ESSAYS ABOUT NEWSPAPER POLITICAL ENDORSEMENTS

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My dissertation focuses on empirically investigating two aspects of newspaper endorsements: their influence on elections, and the factors determining these recommendations.

In the first chapter of my dissertation, "Newspaper Political Endorsements and Market Competition," I develop and estimate a simple structural model to identify the factors determining endorsements. I consider an environment where newspapers are characterized by a political orientation and only make well-informed endorsements. I use this framework to investigate the relationship between newspaper endorsements and market competition. The model also predicts how market competition might affect newspapers' partisan behavior, and whether and to what extent competition makes partisan papers endorsement behavior resemble that of non-partisan papers.

In the second chapter of my dissertation, "The Tuesday Advantage of Candidates Endorsed by American Newspapers," I document the electoral advantage of candidates who have a newspaper endorsement published on Election Day in comparison to other endorsed candidates. I provide evidence that this advantage is not driven by a selection effect, suggesting that it is instead explained by readers deciding how to vote based on endorsements read on Election Day. This chapter's results imply both a causal effect of newspaper political endorsements on voting outcomes, and that the endorsement publication date determines the effectiveness of this advice.

BIOGRAPHICAL SKETCH

Fernanda Leite Lopez de Leon was born in Sao Paulo, Brasil. At age 17 she had to decide which career path to follow: theater, journalism, economics or engineering. She always wanted to be a writer, but she was also curious about the economy and social science phenomena. She then decided to study economics. She was an undergraduate and master student at Universidade de Sao Paulo (USP). After that she worked for two years at a private organization (FIESP), but she got really bored and decided to pursue a PhD abroad. She came to Cornell and developed an (unexpected) interest for political economy. Her dissertation focused on understanding the political behavior of American newspapers and their influence on election outcomes. Fernanda conducted her doctoral research under the guidance of Drs. Jeffrey Prince, Stephen Coate and Benjamin Ho.

To my parents, my sister and to Stewart Little Coop

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CHAPTER 1

NEWSPAPER POLITICAL ENDORSEMENTS AND MARKET COMPETITION

1.1 Introduction

The newspaper industry has an important societal role: it collects information and reports to readers. However, the accuracy and fairness of its news are not always verifiable. Papers facing competition are expected to be higher quality, more diverse, fairer, and more responsive than monopolistic newspapers (Federal Communications Commission 2003, Bagdikian 1992, Entman 1985).

Motivated by this idea and by the decline of newspapers' circulation,[1] the Newspaper Preservation Act was signed in 1970. It authorized the formation of Joint Operating Agreements (JOA) among competing newspapers operating within the same market area.[2] JOA allowed newspapers to combine business operations (advertising and circulation), but they were required to maintain separate – and competitive – news operations and editorial sections. The goal was to preserve competition, aiding the survival of multiple daily newspapers in a given market (Busterna and Piccard 1993). Despite this public effort, there is little empirical evidence of whether or how newspapers' speech responds to competition.[3] This study takes a step toward answering this, investigating the association between market competition and newspaper political endorse-

[1] Between 1923 and 1980, the number of counties with more than two competing newspapers fell by half - from 45% of counties with at least one newspaper to about 21% (Genesove 1999).

[2] Many such agreements were formed: *The Detroit News* joined with *The Detroit Free Press*, *The Cincinnati Enquirer* joined with *The Cincinnati Post*, *Denver Post* joined with *Rocky Mountain News*, and others.

[3] Other papers that also investigate this relationship are Lacy and Davenport (1994), Entman (1985).

ments.

It focuses on these recommendations because they circumvent measurement challenges. First, endorsements are an objective measure of newspaper political opinion, since they represent a clear stand favoring a candidate.[4] Second, during elections newspapers face an identical opportunity of taking a stand. Therefore, their choice set is observable (as opposed to news that are determined by a random occurrence of events and are unobservable to readers until reported). Measuring the correlation between competition and newspaper speech is also challenging. Newspapers face a different set of competitors in different geographical areas, while news are supposed to reach all newspaper readers. Political endorsements are tailored messages for a subset of readers: those who live in a particular district. This feature allows one to test whether the level of competition a newspaper faces in a electoral district correlates with its behavior. It also allows one to control for readership characteristics, such as demographics and political leanings, that might determine both endorsements and market structure.

By design, there is a "separation wall" between the editorial and news section. However, many studies show that editorial page opinions infiltrate news pages (Puglisi and Snyder 2008, Larcinese, Puglisi and Snyder 2007, Druckman and Parkin 2005, Kahn and Kenney 2002). For these reasons, political endorsements qualify as a good object of study to uncover the relationship between competition and newspaper' speech. In addition, the literature provides evidence that newspaper endorsements affect voter perception of candidates and

[4]Other measures of political opinion used in the political science and communication literature to identify media speech and political favoritism are space (soundbites) and tone given to a candidate. See D'Allesio and Allen (2000), Lowry and Schidler (1995), Danton, Beck and Huckfeldt (1998), Kahn and Kenney (2002) and Druckman and Parkin (2005).

influence elections (Ladd and Lenz 2009, Leon 2009, Knight and Chiang 2008).

