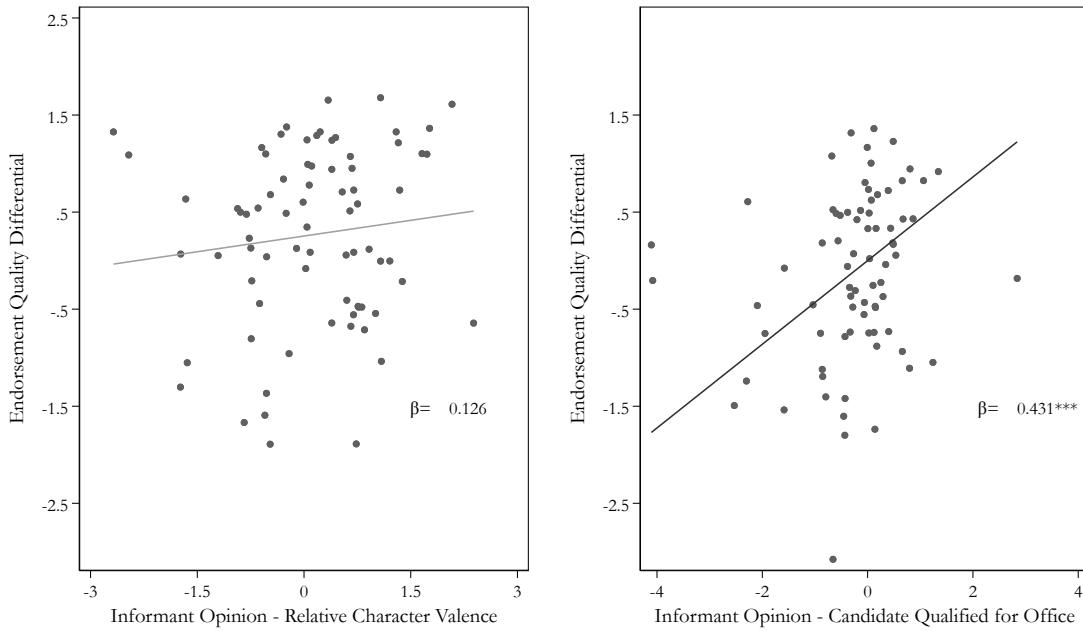
character valence index for both the Democratic and Republican candidates, and then create a relative character valence index for each election, which is simply the average character valence index for the Democrat minus the average character valence index for the Republican. I also do the same with average informant answers to the "qualified for office" question. I run a regression of endorsement-based quality differentials on the relative character valence index and plot the relationship in the left panel of Figure 4, and in the right panel of Figure 4 I show an added-variable plot of the results from a regression of endorsement-based quality differentials on the "qualified for office" question, while controlling for the other character valence items.

The endorsement-based quality differentials are positively related to both relative quality measures from the expert informant data. The coefficient for relative character valence is positive (though not statistically significant) and the coefficient for "qualified for office" question is positive and statistically significant, suggesting that the endorsement-based quality differential measure of quality is related to the same candidate qualifications as determined by experts. Although the sample is small due to a limited number of informant ratings that overlap with the estimated quality differentials, these results demonstrate that the quality differences measured by newspaper endorsements are reflective of expert informant judgments of candidate valence and qualifications for office.

Legislator Effectiveness and Approval Ratings

I also test the relationship between quality differentials and measures of the actual governing performance of politicians. To do so, I examine whether legislative effectiveness scores (LES) and politician approval ratings are predicted by candidate quality differentials. If the endorsement-based quality measure is picking up on actual characteristics of candidates that lead to better governing performance while in office, then we would expect that, on average, candidates that are relatively high quality would both be more effective at passing legislation and would also have higher job approval ratings from their constituencies.

To measure effectiveness as a legislator, I use the Volden and Wiseman (2012) legislative effectiveness scores (LES) for U.S. House members between 1973-2020. The legislative effectiveness scores are based on the ability of members to pass legislation and how substantive that

Notes: Left plot displays a scatterplot of endorsement-based quality differentials and relative character valence. Right plot is an added variable plot of "qualified for office" while controlling for other character valence items. βs reports the coefficient of a regression of the endorsement-based candidate quality differential on expert informant rating. *** $= p < 0.01$.

Figure 4: Comparison to Informant Ratings of Candidate Qualifications

legislation is, and are calculated using a detailed methodology comprised of 15 different indicators of effectiveness observed for each member of Congress. I merge the effectiveness scores for each legislator to their estimated endorsement-based quality differential for the election immediately proceeding the term for which the LES was calculated. For approval ratings I use the U.S. Officials' Job Approval Ratings (JARs) Database Collection (Niemi, Beyle, and Sigelman 2010) to collect state-level approval ratings of governors and senators. For each politician in the sample, I calculate the average net approval rating (approve minus disapprove) across all surveys for the duration of their term, and compare it to the endorsement-based quality differential of the candidate during their election to that same term.

I run regressions to examine the relationship between quality differentials and these governing performance measures, and the results are presented in Table 3. The first column shows that relatively higher-quality U.S. House members, as indicated by newspaper endorsements, have significantly higher legislative effectiveness scores, and the second column shows that higher-quality

governors and U.S. Senators have higher net approval ratings during their term. Although quality differentials are a relative measure of candidate quality, they also appear to be at least partially indicative of candidates who are high-quality in the absolute sense, given the statistically significant correlations between relative quality governing performance. The overall results confirm that the endorsement-based quality measure not only reflects newspaper editors' perceptions of what makes a candidate high quality, but also actually reflects better governance, as indicated by both higher effectiveness in the legislature and higher net approval ratings among constituents.

Table 3: Quality Differentials and Governing Effectiveness

VARIABLES	(1) LES Scores	(2) Net Approval
Quality Differential	0.160***	0.054***
	(0.046)	(0.018)
Observations	1,917	363
Adjusted R-squared	0.006	0.036
Party-State FEs	No	✓
Mean of Dependent Var	1.020	0.163
SD of Dependent Var	1.525	0.217

Notes: LES Scores are legislator Effectiveness Scores from Volden and Wiseman (2012). Net Approval ratings come from Niemi, Beyle, and Sigelman (2010). Quality Differential is the estimated endorsement-based quality differential. Column 1 uses only U.S. House members, while column 2 uses only Governors and U.S. Senators. *** $= p < 0.01$.

Quality Differentials and Candidate Ideology

As a final validation check, I evaluate the impact of legislator ideology on the endorsement-based measures. Specifically, I estimate alternative versions of newspaper partisan bias and candidate quality differentials that take into account legislator ideological positions for a subset of elections. Newspaper endorsements are partly shaped by the ideological distance between the two candidates in the election – all else equal, partisan newspapers will be less likely to endorse an extreme candidate from the opposing party, as that candidate's views are further from the newspaper's ideological preference. For example, a conservative-leaning newspaper

will be more likely to endorse a moderate or conservative Democrat over one with strongly liberal views. Although the main empirical approach assumes that newspapers respond only to candidate partisanship, this may bias quality estimates upward for moderate candidates, who are more likely to receive credible endorsements not necessarily because they are higher quality, but because they are ideologically moderate.

To test this, I reestimate the quality differentials for a subset of elections where ideology data are available for both candidates, incorporating ideological distance into the model. This exercise allows me to assess whether candidate moderation is driving the endorsement-based quality estimates. If the quality differentials change substantially when accounting for ideology, it would suggest the original measure is conflating moderation with quality. However, if the estimates remain stable, it would indicate that the quality differentials primarily capture broader notions of candidate quality, rather than ideological positioning. While data limitations restrict this analysis to a smaller set of elections, it provides a meaningful test of the robustness of the quality measure.

I try two specifications using alternative measures of candidate ideology; in the first, I use the Bonica (2014, 2023) Campaign Finance ideological scores (CF-Scores), and in the second, I use DW-Nominate scores (Lewis et al. 2022). In order to place newspapers on the same scale as CF- or DW-Nominate scores, I calculate newspapers' ideal point as the average of the ideological scores of all candidates they endorse, for each decade.[10] In Figure 5, I plot the correlations between the estimated newspaper ideologies based on endorsed candidate ideologies and the original estimates of partisan bias, using the CF-Scores as the outcome in panel A and the DW-Nominate scores in panel B. Using either ideology measure, the correlation between the ideology of the newspaper and their original partisan bias estimates is positive and relatively high.

I then use the ideology of each newspaper to calculate the difference in ideological distance between each newspaper and candidate in an election.[11] I directly incorporate the relative

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10. This is a Bayesian approach that minimizes the utility loss from (in)congruence in ideological positioning between the newspaper and the candidates whom they endorse. For an explanation of this approach, see appendix D.

11. See appendix B and appendix D for details.
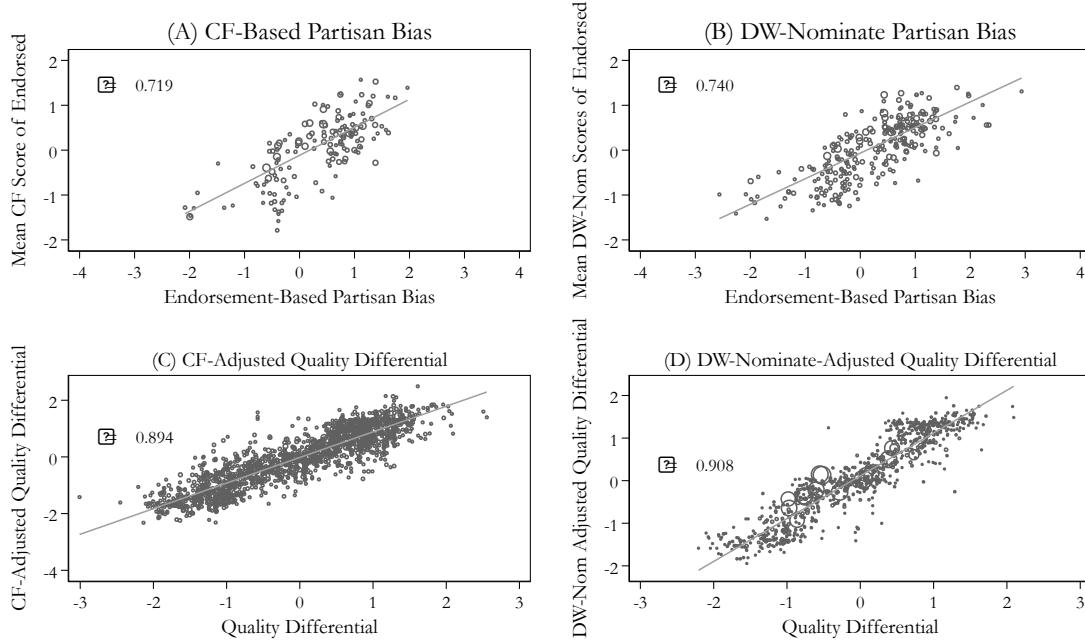
Figure 5: Partisan Bias and Quality Differentials Adjusting for Extremity

ideological distance into the endorsement prediction model, which allows me to take into account how ideological extremity or moderation, relative to the newspapers' own ideological position, affects newspaper endorsements and candidate quality differentials.

I reestimate contest-specific fixed effects in the high-dimensional linear probability model, but rather than newspaper fixed effects with linear time trends, I use the calculated difference in ideological distance term to account for newspapers' partisan preferences. Quality differentials can be estimated for only 1,735 elections (27%) of the original sample when using CF-score for legislator ideology, and for only 778 (12%) of the original sample when using DW-Nominate scores. I plot the correlations between the extremity-adjusted quality differential measures and the original quality differential estimates in Figure 5, with the CF-score adjusted quality estimates in panel C and the DW-Nominate adjusted quality estimates in panel D.

Again, in both cases, the ideology-adjusted quality differential estimates are highly correlated with the original estimates, suggesting that while there are some differences when adjusting for legislator ideology, it is not the main determinant of the endorsement-based quality differential. This is likely because party affiliation explains a huge share of the variation across candidates'

ideological positions, so using party affiliation alone in the empirical estimation captures most of the effects of ideological congruence on newspaper endorsement decisions. These results provide evidence that the original candidate quality differentials are not simply due to the relative moderation or extremity of the candidate.

Candidate Quality, Incumbency Advantages, and Election Results
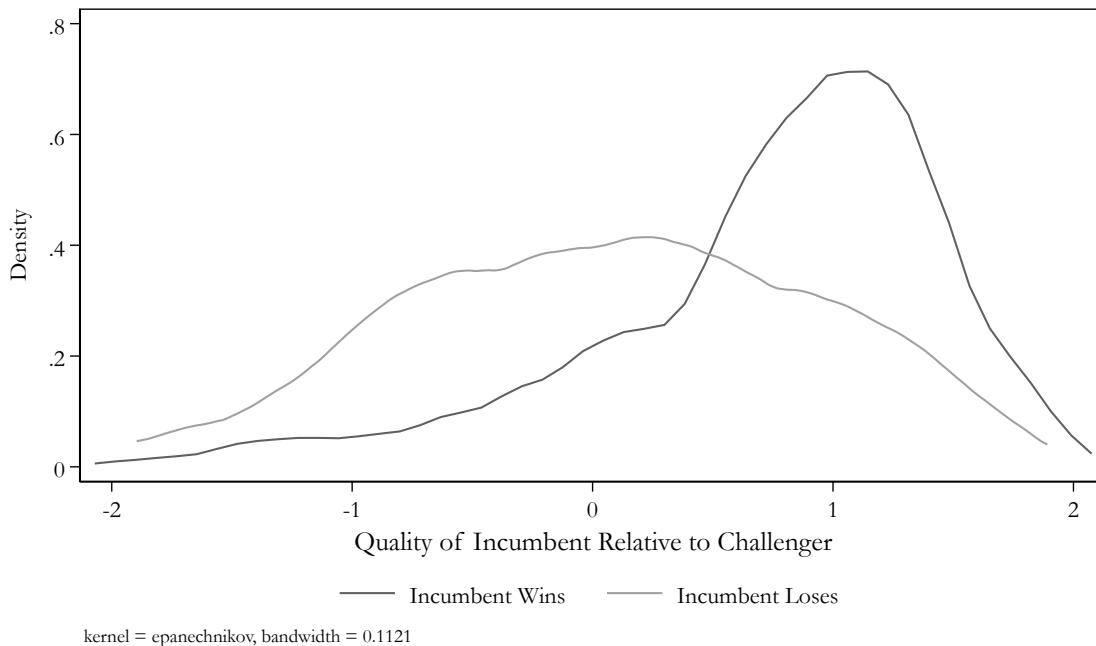
In this section, I use the quality differentials to explore the relationship between candidate quality, incumbency, and election results, as an illustrative example of how the new measure can help answer important questions about the role candidate quality plays in electoral politics.

Incumbency effects have been extensively studied in the literature, and a long line of research has tried to disentangle the components of incumbency advantages, which were at times quite large (Cox and Katz 1996; Jacobson 2015). Candidate quality is one plausible explanation for incumbency effects, but there are also other potential explanations for these advantages, such as enhanced media attention or fundraising ability, which are direct office holder benefits unrelated to candidate quality (in the governing effectiveness sense of the term). These direct officeholding benefits may be detrimental for political accountability if they make it harder for citizens to vote out low-quality politicians. Determining *how much* of the incumbency advantage is due to candidate quality is a long-standing and important question in the literature, and one that is still relevant today due to the difficulties in measuring candidate quality.

The endorsement-based quality differentials provide one way to examine this issue. A benefit of the endorsement-based quality differentials is that they can identify relatively high- or low-quality incumbents, and can also provide an estimate of the magnitude of the quality differences between those incumbents and their challengers. Unlike post-hoc measures of candidate quality, quality differentials are determined by newspaper endorsements made prior to election, and provide an estimate of potential governing quality that is not defined by electoral success itself. These features make the endorsement-based quality differentials well suited to examine the independent effects of candidate quality in terms of explaining incumbent electoral success, and determining the degree to which voters themselves value candidate quality.

