The Persuasive Power of the Fourth Estate: Estimating the Effect of Newspaper Endorsements: 1960-1980

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Abstract

This paper estimates the persuasive effect of newspaper Presidential endorsements on its readers over five elections during the peak of U.S. newspaper circulation (1960-1980), during which time the vast majority of newspaper endorsements were for the Republican candidate. I find that newspaper endorsements caused a large, significant change in readers' preferred candidate and even Republican endorsements, despite being more common, were effective. Because my empirical strategy allows me to estimate causal effects for a large sample of U.S. newspapers in each election year, I can calculate the cumulative effect of newspaper endorsements. I estimate that U.S. newspapers shifted more than 20 million voters toward Republican candidates.

Introduction

Do newspaper endorsements change readers' opinions? The answer to this question informs how we think about both the decision-making process of voters and the role that newspapers have played in past Presidential elections. The importance of understanding the historical impact of newspaper endorsements is heightened by the partisan skew of endorsements themselves. Through much of the era of independent American newspapers, endorsements more frequently favored Republican presidential candidates. From 1936 through 1988, the only time more newspapers endorsed a Democrat was in 1964, when Barry Goldwater's campaign sufficiently alienated him from moderate Republicans. Figure 1 uses Gentzkow and Sinkinson (2014) panel dataset on U.S. Newspapers to show the total circulation of all newspapers endorsing Republican or Democratic candidates. The Republican newspaper advantage was massive. Over those 14 elections, the total circulation for newspapers endorsing Republicans exceeded that of Democrats by 225 million. The unbalanced makeup of editorial endorsements means that even if endorsements have a small effect on voter opinion, editors and publishers may have systematically shifted voters toward Republican candidates.

I estimate the marginal and cumulative effects of newspaper Presidential, general-election endorsements from 1960-1980, using a sample of hundreds of endorsements. Though data constraints mean that these are the only years for which causal estimates can be obtained, they are also years in which American newspapers were most widely read. Using a regression discontinuity design on a nationwide sample of newspaper readers, I show that endorsements led to an immediate, significant change in the voting intentions of its readers. I also find that endorsements for Republican, though more common, were no less effective. My point estimates for Republican endorsements is larger than that for Democrats. I two-way fixed effects regression is used to estimate the dynamic effect of endorsements, and I find that the persuasive effect of endorsements last for at least 4 weeks. Finally, because I am estimating treatment effects for a nationwide sample, my estimates provide a plausibly representative sample of U.S. newspapers, including many of the most widely-read papers in the country, my estimates have allowing me to estimate the cumulative impact of

all newspaper endorsements in any given year.

Literature

Newspaper endorsements are one of the most salient and long-standing forms of political persuasion in American elections. Early research on the effect of newspaper endorsements in the 20th century (Rystrom 1986; Erikson 1976; St. Dizier 1985; Robinson 1974) found endorsements to be correlated with voter behavior. Whether that was due to a causal effect of endorsements themselves, or a byproduct of readers sorting to like-minded newspapers, was not addressed. Newspaper readership has a more formidable selection bias than other forms of political information or persuasion, such as television news or campaign messages. People have full agency over what they read, so comparisons of voters who read different papers must fully address the endogenous nature of readership decisions. Determining the causal effect of newspaper endorsements has to first address the fact that the choice to read (and which paper to read) is heavily influenced by people's pre-existing political leanings.

In their study of a change in the political alignment of British newspapers in the 1990s, Ladd and Lenz (2009) argue that the lack of changes in party support from newspapers presents a challenge to the detection of media persuasion. Certainly, identifying exogenous variation in exposure to newspaper endorsements is more challenging when newspapers consistently support the same party, which is why political re-alignments are an attracted topic of study. Both Ladd and Lenz (2009) in their study of 90s Britain and Erikson (1976) in his study of the American newspaper shift away from the Republican candidate found that readers of papers that switched were more likely to themselves switch their allegiance.

Both Chiang and Knight (2011) and Casas, Fawaz and Trindale (2016), in studying 21st century newspaper endorsements, find that the effect of endorsements depends on the setting. Chiang and Knight (2011) find that endorsements are most effective when they go against the political lean of the newspaper. Casas, Fawaz and Trindale (2016) argue, similarly, also find that "surprise"

endorsements are effective, but primarily when they are consistent with the tone of the newspaper. Though these two studies both suggest that readers filter out potential newspaper bias, their different methodologies have different implications for the historical setting studied here. Casas, Fawaz and Trindale (2016) consider an endorsement a surprise if it bucks the history of previous newspaper endorsements, while Chiang and Knight (2011) measure the political lean of a newspaper by the paper's ownership and the political leanings of its readers. During my period of study, newspapers consistently endorsed Republican presidential candidates, but the magnitude of observable ideological sorting (as measured by Chiang and Knight (2011)) during this period is small. Fewer than 40% of newspaper readers in my sample stated that they already were intending to vote for the candidate endorsed by their newspaper. This number was similar for Republican and Democratic endorsements, despite Republican endorsements being more common.

Several papers have found newspaper endorsements to have an immediate persuasive effect. de Leon (2012) found that endorsements that occurred on Election day are especially persuasive. Similarly, Hollander (1979) finds that support for an endorsed candidate in a Maryland gubernatorial primary election rises following a newspaper endorsement, though this study is only for a single newspaper endorsement.

Such event studies are nonetheless illustrative, including those that have studied celebrity endorsements. Several studies of Oprah Winfrey's 2007 endorsement of Barack Obama Research have shown the endorsement's effects on both the nomination process (Garthwaite and Moore 2013), general election outcomes, and even people's expectations of the race (Pease and Brewster 2008).

This paper expands the literature in several important ways. First, this is the first paper that attempts to obtain unbiased estimates of the causal effect of newspaper endorsements over the Golden Era of the 20th Century American newspaper industry. While several studies above (de Leon 2012; Chiang and Knight 2011) have used convincing sources of exogenous variation in

endorsement exposure to estimate causal effects, none of these have been applied to the period where newspapers were of peak importance. My study sheds light on the historical role newspapers played in shaping public opinion.

This is the first historical paper to use a quasi-experimental framework to estimate the effect of endorsements over a large, nationwide sample of newspapers. In turn, this allows me to estimate the cumulative, nationwide effect of newspaper endorsements. Newspapers' widespread popularity, coupled with the higher likelihood of a Republican endorsement, raises the question of whether newspaper endorsements systematically drew potential voters to Republican presidential candidates. Ironically, one paper that estimates the cumulative effects (Erikson 1976) during this period focuses primarily on 1964, the one year during the golden age of newspapers that a Democrat received the majority of newspaper endorsements. Erikson estimates that endorsements can have a large effect (about 5 million votes), though he is unable to control for secular trends in opinion that may be influencing both voter choice and newspaper endorsements.

Data & Empirical Framework

Endorsement data was collected from newspapers.com and individual newspaper archives. The precise date of the endorsement was determined by either finding the text of the endorsement itself, or a news story reporting on the endorsement. I use the American National Election Study to measure voter intent. The study asks respondents before the election how they intent to vote in Presidential elections. The study also collects data on newspaper readership, asking respondents to name the paper that they "read most of news about politics". This allows me to pair respondents with the newspaper endorsement to which they were exposed. My sample includes the presidential elections from 1960 through 1980, except for 1972, in which no readership data was collected.[1] The survey and endorsement data cannot tell me if a respondent was exposed to an endorsement on the day the endorsement occurred. For example, respondent who reads an

[1]Readership data was collected for 1984, but the survey allowed people to name several papers, and readership data was collected during the pre-election survey, which introduces the threat of bias if the endorsement changed the likelihood that a person recalled the name of a paper.

afternoon paper may have taken the survey in the morning. I therefore drop any survey responses that occur on the exact date of endorsement.

Because many newspapers have not been fully digitized, I am not able to obtain data on the timing of all possible newspapers. Overall, I am able to verify the editorial stance and timing of endorsements (or lack thereof) for 70% of newspapers read by ANES respondents. Many of the remaining 30% are likely papers that chose not to endorse any candidate, but where the lack of endorsement could not be verified.