This chapter addresses the following question: how does market competition correlate with newspapers' likelihood of making endorsements or their choice of which candidate to endorse? To answer this, I collect a new dataset on demographics and market structure characteristics at the county level. I propose a simple data transformation to identify these characteristics at the newspaper-district level. The variation in the data (across newspapers within a district and within a newspaper across districts) allows me to hold constant politicians' behavior, readership and newspapers' intrinsic characteristics that are correlated both with endorsement behavior and market structure. I then ask: (i) whether a newspaper changes its endorsement practice when it faces a different market structure; (ii) whether newspapers that self-select into competitive market structures have a different endorsement behavior than those newspapers that do not.

To identify the relationship between endorsement practice and market competition, I first show the results of a probit model that explains: (i) probability of an endorsement, and, (ii) probability of an endorsement to a candidate. The key explanatory variable is the particular market structure a newspaper faces in a district - monopolistic, duopolistic or competitive. Next, I present a simple structural model of newspaper endorsements. I consider an environment where newspapers are characterized by a political orientation – left-, neutral or right-wing– and only make well-informed endorsements. The goal of this model is to quantify media-bias and perform counterfactuals to predict how market competition might affect newspapers' partisan behavior.

This work relates closely to the literature that studies the determinants of

newspaper endorsements. To the best of my knowledge, this is the first study that investigate newspapers' choice of whether to make an endorsement and whether readership and market structure characteristics correlate with this decision. Previous studies only focused on understanding the determinants of newspaper choice between Republicans and Democrats (Puglisi and Snyder 2008, Knight and Chiang 2008, Kim 2008, Larcinese, Puglisi and Snyder 2007, Ansolabehere, Lessem, and Snyder 2006).

Part of the literature has explored newspaper endorsements to show that newspapers display partisan behavior in their news reporting (Puglisi and Snyder 2008, Larcinese, Puglisi and Snyder 2007, Druckman and Parkin 2005, Kahn and Kenney 2002). This study contributes to the literature on newspapers' political behavior, by testing whether newspapers' political orientation affects their endorsements. The proposed framework allows me to quantify whether and to what extent competition affects media bias. The closest study to this is Kim (2008). She investigates newspaper endorsements in presidential elections and finds evidence that competitive newspapers are more attentive to readers' candidate preferences than monopolistic newspapers.

This chapter's findings suggest that market competition affects newspapers' endorsement practice. It operates mainly by restraining newspapers from making endorsements. This result is observed on both raw correlations and probit regressions controlling for newspaper- and electoral race-fixed effects.

Turning to the remaining results, the estimates for the structural coefficients are consistent with the view of newspapers as politically biased: they take their political preferences into consideration when choosing their endorsements and are more likely to be partisan than non-partisan. The counterfactual exercise

shows that competition makes the endorsement practices of partisan newspapers converge to those of non-partisan papers, but only slightly.

This chapter proceeds in six sections. Section 1.2 describes endorsement practices and discusses why and how endorsements might be correlated with market competition. Section 1.3 explains the data and the constructed measures of readership and market structure at the newspaper-district level. Section 1.4 presents the results of a probit model. Section 1.5 describes a simple structural model of endorsement, and presents its results. Section 1.6 concludes.

1.2 Political Endorsements

1.2.1 Some Background

Political endorsement are located in the editorial or opinion-editorial (Op-Ed) section of the newspaper. The editorial section is the institutional opinion of the newspaper, representing its voice for endorsing candidates, taking a stance on issues, criticizing official decisions and commenting on events. The editorial board decides the newspaper endorsements. It consists of the editorial page editor, the editorial cartoonist and other writers, and is officially subordinate to the publisher.

The endorsement process starts with newspapers first deciding which races to investigate. Then, they contact politicians and invite them to come for an interview (Meltzer 2007, Post Crescent 2006, Lincoln Journal Star 2002). Endorsements are decided after the editorial board collects and takes into considera-

tion various pieces of candidate information: campaign material, news stories, personal interviews, educational background, experience in politics, and civic involvement. Newspapers describe political recommendations as driven by a feeling of obligation to educate and provide guidance to their readers.[5]

1.2.2 Endorsements and Market Competition

There are several reasons why a relationship between market competition and endorsements is expected. Overall, market competition might influence newspapers' characteristics and politicians' behavior. These, intern, might affect newspapers' endorsement practices. I will describe three main mechanisms.

First, market structure might affect newspapers' political orientation (Gentzkow and Shapiro 2010, Chiang 2008, Mullainathan and Shleifer 2004) or their degree of partisanship. Newspapers' political orientations probably determine their evaluation of candidates and their likelihood of making endorsements.

Second, despite (or in addition to) their political views, profit-motivated newspapers might react to competition. This is expected as endorsements are decided in part by the publisher, who is the business executive of the paper.[6]

[5] "Most voters go to polls having never met the candidates and knowing little about many of them. Having spent hours looking into candidates or issues, most editorial page editors know many readers appreciate having their insights. It seems logical that a trusted newspaper, especially one with which the voter frequently agrees philosophically, can be called upon for election insights, in much the same way a decision about whether to see a movie may depend on whether the newspaper's film critic recommends it" (Florida Times-Union 2006)

[6] This position is occupied by a career executive with vast knowledge of the newspaper market. For example, the New York Times publisher—Arthur Sulzberger, Jr—joined The Times in 1978 as a correspondent and since then has worked in a variety of business departments, such as production and corporate planning. He also worked as assistant publisher and deputy pub-

He/she might make strategic choices depending on the level of competition faced in a market (Black 1982).