Figure 6 displays a density plot of the candidate quality differentials for all incumbents

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(relative to their challengers), separately based on whether the incumbent ended up winning or losing their election. Notably, there is a wide range of incumbent quality differentials; not all incumbents are equally qualified. Overall, 16.9% of incumbents are actually *lower* quality than their challengers. Among incumbent losers, nearly half (45%) are lower quality than their challengers. Even among incumbent winners, however, 14.3% are still estimated to be lower quality than their challengers.[12] So, while it is true that most incumbents are high quality – consistent with the use of incumbency status as a proxy for candidate quality – a significant portion of incumbents are not higher quality than their challengers, and low-quality candidates (either incumbents or challengers) still win their elections somewhat often.

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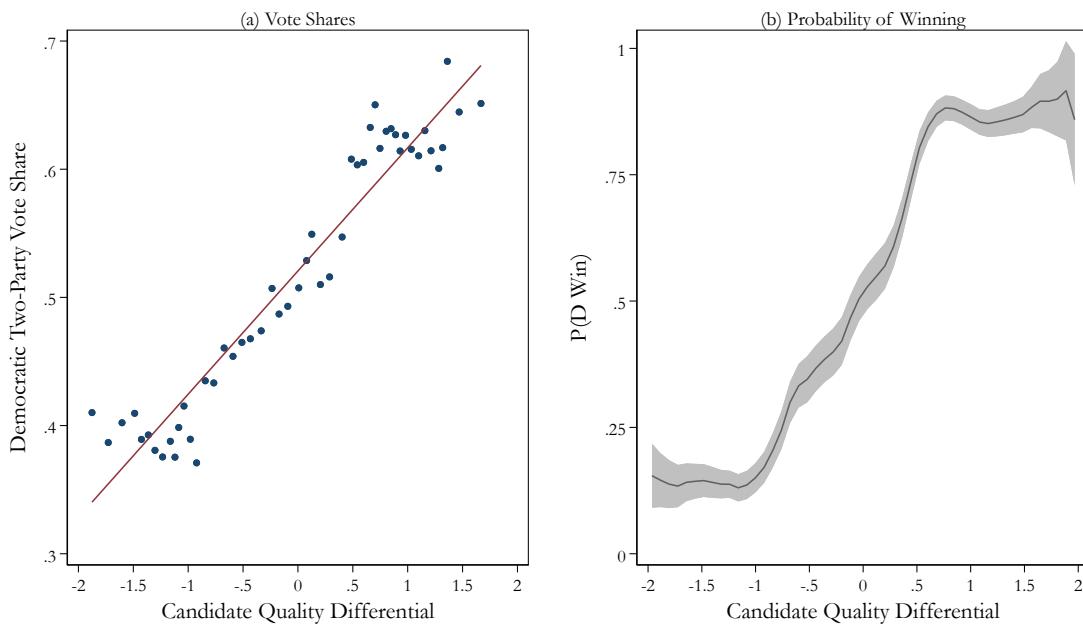
Notes: Positive quality differentials indicate that the incumbent is higher quality than their challenger, while negative quality differentials indicate that the challenger is higher quality than the incumbent. Excludes quality differential outliers greater than 2 or less than -2.

Figure 6: Incumbent Quality and Electoral Success

How much do voters value candidate quality? Empirically, there is a strong correlation between the endorsement-based quality differentials and electoral performance. The left panel of

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12. In the sample of elections I examine here, incumbents win reelection about 92% of the time.

Figure 7 graphs a binned scatter plot of the Democratic share of two-party votes conditional on the estimated candidate quality differential, with a linear fitted line. I include all elections for which candidate quality differentials could be estimated and merged to election results, across offices and over time, for a total of 3,620 elections. The plots show that higher-quality candidates get more votes, which translates directly into higher-quality candidates being more likely to win their elections, as show by the right panel of Figure 7.

Notes: Excludes quality differential outliers greater than 2 or less than -2.

Figure 7: Vote Shares, Probability of Winning, and Quality Differentials

To assess the relationship between candidate quality effects and incumbency effects, I estimate models of electoral performance in Table 4. Specifically, I run a regression of Democratic two-party vote shares (columns 1-3) and the probability of a Democratic victory (columns 4-6) on the estimated candidate quality differential and an incumbency indicator to quantify the effects that candidate quality and incumbency status have on a candidate's electoral success. In all specifications, I control for "partisan tides" from year to year using year fixed effects, and use

constituency fixed effects to control for district partisanship.[13]

Columns 1 and 4 of Table 4 show that the effect of a one standard deviation increase in relative quality results in an increased vote share of 5 percentage points, and an increased probability of winning equal to 13.7 percentage points. Both estimates are statistically significant and substantively meaningful, and demonstrate that voters do care about and tend to reward higher-quality candidates with votes.[14] Columns 2 and 5 estimate incumbency effects using the same sample of elections. Incumbency effects in terms of vote shares are estimated to be 5.6 percentage points in this sample of elections, and incumbency increases the probability of winning by 15.4 percentage points. In column 3, the results show that a one standard deviation increase in relative candidate quality increases a candidate's two-party vote share by 3.4 percentage points even after controlling for incumbency effects, year fixed effects, and constituency fixed effects.

Table 4: Effects of Quality Differentials on Vote Shares

VARIABLES	(1) D Vote	(2) D Vote	(3) D Vote	(4) P(D Win)	(5) P(D Win)	(6) P(D Win)
Quality Differential	0.050*** (0.002)		0.034*** (0.002)	0.137*** (0.011)		0.094*** (0.011)
Incumbency		0.056*** (0.002)	0.042*** (0.002)		0.154*** (0.011)	0.115*** (0.012)
Observations	2,613	2,613	2,613	2,613	2,613	2,613
Adjusted R-squared	0.852	0.860	0.878	0.700	0.704	0.716
Year FE	✓	✓	✓	✓	✓	✓
Constituency FE	✓	✓	✓	✓	✓	✓

Notes: Sample includes contested elections between years 1950-2020. Outcome is the Democratic two-party vote share in the election. The Quality Differential variable is coded so that negative quality differentials indicate that the Republican is higher quality while positive values indicate that the Democrat is higher quality. $^* = p < 0.10$, $^{**} = p < 0.05$, $^{***} = p < 0.01$.

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13. Constituency fixed effects are an indicator variable for a constituency, which is defined as a state-decade indicator variables for any statewide office, and as an indicator variable at the district level for U.S. House and state legislative districts. In appendix E, Table E3 and Table E4 replicate the results using the district normal vote and the substantive results are unchanged.

14. In Table E1 and Table E2, I control for the effect of (relative) candidate extremity, since moderate candidates might be measured as higher-quality due to their ability to more easily earn credible

How much of the estimated incumbency effect is due to candidate quality? To answer this, I include both variables in the specifications in columns 3 and 6. The estimated effects of quality and incumbency both remain statistically significant in these models, however, they also both diminish. In terms of vote shares, incumbency effects go from 5.6 percentage points without controlling for candidate quality to 4.2 once candidate quality is taken into account, a 25% decrease. In terms of the probability of winning, the effect of incumbency goes from 15.4 percentage points to 11.5, which is also a 25% decrease. According to this analysis, one-fourth of incumbency effects are explained by candidate quality. The effects of candidate quality also decrease once incumbency is taken into account, decreasing by 32% whether looking at the effects on vote shares or on the probability of winning. In other words, about one-third of candidate quality effects are explained by incumbency status.

The share of incumbency effects that are explained by candidate quality differentials in this analysis is lower than that found in previous research on this topic. Focusing on the period between 1950-1990, Cox and Katz (1996), Levitt and Wolfram (1997), Ansolabehere, Snyder, and Stewart (2000), and Hirano and Snyder (2009) all estimate that, on average, candidate quality accounts for around 50% of incumbency effects, though this estimate ranges from as low as zero percent in some decades to as high as two-thirds of incumbency effects in the 1980s and 1990s. My results are about half as large as the average estimate of previous works, and suggest a larger role of direct office-holding benefits (i.e., non-quality related benefits) in explaining incumbency effects.

Conclusion

This article estimates a measure of relative quality differences between candidates for thousands of elections in the United States, based on the endorsements of local newspapers. The validation exercises show that the endorsement-based quality differentials are reflective of governing effectiveness, and match expert informant assessment of candidate qualifications.

I demonstrate the utility of the quality differential measure by directly investigating candidate quality effects in an electoral context, and reexamining the relationship between candidate quality endorsements.

and incumbency effects. I find that higher-quality candidates do better in their elections and that candidate quality can explain one-fourth of estimated incumbency effects. Future research employing quality differentials could delve deeper into the relationship between candidate quality and incumbency, and explore how this relationship might change over time and across different types of offices. Whether the effects of candidate quality on candidate success has declined due to increase partisan polarization over time is also an important line of inquiry, with important implications for the state of democracy in the United States, which would also be facilitated by the use of the quality differentials measure.

The quality differentials can also assist political scientists in more directly examining the factors that determine candidate quality and governing effectiveness among politicians. The quality differentials could also help to explain how candidate quality evolves over time, and how the components of candidate quality vary depending on the office type. Another promising avenue of work would be to use the quality differentials to look further downstream, and explore the impact that candidate quality can have on other governing outcomes such as economic performance (Besley, Persson, and Strum 2010) or legislative productivity (Grant and Kelly 2008). Understanding the determinants and consequences of high-quality politicians in our political system has important implications for elections, voters, political parties, and the overall health and efficiency of democracy in the United States.

While the number of local newspaper endorsements is shrinking due to the broader decline of local newspapers, the logic and methodology behind the quality differentials measure are highly adaptable and transferable to other types of political endorsements. For instance, endorsements by interest groups, prominent political figures, media personalities, or other experts can also be used to estimate candidate quality differentials with the same methodology. Additionally, in ongoing work I am actively expanding the dataset to include new local newspaper endorsements as well as additional historical endorsements, which will extend the measure's temporal and geographic coverage. Future plans for research include collecting endorsements from other sources, such as interest groups, media figures, and prominent commentators, to further broaden the scope of the measure. These efforts will enhance the applicability of the endorsement-based

approach, making it a valuable tool for understanding candidate quality and electoral dynamics in the future.

In addition, the paper provides a new dynamic measure of local news media bias for hundreds of newspapers in the United States, based on their propensity to endorse candidates of each political party. These estimates along with the endorsement data could be used to study the extent to which local news can affect political knowledge, voter choices, and partisan outcomes, and whether media bias impacts the quality of candidates who are ultimately elected. Overall, these endorsement-based measures of both candidate quality differentials and newspaper partisan bias have promising potential to help improve our understanding of the importance of candidate quality in American politics.

References

Adams, James, Erik Engstrom, Danielle Joesten Martin, Walter J. Stone, Jon Rogowski, and Boris Shor. 2017. "Do Moderate Voters Weigh Candidates' Ideologies? Voters' Decision Rules in the 2010 Congressional Elections." *Political Behavior* 39 (1): 205–229.

Adams, James, Samuel Merrill, Elizabeth N. Simas, and Walter J. Stone. 2011. "When Candidates Value Good Character: A Spatial Model with Applications to Congressional Elections." *Journal of Politics* 73 (1): 17–30.

Ansolabehere, Stephen, Rebecca Lessem, and James M. Snyder Jr. 2006. "The Orientation of Newspaper Endorsements in U.S. Elections, 1940-2002." *Quarterly Journal of Political Science* 1 (4): 393–404.

Ansolabehere, Stephen, James M. Snyder Jr., and Charles Stewart. 2000. "Old Voters, New Voters, and the Personal Vote: Using Redistricting to Measure the Incumbency Advantage." *American Journal of Political Science* 44 (1): 17–34.

Arizona Republic Editorial Board. 2016. "Why Does The Arizona Republic Make Endorsements?" *Arizona Republic.*

Ashworth, Scott. 2012. "Electoral Accountability: Recent Theoretical and Empirical Work." *Annual Review of Political Science* 15 (1): 183–201.

Barro, Robert J. 1973. "The Control of Politicians." *Public Choice* 14 (1): 19–42.

Basinger, Scott J., Lara M. Brown, Douglas B. Harris, and Girish Gulati. 2014. "Counting and Classifying Congressional Scandals." In *Scandal: An Interdisciplinary Approach to the Consequences, Outcomes, and Significance of Political Scandals,* edited by Alison Dagnes and Mark Sachleben. New York, NY: Bloomsbury.

Besley, Timothy, Torsten Persson, and Daniel M. Strum. 2010. "Political Competition, Policy, and Growth: Theory and Evidence from the US." *Review of Economic Studies* 77 (4): 1329–1352.

Boche, Adam, Jeffery B. Lewis, Aaron Rudkin, and Luke Sonnet. 2018. "The New Voteview.com: Preserving and Continuing Keith Poole's Infrastructure for Scholars, Students and Observers of Congress." *Public Choice* 176 (1-2): 17–32.

Bonica, Adam. 2023. "Database on Ideology, Money in Politics, and Elections: Public Version 3.1." Stanford, CA: Stanford University Libraries: https://data.stanford.edu/dime.

———. 2014. "Mapping the Ideological Marketplace." *American Journal of Political Science* 58 (2): 367–387.

Buttice, Matthew K., and Walter J. Stone. 2012. "Candidates Matter: Policy and Quality Differences in Congressional Elections." *Journal of Politics* 74 (3): 870–887.

Casas, Agustin, Yarine Fawaz, and Andre Trindade. 2016. "Suprise Me If You Can: The Influence of Newspaper Endorsements in U.S. Presidential Elections." *Economic Inquiry* 54 (3): 1484–1498.

Chiang, Chun-Fang, and Brian Knight. 2011. "Media Bias and Influence: Evidence from Newspaper Endorsements." *Review of Economic Studies* 78 (3): 795–820.

Cox, Gary W., and Jonathan N. Katz. 1996. "Why Did the Incumbency Advantage in U.S. House Elections Grow?" *American Journal of Political Science* 40 (2): 478–497.

Dewan, Torun, and Kenneth A. Shepsle. 2011. "Political Economy Models of Elections." *Annual Review of Political Science* 14 (1): 311–330.

Ferejohn, John. 1986. "Incumbent Performance and Electoral Control." *Public Choice* 50 (1): 5–25.

Fowler, Anthony, and Kisoo Kim. 2022. "An Information-Based Explanation for Partisan Media Sorting." *Journal of Theoretical Politics* 34 (4): 499–526.

Gentzkow, Matthew, Edward Glaeser, and Claudia Goldin. 2006. "The Rise of the Fourth Estate: How Newspapers Became Informative and Why It Mattered." Chap. 7 in *Corruption and Reform: Lessons from America's Economic History,* edited by Edward Glaeser and Claudia Goldin, 187–229. University of Chicago Press.

Gentzkow, Matthew, and Jesse M. Shapiro. 2010. "What Drives Media Slant? Evidence from U.S. Daily Newspapers." *Econometrica* 78 (1): 35–71.

Grant, J. Tobin, and Nathan J. Kelly. 2008. "Legislative Productivity of the U.S. Congress, 1789-2004." *Political Analysis* 16 (3): 303–323.

Hirano, Shigeo, and James M. Snyder Jr. 2014. "Primary Elections and the Quality of Elected Officials." *Quarterly Journal of Political Science* 9 (4): 473–500.

———. 2019. *Primary Elections in the United States.* Cambridge University Press.

———. 2009. "Using Multimember District Elections to Estimate the Sources of the Incumbency Advantage." *American Journal of Political Science* 53 (2): 292–306.

Ho, Daniel E., and Kevin M. Quinn. 2008. "Measuring Explicit Political Positions of Media." *Quarterly Journal of Political Science* 3 (4): 353–377.

Inter-university Consortium for Political and Social Research and Carroll McKibbin. 1997. *Roster of United States Congressional Officeholders and Biographical Characteristics of Members of the United States Congress, 1789-1996: Merged Data.* Https://doi.org/10.3886/ICPSR07803.v10.

Jacobson, Gary C. 2015. "It's Nothing Personal: The Decline of the Incumbency Advantage in US House Elections." *Journal of Politics* 77 (3): 861–873.

Jacobson, Gary C., and Samuel Kernell. 1981. *Strategy and Choice in Congressional Elections.* Yale University Press.

Jain, Lakshya, and Leon Sit. 2023. "Our 2022 Senate Wins Above Replace Model." *Split Ticket.*

Jones, Tom. 2020. "Why Do Newspapers Still Make Political Endorsements?" *Poynter.*

Klarner, Carl. 2018. *State Legislative Election Returns, 1967-2016: Restructured For Use.* V. V1. https://doi.org/10.7910/DVN/DRSACA. https://doi.org/10.7910/DVN/DRSACA.