Model selection is driven by the need to identify a counter-factual that fully accounts for newspaper choice. While research on television and radio can find plausibly exogenous variation in exposure to broadcast media (Snyder and Stromberg 2010), newspapers can be read with fewer spacial or temporal limitations. This means that whether a respondent reads a newspaper will be highly correlated with unobserved characteristics affecting pre-existing political preferences. Therefore, I rely primarily on within-readership variation for identification, comparing readers who were exposed to a newspaper endorsement to otherwise identical readers of the same paper who received no exposure.

To achieve this, I use the quasi-experimental variation created by the timing of pre-election voter surveys. This allows me to eliminate any bias in the correlation between voter opinions and their choice of newspaper. However, by comparing the opinions of newspaper readers across time, I am concerned about secular trends in my outcome variable due to ideological sorting occurring as elections approach, or gradual changes in the respondent characteristics. Therefore, my main specification is a regression discontinuity framework.

The running variable in my RD design, t, is calculated as:

$$t = DaysBefore_e - DaysBefore_s$$

where $DaysBefore_e$ is the is number of days before an election that an endorsement occurred and $DaysBefore_s$ is the number of days before an election that a survey was taken. Therefore, if an endorsement occurs 14 days before an election, while the survey occurs 13 days before the election, the running variable would be equal to 1. When the running variable takes on a negative value, respondent have not yet been exposed to an endorsement, and when it is positive, they have been exposed. The outcome variable for my regressions, Y, is a binary variable equal to 1 if a newspaper reader intends to vote for the candidate endorsed by their paper, and 0 otherwise. The treatment effect of an endorsement is given by:

$$TE = \lim_{t \downarrow 0} E[Y|t] - \lim_{t \uparrow 0} E[Y|t]$$

$\lim_{t \downarrow 0} E[Y|t]$ converges to the expected support of a candidate on the day of an endorsement when an endorsement *does* occur, while $\lim_{t \uparrow 0} E[Y|t]$ converges to the expected support of a candidate on the day of an endorsement when an endorsement *does not* occur. These limits are non-parametrically estimated separately using data on each side of the cutoff using a local polynomial. I use the rdrobust software developed by Calonico, Cattaneo and Titiunik (2015) to estimate these limits, and show coefficients under a several specifications of the model by changing kernel shape and polynomial order.

An RD design will provide unbiased estimates even if there are time trends that affect the expected value of my outcome variable, as long as the observations close to the discontinuity are sufficiently similar. Readers may be affected by news reporting and change their views to more closely follow that of their newspaper, or readership sorting may become stronger as the election approaches, meaning that respondents surveyed early in the campaign may be less likely to read a newspaper that already aligns with their views than a respondent who is surveyed later. Additionally, people surveyed early may be systematically different than those surveyed late. While

there are no instructions given to interviewers when they should survey specific subsets of their survey, interviewers will likely use some system, such as alphabetical order or going street by street. Additionally, late respondents are more likely to be people who the survey-taker could not initially reach. By estimating the instantaneous change in voter opinion, I am reducing the potential for secular changes to bias my estimates.

One by-product of using an RD design is that I am estimating the local average treatment effect (LATE) of newspaper endorsements, meaning that I am only estimating the causal effect of endorsements on people near the cutoff itself (Imbens and Angrist 1994). Instead of being a limitation in this setting, the local average treatment effect is the cleanest estimate of persuasion, as it isolates the persuasive effect of newspaper endorsements from any equilibrium effects that may occur. A change in public opinion following an endorsement could affect campaigns' strategy. For example, the campaign of a non-endorsed candidate may allocate more resources to a region, potentially diminishing the observed change in opinion following the endorsement.[2]

The timing of interviews drives the identification strategy for this analysis, so differences in the timing of pre-election surveys must be uncorrelated with outcomes variables. The structure of the ANES creates a setting by which the timing of being surveyed, conditional on being selected to participate in the first place, is as good as random over short time periods. Survey takers were given a list of addresses, and told to survey them, with no instructions given regarding the order of interviews, and little instruction regarding the timing. In fact, interviewers in some years are told that they can start interviews early if they have completed their required training. Survey takers are provided only with a suggested schedule, completing a target percentage of their interviews each week, to minimize a rush in the days prior to the election.

Fortunately, information on newspaper readership is not gathered until the post-election survey. This is a necessary (and serendipitous) component of the survey procedure. Without it, I would

[2]While I present the results of the my preferred specification, I also show the results of a difference-in-difference specification in Appendix B. The point estimates are smaller, but also positive and statistically significant.

not be able to eliminate the possibility that people become more likely to claim reading a newspaper immediately after an endorsement. Endorsements are often news-worthy events, so people may change their readership habits or their self-reporting of readership because of the endorsement itself. Because readership data is collected after the election, all respondents had similar exposure to any political media at the time they answered the readership question.

Figure 2 shows the distribution of my running variable, which is determined by the timing of surveys relative to endorsements. The figure shows the existence of mass points, instead of a smooth distribution typically desired in a regression discontinuity framework. However, these mass points are not due to manipulation of the running variable, but due to clumps in the distribution of both surveys and endorsements. Surveys are significantly less likely to occur on Sundays or Fridays, while endorsements are more likely to occur on Sundays and Tuesdays. This explains why certain values of the running variable (such as 0, 7, 10) are less likely to occur. A respondent is less likely to be surveyed on the exact day of an endorsement because endorsements are more likely to happen on Sunday, while surveys are especially less likely to occur. Similarly, relatively few people were surveyed 10 days following an endorsements, because endorsements are more likely to occur on Tuesdays; 10 days after a Tuesday endorsement is the following Friday, a day of the week in which relatively few surveys occur.

Often, such bunching in the running variable is due to the manipulation of treatment status that may also be correlated with the outcome variable. Fortunately, it is implausible that manipulation can occur in this setting, nor is it clear what motivation would exist for such manipulation. Respondents do not control when they are going to be surveyed, nor do they know in advance when a newspaper endorsement will occur, so they cannot manipulate treatment status. Though survey takers have control over when the survey occurs, they also do not know when endorsements will occur. Most importantly, survey takers do now know the political leaning of respondents before they survey them. So even if (for reasons unknown) the survey taker wanted to systematically survey people of one political leaning immediately following an endorsement, they would have no

way of knowing who those people are.[3]

The mass points in the running variable could still lead to biased estimates if those surveyed immediately following an endorsement are systematically different from those surveyed immediately before. For example, respondents surveyed on Monday are more likely to have a value of 1 in the running variable, while those surveyed on Saturday are more likely to have a value of -1. A systematic difference between these two groups would bias my estimates if the difference was correlated with my outcome variable. This would mean that even if treatment status was the same between those on either side of the discontinuity, the limits on either side would be converging to different points, a violation of the identification strategy.

I therefore test verify the validity of the RD design by testing for discontinuous jumps in demographic variables around the discontinuity. Figure 4 shows the distribution of numerous observable characteristics, verifying that there is no systematic selection into being surveyed just before or just after the endorsement. Respondents on either side of the discontinuity are equally likely to be female or married, and of similar ages. Nonetheless, I include these variables as co-variates in each of my regressions.

The graphs also show that the demographics of respondents gradually change across values of my running variable. Later respondents are younger and more likely to be married and female. This may be due to general trends in surveyor behavior, who may be less likely to initially make contact with people, and therefore more likely to contact them later in the campaign cycle. In spite of these secular changes in demographics, respondents near to discontinuity are similar to those in the overall sample. Respondents surveyed within 3 days of the endorsement have almost identical average ages, percent white and female to the total sample. The largest difference is in the percent married. 73.1% of my total sample is married, while 70.4% of those near the discontinuity are. These small differences suggest that my RD estimates may be representative of the whole sample.

[3]The presence of mass points in the running variable still needs to be adjusted to insure unbiased measures of standard errors. This was addressed using STATA's rdrobust command.

Another concern is that newspapers may time their endorsements to coincide with a local campaign event, such as a visit by a candidate. If this were the case, then I could be picking up the effect of the visit instead of the endorsement. I can rule out this possibility by using data on the timing campaign visits, and comparing the timing of visits to endorsement timing. I compiled data on the schedule of visits from 6 of the 10 campaigns in my sample for which I could locate complete campaign calendars.[4] I find no relationship between the timing of candidate visits and newspaper endorsements, as seen in Appendix Figure A1. If newspapers were timing endorsements to coincide with candidate visits, I would expect points to be distributed around the 45 degree line, indicating that cities visited early (late) in the campaign saw earlier (later) endorsements. Instead, there is no positive correlation at all.