How market forces affect newspapers' willingness to make endorsements is ambiguous. On one hand, endorsements represent (possibly useful) information readers look for during elections. It is presumably costly to gather political information and newspapers have a limited amount of resources to allocate to this end. They might allocate those in areas where they face more competition, as a way to further differentiate themselves, as opposed to areas where they are monopolists.

On the other hand, newspapers are bound to disagree with some of their readers, when making endorsements. This is one reason that prevents newspapers from making endorsements (San Francisco Chronicle, 2002). Under competition, this fear might be exacerbated, inhibiting newspapers from taking political sides.

Newspapers' choice of whom to endorse might also be affected by competition. Under competition, newspapers might become more likely to make safer endorsements. They may feel inclined to sway their endorsements to the incumbent as a way to gain credibility with readers, by having their name associated with the (likely) winner, instead of with the (likely) defeated candidate.[7]

Third, politicians' behavior might be correlated with market competition. Stromberg and Snyder (2008) provide evidence that incumbents attend to their

lisher, overseeing the news and business departments, before becoming publisher of The New York Times in 1992.

[7]The idea of newspapers competing for readers via their political endorsements departs from other arguments explored in the literature. For example, Mullainathan and Shleifer (2004) developed a model where, in equilibrium, readers read newspapers that more closely reflect their own political inclinations. Therefore, "in this world," there is no reason for newspapers to be affected by the threat of competition.

constituencies' needs better in areas with higher newspaper coverage.[8] Market structure might be correlated with media exposure. For example, citizens that live in competitive markets might have characteristics –like being more educated or politically informed– that makes them more prone to read newspapers. In this case, incumbent "quality" might respond to market structure, making newspapers more likely to make endorsements.

This chapter mainly seeks to identify the correlation between market competition and endorsement practice. It will make a small attempt at understanding some mechanisms by which competition correlates with newspapers' endorsements. By examining whether a given newspaper varies its endorsements according to the competition level faced in different districts, I will try to distinguish between two possibilities. The first one is that competition correlates with endorsement behavior because it determines newspapers' intrinsic characteristics (such as their political position). The second is that market competition makes newspapers endorse strategically due to competition with other newspapers.

1.3 Data

This study explains the political endorsement choices of ninety American daily newspapers in electoral races for the U.S. Senate, the U.S. House of Representatives, State Governor, Secretary of State, state Attorney General and the state Senate in 2002 and 2006. In total, 154 electoral races are considered. For each

[8]They find that politicians who are less covered by the local press are less likely to stand witness before congressional hearings and to serve on constituency-oriented committees. Also, federal spending is lower in areas where there is less press coverage of the local members of Congress.

newspaper, endorsement choices are observed in up to twenty-five political races. The chosen newspapers are in seven states—California, Florida, Michigan, Ohio, Oregon, Texas, and Wisconsin—comprised of 658 counties. Endorsements were collected from Lexis, Newsbank databases and newspapers' websites. Newspapers and electoral races considered are listed in Appendix.[9]

The remaining data are candidate and newspaper characteristics, cross sections of readership demographics and political leanings, and measures of newspaper reader share and market competition in an electoral district. Candidate characteristics were collected from the Election Divisions of the Secretaries of State. The construction and sources of market structure measures and readership characteristics are explained in Sections 1.3.1 and 1.3.2, after the aggregate endorsement patterns are presented.

Different endorsement patterns are observed across districts with different market structures. Newspapers are significantly more likely to make endorsements in monopolistic than in duopolistic or competitive districts. In addition, newspapers are more likely to endorse incumbent candidates in competitive districts than in duopolistic districts.

In the remainder of Section 1.3, I explain how I constructed a measure of market competition and readership characteristics at the newspaper-district level. Some readers not interested in this might prefer to move to Section 1.4, where regression results are reported.

[9]The sample of newspapers was selected from papers that report to the Audit Bureau of Circulations (ABC). Of this group, only newspapers that made at least one political endorsement during any election were selected (the ones identified as having an endorsement practice).

1.3.1 Market Definition

In order to investigate the relationship between endorsements and competition, I identified the level of competition faced by a newspaper in a electoral district.[10] In order to construct this measure, I first classified counties as monopolistic, duopolistic or competitive, following the methodology utilized in Borenstein and Rose (1994). A county was classified as having a monopolistic structure if a single newspaper has more than 90% of total circulation in the market. A county was classified as having a duopolistic structure if any two newspapers account for more than 90% of total circulation. A county was classified as having a competitive structure if it was not classified as having a monopolistic or a duopolistic structure. To construct these classes, I used information about newspaper county circulation, available from The Audit Bureau of Circulation (ABC).[11]

Table 1.1 shows that on average, there are three newspapers operating per county. The main newspaper market share is, on average, 76.6%. Most counties have a duopolistic (39.1%), followed by a monopolistic (34.8%) and a competitive (26.1%) structure. As the degree of competition in a county increases, the larger the number of newspapers and the lower the main newspaper's market share.

[10] Alternative measures of competition in the newspaper market are used in the literature. For example, Chiang (2007) classified newspapers as monopolist or duopolist according to The Editor and Publisher International Year Book classification, which lists multiple-newspaper cities.