Krasno, Jonathan S., and Donald Philip Green. 1988. "Preempting Quality Challengers in House Elections." *Journal of Politics* 50 (4): 920–936.

Ladd, Jonathan McDonald, and Gabriel S. Lenz. 2009. "Exploiting a Rare Communication Shift to Document the Persuasive Power of the News Media." *American Journal of Political Science* 53 (2): 394–410.

Larcinese, Valentino, Riccardo Puglisi, and James M. Snyder Jr. 2011. "Partisan Bias in Economic News: Evidence on the Agenda-Setting Behavior of U.S. Newspapers." *Journal of Public Economics* 95 (9): 1178–1189.

Leon, Fernanda Leite Lopez de. 2013. "The Tuesday Advantage of Politicians Endorsed by American Newspapers." *The B.E. Journal of Economic Analysis and Policy* 13 (2): 865–886.

Levitt, Steven D., and Catherine D. Wolfram. 1997. "Decomposing the Sources of Incumbency Advantage in the U.S. House." *Legislative Studies Quarterly* 22 (1): 45–60.

Lewis, Jeffery B., Keith Poole, Howard Rosenthal, Adam Boche, Aaron Rudkin, and Luke Sonnet. 2022. *Voteview: Congressional Roll-Call Votes Database.* https://voteview.com/.

Lim, Claire S.H., and James M. Snyder Jr. 2015. "Is More Information Always Better? Party Cues and Candidate Quality in U.S. Judicial Elections." *Journal of Public Economics* 128:107–123.

Luttbeg, Norman R. 1992. "The Validity and Electoral Impact of Media Estimations of "Best" or "Worst" State Legislators." *Legislative Studies Quarterly* 17 (3): 395–408.

Maisel, L. Sandy, Walter J. Stone, and Cherie Maestas. 1999. "Reassessing the Definition of Quality Candidates." Https://ces.iga.ucdavis.edu/mwpsa99.pdf, *Unpublished Working Paper.*

Miller, Michael, and Brian Hamel. 2021. "Congressional Scandals (1979-2018), V2." Https://doi.org/10.7910/DVN/BID3QM, *Harvard Dataverse.*

Miquel, Gerard Padro i, and James M. Snyder Jr. 2006. "Legislative Effectiveness and Legislative Careers." *Legislative Studies Quarterly* 31 (3): 347–381.

Mondak, Jeffery J. 1995. "Competence, Integrity, and the Electoral Success of Congressional Incumbents." *Journal of Politics* 57 (4): 1043–1069.

Mullainathan, Sendhil, and Andrei Shleifer. 2005. "The Market for News." *American Economic Review* 95 (4): 1031–1053.

Niemi, Richard, Thad Beyle, and Lee Sigelman. 2010. *U.S. Officials' Job Approval Ratings (JARs) Database.* Data hosted by Jennifer Jensen at https://jmj313.web.lehigh.edu/node/6.

Prat, Andrea, Riccardo Puglisi, and James M. Snyder Jr. 2010. "Is Private Campaign Finance a Good Thing? Estimates of the Potential Informational Benefits." *Quarterly Journal of Political Science* 5 (3): 291–318.

Puglisi, Riccardo, and James M. Snyder Jr. 2011. "Newspaper Coverage of Political Scandals." *Journal of Politics* 73 (3): 931–950.

———. 2015. "The Balanced U.S. Press." *Journal of the European Economic Association* 13 (2): 240–264.

Schuster, Steven Sprick. 2023. "The Persuasive Power of the Fourth Estate: Estimating the Effect of Newspaper Endorsements: 1960-1980." *Journal of Economic Behavior & Organization* 207:496–510.

Silver, Nate. 2022. "Candidate Quality Mattered." *FiveThirtyEight.*

Simas, Elizabeth N. 2013. "Proximity Voting in the 2010 U.S. House Elections." *Electoral Studies* 32 (4): 708–717.

Steenbergen, Marco R., and Gary Marks. 2007. "Evaluating Exeprt Judgements." *European Journal of Political Research* 46 (3): 347–366.

Stone, Walter J., Sarah A. Fulton, Cherie D. Maestas, and L. Sandy Maisel. 2010. "Incumbency Reconsidered: Prospects, Strategic Retirement, and Incumbent Quality in U.S. House Elections." *Journal of Politics* 72 (1): 178–190.

Stone, Walter J., and Elizabeth N. Simas. 2010. "Candidate Valence and Ideological Positions in U.S. House Elections." *American Journal of Political Science* 54 (2): 371–388.

Takengag, Lara. 2020. "How and Why Our Editorial Board Endorses Political Candidates." *New York Times.*

Volden, Craig, and Alan E. Wiseman. 2012. "Legislative Effectiveness and Representation." In *Congress Reconsidered,* 10th ed., edited by Lawrence C. Dodd and Bruce I. Oppenheimer, 237–264. Washington, DC: CQ Press.

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Supplementary Material for

Editor's Choice: Measuring Candidate Quality using Local Newspaper Endorsements

Contents

A   Data

Endorsement Data and Newspaper Sample

The procedure for finding, collecting, and digitizing newspaper endorsements is a time-consuming process that requires considerable effort. Many of the endorsements come from `newspapers.com`, which is a comprehensive archive of newspapers containing millions of scanned pages that can be viewed digitally online. Data from `newspapers.com` is reputable and has been used in other peer-reviewed published political science and economics research that analyzes newspaper content (Gentzkow et al., 2006; Ban et al., 2018; Beach and Hanlon, 2022; Schuster, 2023). Other endorsements come from `newslibrary.com`, `newsbank.com`, ProQuest archives, individual newspaper archives (e.g., `https://archive.nytimes.com/www.nytimes.com/ref/membercenter/nytarchive.html`), and from various college and university library collections across the country.

Most of this new set of local newspaper endorsements were manually collected and typed up over recent of years, though parts of the endorsement data set has been used in previous research.[1] I collected many of the new endorsements myself, and had significant help from Jim Snyder, Tyler Simko, David Beavers, Zoe Kava, Patricia Hughes, Matt Kind, Sabrina Goldfischer, Emily Mao, Marina Legorreta, Karen Yang, William Porayouw, Andrew Beingessner, Owen Hannon, Sasha Jones, Khuan-Yu Hall, Grace Aitken, Alexandra Schoettler, and a handful of other research assistants that came before me, to whom I am extremely grateful for.

The procedure for finding and collecting endorsements is as follows: first, in the online digital archive, the editorial page of the newspaper on the day of the general election for a specific year must be found. Then, one must look for endorsements on the editorial page on that day. If there are endorsements, collect an image of the editorial endorsements and type them into a spreadsheet. If there are no endorsements, go to the day before the election and check that editorial page for endorsements. Repeat this for up to ten days before the election, until a published list of all the newspaper's endorsements is found, or until all endorsement articles in the time frame has been collected.

While it is common for newspapers to publish a summary of their endorsement in list form close to election day, some papers only publish endorsements in longer article formats in the days leading up to the election. Figure 1 in the main text shows examples of newspaper endorsements as they appear in online archives, both in list (a) and article format (b). Once a list of endorsements is found or an article endorsement is found, the editorial article is "clipped" (digitally – saved online), saved as a pdf in a newspaper-specific folder, and then the information from the endorsement is typed into a spreadsheet of newspaper endorsement data. Each endorsement is typed into the data set, from president down to local county offices. Table 1 in the main text provides summary statistics on the endorsements used in the analysis, and Figure A1 displays

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[1]See Ansolabehere et al. (2006) and Larcinese et al. (2011).

the number of endorsements per year in the data, and shows that the bulk of the endorsements that have been collected in this dataset were made between 1960 and 2006. The drop off in collected endorsements after 2006 is mainly due to incomplete data, but also reflects an decline in total newspaper endorsements due to 1) local newspapers going out of business at an increasing rate after 2008, due to the financial crises along with competition from internet and social media sites, and 2) a decline in the number of endorsements that surviving newspapers make, in part due to staffing cuts and corporate chain ownership which discourages or sometimes outright bans editorial endorsements (Klein, 2022; Kornfield and Farhi, 2022).

Because of the various formats that newspapers use to report and announce their endorsements, the process of digitizing endorsement data is difficult if not impossible to automate so must be done manually and carefully. In many cases, additional information about the candidates needed for analysis – such as incumbency status, party affiliation, and information about the non-endorsed candidate – are missing from the endorsement clippings and must be compiled from other sources. For example, in panel (a) of Figure 1 the summary of the Wisconsin State Journal's endorsements include the name and party affiliation of the candidate endorsed, but not the incumbency status of the endorsed candidate nor the name of the candidate who was not endorsed.

To include a newspaper and its endorsements in the sample, I impose three restrictions. First, I must have at least 10 newspaper endorsements from a newspaper. This helps to reduce the noisiness of the partisan bias estimates. Second, there must be at least two different newspapers endorsing in a particular contest (office and year) for the endorsement to be included. This is necessary in order to estimate the high-dimensional fixed effects model from which the bias and quality differential estimates are derived. Third, the endorsements must be for partisan offices.

Table 1 provides summary statistics for the set of all 21,095 partisan newspaper endorsements that are ultimately used in the analyses throughout the paper. Figure A1 shows the number of endorsements in the data from each year,[2] Figure A2 shows the main counties of circulation for newspapers in the sample, Figure A3 shows the share of endorsements in the sample that were for Democrats in each year, and Table A1 lists all newspapers and the number of collected endorsements for each.

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[2]I count endorsements made in odd-year off cycle elections as being in the *subsequent* even-numbered year, for expositional purposes and also in the main analysis (i.e., when using year fixed effects or calculating time trends).
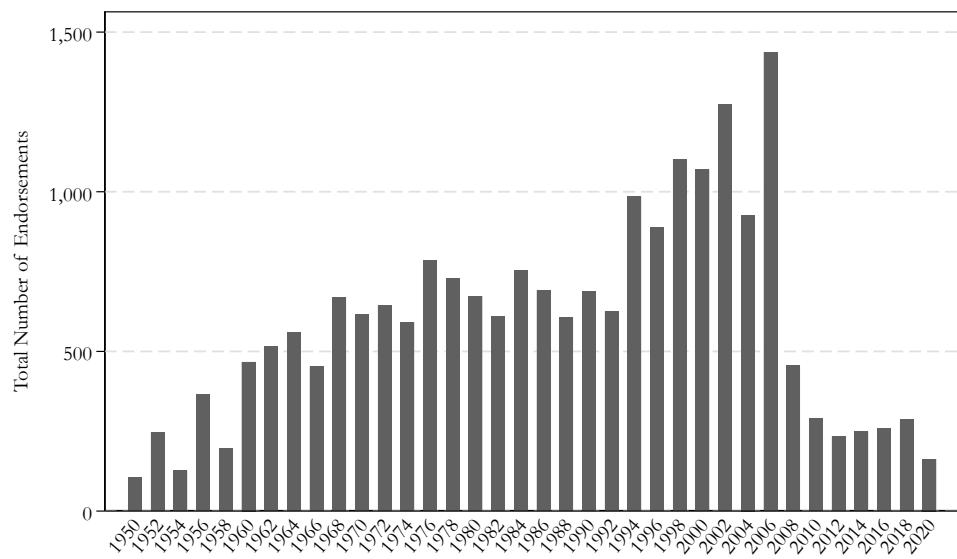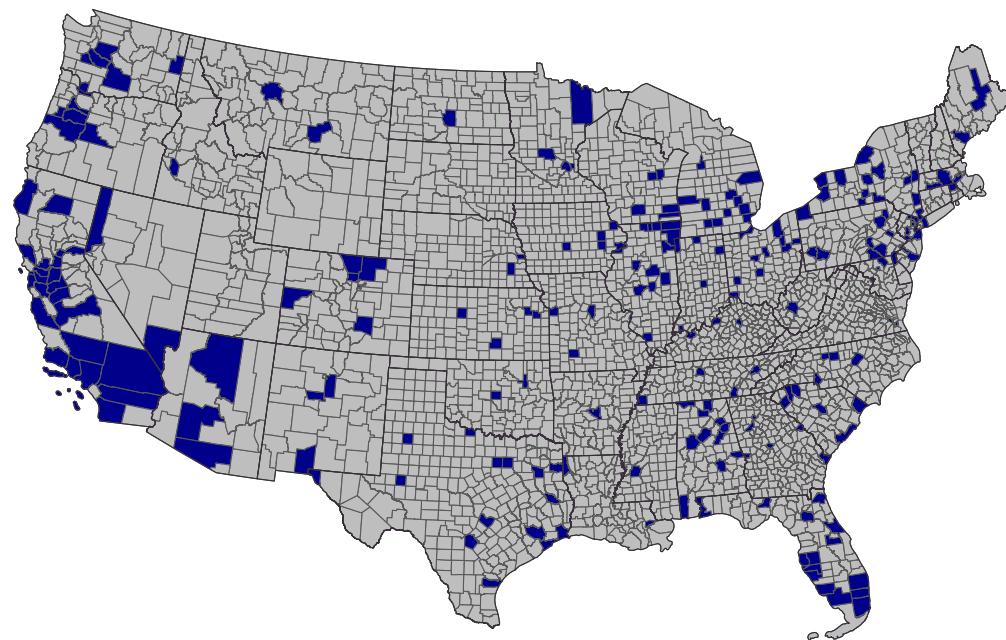
Figure A1: Local Newspaper Endorsement Data, 1950-2020

Notes: There is wide geographic variation in where newspapers circulate, with only a handful of states with no newspapers in the sample. Newspapers come from 44 states plus DC. The six states with no newspaper endorsements used in the sample are: Alaska, South Dakota, New Hampshire, Utah, Vermont, and Wyoming. Honolulu county in Hawaii is included in the sample but not shown in the figure. It should be noted that while these are the main counties of circulation, many newspapers circulate significantly in counties surrounding the main county where they circulate, especially in the earlier years of the sample, and newspapers make endorsements in statewide races and in U.S. House or state legislative districts that may encompass areas outside the county.