Results

Table 1 shows the main results of the persuasive effects of newspaper endorsements, which shows the average effect of endorsements over all years in my sample. Estimates are robust to different choices on kernel densities and polynomial order. Given the importance of bandwidth size on regression results (Imbens and Lemieux 2008, p. 633), the choice of bandwidth is left to a data-driven procedure. I use the mean squared error (MSE) optimal bandwidth, which will vary over specifications of the model, but selects bandwidths between 10 and 20 days around the cutoff. At pointed out by Calonico, Cattaneo and Farrell (2020), MSE optimal bandwidths will not yield valid results for causal inference unless bias-corrected confidence intervals are used. I therefore use bias-corrected confidence intervals using STATA's rdrobust command, developed by Calonico, Cattaneo and Titiunik (2015). To best focus on the persuasive effect of endorsements, I drop from my sample anyone who does not intend to vote. While this decision makes my estimates slightly more precise, my main results are robust to the inclusion of voters who do not intend to vote.

Table 1 presents the results from the RD regression. I find that a newspaper endorsement in-

[4] 1960 (DEM & REP), 1964 (REP), 1968 (REP), 1976 (DEM), 1980 (REP).

creases readers' intention to vote for that candidate by about 19.9 percentage points using my preferred specification, which uses a first-order polynomial model and a triangular kernel density. The point estimates and statistical significance of my findings using different specifications are similar. Compared to an average about about 49 percent, this equates to a 40.6% increase. Figure 3 illustrates this jump in respondent opinion.

Given the diminished role of newspapers in recent decades, this point estimate may appear implausibly high. For example, using their sample of 2000-2004 Chiang and Knight (2011) estimate that 5% of the difference in voter preferences between Republican and Democrat-endorsing newspapers was attributable to the endorsement itself. Compared to studies that have used a candidate's total vote share as the outcome variable (de Leon 2012), I am looking at a subset of voters that are most likely to be affected by a newspaper's endorsement, as my sample only includes people who stated that they read a newspaper for campaign coverage. Since this group is (presumably) more likely to be affected by an endorsement than the general public, my estimates of causal effect is predictably higher than those using aggregated voting outcomes.

When the point estimates presented here are compared to other studies with comparable treated populations, the results are in line with previous findings. Robinson (1974) showed, in his study of 1960s Presidential elections, that readers of Democratic-endorsing newspapers were 14-24 percentage points more likely to vote for the Democrat than readers of Republican-endorsing newspapers. Ladd and Lenz (2009) find that a shift in political alignment by British newspapers in 1997 persuaded between 10 and 25 percent of readers.

Some of this effect from my results is coming from a decrease in undecided voters. Newspaper endorsements are a low cost way for readers to gain information about candidates, so it makes sense that an endorsement could affect candidate support by reducing the number of people who had yet to make up their minds. However, this raises the question of whether the persuasive effect of endorsements is due to voters actually changing their voting behavior, or whether newspapers are

instigating a change that would have occurred anyway when voters ultimately made their choices. When I restrict my sample by eliminating undecided voters, I still find endorsements to have a positive impact on the probability that voters support the endorsed candidate. This means that endorsements are actually changing voter preferences, not simply inducing voters to support the candidate that, in the absence of the endorsement, they would have eventually supported anyway. In the appendix, I show both the effect of endorsements on the likelihood a voter is undecided, and the persuasive effect of endorsements when undecideds are dropped.

Taking the findings of previous research, these findings lead to a puzzling result. Both Chiang and Knight (2011) and Casas, Fawaz and Trindale (2016) provide evidence that endorsements are less effective when they align with readers' pre-conceived ideas of a newspaper's ideological bend. As Chiang and Knight (2011) point out, this potentially eliminates the ability for newspaper endorsements to have an aggregate partisan effect, as relatively rare endorsements for one party will have larger marginal effects than the more common, less effective endorsements for the other party. In fact, when the authors perform an unweighted regression of the effect of endorsements, they find a small, insignificant effect. If the vast majority of the endorsements in my sample are for the Republican candidate, are they still effective?

First, I find no evidence that Republican endorsements, despite being more common, are less effective. In fact, the point estimates of the effect of Republican endorsements are larger than those of Democratic endorsements. Panels B and C of Table 1 present the regression results separately for Republicans and Democrats. Republican endorsements increase the likelihood that a respondent intends to vote for a Republican by about 30 percentage points, while an endorsement for a Democrat has a small, statistically insignificant effect.

To better understand why Republican endorsements can be both common and effective, I turn to the measures of media slant used in the literature. Chiang and Knight (2011) build their measure of newspaper bias on newspaper ownership and the pre-endorsement preference of readers.

Independent newspapers were much more common during the period of study here, meaning that newspaper ownership was not a meaningful variable with which to measure newspaper leaning. Therefore, I use pre-endorsement reader opinions to determine whether the endorsement is surprising or not. Similar to their findings, I find that endorsements are more effective when the pre-endorsement political leanings of readers go counter to the endorsed candidate. Endorsements are far more effective when the rate of reader preference for the endorsed candidate is below the median of my sample, as illustrated by Figure xx. When the readership support prior to the endorsement for the endorsed candidate is above the median of my sample (48.4%), I find no effect on newspaper endorsements. However, then pre-endorsement reader support is below the median, I find a large effect. The endorsements Chiang and Knight (2011) would classify as "surprising" do appear to be more effect.

But these surprising endorsements are just as likely be Republican endorsements. Within the sample of pre-endorsement readers, 44% of readers of Republican-endorsing newspapers had already decided to vote for the Republican candidate. This is slightly lower than the to the 48.4% for readers of Democratic-endorsing newspapers who had decided to vote for the Democrat. This suggests that ideological sorting of readers across papers is relatively low during this period. Even though Republican endorsements are more common, they are not simply "preaching to the choir", leaving plenty of room for potential persuasion.

I also look at differences in newspapers' propensity to endorse specific candidates. Casas, Fawaz and Trindale (2016) showed that endorsements were more effective when the newspaper has a lower propensity to endorse that candidate's party. Given that Republican endorsements are more common, Republican-endorsing newspapers also have a higher propensity to having endorsed Republicans in the past. For example, of newspapers in my sample where the previous endorsement could be determine, 76% of Republican-endorsing newspapers endorsed a Republican four years prior; only 55% of Democratic-endorsing newspapers endorsed Democrats four year prior.[5]

[5]Much of this is actually due to the 1964 election. Almost 40% of the instances of Democratic endorsements in my sample come from this year. Only a quarter of these papers endorsed Kennedy in 1960.

But while Republican-endorsing newspapers have a higher propensity of have endorsed Republicans in the past, I don't find that this high-propensity to endorse one party over another saps the persuasive effect from the endorsement. If I restrict my sample to only newspapers that are endorsing the same party that they endorsed in the previous cycle, the point estimates for my preferred RD specification (linear, first-order polynomial) are similar (0.214) to the overall sample (0.197).

Taken together, these results offer some explanation for Republican endorsements being more common but still having a significant marginal impact in persuading voters. While I find the pre-disposition of a newspaper's readership to be a strong predictor of the effectiveness of endorsements, I find no difference in reader pre-disposition between Republican and Democratic-endorsing papers. And while I do see a difference between Republican- and Democrat-endorsing papers in how often an endorsement goes against a papers propensity to support a party, I find no difference in the marginal impact of an endorsement that matches the paper's previous endorsement compared to a change in the party endorsed.

Another (untestable) potential explanation for effective Republican endorsements stems from perceptions of a pre-existing liberal bias in the media. Despite a lack of evidence in bias in the coverage of Presidential elections throughout my sample period (D'Alessio and Allen 2000), accusations of a liberal media bias began in the 1960s (Greenburg 2008). If readers believed that their newspaper had biases against Republican candidates, a Republican endorsement could be more persuasive.