[11] For all 658 counties considered, I identified all the operating newspapers and their participation at that level based on 2005 circulation data. For the seven states in this study, the newspaper market is composed of two hundred and thirty-one newspapers. Larger newspapers are over-represented in this sample, and it represents 20.4% of total newspapers in the seven states.

Table 1.1: County market structure - newspaper market

	Mean	Median	Std Dev	Min	Max	counties
Main newspaper's market share	76.6	83	22.3	22.1	100	658
Number of newspapers	3.0	3	1.7	1	9	658
Monopolistic (34.8%)						
Main newspaper's market share	97.7	99.9	3.1	90	100	229
Number of newspapers	2	2	1.4	1	9	229
Duopolistic (39.1%)						
Main newspaper's market share	75.1	78.7	12.3	47.8	89.9	257
Number of newspapers	3.1	3	1.2	2	8	257
Competitive (26.1%)						
Main newspaper's market share	55.6	54.6	20.5	22.1	89.9	172
Number of newspapers	4.5	4	1.9	3	9	172

1.3.2 Readership Characteristics

This study identifies the correlation between competition and endorsement behavior through cross-sectional comparisons. In order to help to isolate the effect of competition on newspaper behavior, I consider demographics, political leanings and a measure that conveys a readership's degree of homogeneity.

Demographic characteristics—education, race, gender— and total population, income and level of urbanization were collected from the Census Bureau. To identify counties political leanings, I used the two-party vote share to John Kerry in the 2004 presidential elections, collected from the Election Divisions of the Secretaries of State. In addition, I created two variables to capture the overall and political heterogeneity of readers.[12]

The first is an index of political homogeneity. This is the absolute distance between the 2004 presidential vote-share to John Kerry, and 0.5, which represents a bipartisan county. It is a measure of how the politically homogeneity of

[12]The composition of newspaper readership is not observable at the county level. In this study, I assume that county population is representative of the readership at this level.

district's readership.[13]

The second is a measure of county overall homogeneity conveying demographic and political characteristics. It is constructed based on three variables: maximum fraction of whites, blacks and Hispanics (a), fraction of males (b) and the constructed index of political homogeneity (g). The measure of readership overall homogeneity, $Homog$, is defined as:

$$Homog = (a^2) + (b^2) + (g^2).^{14}$$

Endorsement choices are observed at the district level. Since newspaper readership characteristics and market competition are only available at the county level, I aggregated county characteristics at the district level.

1.3.3 Aggregation at the Newspaper-District Level

The races considered in this study are the ones for which the county is a subset of an electoral district.[15] When explaining endorsement choices in gubernatorial races, I aggregated county level characteristics at the state level. When explaining endorsement choices in the U.S. House of Representatives, I aggregated characteristics at the specific congressional district level.

[13]For example, if John Kerry received one hundred percent of the votes (or zero percent of the votes) in a county, this measure would be equal to 0.5. If he received half of the votes, this measure would be equal to zero. Within this index metric, heterogeneous counties must be closer to zero and more homogeneous counties must be closer to 0.5.

[14]To illustrate this variable, suppose the county is homogeneous: the whole population is composed of white males that voted for George Bush in the 2004 presidential election. In this case, the value of this variable is 3. Opposed to this, assuming the county is heterogeneous – one third of the county is black, white or hispanic, half of the county is male and half of it voted for Gerge Bush in the 2004 presidential election – the value of this variable will be 0.59.

[15]A map with an example is available in Appendix.

The aggregation of county characteristics at the district level is a simple (weighted) average of county characteristics across counties in a district. The weights are newspaper specific. They are the ratio between a newspaper's reader share at the county level[16] and its total reader share at the district level.[17] They were constructed in the following way: a newspaper *j*circulates in a district *d*, composed of *m*counties indexed by *u*. Using the information about newspaper county circulation, I calculated the newspaper county reader share (RC_{ju}),district reader share (RD_{jd})and $Weights_{jd}$as described below:

$$RD_{jd} = \sum_{u=1}^{m} RC_{ju}$$

$$Weight_{ju} = \frac{RC_{ju}}{RD_{jd}}$$

Next, I constructed newspaper-district characteristics (X_{jd})as described below, using county characteristics (X_u)and $Weights$.

$$X_{jd} = \sum_{u=1}^{m} (Weight_{ju}) X_u$$

Table 1.2 illustrates the aggregation with an example. Congressional District 2 in Michigan is composed of three counties: Berrien, Ionia and Kent. They have different population sizes (162,453; 61,518 and 574,335, respectively). Table 1.2 describes three papers that operate in this congressional district: *The Grand Rapid Press*, *The Detroit News* and *The Daily News*. These papers have different reader shares in Berrien, Ionia and Kent.[18] In constructing the weights and

[16]Newspaper county reader share is the percentage of newspapers' readers that live in a county.

[17]Newspaper district reader share is the percentage of newspapers' readers that live in a district.

[18]For example, 61.5% of *The Grand Rapid Press* readership is in Kent. 13.25% of *The Daily News* readership is in Ionia.