Figure A2: Map of Main Counties where Newspapers in Sample Circulate.
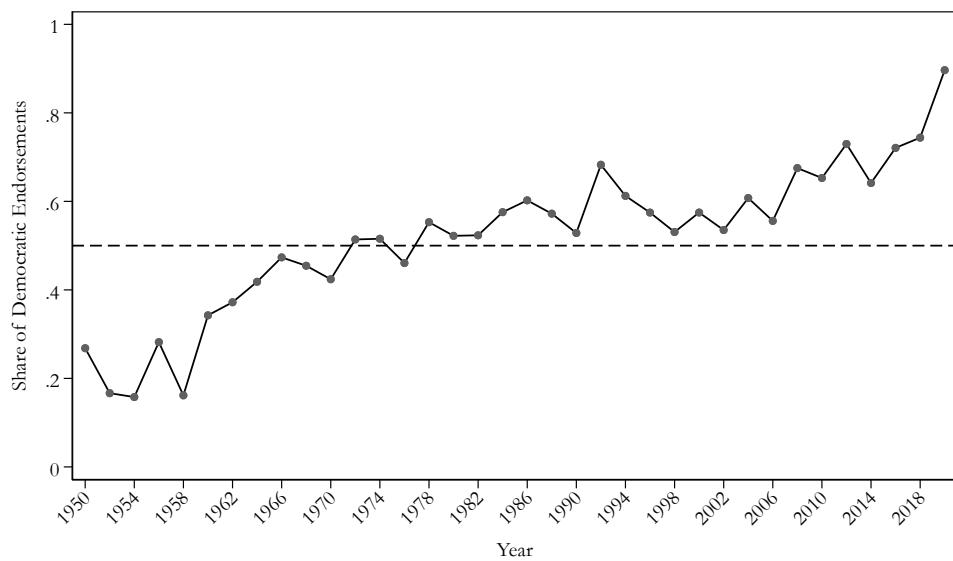
Figure A3: Share of Endorsements for Democratic Candidates Over Time

Table A1: Sample of Newspaper Endorsements and Partisanship

State	Newspaper Name	Dem Share	Bias	Trend	N
AL	Anniston Star	0.89	1.31	-0.06	47
AL	Birmingham News	0.29	-0.80	0.02	95
AL	Birmingham Post Herald	0.55	0.14	0.01	83
AL	Decatur Daily	0.73	1.00	0.14	11
AL	Florence Times Daily	0.44	-0.14	0.24	27
AL	Gadsden Times	0.25	-0.85	-0.35	12
AL	Huntsville Times	0.48	-0.06	0.09	56
AL	Mobile Register	0.22	-0.94	0.01	65
AL	Montgomery Advertiser	0.52	-0.22	0.03	40
AL	Montgomery Advertiser Journal	0.47	0.10	0.13	43
AL	Montgomery Journal	0.55	-0.01	0.01	44
AL	Opelika Auburn News	0.50	-0.01	-0.81	12
AL	Talladega Daily Home	0.57	0.39	-0.18	46
AL	Tuscaloosa News	0.58	0.49	-0.35	12
AR	Little Rock Arkansas Gazette	0.90	2.61	-0.02	10
AZ	Arizona Daily Sun	0.32	-0.82	0.15	25
AZ	Phoenix Arizona Gazette	0.38	-0.40	-0.01	233
AZ	Phoenix Arizona Republic	0.41	-0.41	-0.01	316
AZ	Tucson Arizona Citizen	0.40	-0.33	0.04	367
AZ	Tucson Arizona Star	0.70	0.98	-0.05	345
CA	Alameda Times Star	0.62	0.40	0.04	16
CA	Auburn Journal	0.50	0.43	-0.13	18
CA	Bakersfield Californian	0.48	-0.43	0.01	29
CA	Contra Costa Times	0.58	0.11	0.14	31
CA	Escondido Times Advocate	0.00	-1.37	-0.06	13
CA	Eureka Times Standard	0.08	-0.22	0.01	13
CA	Fremont Argus	0.41	-0.17	0.17	29
CA	Fresno Bee	0.79	1.02	-0.10	118
CA	Hayward Daily Review	0.67	0.63	0.13	21
CA	Inland Valley Daily Bulletin	0.38	-0.35	0.24	21
CA	Lodi News Sentinel	0.28	-0.80	0.05	18
CA	Lompoc Record	0.14	-0.63	-0.05	21
CA	Long Beach Independent	0.31	-0.07	-0.07	97
CA	Long Beach Press Telegram	0.38	-0.21	-0.06	133
CA	Los Angeles Daily News	0.35	-0.70	0.15	55
CA	Los Angeles Times	0.47	0.24	0.06	200
CA	Merced Sun Star	0.49	-0.18	0.05	49
CA	Modesto Bee	0.72	0.62	-0.16	61
CA	Monterey County Herald	0.67	0.60	0.62	12
CA	Oakland Tribune	0.36	-0.10	0.10	110
CA	Oceanside North County Times	0.00	-1.35	0.12	19
CA	Palm Springs Desert Sun	0.20	-0.72	0.03	20
CA	Palo Alto Times	0.04	0.09	-0.02	24
CA	Pasadena Independent Star News	0.06	-0.18	-0.02	47
CA	Pasadena Star News	0.29	-0.66	0.00	28

continued

CA	Petaluma Argus Courier	0.23	0.14	0.01	39
CA	Pleasanton Tri Valley Herald	0.58	0.26	0.08	24
CA	Pomona Progress Bulletin	0.17	-0.34	-0.07	29
CA	Redding Record Searchlight	0.41	-0.40	-0.06	32
CA	Redwood City Tribune	0.10	0.08	0.00	39
CA	Riverside Press Enterprise	0.54	0.22	-0.10	50
CA	Sacramento Bee	0.90	1.52	-0.05	181
CA	Sacramento Union	0.06	-0.91	-0.02	17
CA	Salinas Californian	0.39	0.06	0.24	33
CA	San Bernardino Sun	0.65	0.69	-0.04	102
CA	San Diego Union	0.00	-0.85	-0.05	15
CA	San Diego Union Tribune	0.16	-1.35	0.30	62
CA	San Francisco Chronicle	0.69	0.32	0.09	251
CA	San Francisco Examiner	0.59	0.45	-0.00	310
CA	San Gabriel Valley Tribune	0.37	-0.53	0.08	30
CA	San Jose Mercury News	0.76	0.68	0.09	101
CA	San Mateo County Times	0.70	0.80	0.11	20
CA	Santa Barbara News Press	0.30	1.00	-0.28	10
CA	Santa Monica Outlook	0.00	-1.14	-0.06	11
CA	Santa Rosa Press Democrat	0.56	0.60	0.06	97
CA	Sonoma Index Tribune	0.50	-0.11	0.39	10
CA	Torrance Daily Breeze	0.26	-1.20	0.10	57
CA	Vallejo Times Herald	0.86	0.86	-0.55	14
CA	Ventura County Star Free Press	0.69	2.00	-0.31	16
CA	Whittier Daily News	0.37	-0.41	-0.01	30
CO	Boulder Daily Camera	0.67	0.57	0.06	36
CO	Denver Post	0.52	0.30	-0.01	106
CO	Denver Rocky Mountain News	0.32	-0.52	-0.01	84
CO	Fort Collins Coloradoan	0.33	-0.68	0.00	30
CO	Grand Junction Daily Sentinel	0.38	-1.20	-0.11	16
CO	Greeley Daily Tribune	0.30	-0.67	-0.03	10
CO	Pueblo Chieftain	0.17	-1.39	-0.29	12
CT	Bridgeport Connecticut Post	0.56	-0.03	0.03	25
CT	Danbury News Times	0.62	0.69	-0.01	16
CT	Hartford Courant	0.55	0.40	0.10	127
CT	Hartford Times	0.72	1.91	-0.11	18
CT	New Haven Register	0.58	-0.16	0.10	33
CT	Stamford Advocate	0.42	-0.04	0.00	12
CT	Waterbury Republican American	0.07	-2.04	-0.23	14
DC	Washington Post	0.77	0.92	0.02	149
DC	Washington Times	0.01	-1.99	0.00	83
DE	Meriden Record Journal	0.85	1.20	-0.12	26
DE	Wilmington Evening Journal	0.39	0.78	0.23	214
DE	Wilmington Morning News	0.37	0.79	0.23	194
FL	Bradenton Herald	0.46	-0.17	-0.07	13
FL	Brandenton Herald	0.54	0.21	-0.10	41
FL	Clearwater Sun	0.71	0.35	-0.16	14

FL	Daytona Beach News Journal	0.89	1.78	0.11	37
FL	Fort Lauderdale News	0.52	-0.46	-0.06	42
FL	Fort Lauderdale News and Sun Sentinel	0.73	0.69	0.04	154
FL	Fort Myers News Press	0.73	0.53	-0.17	11
FL	Gainesville Sun	0.75	1.04	0.05	16
FL	Jacksonville Florida Times Union	0.22	-0.87	-0.10	36
FL	Miami Herald	0.76	0.74	0.00	234
FL	Miami News	0.94	1.19	-0.06	120
FL	Naples Daily News	0.27	-0.85	-0.03	49
FL	Orlando Sentinel	0.56	0.22	0.04	105
FL	Palm Beach Post	0.80	1.09	0.01	106
FL	Pensacola News	0.60	-0.16	-0.69	10
FL	Pensacola News Journal	0.73	0.55	0.16	11
FL	Sarasota Herald Tribune	0.65	0.62	0.23	20
FL	St Petersburg Times	0.72	0.78	0.01	168
FL	Tallahassee Democrat	0.76	0.82	-0.04	29
FL	Tampa Bay Times	1.00	2.07	-0.11	10
FL	Tampa Daily Times	0.80	0.67	0.08	59
FL	Tampa Tribune	0.49	-0.04	-0.06	172
GA	Atlanta Constitution	0.67	1.26	-0.14	51
GA	Atlanta Journal	0.42	0.56	-0.30	12
GA	Atlanta Journal and Constitution	0.71	0.68	0.73	31
GA	Augusta Chronicle	0.31	-0.95	-0.30	42
GA	Columbus Ledger Enquirer	0.72	0.76	-0.19	39
GA	Macon Telegraph and News	0.70	0.44	-0.02	44
GA	Savannah Morning News	0.26	-0.81	0.02	39
HI	Honolulu Advertiser	0.65	1.63	0.11	23
HI	Honolulu Star Bulletin	0.57	1.13	0.14	23
IA	Cedar Rapids Gazette	0.18	-0.58	-0.00	55
IA	Davenport Quad City Times	0.43	-0.04	0.02	28
IA	Des Moines Register	0.59	0.98	0.06	59
IA	Dubuque Telegraph Herald	0.25	-0.56	0.03	12
IA	Iowa City Press Citizen	0.40	-0.14	0.25	10
IA	Rock Island Argus	0.35	-0.62	0.00	83
ID	Boise Idaho Statesman	0.57	0.33	0.26	14
IL	Arlington Heights Daily Herald	0.43	-0.02	0.04	37
IL	Belvidere Daily Republican	0.05	-1.36	-0.00	19
IL	Berwyn Life	0.24	-0.79	-0.05	38
IL	Bloomington Pantagraph	0.41	-0.51	-0.03	29
IL	Carbondale Southern Illinoisan	0.17	-1.44	-0.05	12
IL	Champaign Urbana News Gazette	0.27	-1.06	-0.01	11
IL	Chicago Sun Times	0.57	-0.01	-0.00	143
IL	Chicago Tribune	0.31	-0.79	0.06	303
IL	Crystal Lake Northwest Herald	0.33	-0.93	-0.54	15
IL	Daily Southtown	0.77	0.43	2.13	13
IL	Decatur Daily Review	0.45	0.09	0.44	42
IL	Decatur Herald	0.42	0.13	0.46	31

continued

IL	Decatur Herald and Review	0.46	-0.22	0.01	103
IL	Joliet Herald News	0.71	0.59	0.28	14
IL	Moline Dispatch	0.32	-0.87	-0.01	75
IL	Peoria Journal Star	0.38	-0.16	-0.02	64
IL	Rockford Morning Star	0.21	-0.82	0.02	14
IL	Rockford Register Republic	0.08	-0.90	-0.07	12
IL	Rockford Register Star	0.50	-0.06	-0.08	10
IL	Springfield State Journal Register	0.37	-0.46	0.18	49
IL	Waukegan News Sun	0.50	0.11	0.10	30
IN	Evansville Courier	0.39	-0.62	-0.09	85
IN	Evansville Press	0.42	-0.55	-0.19	106
IN	Fort Wayne Journal Gazette	0.69	0.94	-0.11	39
IN	Fort Wayne News Sentinel	0.16	-1.49	-0.06	38
IN	Gary Post Tribune	0.47	-0.30	-0.01	36
IN	Indianapolis News	0.04	-0.89	-0.03	25
IN	Indianapolis Star	0.12	-0.99	-0.02	42
IN	Munster Times	0.17	-1.14	0.02	18
IN	South Bend Tribune	0.52	-0.09	0.13	23
KS	Hays Daily News	0.50	0.66	-0.49	18
KS	Lawrence Journal World	0.25	-0.81	-0.21	12
KS	Topeka Capital Journal	0.23	-1.24	0.02	13
KS	Wichita Beacon	0.47	-0.59	0.07	49
KS	Wichita Eagle	0.42	-0.55	0.02	50
KS	Wichita Eagle Beacon	0.27	-0.15	-0.09	33
KY	Lexington Herald Leader	0.73	1.18	0.07	22
KY	Louisville Courier Journal	0.77	1.64	-0.07	69
KY	Louisville Times	0.79	2.18	-0.13	14
KY	Owensboro Messenger Inquirer	0.59	0.47	-0.41	17
LA	New Orleans Times Picayune	0.41	-0.36	0.04	17
LA	Shreveport Times	0.53	0.35	0.18	15
MA	Boston Globe	0.81	1.24	-0.04	68
MA	Boston Herald	0.29	-0.54	-0.06	45
MA	Quincy Patriot Ledger	0.81	0.88	0.24	16
MA	Springfield Republican Union News	0.88	1.36	-0.27	17
MA	Worcester Telegram and Gazette	0.47	-0.15	0.18	40
MD	Baltimore Sun	0.67	0.62	0.06	152
MD	Bel Air Aegis	0.36	-0.54	-0.06	47
MD	Salisbury Daily Times	0.68	1.27	-0.25	22
ME	Bangor Daily News	0.65	0.39	0.36	17
ME	Portland Press Herald	0.76	0.87	0.24	17
MI	Battle Creek Enquirer and News	0.56	0.53	0.13	18
MI	Detroit Free Press	0.69	0.62	0.06	374
MI	Detroit News	0.48	-0.57	-0.02	494
MI	Flint Journal	0.65	0.56	0.07	20
MI	Grand Rapids Press	0.25	-0.23	-0.05	57
MI	Huron Daily Tribune	0.58	0.03	0.17	12
MI	Kalamazoo Gazette	0.41	0.11	-0.04	37

MI	Lansing State Journal	0.40	0.11	0.11	58
MI	Muskegon Chronicle	0.53	0.80	0.09	19
MI	Pontiac Oakland Press	0.17	-0.95	0.04	12
MI	Saginaw News	0.47	0.16	0.02	36
MI	Traverse City Record Eagle	0.69	0.77	0.13	13
MN	Duluth News Tribune	0.46	0.40	0.01	13
MN	Minneapolis Star	0.45	1.90	0.35	99
MN	Minneapolis Star Tribune	0.78	1.49	0.10	79
MN	Minneapolis Tribune	0.47	1.74	0.33	74
MN	St Cloud Times	0.60	0.73	-0.05	10
MN	St Paul Pioneer Press	0.64	0.98	0.02	80
MO	Columbia Daily Tribune	0.47	0.26	0.30	32
MO	Kansas City Star	0.54	0.55	0.08	189
MO	Kansas City Times	0.54	0.53	0.08	130
MO	Springfield News Leader	0.36	-0.34	-0.31	14
MO	St Louis Globe Democrat	0.30	-0.10	-0.07	10
MO	St Louis Post Dispatch	0.72	1.50	-0.02	96
MS	Jackson Clarion Ledger	0.42	0.09	-0.09	12
MT	Billings Gazette	0.52	-0.38	0.16	23
MT	Great Falls Tribune	0.79	0.49	0.13	14
NC	Charlotte News	0.67	0.65	0.05	86
NC	Charlotte Observer	0.81	1.21	0.05	191
NC	Greensboro News	0.81	0.99	0.07	21
NC	Greensboro News and Record	0.83	1.47	-0.11	84
NC	Greensboro Record	0.62	0.21	-0.32	21
NC	Raleigh News and Observer	0.97	1.72	-0.09	89
NC	Winston Salem Journal	0.72	0.75	0.12	50
ND	Bismarck Tribune	0.40	1.88	-1.24	5
NE	Lincoln Journal	0.41	0.22	0.12	32
NE	Lincoln Journal Star	0.32	-0.43	0.01	22
NE	Lincoln Star	0.65	1.19	-0.14	34
NE	Omaha World Herald	0.20	-0.91	0.00	41
NJ	Asbury Park Press	0.44	0.49	0.15	45
NJ	Bergen County Record	0.64	0.93	0.05	39
NJ	Bridgewater Courier News	0.51	0.64	0.05	101
NJ	Camden Courier Post	0.61	0.91	-0.05	64
NJ	Jersey City Jersey Journal	0.85	2.07	0.06	13
NJ	Newark Star Ledger	0.67	1.04	0.03	39
NJ	Passaic Herald News	0.40	-0.39	-0.01	68
NJ	Paterson Call	0.46	0.12	0.14	13
NJ	Paterson Evening News	0.39	-0.12	0.06	46
NJ	Paterson News and Call	0.70	0.04	-1.13	10
NJ	Press Of Atlantic City	0.37	0.47	0.08	19
NJ	Trenton Times	0.63	1.40	-0.01	41
NJ	Trentonian	0.40	-0.42	-0.23	10
NM	Albuquerque Journal	0.48	-0.33	-0.01	374
NM	Albuquerque Tribune	0.58	-0.02	0.03	353