As I have emphasized, while the use of regression discontinuity provides a plausibly unbiased estimate of the immediate persuasive effect of newspaper endorsements, it cannot be used to test for the persistence of the persuasive effect. To determine whether endorsements have a persistent effect, I use a two-way fixed effects framework, estimating the likelihood that a respondent sup-

ports a candidate using an OLS regression that controls for both time (a full set of day dummies) and paper (a full set of paper dummies). To test for persuasion decay I include a full set of "event study" dummy variables for each week following treatment (the endorsement). If the effect of endorsements are short-lived, I would expect these dummy variables to be negative as the causal effect drops over time.

$$RepVote_{pt} = \iota_t + \lambda_p + (\beta_1 Endorsement_{pt} + \Sigma\beta_i D_i)I_p + \epsilon_{pt}$$

Where $RepVote_{pt}$ is an indicator variable equal to 1 if a respondent (who reads newspaper p and is surveyed at date t) intends to vote for the Republican candidate and 0 otherwise. $Endorsement_{pt}$ is equal to 1 if the survey took place after an endorsement and 0 otherwise. D_i is a full set of treatment dummies created by interacting my endorsement variable with dummies for each week following the endorsement. ι_t and λ_p are a full set of day and newspaper dummy variables. I_p is an indicator variable equal to 1 if newspaper p endorsed a Republican, and -1 if it endorsed a Democrat. β_1 is therefore an estimate of the immediate effect of the endorsement, while the full set of β_i show how the causal effect decays over time.

The regression results are shown in Table 2. First, I estimate causal effect without the event study dummy variables. This is shown in Column 1. The coefficient (0.0811) is statistically significant and shows that my estimates are robust to estimating persuasion using the two-way fixed effects regression. In this regression, the coefficient on $Endorsement_{pt}$ provides an estimate of the average treatment effect for all readers exposed to the endorsements, not just the immediate impact.

I illustrate the dynamic effect of endorsements in Column 2. Because I have interacted dummy variables for each week following the endorsement with the treatment variable, I have omitted the dummy variable for Week 1. This means that the level effect for the *Endorsement* variable is

an estimate of the effect on newspaper endorsements within the first week following the endorsement. The point estimate (0.107) is comparable in interpretation to the regression discontinuity estimates. Endorsements have a greater impact to those surveyed immediately following the endorsement. The interaction terms show how the treatment effect changes over time. The negative coefficients on weeks 2-4 show that the persuasive effects of endorsements decrease significantly in the weeks following the endorsement, with the effect of endorsements by week 4 being statistically significantly different from the immediate effect.

Even in the face of full persuasion decay, endorsements can still impact voting behaviors, since many endorsements occur within just a few weeks of the election. Within my sample, the median number of days that an endorsement occurred prior to an election was 16. Sixty percent of endorsements occur within three weeks of the election.

Cumulative Effects

Given that endorsements changed voter opinion, the Republican skew in the distribution of endorsements means that the aggregate nationwide effect of newspaper endorsements was, for most years in my sample, to shift voters towards the Republican candidate. To estimate the cumulative effect of endorsements, I use a back-of-the-envelope calculation that uses year-specific estimates of causal effect and a scalar that maps survey respondents' rate of newspaper readership to aggregate circulation numbers.

$$RepSway_t = \iota_t \sum_{n=1}^{N} \beta_t (Circ_{nt} I_{nt}) \tag{1}$$

Where $RepSway_t$ is the net number of respondents who change their intended vote to the Republican candidate in year t. β_t is the point estimate of causal effect for year t. $Circ_{nt}$ is the circulation of newspaper n in year t. I_{nt} is an indicator variable equal to 1 if a newspaper endorsed a Republican, and -1 if it endorsed a Democrat. ι_t is a scalar to reflect that 1) each copy of

the newspaper is read by more than 1 person, and 2) not each reader of a newspaper relies on it for campaign coverage. This means that circulation may be understating or overstating the spread of a newspaper's political coverage. Using ANES survey data, which allows my to estimate what percentage of people rely on newspaper for political coverage (and therefore are part of my population of interest) I calculate ι_t as:

$$\iota_t = \frac{ANES(Readers)_t}{ANES(Sample)_t} / \frac{Circulation_t}{VAP_t} \tag{2}$$

This allows me to scale the readership numbers in my sample to nationwide readership estimates.[6] For example, nationwide newspaper circulation was 58.882 million in 1960, compared to a voting-age population of 110 million. 73.1 percent of ANES respondents in 1960 claimed to read any newspaper for political coverage, therefore: $\iota_{1960} = \frac{73.1}{100} / \frac{58.882}{110} = 1.366$. This means that for every copy of a newspaper that is circulated, 1.366 people read a newspaper for political covereage. This number is plausible. Standard estimates for readers per copy are between 1.75 and 2.5, so 1.366 political readers per copy is possible.[7]

Table 2 shows the calculations using the year-specific estimates of causal effect, and aggregate calculations of sway. Because the control group in the regression discontinuity is voters surveyed immediately before the endorsement, this measure of sway is against the counterfactual of no endorsement at all. Over the 5 elections, I estimate that the net effect of newspaper endorsements on Republican candidates for President was a swing of 21.220 million voters. In each election year, I estimate the newspaper endorsements drove at least 2 million voters toward one candidate or another, and except for 1964, the Republican was the beneficiary. This estimate is a conservative

[6] I rely on Pew research estimates of weekday readership for circulation figures.

[7] I find that in the later years of my sample, ι increases. This is because the decrease in circulation in the 1970s and 1980s is greater than the decrease in the percentage of ANES respondents who say they read the newspaper for election coverage.

one, as I am not constructing these estimates with party-specific causal effects. Because I found Republican endorsements had a larger marginal effect, using party-specific βs would increase my estimate of newspaper sway towards Republicans. Instead, *RepSway* is being driven entirely by the fact that Republican endorsements were more common.

Of course, the extent to which these endorsements affected election outcomes depends on the extent to which endorsements changed actual votes, not intentions to vote. The counterfactual becomes impossibly complex once persuasion decay and 2nd order affects are taken into account. As seen in the two-way fixed effects regressions, I do find a decay in the persuasive effect of endorsements, but the decay is gradual, and many voters likely cast their votes before the effect of the endorsement decayed completely.

Conclusion

A massive body of literature has provided us with a nuanced understanding of how American newspapers shape our views of politics and politicians, but we still know little about the role of newspaper endorsements in the history of U.S. presidential politics. The vast majority of research done on 20th U.S. elections provides correlations between endorsements and readership preferences, but cannot estimate the persuasive effect of endorsements themselves. This gap in research is puzzling, given that the distribution of endorsements is more skewed towards one party than the relative vote shares. Even if endorsements have a small effect in changing readers' preferences over candidates, they disproportionately help one political party.

Using a nationwide sample of newspaper and endorsements and voter surveys, I find that endorsements lead to an immediate change in voter preferences. Despite Republican endorsements being more common, I do not find them to be less effective. Ideological sorting of readers and papers was not very strong during this period, meaning that newspapers were not just "preaching to the choir". The readers of Republican-endorsing newspapers were not already significantly more likely to support the Republican presidential candidate, leaving plenty of room for endorsements

to change minds.

Over the 5 elections covered in my sample, newspaper endorsements caused a net shift of about 21.2 million voters toward Republican candidates. Of the elections covered, the winners in two (1960 and 1976) received fewer endorsements, while in two others (1964 and 1980) the margin of victory was large enough that newspaper endorsements were unlikely to be pivotal. This leaves 1968, where Richard Nixon won a narrow electoral college victory and even narrower popular vote victory. Nixon's 500,000 popular-vote victory was significantly smaller than the 2.14 million voters that I estimate were swayed by newspapers. This represents a 5.4% sway in popular votes. If this same shift occurred in all states, Nixon would have earned 150 fewer electoral votes, with Humphrey earning 150 more. This would have led to a decisive, 341-151, Humphrey electoral college victory.

Appendix

A.1: Timing of Endorsements and Visits

Figure A.1 graphs the timing of newspaper endorsements against presidential visits. If endorsements were timed to coincide with presidential visits, a finding of positive effects of endorsements could instead be due to presidential visits. However, I find no correlation between the timing of the two events. Cities that are visited earlier by a candidate are no more likely to publish an early endorsement. The correlation between the timing of the two events is virtually 0, and even pointing the in wrong direction, with a weak negative correlation between the timing of the two events.