Table 1.2: Aggregation within congressional district 2 - Michigan

RC				
	Grand Rapid Press	Detroit News	Daily News	X
Berrien	0.0000	0.0011	0.0000	162,453
Ionia	0.0239	0.0010	0.1325	61,518
Kent	0.6150	0.0052	0.0079	574,335
RD	0.6389	0.0073	0.1404	
Weights				
	Grand Rapid Press	Detroit News	Daily News	X_{jd}
Berrien	0.0000	0.1507	0.0000	555,152
Ionia	0.0374	0.1370	0.9437	442,022
Kent	0.9626	0.7123	0.0563	90,373

aggregating county characteristic, X_u(population in this case), one can identify variation in readership size across newspapers for Congressional District 2. In this example, they are: 555,152, 442,022 and 90,373, for *The Grand Rapid Press*, *The Detroit News* and *The Daily News,* respectively. This aggregation was performed for all characteristics (readership and market structure), for all newspapers, in every district, for every district where a newspaper circulates. In this fashion, I created newspaper-district-markets (three in this example).

Note that this simple aggregation rule generates (helpful) variation that come from two facts: (i) for the considered races, a district is composed of several heterogeneous counties; (ii) different newspapers have different reader share in the counties that make up a district. This allows me to identify variation in characteristics across newspapers within a district. Since several endorsements by a single newspaper are observed and different districts are composed of different counties, this aggregation also allows me to observe variation in characteristics within newspapers across districts.

The construction of characteristics at the newspaper-district level was performed only for cases where a newspaper circulates in a district (since county

Table 1.3: Characteristics by market type - mean values

	Monopolistic	Duopolistic	Competitive
Age	36.24	36.46	36.56
Male	49.14	49.23	49.56
White (%)	75.54	73.65	74,60
Black (%)	10.08	7.76	5.67
Hispanic (%)	9.58	12.88	13.59
Two party vote share to Kerry (%)	48.16	46.90	50.32
Political Homogeneity Index	9.22	8.48	8.28
Overall Homogeneity Index	0.85	0.83	0.87
Population	447,400	509,801	1,034,241
Urban (%)	72.24	74.08	69.48
At least some college (%)	82.52	80.94	80.66
Newspaper reader share (%)	73.11	70.43	52.52
Number of newspaper-district-markets	258	308	259

circulation is needed to construct the weights). All total, 825 newspaper-district-markets were generated.

Table 1.3 shows summary statistics of demographics and political inclinations of newspaper readership at the newspaper-district level, for different market structure. Monopolistic districts are more likely to be located in non-urban areas; readers there are more likely to be politically and racially homogenous and less likely to be black. In duopolistic districts, readers are more likely to be heterogeneous. Competitive districts are characterized by areas with larger population. Readers in these districts are more likely to be Democratically-oriented and males. Newspapers have a smaller share of readers in competitive districts than in duopolistic or competitive districts.

1.4 Probit Results

This section reports the results of probit regressions explaining newspapers endorsement behavior. I first explain newspapers' probability of making an endorsement. The empirical specification is expressed by (1).

$$y_{jrt} = \alpha + \gamma COMP_{jr} + \alpha DUOP_{jr} + \beta_j z_j + \beta_r v_r + \theta_j + \theta_r + \theta_t + \varepsilon_{jrt} \qquad (1)$$

The dependent variable is a dummy of value one if a newspaper j made an endorsement in race r in year t, and zero otherwise. The coefficients of interest are γ and α, representing the correlation between circulating in a specific market structure (competitive or duopolistic, respectively) and newspaper's likelihood of making an endorsement. The excluded (and baseline) category is the monopolistic structure. Other characteristics, possibly correlated with the newspapers' probability of making an endorsement, are controlled for. These are z_j, representing newspaper readership (demographics and of political views) and other newspaper characteristics. Electoral race characteristics are represented by v_r. Newspaper-, electoral race- and year-fixed effects are represented by θ_j, θ_r, θ_t, and ε_{jrt} represents a stochastic error term. Robust standard errors are clustered at the level of the 154 races.

The results are described in Table 1.4. The estimated coefficients, presented in Column 1, reflect the correlations observed in Figure 1. Newspapers are more likely to make endorsements in monopolistic than in duopolistic or competitive districts. This correlation is robust to the inclusion of readership and newspaper characteristics (Column 2).

Table 1.4: Probability of an endorsement - marginal effects

	(1)	(2)	(3)	(4)	(5)
Competitive	-0.116**	-0.115**	-0.064**	-0.047*	-0.084**
	(0.029)	(0.030)	(0.033)	(0.027)	(0.045)
Duopolistic	-0.057**	-0.086**	-0.080**	0.018	-0.0347
	(0.025)	(0.027)	(0.036)	(0.026)	(0.043)
Readership, newspaper and Electoral race characteristics	n	y	y	y	n
Year- and Electoral race-fixed effects (r=154)	n	n	y	n	y
Year- and Newspaper-fixed effects (j=90)	n	n	n	y	y
R^2	0.4179	0.4955	0.5240	0.5175	0.6307
Number of observations	1692	1692	1692	1692	1692

Notes: 1) Standard Errors are reported in parenthesis. 2) Competitive (Duopolistic) refers to a dummy indicating whether the newspaper circulates in the district interacted with the proportion of the district in which a newspaper operates in a competitive (duopolistic) structure. 3) Readership controls include gender, income, education, population, urban, two party vote share to John Kerry, ideology index, race (black, white and Hispanic), and a dummy indicating whether a newspaper circulates in the district. Newspaper controls include a dummy indicating whether the newspaper is among the top100 largest papers in the US. Electoral race controls include a dummy indicating whether the race is statewide, a dummy indicating whether it is a close race (whether the winning candidate received at most 55% of total vote-share), a dummy indicating whether the incumbent is not running for re-election in the race and a dummy indicating whether the race took place in 2002. 4) **Significant at the 5% level.