continued

NM	Las Cruces Sun News	0.61	0.07	-0.01	33
NM	Santa Fe New Mexican	0.74	0.47	-0.05	66
NV	Las Vegas Review Journal	0.18	-1.52	-0.07	34
NV	Reno Evening Gazette	0.17	-0.77	-0.05	12
NV	Reno Gazette Journal	0.61	0.22	-0.06	28
NY	Albany Times Union	0.59	0.74	0.07	58
NY	Binghamton Press and Sun Bulletin	0.50	0.70	-0.36	12
NY	Buffalo Courier Express	0.30	0.20	-0.59	10
NY	Buffalo News	0.60	0.79	0.06	68
NY	Elmira Star Gazette	0.42	0.20	0.12	12
NY	Ithaca Journal	0.33	0.52	0.08	52
NY	Long Island Newsday	0.74	1.03	-0.06	86
NY	New York Daily News	0.59	0.66	0.09	27
NY	New York Post	0.29	-0.73	-0.23	56
NY	New York Times	0.67	1.06	0.03	359
NY	Niagara Falls Gazette	0.36	0.63	0.02	14
NY	Oneida Daily Dispatch	0.10	-0.69	-0.09	10
NY	Poughkeepsie Journal	0.64	0.43	-0.04	11
NY	Rochester Democrat and Chronicle	0.46	0.69	0.05	127
NY	Rochester Times Union	0.18	-0.28	0.04	11
NY	Staten Island Advance	0.73	1.03	-0.16	15
NY	Syracuse Herald Journal	0.20	-0.25	-0.16	15
NY	Syracuse Post Standard	0.28	0.00	0.02	65
NY	Troy Record	0.23	0.20	-0.02	22
NY	Utica Daily Press	0.18	-0.17	0.07	11
NY	Utica Observer Dispatch	0.23	-0.03	0.11	13
NY	Watertown Daily Times	0.41	-0.23	0.16	22
NY	Westchester County Journal News	0.58	0.46	0.27	12
NY	Yonkers Herald Statesman	0.40	-0.01	0.10	15
OH	Akron Beacon Journal	0.40	0.29	0.04	240
OH	Canton Repository	0.28	-0.14	0.02	25
OH	Cincinnati Enquirer	0.15	-0.58	0.02	269
OH	Cincinnati Post	0.26	-0.19	-0.02	182
OH	Cleveland Plain Dealer	0.52	0.30	0.05	81
OH	Cleveland Press	0.40	0.13	-0.13	20
OH	Columbus Citizen Journal	0.30	-0.23	-0.02	23
OH	Columbus Dispatch	0.11	-0.97	0.01	36
OH	Dayton Daily News	0.63	1.09	-0.02	168
OH	Dayton Daily News Journal Herald	0.40	0.52	0.04	62
OH	Dayton Journal Herald	0.29	-0.30	-0.03	150
OH	Mansfield News Journal	0.26	-0.06	0.05	34
OH	Marion Star	0.00	-0.80	-0.05	11
OH	Massillon Independent	0.09	-0.88	0.02	22
OH	Toledo Blade	0.60	0.56	-0.04	48
OH	Youngstown Vindicator	0.33	0.08	0.03	12
OK	Oklahoma City Daily Oklahoman	0.22	-2.17	-0.10	50
OK	Tulsa Tribune	0.08	-1.11	-0.04	12

continued

OK	Tulsa World	0.37	-1.39	-0.10	49
OR	Albany Democrat Herald	0.08	-1.38	0.05	13
OR	Bend Bulletin	0.14	-2.01	0.03	21
OR	Corvallis Gazette Times	0.08	-2.12	0.16	24
OR	Eugene Register Guard	0.52	-0.49	0.13	42
OR	Portland Oregonian	0.64	0.37	0.07	45
OR	Salem Statesman	0.22	-1.67	0.03	23
OR	Salem Statesman Journal	0.79	1.21	-0.05	19
PA	Allentown Morning Call	0.46	0.23	0.10	59
PA	Citizens' Voice	0.82	1.54	-0.02	49
PA	Erie Daily Times	0.00	-0.61	-0.05	10
PA	Erie News	0.07	-0.54	-0.04	15
PA	Greensburg Tribune Review	0.08	-1.48	-0.07	12
PA	Harrisburg Patriot News	0.29	0.11	0.08	35
PA	Lancaster Intelligencer Journal	0.72	1.50	-0.17	18
PA	Lancaster New Era	0.06	-1.03	-0.08	17
PA	Philadelphia Daily News	0.69	1.37	0.06	89
PA	Philadelphia Inquirer	0.54	1.09	0.06	214
PA	Pittsburgh Post Gazette	0.50	0.83	-0.07	146
PA	Pittsburgh Press	0.44	0.57	-0.05	98
PA	Scranton Times	0.59	1.25	-0.21	112
PA	Scranton Times Tribune	0.88	1.61	-0.07	25
PA	Scranton Tribune	0.37	0.40	-0.02	139
PA	Wilkes Barre Times Leader	0.53	0.24	0.02	17
PA	York Daily Record	0.38	0.27	-0.06	24
RI	Providence Journal	0.25	-0.55	-0.00	16
RI	Providence Journal Bulletin	0.47	-0.21	-0.09	30
SC	Charleston Post and Courier	0.41	-1.15	-0.03	37
SC	Columbia Record	0.50	-0.28	-0.18	16
SC	Columbia State	0.48	-0.64	-0.05	67
SC	Florence Morning News	0.15	-0.66	0.01	13
SC	Greenville News	0.26	-1.26	-0.07	54
SC	Myrtle Beach Sun News	0.59	0.43	0.09	34
SC	Rock Hill Herald	0.74	0.15	-0.01	34
SC	Spartanburg Herald Journal	0.17	-1.92	0.55	12
SC	Sumter Item	0.51	-0.59	-0.15	39
SC	Walterboro Press and Standard	0.95	2.00	-0.08	19
SC	anderson Independent Mail	0.59	0.13	-0.03	41
TN	Chattanooga Free Press	0.20	-0.52	-0.14	10
TN	Chattanooga Free Press	0.07	-1.89	-0.10	15
TN	Chattanooga Times	0.83	1.74	0.05	18
TN	Knoxville Journal	0.07	-1.05	0.01	15
TN	Knoxville News Sentinel	0.27	-1.04	-0.10	33
TN	Memphis Commercial Appeal	0.36	-0.75	-0.04	33
TN	Nashville Banner	0.44	0.29	0.07	16
TN	Nashville Tennessean	0.89	1.67	-0.16	27
TX	Austin American Statesman	0.61	-0.19	-0.14	184

continued

		Dem Share	Bias	Trend	N
TX	Beaumont Enterprise	0.16	-1.10	-0.06	22
TX	Corpus Christi Caller Times	0.25	-1.11	0.15	16
TX	Corpus Christi Times	0.70	0.61	-0.11	10
TX	Dallas Morning News	0.31	-1.24	-0.05	165
TX	El Paso Herald Post	0.75	-0.25	-0.01	80
TX	El Paso Times	0.57	-0.47	-0.06	148
TX	Fort Worth Star Telegram	0.48	-0.56	-0.07	132
TX	Galveston County Daily News	0.27	-1.69	-0.12	11
TX	Houston Chronicle	0.38	-0.87	-0.01	100
TX	Lubbock Avalanche Journal	0.28	-1.13	-0.11	32
TX	Lufkin Daily News	0.30	-0.43	-0.01	20
TX	Marshall News Messenger	0.17	-1.36	-0.11	24
TX	Midland Reporter Telegram	0.04	-1.63	0.02	24
TX	San Antonio Express	0.40	0.06	-0.01	10
TX	San Antonio Express News	0.23	-0.99	0.05	73
TX	San Antonio News	0.40	0.06	-0.01	10
TX	Wichita Falls Record News	0.75	1.09	-0.38	12
TX	Wichita Falls Times	0.77	1.06	-0.40	13
TX	Wichita Falls Times Record News	0.33	-0.79	0.15	15
VA	Newport News Daily Press	0.60	0.24	0.04	10
VA	Norfolk Virginian Pilot	0.69	0.58	0.17	26
VA	Richmond Times Dispatch	0.11	-1.80	-0.07	54
VA	Roanoke Times	0.86	1.08	-0.06	21
WA	Olympia Olympian	0.75	0.94	0.06	71
WA	Seattle Post Intelligencer	0.73	0.78	0.12	109
WA	Seattle Times	0.61	0.25	0.09	113
WA	Spokane Spokesman Review	0.38	-0.37	0.01	50
WA	Tacoma News Tribune	0.66	0.60	0.06	77
WA	Vancouver Columbian	0.64	0.26	0.06	28
WA	Yakima Herald Republic	0.62	0.20	0.08	26
WI	Appleton Post Crescent	0.37	-0.30	-0.04	51
WI	Green Bay Press Gazette	0.17	-1.81	-0.07	12
WI	Kenosha News	0.64	0.92	-0.02	74
WI	Madison Capital Times	0.96	2.02	-0.13	178
WI	Madison State Journal	0.43	-0.32	-0.02	234
WI	Milwaukee Journal	0.80	2.10	-0.03	15
WI	Milwaukee Journal Sentinel	0.55	-0.39	0.21	44
WI	Milwaukee Sentinel	0.00	-1.12	-0.06	14
WI	Racine Journal Times	0.64	0.63	-0.16	44
WV	Charleston Daily Mail	0.29	-1.15	-0.12	24
WV	Charleston Gazette	0.87	1.14	-0.16	23

Notes: Table includes the full sample of newspapers used in the main results. The "Dem Share" column is the share of all of the newspaper's endorsements that went to Democratic candidates. Bias is the normalized partisan bias measure estimated in the main text. Trend is an estimated paper-specific linear trend by year, multiplied by ten (i.e. change in bias each decade). N is the total number of endorsements for each newspaper.

Additional Data

I rely on a number of other datasets in order to construct the detailed endorsement data and in order to conduct the many analyses in the main text. For alternative measures of partisan bias of newspapers, I rely on three different measures, that come from: Ho and Quinn (2008), Gentzkow and Shapiro (2010), and Puglisi and Snyder (2015).

Candidate quality-related characteristics and backgrounds come from a variety of sources. Many historical backgrounds of candidates come were collected from Inter-university Consortium for Political and Social Research and McKibbin (1997). For US Senate and US House, prior service and years of experience are calculated from Lewis et al. (2022). State legislative candidate incumbency and years of experience generally come from Klarner (2018). Congressional scandal data covering 1978-2018 come from Basinger et al. (2014); Miller and Hamel (2021). In many (but not all) cases, candidate background information not included in the previous datasets is manually collected and coded while collecting the endorsements themselves, and comes from the reporting in local newspapers. For politician ideology, I use both Campaign Finance scores Bonica (2023) and DW-Nominate scores Lewis et al. (2022).[3]

For other measures of candidate quality and governing effectiveness, I also use a variety of sources. Expert informant ratings of candidate quality used in Figure 4 come from Stone et al. (2004, 2010).[4] Legislative effectiveness scores are developed by Volden and Wiseman (2012, 2014), and data was downloaded from `https://thelawmakers.org/data-download`. For governor and senator approval ratings, I use the data from the Job Approval Ratings (JARs) Database Niemi et al. (2010), hosted by Dr. Jennifer Jensen `https://jmj313.web.lehigh.edu/node/6`.

Lastly, for identifying the main county that newspapers circulate in to construct the Dem Vote Share variable, and also to identify ownership info that is used in appendix C, I rely on Gentzkow et al. (2014).

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[3]For DW-Nominate data, see also Boche et al. (2018).

[4]Stone and Simas (2010) adjust the valence item scores from each expert to account for the partisan bias of informants. See Stone and Simas (2010), Adams et al. (2017), and the "readme" file from the UC Davis Congressional Election Study 2006 documentation for more details.

B   Formal Model of Newspaper Endorsements

In this section, I present a formal model of a newspaper's endorsement decision, conditional on the newspaper's partisan preference and the difference in candidate quality between two candidates. The model is based on general models in the "valence" literature (Ansolabehere and Snyder, 2000), as well as the model in Chiang and Knight (2011), who measure the credibility of individual endorsements and estimate their effects on voter learning and behavior rather than using endorsements to estimate candidate quality differences *per se*.

I assume that, from each candidate in the general election, newspapers get potential utility in the form:

$$u_{n,c} = \omega q_c - (i_n - i_c)^2$$

Where $u_{n,c}$ is the utility that newspaper n would get if candidate c won the election, q_c is politician c's quality, ω is the relative utility weight that newspapers put on candidate quality, i_n is a measure of newspaper n's ideological preferences and i_c is the location of candidate c's ideological position. Utility increases in candidate quality q_c, scaled by ω which is constant across newspapers, but suffers quadratic losses as the candidate's ideological position i_c moves further away from the newspaper's preferred ideological point i_n. While I assume a particular quadratic loss functional form here, which is common in the literature (Ashworth and Bueno de Mesquita, 2009; Hall and Thompson, 2018), the key results of the model rely only on the fact that the utility newspapers receive from quality and ideological congruence are additively separable.[5]

I further simplify the decision by assuming that the candidates in the general election are only affiliated with either the Republican (R) or Democratic (D) party. Hence, $c \in \{D, R\}$, and we can write candidate quality in terms of the quality of the Republican candidate, q_R, and the quality of the Democratic candidate, q_D. We can also write candidate ideology in terms of Republican or Democratic ideology as well, i_R and i_D. Let higher values of i indicate a more liberal or Democratic ideology and lower values of i indicate a more conservative or Republican ideology, so that $i_R < i_D$ in general.

Newspapers endorse the candidate that would maximize its utility should that candidate win the election. I assume that newspapers endorse sincerely.[6] Let $E_n = 1$ indicate that newspaper

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[5]It would be possible, with additional assumptions, to analyze and estimate a model where valence and ideological proximity are not additively separable. For example, it could be the case that newspapers would view an ideologically extreme but high-quality candidate as being worse for them since that candidate would be more effective at implementing a policy agenda they opposed. In this case, they may be even less likely to endorse that candidate (compared to a less extreme, high-quality candidate or an extreme, low-quality candidate) since their expected payoff is lower.

[6]A model of strategic endorsing might have newspapers consider the likely effect of their

n endorsed the Democratic candidate in a particular race, while $E_n = 0$ indicates a Republican endorsement. Then:

$$E_n = \left\{ \begin{array}{ll} 1 & \text{if } u_{n,D} > u_{n,R} \\ 0 & \text{if } u_{n,D} < u_{n,R} \end{array} \right\}$$

The newspaper's decision to endorse a Democrat $(E_n = 1)$ can be rewritten as:

$$E_n = \mathbb{1}\left[u_{n,D} > u_{n,R} \right]$$

$$E_n = \mathbb{1}\left[\omega q_D - (i_n - i_D)^2 > \omega q_R - (i_n - i_R)^2 \right]$$

$$E_n = \mathbb{1}\left[\omega(q_D - q_R) > (i_n - i_D)^2 - (i_n - i_R)^2 \right]$$

$$E_n = \mathbb{1}\left[\omega \delta_q > (i_n - i_D)^2 - (i_n - i_R)^2 \right]$$

Where $\delta_q = q_D - q_R$ is the candidate quality differential, how much higher the Democratic candidate's quality is relative to the Republican candidate's quality, and $\mathbb{1}[\cdot]$ is the indicator function. Positive values of δ_q indicate that the Democratic candidate is higher quality relative to the Republican candidate, while negative values indicate the opposite. This decision rule shows that a newspaper will endorse a Democrat if the relative utility-weighted difference in quality between the Democrat and Republican candidates is greater than the value of the difference in utility loss the newspaper incurs due to the ideological distances of each of the candidates from the newspaper's own ideological preference.

From the newspaper's point of view, they are uncertain about the quality of each candidate. Even as experts, newspapers will have a hard time learning the precise quality of each candidate, and so will need to make their best guess based on what they observe. Candidate quality may be especially difficult to observe in open seats, where neither candidate has a record of performance in the job, or in cases where neither candidate has relevant political experience. As in Chiang and Knight (2011), I assume newspapers receive a noisy but unbiased signal of each candidate's quality:

$$\theta_{n,c} \sim \mathcal{N}(q_c, \frac{1}{2}\sigma_\varepsilon^2)$$

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endorsement – whether it could potentially change some people's vote choice or affect the outcome of the election – relative to the cost of an endorsement in terms of reputation or reader trust – the ability to influence future elections with their endorsements. Having read thousands of these endorsements myself, and given the qualitative evidence from public interviews with newspaper editors, it appears that most newspaper endorsements are in fact sincere.