A.2: Regressions Involving Undecided Voters

One mechanism through which endorsements can affect the voting intention of individuals is by changing the likelihood that a person is undecided. Panel A of Table A.1 shows the effect of endorsements on whether a respondent is undecided, and the dependent variable is a binary variable

equal to 1 if the person is undecided and 0 otherwise. The negative coefficients therefore show that endorsements potentially lead to a decrease in undecided voters. I estimate that endorsements decrease the probability that a voter is undecided by between 3 and 12 percentage points. However, the statistical significance of the estimates are not robust to using a 2nd-order polynomial.

While decreasing the probability that a voter is undecided is a plausible way for endorsements to change voter behavior, it is also possible that endorsements simply expedited a change that would have occurred anyway. Perhaps endorsements are simply changing when a person decides to support a specific candidate without changing the identify of who someone will support. If this is the case, then I would expect to lose all statistical significance when I eliminate undecided voters from my sample.

Panel B of Table A.1 shows the point estimates of the persuasive effect of endorsements when I control for whether or not a respondent is undecided. I still find that endorsements increase the probability that a respondent supports the endorsed candidates by between 15.1 and 18 percentage points. The results are all significant at the 10% level, with the estimates obtained using a 1st order polynomial significant at the 5% level. Taken together, the results show that endorsements affect voter behavior by decreasing the likelihood that they are undecided, but I do not find evidence that this decrease in undecided voters is driving all (or even most) of my results, indicating that endorsements are leading to meaningful changes in voter opinion.

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[Insert Figure 1 here]

[Insert Figure 2 here]

[Insert Figure 3 here]

[Insert Figure 4 here]

[Insert Figure 5 here]

[Insert Table 1 here]

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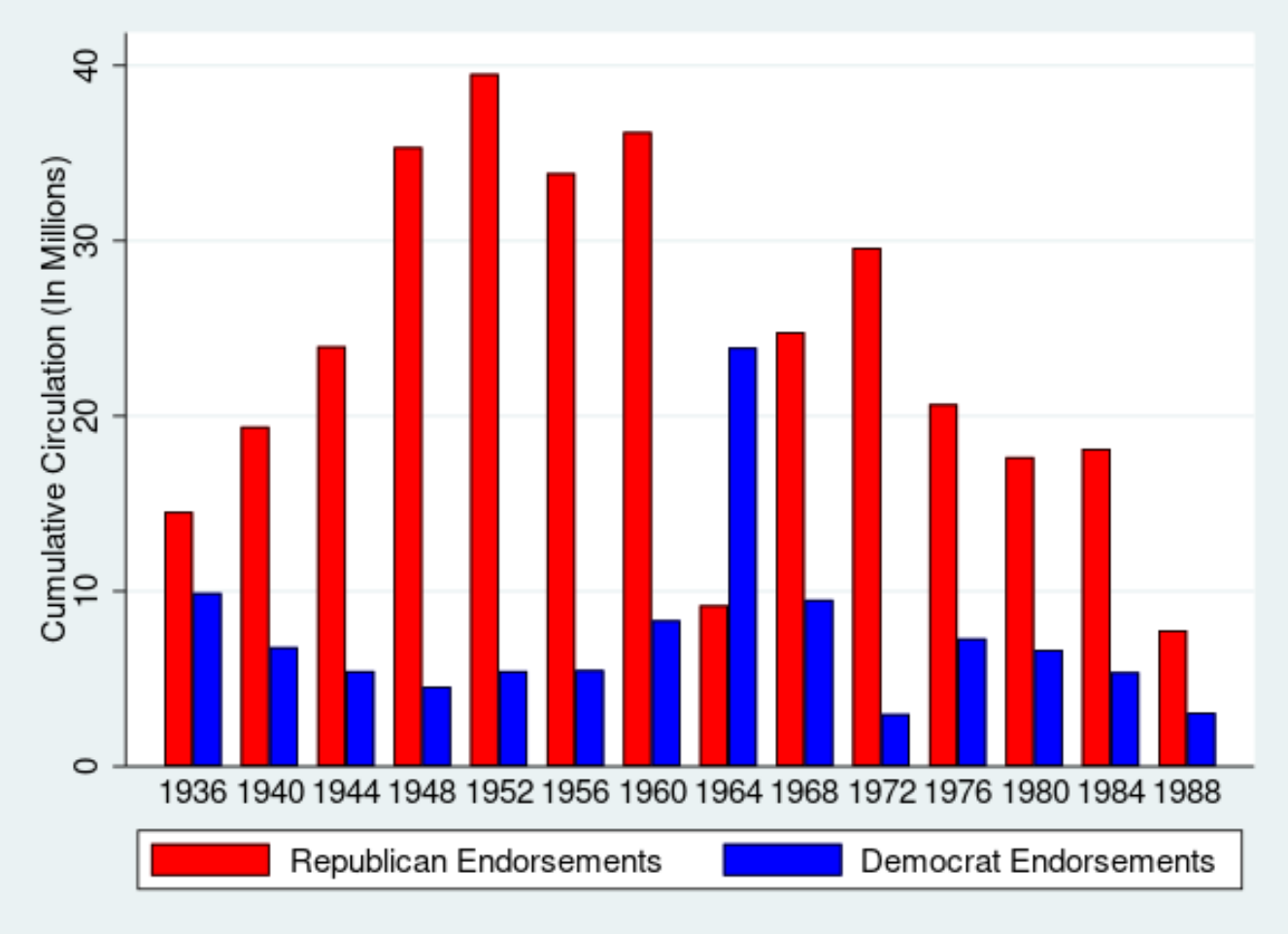
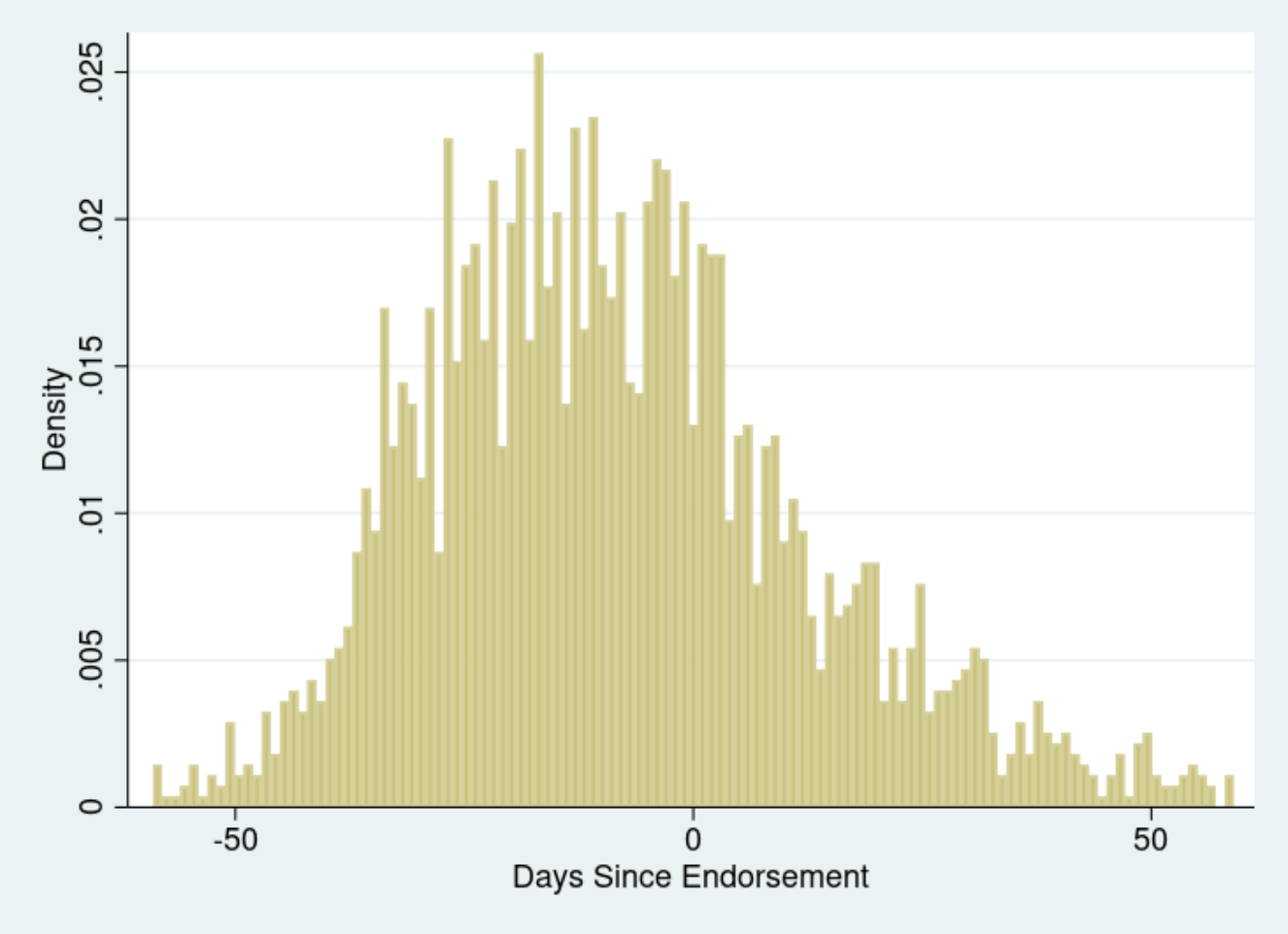
[Insert Table 4 here]