Column 3 shows the results controlling for electoral race-fixed effects. This specification is convenient for separating the effect of competition on endorsements from politician's behavior. Under this specification, the estimate of γ changes. This reveals that newspapers are inherently less likely to endorse politicians that run in races with higher level of market competition. One explanation for this is that newspapers are driven to make endorsements in supposedly "interesting" races. As discussed before, incumbents in a competitive structure might be "better politicians" than other incumbents. They might attract less qualified challengers. In these races, readers face less uncertainty

about who is the more qualified candidate.

Column 4 shows the results controlling for newspaper-fixed effects. This specification is useful to understand whether newspapers respond to competition across districts, allocating their resources accordingly. The estimate results suggest that newspapers prioritize to provide political opinion in areas where they face *less* competition.

The size of γ diminishes when newspaper-fixed effects are included. In addition, under this specification, the coefficient associated with duopolistic districts is no longer significant. These results combined show that newspapers that self-select in duopolistic or competitive markets are inherently less likely to make endorsements.

Next, I estimate newspapers' probability of endorsing Democrats. Endorsement observations were restricted to cases where a newspaper made an endorsement (either to a Democrat or to a Republican). The goal is to understand whether market competition is associated with a convergence or divergence of endorsements. I will test this, investigating a particular case. I will look whether incumbents are more likely to be endorsed when newspapers face more competition, following the specification expressed by (2):

$$y_{jrt} = \alpha + \beta^{*} Incumbent_{rt} + \delta COMP^{*}_{jr} Incumbent_{rt} + \theta DUOP^{*}_{jr} Incumbent_{rt} + \theta_j + \theta_r + \varepsilon_{jct} \quad (2)$$

The dependent variable is a dummy of value one in case a newspaper endorsed a Democrat in a race r, in year t, and zero if it endorsed a Republican. The variables of interest to understand whether market competition correlates with newspapers' choices of whom to endorse are δ and θ.

Table 1.5 describes the results. The estimate of β shows that newspapers are more likely to endorse incumbents than other candidates. This result is robust to all specifications. The coefficients reported in Column 1 reflect raw correlations. They show that newspapers facing competitive rather than duopolistic or monopolistic environments, are more likely to endorse incumbents. Controling for readership, race and newspaper characteristics, the coefficient δ is only significant at the 12% level. Column 3 shows the results controlling for electoral race-fixed effects. Since this specification estimate the likelihood of an endorsement within a race, it controls for candidates' characteristics (other than being Democrat and Incumbent). Presumably, these are an important determinants of endorsements. As expected, I cannot reject the joint test that the district fixed effects are zero (F-test =2.37).

Under this specification, the estimate of δ is no longer significant, but its size remains almost the same. It is important to keep in mind that due to the small number of observations (440) and large number of controls (154 race dummies), this regression does not have enough power to detect an effect of competition on newspapers' choice of whom to endorse. However, the stability of this coefficient is suggestive of an association. Newspapers might be more likely to endorse incumbents under competition regardless of candidate' characteristics.

Column 4 shows the results controlling for newspaper-fixed effects. This specification controls for newspapers' intrinsic (and varied) endorsement rules. I cannot reject the joint test that the newspaper-fixed effects are zero (F=1.943). The signs of the coefficients δ and θ change and they are no longer statistically significant. The difference in coefficient size and sign under these different specifications (with the inclusion of electoral district-fixed effect versus newspaper

fixed effect) is suggestive of the mechanism by which competition might affect newspapers' endorsements. Newspapers might be more likely to endorse incumbents because of their intrinsic characteristics (like their political position) determined by a more competitive market structure. However, a given newspaper does not become more likely to endorse the incumbent (and make a safer endorsement) due to the threat of competition in a district.

The results described in Table 1.4 and 1.5 suggest that market competition affects newspapers mainly by preventing them from making endorsements. At least two mechanisms explain this finding. Newspapers that self-select into competitive markets are inherently less likely to make endorsements. Also, newspapers react to market competition strategically, becoming less likely to endorse candidates. One explanation for this result is that newspapers might raise their standards for making endorsements when they face more competition. They might prefer to be associated with "better politicians" in these markets.

An important aspect of newspaper behavior not addressed in the probit regressions is their partisanship. Most reader perceive newspapers as politically-biased (Pew 2005). Newspapers vary in the frequency with which they endorse candidates of a single party (Larcinese, Puglisi and Snyder 2007). This is possibly explained by difference in newspapers' political views and therefore on their evaluation of candidates. Common wisdom suggest that market competition can minimize media-bias and make partisan newspapers behave as non-partisan ones. In order to quantify media bias and to predict the extent to which market competition can affect newspapers' partisan behavior, I propose and estimate a simple structural model. It addresses this issue and takes into consider-