This means that the difference in candidate quality that the newspapers use in their endorsement decision, δ_q, is really the difference in the signal the paper receives about each candidate.

$$\theta_{n,\delta_q} = \theta_{n,D} - \theta_{n,R}$$

Which is the difference between two normally distributed random variables. Hence, the distribution of θ_{n,δ_q} is:

$$\theta_{n,\delta_q} \sim \mathcal{N}(q_D - q_R, \frac{1}{2}\sigma_\varepsilon^2 + \frac{1}{2}\sigma_\varepsilon^2) = \mathcal{N}(\delta_q, \sigma_\varepsilon^2)$$

Newspapers use the normalized signal of candidate quality in their endorsement decision (Chiang and Knight, 2011). More noise in the signals of candidate quality (a higher σ_ε^2) means that newspapers will make their endorsements based more on ideological congruence and less on differences in candidate quality. This normalized signal of candidate quality is equal to $\frac{\delta_q}{\sqrt{\sigma_\varepsilon^2}} = \frac{\delta_q}{\sigma_\varepsilon}$. Substituting this back into the endorsement decision gives:

$$E_n = \mathbb{1}\left[\omega\frac{\delta_q}{\sigma_\varepsilon} > (i_n - i_D)^2 - (i_n - i_R)^2\right]$$

I also assume newspapers do not know each candidate's true ideology. There are a number of ways newspapers could make estimates of candidate ideologies. They could simply assume that the partisan affiliation of each candidate determines their ideological position. They could assume that each candidate's ideology is equivalent to their party's median policy position. When more information is available – such as when newspapers interview candidates and ask them policy-related questions – newspapers could try to gauge where exactly is each candidate's ideal point, i_c, in relation to their own, i_n. In the model, I simply assume that newspapers receive unbiased but potentially noisy signals of candidate ideologies: $\tilde{i_D}$ and $\tilde{i_R}$. Accounting for the noisy candidate quality and candidate ideology signals:

$$E_n = \mathbb{1}\left[\omega\delta_q > (i_n - \tilde{i_D})^2 - (i_n - \tilde{i_R})^2\right]$$

Note that the inside of the bracket can be rewritten as:

$$\omega\frac{\tilde{\delta_q}}{\sigma_\varepsilon} > (i_n - \tilde{i_D})^2 - (i_n - \tilde{i_R})^2$$

$$\omega\frac{\tilde{\delta_q}}{\sigma_\varepsilon} > i_n^2 - 2i_n\tilde{i_D} + \tilde{i_D}^2 - i_n^2 + 2i_n\tilde{i_R} - \tilde{i_R}^2$$

$$\omega\frac{\tilde{\delta_q}}{\sigma_\varepsilon} - 2(\tilde{i_R} - \tilde{i_D})i_n - (\tilde{i_D}^2 - \tilde{i_R}^2) > 0$$

$$\tilde{\delta}_q - \frac{2\sigma_\varepsilon(\tilde{i_R} - \tilde{i_D})}{\omega}i_n - \frac{\sigma_\varepsilon(\tilde{i_D}^2 - \tilde{i_R}^2)}{\omega} > 0$$

$$\tilde{\delta}_q - \frac{2\sigma_\varepsilon(\tilde{i_R} - \tilde{i_D})}{\omega}i_n + \frac{2\sigma_\varepsilon(\tilde{i_R} - \tilde{i_D})(\tilde{i_D} + \tilde{i_R})}{2\omega} > 0$$

$$\tilde{\delta}_q - \frac{2\sigma_\varepsilon(\tilde{i_R} - \tilde{i_D})}{\omega}\left(i_n + \frac{(\tilde{i_D} + \tilde{i_R})}{2}\right) > 0$$

Define the following variables:

- Relative utility weight: $\phi = \frac{2\sigma_\varepsilon(\tilde{i_D} + \tilde{i_R})}{\omega}$

- Midpoint of candidates' ideological positions: $m = \frac{(\tilde{i_D} + \tilde{i_R})}{2}$

This leads to the simplification:

$$\tilde{\delta}_q + \phi\left(i_n + m\right) > 0$$

$$\tilde{\delta}_q > -\phi\left(i_n + m\right)$$

$$\frac{1}{\phi}\tilde{\delta}_q > m - i_n$$

$$i_n + \frac{1}{\phi}\tilde{\delta}_q > m$$

The simplified endorsement decision is:

$$E_n = \mathbb{1}\left[i_n + \frac{1}{\phi}\tilde{\delta}_q > m\right]$$

This intuitive form of the endorsement decision reveals a number of important implications. First, as in vote choice models without a valence or quality component, a newspaper will endorse the Democratic candidate if their ideal point i_n is greater than the midpoint m between the Republican's ideological position and the Democrat's ideological position (higher values of i indicate a more liberal or Democratic ideology). So, as a first order consideration, whether i_n is closer to i_R or i_D will be a strong determinant of which candidate gets endorsed, as in most spatial models of vote choice.

Second, in the model the effect of ideology on the endorsement decision is adjusted by the (relative utility weighted) effect of the quality differential, $\frac{1}{\phi}\tilde{\delta}_q$. As $\tilde{\delta}_q$ increases – indicating that the quality of the Democrat is increasing relative to the Republican candidate's quality – then the paper will be more likely to endorse the Democratic candidate. This quality differential consideration is scaled by $\frac{1}{\phi} = \frac{\omega}{2\sigma_\varepsilon(\tilde{i_D} + \tilde{i_R})}$, which gets smaller as the distance between $\tilde{i_R}$ and $\tilde{i_D}$ increases or as σ_ε increases, and gets larger as ω increases. In other words, as the distance between the candidates increases, candidate quality will matter less to the endorsement decision; as the

noise of the quality signal increases, newspapers will place less weight on their own estimates of candidate quality differentials in the endorsement decision; and as the relative utility weight that newspapers place on candidate quality increases, the effect of candidate quality on endorsement behavior will also be larger.

Note on Linear Probability Models vs. Ideal Point Estimation

While other research takes advantage of editorial positions to estimate newspaper ideology, as in Ho and Quinn (2008), the endorsement data is not well-suited for ideal point estimation procedures nor for item response theory (IRT) models. Typically, when estimating ideal points in practice, researchers are able to observe a set of legislators taking positions (votes) on usually hundreds of *the same set* of specific bills. In contrast, newspapers (analogous to legislators) are taking positions on thousands of different elections (analogous to votes), but in many case most newspapers do not make an endorsement in the same election (the one exception to this is presidential elections). This makes ideal point estimation difficult and uninformative due to sparse overlap in endorsement possibilities, and would limit the ability of the endorsement data to estimate quality differentials for only a small number of elections.

C Alternative Partisan Bias Estimation and Results

In this section, I assess the robustness of the candidate quality estimates and results by trying five different specifications to model the partisan bias of local newspapers and extract quality differentials. I use the same dataset of newspaper endorsements to run each model, each which allows the partisan bias of newspapers to be calculated in different ways, in order to see how sensitive the candidate quality differentials (contest fixed effects) are to alternative empirical estimation procedures. I find that across all alternative models, the correlations between bias estimates is about 0.8 or greater, while the correlations between candidate quality differentials is 0.91 or greater. At the end of this section, I use one of these alternative estimations of quality differentials to re-run the main results in the text (on the effects of quality differentials on vote shares, probability of winning, legislative effectiveness scores, and approval ratings) and show that they are substantively unchanged.

Model Specifications

The five alternative specification models are defined as follows:

Model 1: Linear Time Trends

Model 1, which is the the empirical specification used in the main text, allows for the partisan bias of each newspaper to change linearly over time. The empirical specification for this model is:

$$E_{n,j,t} = \alpha + (\beta_{1,n} + \beta_{2,n}t) + \gamma_{j,t} + \varepsilon_{n,j,t} \tag{1}$$

Model 2: By Decade Bias

Model 2 allows for the partisan bias of each newspaper to change each decade. I run a model similar to Model 1, but without the linear time trend (removing $\beta_{2,n}t$). Instead, I run the model separately for each decade of endorsements and use this to calculate the partisan bias of each paper in each decade, as well as to estimate contest specific fixed effects (quality differentials). The empirical specification for this model is:

$$E_{n,j,t} = \alpha + \beta_n + \gamma_{j,t} + \varepsilon_{n,j,t} \tag{2}$$

The newspaper bias in each decade is calculated using only the newspaper endorsements for the paper in that particular decade. For example, a newspaper's bias in 1950-1959 is calculated using

all that newspaper's endorsements made between 1950-1959. This model allows a newspaper's bias to change discretely across decades, rather than imposing a linear trend.

Model 3: Dynamic Bias

Model 3 creates a dynamic measure of each newspaper's partisan bias. As in Model 2, the empirical specification for this model is:

$$(3) \qquad\qquad E_{n,j,t} = \alpha + \beta_n + \gamma_{j,t} + \varepsilon_{n,j,t}$$

Instead of running this once per decade, I run this model for every year between 1950-2020, using a decade's worth of endorsements centered around the year in order to calculate the partisan bias of a newspaper in that particular year. For example, a newspaper's partisan bias in 1984 would use all that paper's endorsements between 1980 and 1998 (plus or minus 4 years in each direction). This allows each newspaper's bias to change every year.

Because the newspaper bias is changing depending on the year (and decade's worth of endorsements used in the estimation), there are often multiple candidate quality differential estimates for each election (due to estimating contest-fixed effects in different years where the partisan bias of the newspapers are changing). For each electoral contest, I simply take the average of all candidate quality differential estimates (i.e., contest fixed effects) to construct the final quality differentials in this model.

Model 4: Linear Bias Plus Demand and Ownership Effects

Model 4 takes the linear trends specification from Model 1, but incorporates "demand-side" effects as well as ownership effects in the endorsement predictive model. For "demand-side" effects, I include a variable for the county-level Democratic two-party vote share in the most recent presidential election, for the main county in which the newspaper circulates. This captures how newspaper may endorse candidates in response to audience preferences for those candidates. I also include ownership fixed effects in this model. The ownership data comes from Gentzkow et al. (2014), and is missing for years after 2004 and is not complete for all newspapers in my sample. The empirical specification for this model is:

$$(4) \qquad E_{n,j,t} = \alpha + (\beta_{1,n} + \beta_{2,n}t) + \gamma_{j,t} + \beta_3 DemVote_{n,t} + \phi_o + \varepsilon_{n,j,t}$$

where $DemVote_n$ is the most recent or concurrent county-level Democratic two-party vote share in the main county where newspaper n circulates; and ϕ_o are ownership fixed effects, which can

vary across newspapers n and year t.

Model 5: Dynamic Bias Plus Demand and Ownership Effects

Model 5 takes the dynamic bias specification from Model 3 and incorporates the demand-side (county vote shares) and ownership (fixed effects) variables into the equation. As in Model 4, the empirical specification for this model is:

(5) $$E_{n,j,t} = \alpha + (\beta_{1,n} + \beta_{2,n}t) + \gamma_{j,t} + \beta_3 DemVote_{n,t} + \phi_o + \varepsilon_{n,j,t}$$

Similar to specification 3, I run this model for every year between 1950-2020, using a decade's worth of endorsements centered around the year in order to calculate the partisan bias of a newspaper in that particular year, in this case taking into account any effects of vote shares and ownership on the endorsement decision. As before, for each electoral contest, I take the average of all candidate quality differential estimates (i.e., contest fixed effects) to construct the final quality differentials in this model.

Alternative Model Comparisons

Each of the model specifications is estimated using OLS. In Figure C1 below, I demonstrate and compare all five alternative partisan bias estimates for a single newspaper, the Cincinnati Enquirer. While not precisely the same, the alternative bias estimates are in general quite similar in most years. The more flexible models all capture a quick shift toward Democrats in the early 1960s, with a shift back towards Republicans in the 1970, followed by a gradual shift back towards Democrats throughout the rest of the time period. The by decade (model 2) and dynamic bias (model 3) estimates also pick up a shift towards Democrats around 2010, and the paper actually shifts from slightly Republican leaning to slightly Democratic leaning (which is not captured by the linear trends (model 1) estimates).

In cases where I have ownership data, the addition of county-level vote shares and ownership fixed effects does not have a large impact on the partisan bias estimates. In terms of ownership effects, this is not surprising and is consistent with Gentzkow and Shapiro (2010), who also find minimal ownership effects on partisan bias. Additionally, while demand side effects (county vote shares) and ownership effects may be interesting components of partisan bias worthy of study, these causes of partisan bias would be ultimately reflected in the endorsement behavior (which is the outcome in all of these models). In other words, they may be independent sources of a newspaper's bias, but it would not (largely) affect how newspaper bias is measured in this context which is more about propensity to endorse *per se*.

In Table C1, I present the correlations between alternative measures of newspaper partisan
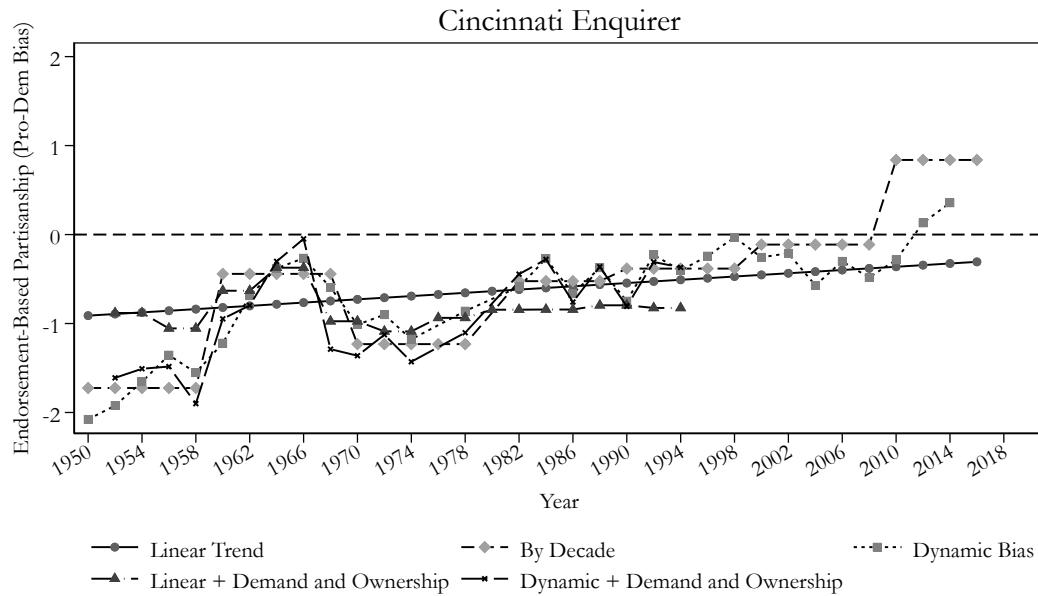
Figure C1: Alternative Bias Estimates, Cincinnati Enquirer

bias (panel A) and correlations between alternative measures of candidate quality differentials (panel B). Across models, the correlations between partisan bias estimates is above 0.77 in all cases, and the correlations between quality differential estimates is above 0.91 in all cases. The table demonstrates that while both sets of estimates are quite robust to alternative specifications, estimates of quality differentials are more robust to alternative model specifications than estimates of partisan bias. This result is also mirrored in Figure 5 in the main text: in Figure 5, I compare the original (Model 1) newspaper bias to the average of endorsed candidates CF-Scores (panel A) or DW-Nominate scores (panel B), and find the correlations between bias scores to be 0.719 and 0.740, respectively; however, when comparing the original (Model 1) quality differentials to the CF-Adjusted quality differentials (panel C) or the DW-Nominate-Adjusted quality differentials (panel D), the correlations are much higher: 0.898 and 0.933, respectively.