Figure 1: Party Breakdown of Newspaper Endorsements



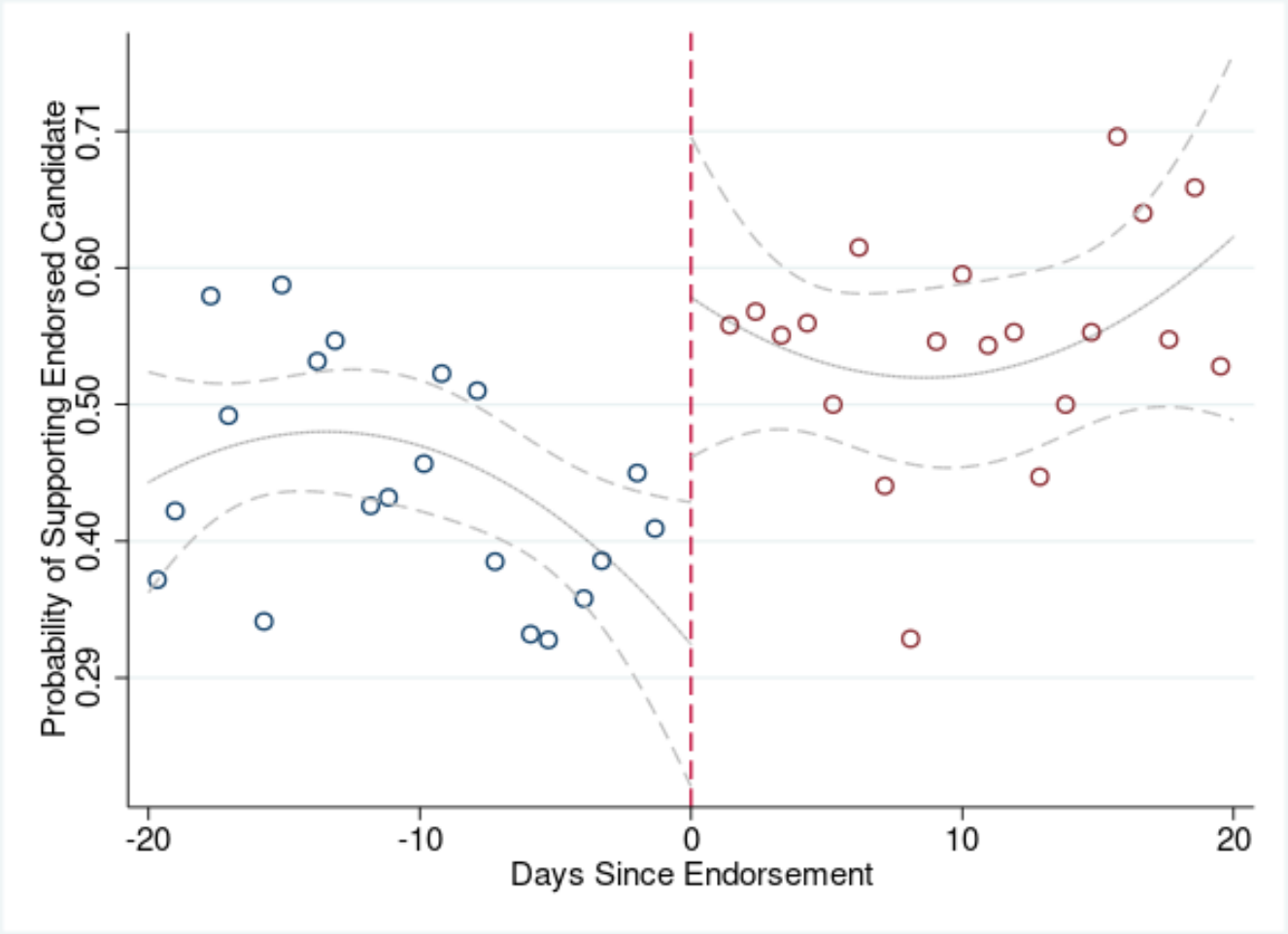
Notes: Figure shows the cumulative circulation of all newspapers in each year that endorsed the Republican and Democratic Presidential candidates. Endorsement and circulation data come from Gentzkow and Sinkinson (2014). The decline in later years is due to 1) A general decline in newspaper circulation, 2) An increase in the likelihood that a newspaper declines to endorse a candidate at all, and 3) an increased likelihood that the data misses an endorsement. Gentzkow and Sinkinson (2014) use reported data from *Editor and Publisher*, which polls newspapers, but is more likely to miss endorsements that occur late in the election cycle. In the 1970's and 1980's, newspapers endorsements occurred later, and therefore are less likely to be accurately counted in the data. Because I collected endorsement data, instead of relying on *Editor and Publisher* data, none of this will affect my results.

Figure 2: Histogram of RD Running Variable



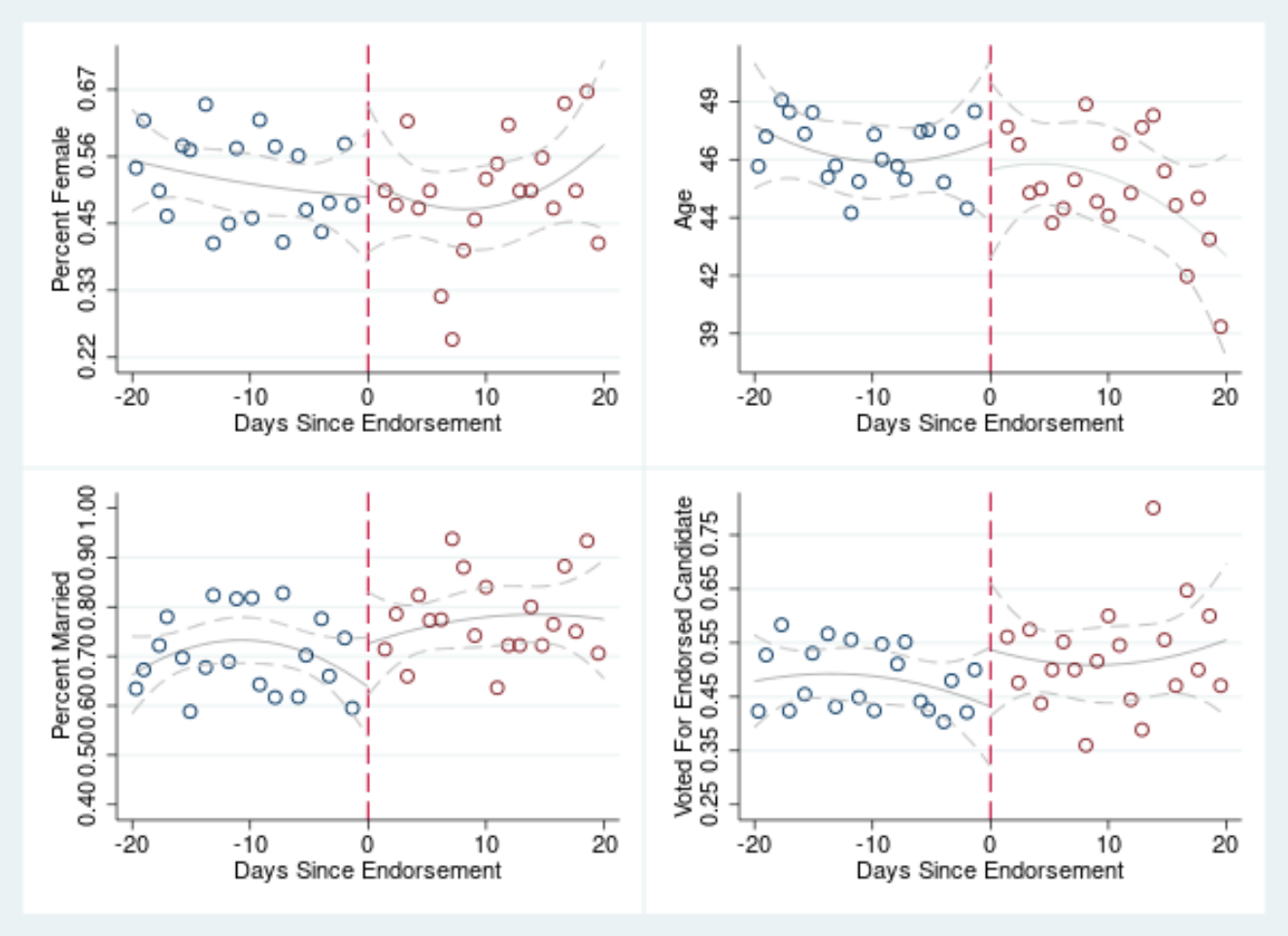
Notes: Figure shows the histogram for the distribution of my running variable, which is the days since an endorsement that a survey occurred.