Table 1.5: Probability of an endorsement to a Democrat - marginal effects

	(1)	(2)	(3)	(4)
Incumbent	0.181**	0.196**	0.543**	0.289**
	(0.071)	(0.773)	(0.216)	(0.134)
Incumbent*Competitive	0.156*	0.153	0.177	-0.011
	(0.091)	(0.102)	(0.327)	(0.150)
Incumbent*Duopolistic	0.039	0.003	-0.012	-0.064
	(0.095)	(0.104)	(0.327)	(0.146)
Readership, newspaper and				
Electoral race characteristics	n	y	n	n
Year- and Electoral Race fixed-effects (r=154)	n	n	y	n
Year- and Newspaper fixed-effects (j=90)	n	n	n	y
R^2	0.0496	0.1271	0.3104	0.2322
Number of observations	483	224	224	440

Notes: 1) Standard Errors are reported in parenthesis.
2) Incumbent*Competitive refers to the interaction of a dummy indicating the incumbent with the proportion of the district a newspaper operates in a competitive structure.
Incumbent*Duopolistic refers to the interaction of a dummy indicating the incumbent with the proportion of the district a newspaper operates in a duopolistic structure.
3) **Significant at the 5% level.

ation the interdependence among endorsement choices (of whether and whom to endorse).

1.5 A Simple Model of Endorsements

To illustrate the model's main features and assumptions, consider the environment faced by a hypothetical newspaper. It is characterized by a political orientation – left-wing, neutral or right-wing. In a general election, the newspaper faces several simultaneous two-candidate races for which it can make political recommendations. The endorsement represents the newspaper's expressive vote, as opposed to an instrumental model whereby the newspaper seeks to influence the election outcome. The newspaper likes to endorse candi-

dates it thinks highly of. The value of an endorsement is determined solely by its evaluation of the endorsed candidate.

For any election, the newspaper has knowledge about some characteristics of the candidates running: it is aware of candidates' incumbency and party affiliation. These characteristics may affect the newspaper's evaluation of candidates, but the newspaper is not yet fully informed about other characteristics such as honesty, competence and political record. These are important determinants of its assessment of candidates and consequently of its endorsements. To find out about these, the newspaper has to invest in a research process with interviews and investigation of candidates' records.

The newspaper faces the following problems: it has to decide in which of the races it will provide its endorsement to readers. Since the research process is costly, the newspaper has to decide whether to investigate or not the candidates running in a race. For any given election, it makes its research decision by comparing the expected value of its (future) endorsement with its cost of making an endorsement. Once the research is done, the newspaper, fully informed, declares its endorsement. I assume the research process is a necessary and sufficient condition for the endorsement: the newspaper only makes well-informed endorsements, and it makes some endorsement announcement, in all investigated elections.[19]

I next summarize and introduce the notation. A newspaper j has one of three possible political ideological positions ($H \in \{h_1, h_2, h_3\}$), which are left-wing

[19]These assumptions are based both on newspaper anecdotes about their practice and data limitation. In one hand, newspapers report they always investigate candidates before making endorsements (Post Crescent 2006). On the other hand, I assumed that newspapers declare endorsements whenever they investigate a race. This is because the situation where newspapers investigate a race and do not make an endorsement is not observable.

(h_1), neutral (h_2), and right-wing (h_3). In general elections, it faces several races e. For any of these, it potentially makes two sequential decisions. First, it makes a decision t $\in \{0, 1\}$ to research (t= 1) or not research (t= 0) the two candidates c, $c \in \{D, R\}$. In making this decision, it compares the cost of investigating an election (and making an endorsement) with the expected value of its announcement. Second, conditional on investigating a race, it can make three types of announcements $i \in \{D, R, \varnothing\}$,"endorse the Democrat" ($i = D$), "endorse the Republican" ($i = R$), or explicitly declare "no endorsement for either of the candidates" ($i = \varnothing$). This last announcement represents newspaper abstention in a political race once it determines that neither of the candidates meets its standards to receive an endorsement.[20] I will next detail the payoffs and decision problem for both decisions, starting with the second. After these components are described, choice probabilities and estimation procedure are specified.

1.5.1 Endorsement Announcement Decision

In the second decision, conditional on having incurred costs in the research process, the newspaper can make two types of announcements. The first type favors a candidate. The payoff derived from this type of announcement is the newspaper's satisfaction from endorsing its preferred candidate and it is determined by newspaper evaluation of the candidate. It has three components: (i) a deterministic component related to newspaper political preference; (ii) a deterministic component unrelated to newspaper political preference; and (iii)

[20]This assumption is based on evidence from the data. When newspapers declare "no endorsement for either candidate," they justify this choice as due to the low qualifications of the candidates. For example, The Record-Eagle made the following announcement in a race, in the 2006 election:

"There's no good choice in this race. Incumbent Republican Mike Cox has shown he'll put politics over policy. His challenger, Democrat Amos Williams, isn't qualified."

the newspaper's overall evaluation of the candidates' unobservable characteristics - such as quality, honesty, and historical record - revealed through research (ε_j^D,ε_j^R).These are assumed to be drawn from a type I extreme value distribution with mean zero and scale parameter $\sigma = 1$. The overall payoff from endorsement of a candidate, denoted by S_j^c, is:

$$S_j^c(H,c) = v(H,c) + Z^c(XC_j) + \varepsilon_j^c, \qquad c = \{D,R\}$$

Ceteris paribus, left-wing (h_1) and right-wing (h_3) newspapers have an endorsement for the Democrat and the Republican candidate, respectively, as their most preferred decision. Neutral newspapers are indifferent between Democrats or Republicans. The payoff $v(H,c)$that a newspaper of each type derives from its endorsement of a candidate c, is as follows:

$$v(h_1,c) = \left\{ \begin{array}{l} \gamma_D, \text{ if } c = D \\ 0, \text{ if } c = R \end{array} \right\}$$

$$v(h_2) = 0$$

$$v(h_3,c) = \left\{ \begin{array}{l} 0, \text{ if } c = D \\ \gamma_R, \text{ if } c = R \end{array} \right\}$$

The value of $v(H,c)$when a newspaper makes its less preferred decision is normalized to 0. The payoff when it makes its preferred decision is γ_c.