The reason for this pattern of results is because of how quality differentials (contest fixed effects) arise in the model. The largest quality differentials occur when a newspaper makes an unusual or surprising ("credible") endorsement, meaning that it deviates from its typical endorsement behavior. For example, if the Cincinnati Enquirer were to endorse a Democrat, that would be a strong signal of the relative quality advantage of the Democratic candidate, and hence the quality differential in that race would be somewhat large and positive. Whereas endorsements for Republican candidates are less surprising, and hence do not affect candidate quality estimates as much. This will be true basically no matter which model you use to estimate partisan bias, given their similarities. Even in cases where the partisan bias estimates diverge to

some extent – such as in the 1950s or 1970s for the Cincinnati Enquirer – the *direction* of the bias generally matches across models (an exception here is the 2010s). Additionally, because the quality differentials are calculated using endorsements across many newspapers, to some extent, the errors in partisan bias estimation due to noise will cancel out when averaged across multiple papers. So while the bias estimates are crucial for estimating quality differentials, the resulting quality differentials are robust to alternative model specifications.

Robustness of Main Results

According to Table C1, adding in county vote shares and ownership fixed effects (as in models 4 and 5) results in a relatively large number of candidate quality differentials dropped from estimation due to missing data. To avoid dropping too many quality differential estimates, I focus on the alternative estimates from Model 3, which allows for a much more flexible estimation of partisan bias (relative to imposing linear trends as in Model 1), and use these to re-estimate the main results on electoral success and governing performance. Notice that the flexibility of the partisan bias estimates in Model 3 is reflected in the 0.77 correlation between Model 1 and Model 3 partisan bias estimates. At the same time, however, the correlation between candidate quality differentials between Model 1 and Model 3 is 0.93.

Table C2 replicates the results from Table 3 while Table C3 replicates the results from Table 4, both using the estimated quality differentials from the dynamic model of partisan bias described above. Both tables show that the main substantive results from the main text are unchanged when using this alternative specification which allows for a much more flexible estimation of a newspapers partisan bias.

Table C1: Correlations Between Alternative Estimates of Partisan Bias and Candidate Quality

(A): Partisan Bias	(1)	(2)	(3)	(4)	(5)
Model 1	1.00				
	(4,993)				
Model 2	0.80	1.00			
	(2,670)	(2,670)			
Model 3	0.77	0.89	1.00		
	(2,324)	(2,216)	(2,324)		
Model 4	0.90	0.79	0.83	1.00	
	(2,867)	(1,283)	(1,131)	(2,867)	
Model 5	0.77	0.88	0.97	0.85	1.00
	(1,124)	(1,077)	(1,124)	(1,124)	(1,124)
(B): Candidate Quality	(1)	(2)	(3)	(4)	(5)
Model 1	1.00				
	(6,397)				
Model 2	0.91	1.00			
	(5,630)	(5,630)			
Model 3	0.93	0.97	1.00		
	(6,013)	(5,593)	(6,046)		
Model 4	0.98	0.94	0.95	1.00	
	(3,554)	(3,154)	(3,344)	(3,554)	
Model 5	0.94	0.97	0.99	0.96	1.00
	(3,387)	(3,128)	(3,404)	(3,314)	(3,404)

Notes: See text for model details. In Panel (A), the number in parentheses under each cell is the number of member-year observations where both models of partisan bias are estimated. In Panel (B), the number in parentheses under each cell is the number of elections for where both quality differentials are estimated. Correlations are calculated for all instances in which pairs of estimates are available.

Table C2: Quality Differentials and Governing Effectiveness, Using Dynamic Bias Model

VARIABLES	(1) LES Scores	(2) Net Approval
Quality Differential	0.187***	0.042**
	(0.042)	(0.017)
Observations	1,812	332
Adjusted R-squared	0.010	0.027
Party-State FEs	No	✓
Mean of Dependent Var	1.038	0.165
SD of Dependent Var	1.548	0.219

Notes: LES Scores are legislator Effectiveness Scores from Volden and Wiseman (2012). Net Approval ratings come from Niemi et al. (2010). Quality Differential is the estimated endorsement-based quality differential. Column 1 uses only U.S. House members, while column 2 uses only Governors and U.S. Senators. Quality differential estimates come from the alternative dynamic model of partisan bias (Model 3). $* = p < 0.10$, $** = p < 0.05$, $*** = p < 0.01$.

Table C3: Effects of Quality Differentials on Votes and P(Win), Using Dynamic Bias Model

VARIABLES	(1) D Vote	(2) D Vote	(3) D Vote	(4) P(D Win)	(5) P(D Win)	(6) P(D Win)
Quality Differential	0.043***		0.028***	0.115***		0.077***
	(0.002)		(0.002)	(0.010)		(0.011)
Incumbency		0.056***	0.043***		0.154***	0.113***
		(0.002)	(0.002)		(0.011)	(0.012)
Observations	2,463	2,613	2,463	2,463	2,613	2,463
Adjusted R-squared	0.853	0.860	0.879	0.703	0.704	0.718
Year FE	✓	✓	✓	✓	✓	✓
Constituency FE	✓	✓	✓	✓	✓	✓

Notes: Sample includes contested elections between years 1950-2020. Outcome for columns 1-2 is the Democratic two-party vote share in the election. Outcome for columns 3-4 is a binary variable indicating a Democratic election victory. The "Quality Differential" variable is coded so that negative quality differentials indicate that the Republican is higher quality while positive values indicate that the Democrat is higher quality. Quality differential estimates come from the alternative dynamic model of partisan bias (Model 3). $* = p < 0.10$, $** = p < 0.05$, $*** = p < 0.01$.

D   Technical Details: Adjusting for Legislator Ideology

I use the set of endorsed candidates and their ideological scores to estimate newspaper ideal points $(i_n^*\text{s})$, in order to place newspapers on the same scale as legislator ideologies. I take a Bayesian approach: given the set of candidates that a newspaper endorses, what is the most likely i_n^* for that newspaper that would minimize the utility loss from the ideological distances between the newspaper and the candidates it has endorsed, given the endorsed candidates' ideological scores? Note that because the utility that a newspaper gets from quality is separate from the utility it gets from ideological congruence, candidate quality is not important for estimating the i_n^* that minimizes utility loss from ideological congruence.

Given that the utility loss from ideological congruence across all observed endorsements is a sum of negative squared distances of the endorsed candidates, the simple solution to i_n^* is simply to take the average of the ideological positions (either CF-Scores or DW-Nominate scores) of all of the endorsed candidates. I provide proof of the intuition here:

Given the utility function in a spatial valence model, $u_{n,c} = \omega q_c - (i_n - i_c)^2$ (see appendix B), the loss function for a newspaper, given a set of newspaper endorsements and the candidate ideological positions, is defined as:

$$q_c - (i_n - i_c)^2$$

or

$$-(i_n - i_c)^2 + q_c$$

Each newspaper makes a set of K endorsements which are observed in the endorsement data set, in which candidate c_k signifies the endorsed candidate, who has ideology i_{c_k} and quality q_{c_k}. The total utility from each of these endorsements can be written in the form of a loss function:

$$\mathcal{L} = \sum^{K} -(i_n - i_{c_k})^2 + q_{c_k}$$

Given that $-(i_n - i_{c_k})^2$ will always be negative or equal to zero, we want to guess the value of i_n^* as to minimize this loss function. Taking the derivative with respect to i_n and setting the expression equal to zero:

$$\frac{\partial \mathcal{L}}{\partial i_n} = \sum^{K} -2(i_n - i_{c_k}) = 0$$

$$= \sum^{K} (i_n - i_{c_k}) = 0$$

$$= Ki_n - \sum^{K} i_{c_k} = 0$$

$$= Ki_n = \sum^{K} i_{c_k}$$

$$i_n^* = \frac{\sum^{K} i_{c_k}}{K}$$

In other words, the i_n^* that minimizes the loss from ideological (in)congruence is the average of all the ideological positions of the endorsed candidates (the average of i_{c_k}s). This will place newspaper ideal point estimates, i_n^*, on the same scale as the CF or DW-Nominate scores, so that the distance between i_n^* and the i_cs are meaningful.

For each newspaper, I calculate i_n^* using all endorsements in the data for which an ideological score is available, separately for each decade of endorsements (this allows newspapers to change their ideology every decade, for more flexibility). For most newspapers, there is at least one endorsed candidate who has either a CF-Score or a DW-Nominate score: CF-Scores have relatively good overlap with Congressional candidates in the endorsement sample, while DW-Nominate scores are available for presidents, and most newspapers make Presidential endorsements at some point.

I then use these newspaper ideal points to directly estimate the effect of ideological congruence on endorsement behavior. To calculate the difference in ideological distance between newspapers and each candidate in an election, I simply use the newspaper ideal points as well as the CF or DW-Nominate scores of candidates and incorporate them into the utility function from the model. In the main text, panels A and B of Figure 5 compare the original partisan bias estimates at the year-level from Equation 1 in the main text to the average of the newspaper's endorsed candidates' ideological scores serves as the CF-based and DW-Nominate-based measures of partisan bias.

The endorsement decision of newspapers can be written as:

$$E_n = \mathbb{1}\left[\omega\delta_q > (i_n - i_D)^2 - (i_n - i_R)^2\right]$$

where $u_{n,c}$ is the utility that newspaper n would get if candidate c won the election, q_c is politician c's quality, ω is the relative utility weight that newspapers put on candidate quality, i_n is a measure of newspaper n's ideological preferences and i_c is the location of candidate c's ideological position. The key term in the utility function in the right hand side of the endorsement decision criterion is $(i_n - i_D)^2 - (i_n - i_R)^2$, which is the *difference* in the squared distances between the paper's and each candidates' ideology (the "difference in ideological distance").

I run a modified version of the high-dimensional fixed effects regression from the main text, and instead of estimating newspaper fixed effects with a linear trend, I add the difference in ideological distance term directly into the high dimensional fixed effects regression in order to account for the ideological extremity of the pairs of candidates in the estimation of the quality

differentials for each election. According to the formal model, this term captures entirely the effects of newspaper ideology and candidate extremity on the endorsement decision, so that any other election-specific effects on endorsement propensities across newspapers must be due to candidate quality.

The results of the original and alternative model specifications are reported in Table D1. Column 1 shows the linear probability model and fixed effects estimation results of the original model, column 2 shows the CF-Score adjusted model, and column 3 shows the DW-Nominate adjusted model. In total, I am able to use 4,434 endorsements in the CF-Scores adjusted model and 4,820 endorsements in the DW-Nominate scores adjusted model. The election fixed effects in the regressions calculate the "extremity adjusted" quality differential estimates for only 1,735 elections (27%) of the original sample when using CF-Score for legislator ideology, and for only 778 (12%) of the original sample when using DW-Nominate scores.[7] In panels C and D of Figure 5 in the main text, the election-specific fixed effects in the alternative specifications in columns 2 and 3 of Table D1 serve as the CF-Adjusted and DW-Nominate-Adjusted quality differential measures. The correlations are quite high, suggesting that incorporating candidate ideological positions directly into the model does little to change the candidate quality differentials from the model.

The results in Table D1 show that the the difference in ideological distance term in the model has a significant effect on endorsements. While the samples are different across specifications, the adjusted R^2s for the models that incorporate ideological positions directly into the estimations are higher when using DW-Nominate scores (0.559) and CF-Scores (0.614) relative to when just using newspaper fixed effects (0.540). The Adjusted Within R^2s in Table D1 also shows that CF-Scores alone can explain about 26.8% of the variation in endorsement behavior, while DW-Nominate scores alone can explain nearly 40.1% of the variation in endorsement behavior in the small set of elections where they are available. This could be because the cases where DW-Nominate scores are available for both candidates are an unusual set of elections (i.e., where both candidates have a record of voting for bills in Congress), or it could be due to the presence of more noise in the campaign finance ideology scores (Tausanovitch and Warshaw, 2017).

Finally, in Table D2 I replicate the results on candidate quality and election outcomes (Dem Vote and Probability of winning), using both the CF- and DW-Nominate-Adjusted quality differentials. The coefficient on candidate quality in all scenarios presented in Table D2 reveal that the estimates of the effects of candidate quality on election results is slightly lower to the results in the robustness checks presented in appendix E (Table E1 through Table E6).

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[7]Because there are hundreds of endorsements for each presidential election, and DW-Nominate scores are calculated for presidents, it results in there being more endorsements used in the DW-Nominate adjustment model despite the relatively small number of elections. CF-Scores are not available for candidates before 1980.

Table D1: Comparisons of Alternative Estimation Specifications

VARIABLES	(1) Endorse D	(2) Endorse D	(3) Endorse D
$(i_n - i_D)^2 - (i_n - i_R)^2$		-0.080***	-0.172***
		(0.003)	(0.003)
Observations	21,095	4,411	4,820
Adjusted R-squared	0.540	0.614	0.559
Adjusted Within R^2	0.000	0.272	0.401
Model	Fixed Effects	CF Adjusted	DW-Nom Adjusted
Newspaper FEs	✓	No	No
Election FEs	✓	✓	✓
N Elections	6432	1725	778

Notes: Outcome variable is coded as 1 for a Democratic endorsement, 0 for a Republican endorsement, and 0.5 for a third party endorsement, an explicit non-endorsement, or when the paper endorses both candidates. Column 1 estimates the simplified high-dimensional linear probability model from the main text, with newspaper and election fixed effects. Column 2 does not include newspaper fixed effects and instead incorporates $(i_n - i_D)^2 - (i_n - i_R)^2$ based on the CF-Scores of candidates. Column 3 does not include newspaper fixed effects and instead incorporates $(i_n - i_D)^2 - (i_n - i_R)^2$ based on the DW-Nominate scores of candidates. Adjusted Within R^2 in columns 2 and 3 is the amount of variation explained by the ideological distance term (and not by the fixed effects). Observations are the number of newspaper endorsements used in the estimation while N Elections is the number of unique elections for which extremity adjusted quality differentials are estimated. * = $p < 0.10$, ** = $p < 0.05$, *** = $p < 0.01$.

Table D2: Effect of Quality on Election Outcomes, Using Ideology-Adjusted Quality Differentials

VARIABLES	(1) CF-Adjusted-D Vote	(2) CF-Adjusted-P(D Win)	(3) DWNOM-Adjusted-D Vote	(4) DWNOM-AdjustedP(D Win)
Quality Differential	0.027***	0.060***	0.027***	0.078*
	(0.003)	(0.014)	(0.007)	(0.039)
Incumbency	0.040***	0.104***	0.033***	0.003
	(0.003)	(0.018)	(0.008)	(0.044)
CF–Score Midpoint	-0.055***	-0.242***	-0.005	-0.246
	(0.013)	(0.068)	(0.032)	(0.189)
Observations	1,190	1,190	285	285
Adjusted R-squared	0.870	0.738	0.796	0.591
Year FE	✓	✓	✓	✓
Constituency FE	✓	✓	✓	✓

Notes: Sample includes contested elections for President, Governor, U.S. Senate, U.S. House, and single-member State Legislative elections (1967-2016), and select other statewide offices, in years 1950-2020. Columns 1-2 use the CF-Score adjusted quality differential, and columns 3-4 use the DW-Nominate adjusted quality differential. Outcome for columns 1 and 3 is the Democratic two-party vote share in the election ("D Vote"), and outcome for columns 2 and 4 is a binary variable indicating a Democratic election victory ("P(D Win)"). The "Quality Differential" variable is coded so that negative quality differentials indicate that the Republican is higher quality while positive values indicate that the Democrat is higher quality, and is standardized to have a standard deviation of one. Incumbency is coded as +1 for a Democratic incumbent, -1 for a Republican incumbent, and 0 for open seats. The CF-Score Midpoint variable is coded so that higher values indicate the Democratic candidate is relatively more extreme. $^{*} = p < 0.10$, $^{**} = p < 0.05$, $^{***} = p < 0.01$.

E   Alternative Specifications and Robustness Checks

In this appendix, I present a battery of results that test the robustness of the effects of candidate quality differentials on election results.