Figure 3: Regression Discontinuity Results



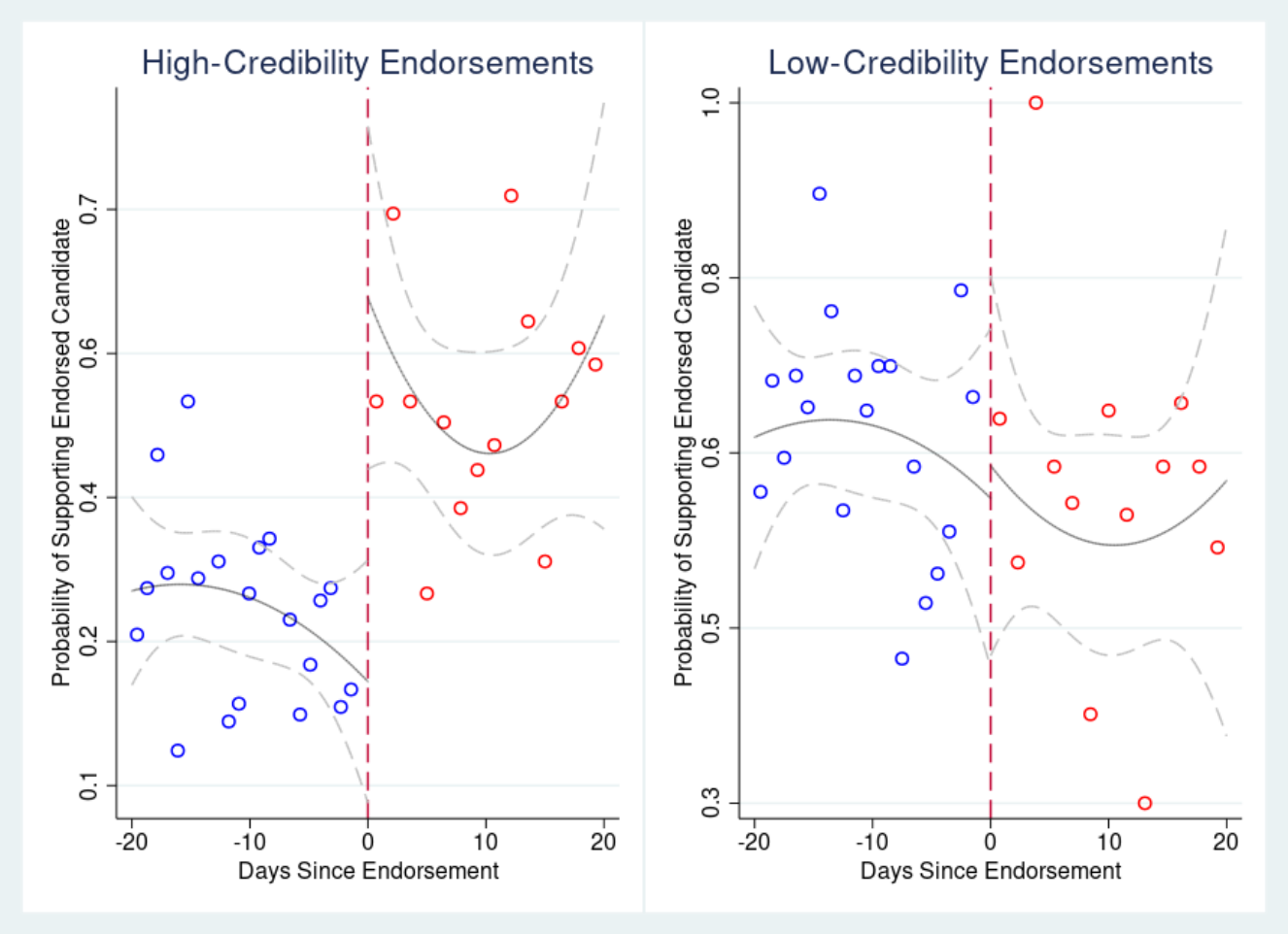
Notes: Figure shows the average value of several respondent characteristics over each value of the running variable, including all days 20 days before and after the endorsement date. Linear best fit lines and 95% confidence intervals, calculated using STATA's cmogram command, are included.

Figure 4: Demographic Characteristics



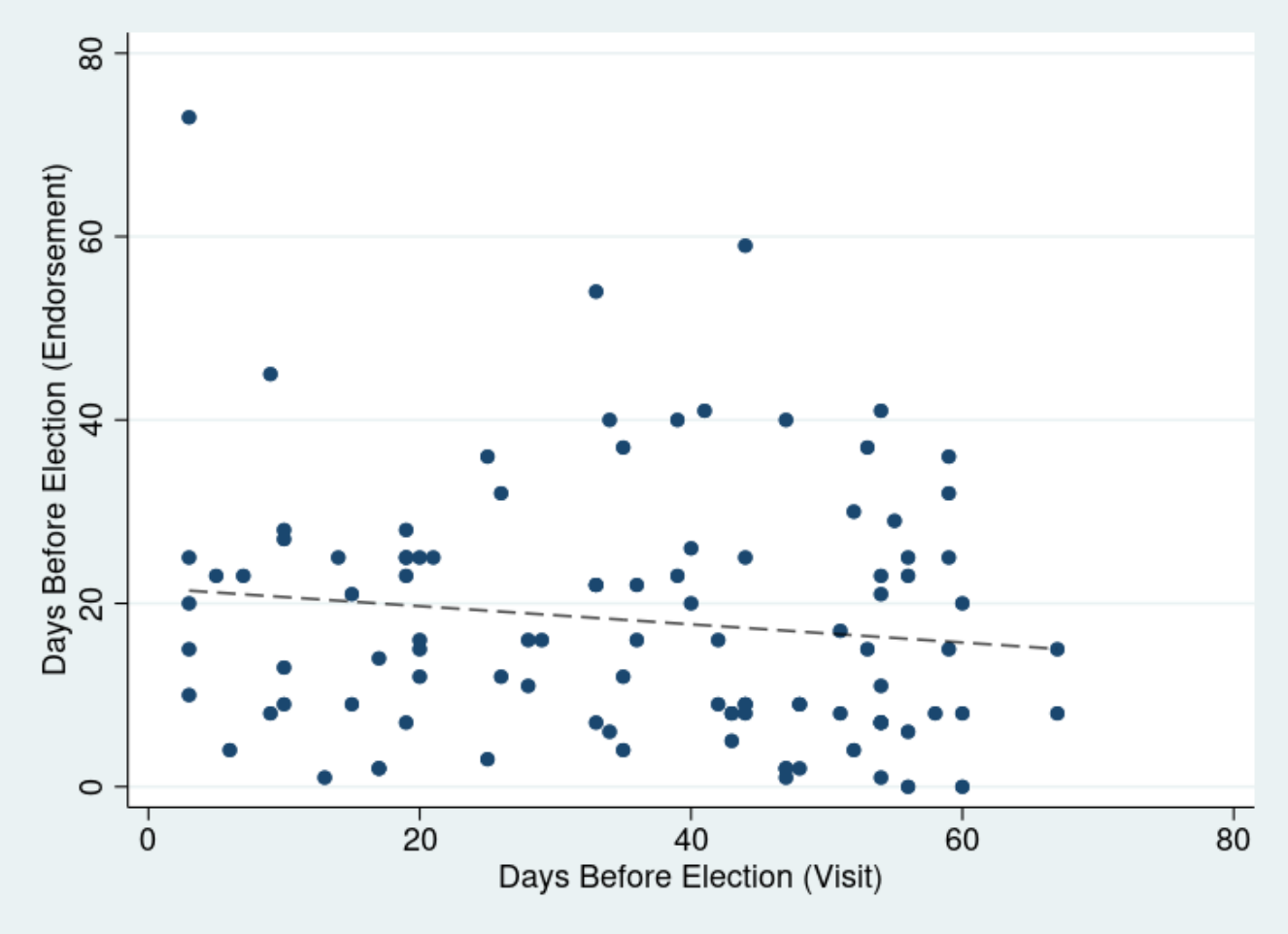
Notes: Figure shows the average of several respondent characteristics for different values of the running variable, including all days 20 days before and after the endorsement date. Linear best fit lines and 95% confidence intervals, calculated using STATA's cmogram command, are included.

Figure 5: Effect of Endorsement Based on Pre-Existing Reader Preferences



Notes: Figure shows the effect of newspaper endorsements when my sample is split based on the pre-endorsement preferences on readers. Following the work of Chiang and Knight (2011), I consider an endorsement to be a "High-Credibility" endorsement if the pre-endorsement probability of its readers to support the endorsed candidate is low (below a median of 44.4)%. "Low-Credibility" endorsements are those where the pre-endorsement odds of readers supporting the endorsed candidate are already high.

Figure 6: Timing of Endorsements and Presidential Visits



Notes: Figure shows the timing of newspaper endorsements relative to the timing of the endorsed candidate's visit to the city. A linear best fit line is shown in red. The timing of a candidate visit is determined by the first time a candidate visited a city. The sample is the that both had a newspaper endorsement included in my sample, and were from the following campaigns, which were the ones for which I could locate complete campaign schedules: 1960 (REP & DEM), 1964 (REP), 1968 (REP), 1976 (DEM), 1980 (REP).

Table 1: Regression Discontinuity Estimates

VARIABLES	(1)	(2)	(3)	(4)
PANEL A: All Endorsements				
Endorsement	0.199***	0.193*	0.187***	0.249***
	(0.069)	(0.099)	(0.069)	(0.092)
Observations	2,322	2,322	2,322	2,322
Bandwidth (Days)	15.18	17.79	12.12	17.25
PANEL B: REP Endorsements				
Endorsement	0.304***	0.340**	0.301***	0.336***
	(0.093)	(0.106)	(0.100)	(0.125)
Observations	1,286	1,286	1,286	1,286
Bandwidth (Days)	13.00	23.30	9.56	15.52
PANEL C: DEM Endorsements				
Endorsement	0.130	0.0733	0.102	0.0267
	(0.089)	(0.15)	(0.10)	(0.16)
Observations	1,036	1,036	1,036	1,036
Bandwidth (Days)	20.12	18.03	12.28	14.45
Kernel	Triangular	Triangular	Uniform	Uniform
Order	Linear	Quadratic	Linear	Quadratic

Notes: Coefficients are from regression discontinuity estimations. The dependent variable is a binary variable equal to 1 if the respondent intends to vote for the candidate endorsed by the newspaper they read for campaign coverage. The forcing variable is the number of days after an endorsement the survey occurs. Observations for surveys that occurred on the same day as an endorsement are dropped, since treatment could not be determined. Each regression includes the following co-variables: age, and binary variables equal to one if the respondent: is married, is female, and is white. Bandwidths are MLE optimal bandwidths. *** p<0.001. ** p<0.05. * p<0.1.

Table 2: Two-Way Fixed Effects Estimates

VARIABLES	(1)	(2)
Endorsement	0.0811***	0.107***
	(0.0255)	(0.0362)
Week 2 X Endorsement	-	-0.0515
		(0.0525)
Week 3 X Endorsement	-	-0.0403
		(0.0598)
Week 4 X Endorsement	-	-0.142**
		(0.0674)
Week 5 X Endorsement	-	0.0175
		(0.0781)
Week 6 X Endorsement	-	0.028
		(0.0893)
Observations	2,294	2,294
R-squared	0.24	0.24

Notes: Coefficients are from two-way fixed effects regressions, with full sets of dummy variables for newspaper and the day (measured as the days until the election). Each regression includes the following co-variables: age, and binary variables equal to one if the respondent: is married, is female, and is white. Dummy variables for weeks up to week 10 are included in the regression, but only the results through week 6 are included here. Weeks 7-10 represent very few respondents, and the coefficients are insignificant and have large standard errors. *** p<0.001. ** p<0.05. * p<0.1.

Table 3: Calculation of Cumulative Effects

	β	ι	RepCirc	DemCirc	*RepSway*
1960	0.184	1.366	36,206,472	8,339,423	+7,004,216
1964	0.212	1.442	9,199,799	23,903,060	-4,494,846
1968	0.104	1.348	24,793,000	9,517,221	+2,141,542
1976	0.331	1.805	29,598,000	7,300,000	+13,322,052
1980	0.171	1.727	17,661,800	6,663,620	+3,246,950
TOTAL					+21,219,914

Notes: Table shows the calculation for the cumulative effect of newspaper endorsements, measured as the net Republican gain of support. *RepSway* estimates the cumulative increase in Republican support in each year of my sample, which is calculated using year-specific estimates of causal effect β, estimated using a regression discontinuity estimation, as well as a scalar ι, which uses survey data to determine how many readers per circulated copy of a newspaper relied on it for political coverage.

Table 4: Regression Discontinuity Estimates, Undecided

VARIABLES	(1)	(2)	(3)	(4)
PANEL A: Effect of Endorsements on Being Undecided				
Endorsement	-0.120**	-0.0354	-0.141***	-0.115
	(0.0414)	(0.0802)	(0.0464)	(0.071)
Observations	2,322	2,322	2,322	2,322
Bandwidth (Days)	16.06	11.32	9.85	13.81
PANEL B: Effect of Endorsements; Undecideds Dropped				
Endorsement	0.151**	0.174*	0.166**	0.180**
	(0.073)	(0.093)	(0.070)	(0.085)
Observations	1,964	1,964	1,964	1,964
Bandwidth (Days)	14.95	21.92	13.64	13.81
Kernel	Triangular	Triangular	Uniform	Uniform
Order	Linear	Quadratic	Linear	Quadratic

Notes: Coefficients are from regression discontinuity estimations. The dependent variable in Panel A is equal to 1 if the respondent is undecided, and 0 otherwise. The outcome variable in Panel B is equal to 1 if the respondent intends to vote for the candidate endorsed by the newspaper they read for campaign coverage. The sample in Panel B is only people who are not undecided, and therefore illustrates the effect of endorsements on switching voters allegiances. The forcing variable is the number of days after an endorsement the survey occurs. Observations for surveys that occurred on the same day as an endorsement are dropped, since treatment could not be determined. Each regression includes the following co-variables: age, and binary variables equal to one if the respondent: is married, is female, and is white. Bandwidths are MLE optimal bandwidths. *** $p<0.001$. ** $p<0.05$. * $p<0.1$.