In Table E1 and Table E2, I look at the effect of quality on vote shares and on the probability of winning, respectively, while incorporating a measure of the relative ideological extremity of candidates. To measure relative ideological extremity, I use the midpoint of the (dynamic) CF-Scores of the two candidates (Republican and Democratic) in the race. I multiply CF-Scores by -1 so that higher values of the CF-Score Midpoint variable indicate that the Democratic candidate is relatively more extreme, while lower and negative values indicate that the Republican candidate is more extreme. The coefficient on the CF-Score Midpoint variable is statistically significant and shows that if a candidate is relatively more extreme than their opponent, they both earn less votes and are less likely to win their election. Importantly, the coefficients on candidate quality remains statistically significant and positive, and are similar in magnitude and also show a similar pattern of results compared to the estimates presented in Table 4 in the main text. However, the coefficient on quality are a bit lower when controlling for CF-Score Midpoints, suggesting that a small portion of the effect of quality is explained by ideological moderation.[8]

In Table E3 and Table E4, I use a measure of the district "normal vote", rather than constituency fixed effects. I construct the normal vote measure as follows. For each statewide election (Governor, Senate, and other statewide offices), I calculate the average Democratic two-party vote share for all *other* statewide election results during the decade. For each U.S. House and state legislative election, I calculate the average Democratic two-party vote share for all *other* district election results during the decade. The results in Table E3 and Table E4 are not substantially different from the main results in Table 4 nor from the results in Table E1 and Table E2.

In Table E5 and Table E6, I look at whether quality differentials effects are still significant after controlling for candidate characteristics in races where I have all the requisite data. The sample size is reduced by about half in these cases, and by about two-thirds when I also look at cases where I have relative campaign spending data. Table E5, where the outcome is democratic vote shares, shows that the effect of quality differentials on vote shares is essentially unchanged across all specifications. In column 5 of Table E5, which includes all candidate characteristics variables and relative campaign spending, only quality differential, incumbency, and campaign spending have an effect on vote shares, and the coefficient on quality differential is 3.4 percentage points (which is identical to the 3.4 percentage point effect in the main text). In Table E6, the

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[8]Note that the effect of ideological extremity/moderation decreases when moving either from column 2 to column 4 or from column 3 to column 4. This suggests that there is a relationship between candidate moderation and both candidate quality and incumbency, which has not been taken into account in previous work.

outcome is the probability of winning the election. In columns 3-5, the estimated coefficients of quality differential on the probability are non-significant and noisy. Given the much smaller sample sizes and large standard errors it is hard to be conclusive about the estimates – most of the 95% confidence intervals of the non-significant results in columns 3-5 overlap the intervals of the significant coefficients in columns 1-2. Compared to the effects on vote shares, the results of the effects of quality on the probability of winning are less robust but also noisy.

I include relative campaign spending as a variable in robustness checks for the election results models in Table E5 and Table E6. The inclusion of (the natural log of) relative campaign spending reduces the sample size significantly and is estimated to have no effect on newspaper endorsement behavior (in a model that adds campaign spending to column 6 of Table 2 in the main text). In terms of electoral success, campaign spending does have a statistically significant effect on both vote shares and on probability of winning, despite the reduced sample size. But it does not affect the coefficient of quality differentials on vote share (Table E5, comparing column 5 to column 4). Nor does it affect the estimated effect of quality on the probability of winning (Table E6, comparing column 5 to column 4).

Table E1: Effects of Quality Differentials on Vote Shares

VARIABLES	(1) D Vote	(2) D Vote	(3) D Vote	(4) D Vote
Quality Differential	0.093***	0.042***		0.030***
	(0.002)	(0.003)		(0.003)
Incumbency			0.051***	0.040***
			(0.003)	(0.003)
CF-Score Midpoint		-0.017***	-0.014***	-0.007**
		(0.003)	(0.003)	(0.003)
Observations	3,681	1,190	1,190	1,190
Adjusted R-squared	0.421	0.844	0.852	0.868
Year FE	No	✓	✓	✓
Constituency FE	No	✓	✓	✓

Notes: Sample includes contested elections between years 1950-2020. Outcome is the Democratic two-party vote share in the election. The Quality Differential variable is coded so that negative quality differentials indicate that the Republican is higher quality while positive values indicate that the Democrat is higher quality. The CF-Score Midpoint variable is coded so that higher values indicate the Democratic candidate is relatively more extreme. $* = p < 0.10$, $** = p < 0.05$, $*** = p < 0.01$.

Table E2: Effects of Quality Differentials on P(Win)

VARIABLES	(1) P(D Win)	(2) P(D Win)	(3) P(D Win)	(4) P(D Win)
Quality Differential	0.289***	0.094***		0.062***
	(0.006)	(0.016)		(0.017)
Incumbency			0.129***	0.107***
			(0.017)	(0.018)
CF-Score Midpoint		-0.071***	-0.059***	-0.045***
		(0.016)	(0.016)	(0.016)
Observations	3,681	1,190	1,190	1,190
Adjusted R-squared	0.356	0.725	0.732	0.737
Year FE	No	✓	✓	✓
Constituency FE	No	✓	✓	✓

Notes: Sample includes contested elections between years 1950-2020. Outcome is a binary variable indicating a Democratic election victory. The Quality Differential variable is coded so that negative quality differentials indicate that the Republican is higher quality while positive values indicate that the Democrat is higher quality. The CF-Score Midpoint variable is coded so that higher values indicate the Democratic candidate is relatively more extreme. $* = p < 0.10$, $** = p < 0.05$, $*** = p < 0.01$.

Table E3: Effects of Quality Differentials on Vote Shares, using Normal Vote

VARIABLES	(1) D Vote	(2) D Vote	(3) D Vote	(4) D Vote
Quality Differential	0.093***	0.040***		0.025***
	(0.002)	(0.002)		(0.002)
Incumbency			0.061***	0.049***
			(0.002)	(0.002)
CF-Score Midpoint		-0.005***	-0.004**	0.001
		(0.002)	(0.002)	(0.002)
Observations	3,681	1,599	1,599	1,599
Adjusted R-squared	0.421	0.783	0.811	0.829
Year FE	No	✓	✓	✓
District Normal Vote	No	✓	✓	✓

Notes: Sample includes contested elections between years 1950-2020. Outcome is the Democratic two-party vote share in the election. The Quality Differential variable is coded so that negative quality differentials indicate that the Republican is higher quality while positive values indicate that the Democrat is higher quality. The CF-Score Midpoint variable is coded so that higher values indicate the Democratic candidate is relatively more extreme. $^* = p < 0.10$, $^{**} = p < 0.05$, $^{***} = p < 0.01$.

Table E4: Effects of Quality Differentials on P(Win), using Normal Vote

VARIABLES	(1) P(D Win)	(2) P(D Win)	(3) P(D Win)	(4) P(D Win)
Quality Differential	0.289***	0.140***		0.065***
	(0.006)	(0.010)		(0.009)
Incumbency			0.274***	0.244***
			(0.011)	(0.012)
CF-Score Midpoint		-0.031***	-0.011	0.002
		(0.009)	(0.008)	(0.008)
Observations	3,681	1,599	1,599	1,599
Adjusted R-squared	0.356	0.619	0.694	0.703
Year FE	No	✓	✓	✓
District Normal Vote	No	✓	✓	✓

Notes: Sample includes contested elections between years 1950-2020. Outcome is a binary variable indicating a Democratic election victory. The Quality Differential variable is coded so that negative quality differentials indicate that the Republican is higher quality while positive values indicate that the Democrat is higher quality. The CF-Score Midpoint variable is coded so that higher values indicate the Democratic candidate is relatively more extreme. $^* = p < 0.10$, $^{**} = p < 0.05$, $^{***} = p < 0.01$.

Table E5: Effects of Quality Differentials on Vote Shares, with Candidate Characteristics

VARIABLES	(1) D Vote	(2) D Vote	(3) D Vote	(4) D Vote	(5) D Vote
Quality Differential	0.030***	0.030***	0.034***	0.034***	0.034***
	(0.003)	(0.005)	(0.006)	(0.006)	(0.007)
Incumbency	0.040***	0.037***	0.053***	0.053***	0.026**
	(0.003)	(0.004)	(0.007)	(0.007)	(0.011)
CF-Score Midpoint	-0.007**	-0.006	-0.003	-0.003	-0.002
	(0.003)	(0.004)	(0.004)	(0.004)	(0.005)
Prior Experience		0.016***	0.016***	0.017***	0.012
		(0.005)	(0.006)	(0.006)	(0.008)
Decades of Exp.			-0.005	-0.005	0.005
			(0.006)	(0.006)	(0.015)
(Decades of Exp.)^2			0.001	0.001	-0.001
			(0.002)	(0.002)	(0.004)
Scandal				-0.042*	-0.034
				(0.025)	(0.029)
ln(Relative Spending)					0.017***
					(0.005)
Observations	1,190	703	581	575	361
Adjusted R-squared	0.868	0.843	0.869	0.869	0.797
Year FE	✓	✓	✓	✓	✓
Constituency FE	✓	✓	✓	✓	✓

Notes: Sample includes contested elections between years 1950-2020. See text for variable details. Outcome is the Democratic two-party vote share in the election. * $= p < 0.10$, ** $= p < 0.05$, *** $= p < 0.01$.

Table E6: Effects of Quality Differentials on P(Win), with Candidate Characteristics

VARIABLES	(1) P(D Win)	(2) P(D Win)	(3) P(D Win)	(4) P(D Win)	(5) P(D Win)
Quality Differential	0.062***	0.076**	0.025	0.024	-0.013
	(0.017)	(0.033)	(0.023)	(0.024)	(0.020)
Incumbency	0.107***	0.108***	0.297***	0.292***	0.206***
	(0.018)	(0.025)	(0.026)	(0.026)	(0.029)
CF-Score Midpoint	-0.045***	-0.017	-0.006	-0.008	0.001
	(0.016)	(0.024)	(0.016)	(0.016)	(0.013)
Prior Experience		0.112***	0.076***	0.072***	0.062***
		(0.031)	(0.022)	(0.023)	(0.022)
Decades of Exp.			0.029	0.038	0.010
			(0.023)	(0.024)	(0.042)
(Decades of Exp.)^2			-0.006	-0.008	-0.004
			(0.006)	(0.007)	(0.011)
Scandal				0.036	0.104
				(0.098)	(0.079)
ln(Relative Spending)					0.039***
					(0.013)
Observations	1,190	703	581	575	361
Adjusted R-squared	0.737	0.640	0.858	0.857	0.682
Year FE	✓	✓	✓	✓	✓
Constituency FE	✓	✓	✓	✓	✓

Notes: Sample includes contested elections between years 1950-2020. See text for variable details. Outcome is a binary variable indicating a Democratic election victory. $^* = p < 0.10$, $^{**} = p < 0.05$, $^{***} = p < 0.01$.

References

Adams, J., E. Engstrom, D. J. Martin, W. J. Stone, J. Rogowski, and B. Shor (2017). Do moderate voters weigh candidates' ideologies? voters' decision rules in the 2010 congressional elections. *Political Behavior 39*(1), 205–229.

Ansolabehere, S., R. Lessem, and J. M. Snyder, Jr. (2006). The orientation of newspaper endorsements in u.s. elections, 1940-2002. *Quarterly Journal of Political Science 1*(4), 393–404.

Ansolabehere, S. and J. M. Snyder, Jr. (2000). Valence politics and equilibrium in spatial election models. *Public Choice 103*(3/4), 327–336.

Ashworth, S. and E. Bueno de Mesquita (2009). Elections with platform and valence competition. *Games and Economic Behavior 67*(1), 191–216.

Ban, P., A. Fouirnaies, A. B. Hall, and J. M. Snyder, Jr. (2018). How newspapers reveal political power. *Political Science Research and Methods*, 1–18.

Basinger, S. J., L. M. Brown, D. B. Harris, and G. Gulati (2014). Counting and classifying congressional scandals. In A. Dagnes and M. Sachleben (Eds.), *Scandal: An Interdisciplinary Approach to the Consequences, Outcomes, and Significance of Political Scandals*. New York, NY: Bloomsbury.

Beach, B. and W. W. Hanlon (2022). Historical newspaper data: A researcher's guide and toolkit. *NBER Working Paper No. 30135*.

Boche, A., J. B. Lewis, A. Rudkin, and L. Sonnet (2018). The new voteview.com: Preserving and continuing keith poole's infrastructure for scholars, students and observers of congress. *Public Choice 176*(1-2), 17–32.

Bonica, A. (2023). Database on ideology, money in politics, and elections: Public version 3.1. Stanford, CA: Stanford University Libraries: `https://data.stanford.edu/dime`.

Chiang, C.-F. and B. Knight (2011). Media bias and influence: Evidence from newspaper endorsements. *Review of Economic Studies 78*(3), 795–820.

Gentzkow, M., E. Glaeser, and C. Goldin (2006). The rise of the fourth estate: How newspapers became informative and why it mattered. In E. Glaeser and C. Goldin (Eds.), *Corruption and Reform: Lessons from America's Economic History*, Chapter 7, pp. 187–229. University of Chicago Press.

Gentzkow, M. and J. M. Shapiro (2010). What drives media slant? evidence from u.s. daily newspapers. *Econometrica 78*(1), 35–71.

Gentzkow, M., J. M. Shapiro, and M. Sinkinson (2014). United states newspaper panel, 1869-2004 (icpsr 30261). Version V6, `https://doi.org/10.3886/ICPSR30261.v6`.

Hall, A. B. and D. M. Thompson (2018). Who punishes extremist nominees? candidate ideology and turning out the base in us elections. *American Political Science Review 112*(3), 509–524.

Ho, D. E. and K. M. Quinn (2008). Measuring explicit political positions of media. *Quarterly*

Journal of Political Science 3(4), 353–377.

Inter-university Consortium for Political and Social Research and C. McKibbin (1997). Roster of united states congressional officeholders and biographical characteristics of members of the united states congress, 1789-1996: Merged data. https://doi.org/10.3886/ICPSR07803.v10.

Klarner, C. (2018). State Legislative Election Returns, 1967-2016: Restructured For Use.

Klein, C. (2022). Is the newspaper endorsement dying? *Vanity Fair*. https://www.vanityfair.com/news/2022/10/is-the-newspaper-endorsement-dying.

Kornfield, M. and P. Farhi (2022). The biggest u.s. newspaper chain wants less opinion in its pages. *Washington Post*. https://www.washingtonpost.com/media/2022/06/09/gannett-opinion-pages/.

Larcinese, V., R. Puglisi, and J. M. Snyder, Jr. (2011). Partisan bias in economic news: Evidence on the agenda-setting behavior of u.s. newspapers. *Journal of Public Economics 95*(9), 1178–1189.

Lewis, J. B., K. Poole, H. Rosenthal, A. Boche, A. Rudkin, and L. Sonnet (2022). Voteview: Congressional Roll-Call Votes Database.

Miller, M. and B. Hamel (2021). Congressional scandals (1979-2018), v2. *Harvard Dataverse*. https://doi.org/10.7910/DVN/BID3QM.

Niemi, R., T. Beyle, and L. Sigelman (2010). U.s. officials' job approval ratings (jars) database. Data hosted by Jennifer Jensen at https://jmj313.web.lehigh.edu/node/6.

Puglisi, R. and J. M. Snyder, Jr. (2015). The balanced u.s. press. *Journal of the European Economic Association 13*(2), 240–264.

Schuster, S. S. (2023). The persuasive power of the fourth estate: Estimating the effect of newspaper endorsements: 1960-1980. *Journal of Economic Behavior & Organization 207*, 496–510.

Stone, W. J., S. A. Fulton, C. D. Maestas, and L. S. Maisel (2010). Incumbency reconsidered: Prospects, strategic retirement, and incumbent quality in u.s. house elections. *Journal of Politics 72*(1), 178–190.

Stone, W. J., L. S. Maisel, and C. D. Maestas (2004). Quality counts: Extending the strategic politician model of incumbent deterrence. *American Journal of Political Science 48*(3), 479–495.

Stone, W. J. and E. N. Simas (2010). Candidate valence and ideological positions in u.s. house elections. *American Journal of Political Science 54*(2), 371–388.

Tausanovitch, C. and C. Warshaw (2017). Estimating candidates' political orientation in a polarized congress. *Political Analysis 25*(2), 167–187.

Volden, C. and A. E. Wiseman (2012). Legislative effectiveness and representation. In L. C. Dodd and B. I. Oppenheimer (Eds.), *Congress Reconsidered* (10 ed.)., pp. 237–264. Washington, DC:

CQ Press.

Volden, C. and A. E. Wiseman (2014). *Legislative Effectiveness in the United States Congress: The Lawmakers.* Cambridge University Press.