The component unrelated to newspaper political preference, Z^c,is a linear

function of other candidate characteristics. I represent this term with a dummy of value one if the candidate is an incumbent, and zero otherwise. To uncover correlations between endorsements and competition, I allow Z^c to be explained by the interaction of the incumbent dummy with measures of market structure. These variables are compressed in CAN_j and described in detail in Appendix.

Besides endorsing the Democrat or Republican, newspapers can explicitly announce "no endorsement for either of the candidates" ($i = \varnothing$).[21] This decision's payoff has two components: (i) a deterministic component that represents the newspaper's standard for making an endorsement. Its value is normalized to zero; (ii) newspaper shock specific to this alternative $\varepsilon_j^{\varnothing}$, assumed to be drawn from a type I extreme value distribution with mean zero and scale parameter $\sigma = 1$.[22] The payoff of this alternative is:

$$S_j^{\varnothing}(H) = \varepsilon_j^{\varnothing}, \qquad \text{for any } H$$

At this (second) stage, the newspaper becomes fully informed and is able to evaluate the respective payoffs of the three alternatives. It decides on its announcement i^* according to the rule below:

$$i^* = \arg\max\{S^i(H) : i \in \{D, R, \varnothing\}\}$$

[21] It is assumed that every time the newspaper incurs costs in the investigation process, it makes an announcement. I allow for this option - abstention - to ensure newspapers are maximizing total utility.

[22] This component is supposed to capture the unobservable heterogeneity among newspapers in their standards for declaring an endorsement. If newspapers only care about providing helpful advice to their readers, they would just need to pick the "least worst" among the candidates. However, in some elections, newspapers might worry about some reputational damage from endorsing a "bad politician."

1.5.2 Decision to Research

In the first decision, the newspaper faces the choice of whether or not to research the candidates to find out their (ex-ante) unobservable characteristics. The payoff to the newspaper's investment in researching a race has two components: the expected benefit and the cost of endorsement. The payoff of the research alternative, denoted by RES, is described below:

$$RES_j = E(Z_j^D, Z_j^R) - COST_j(RC_j)$$

The first element, $E(Z_j^D, Z_j^R)$ denotes the expected benefit of a (future) endorsement. This is the foreseen value of an endorsement and is a function of the characteristics of candidates running in a political race combined with newspaper political orientation, as described in Section 1.5.1.

$$E(Z_j^D, Z_j^R) = E_\varepsilon \max\{S^{i^*}(H) : i \in \{D, R, \varnothing\}\}$$

$$= \ln((\exp(Z^D(CAN_j)) + \exp(Z^R(CAN_j)) + 1))^{23}$$

The endorsement cost, $COST$ conveys both research and reputation costs in making endorsements. I assumed a simple functional form for this, as described below:

$$COST_j = \beta_0 + \beta_0 \cdot (RCE_j) + \beta_0 \cdot (RCD_j) + \beta_0 \cdot (RCM_j) + \zeta_j^{COST}$$

[23] Under the stochastic term assumptions, this expectation has a well-known close form derived in Small and Rosen (1981).

It is determined by a fixed endorsement cost common to all newspapers (β_0). I then let the cost vary by newspaper size, reader share in a district and election characteristics (RCE_j). These characteristics might affect the research cost as they convey, respectively, different levels of paper resources and employees, previous political knowledge of the district and politicians' visibility. I allow the cost to vary by readership demographics and political leanings in a district (RCD_j) as these might explain specialization in a market or different perceived costs in making endorsements. Lastly, the cost might vary by the market structure faced in the district (RCM_j). These parameters partially identify the correlation between newspapers' likelihood of making endorsements and market competition. The cost variables are compressed in RC_j, where $RC_j = (RCE_j, RCD_j, RCM_j)$. These are detailed in the Appendix. The cost of endorsement is also determined by a research cost shock ζ_j^{RES}, assumed to be drawn from a type I extreme value distribution with mean zero and scale parameter $\sigma = 1$.[24]

The payoff to non-researching, denoted by $NRES$, has two components: a deterministic component normalized to zero and a taste shock ζ_j^{NRES} associated with this alternative.[25] This is assumed to be drawn from a type I extreme value distribution with mean zero and scale parameter $\sigma = 1$.

$$NRES_j = \zeta_j^{NRES}$$

[24]This component is unobservable to the researcher and reflects, for example, a shortage of interns to collect information about the politicians, or politicians directly contacting newspapers to facilitate an interview.

[25]This stochastic term is supposed to explain any remaining difference in the research decisions of different newspapers when the research costs they face are the same. This could be related to the editor's mood, for example.

A newspaper's first decision is whether to investigate ($t(H) = 1$) or not investigate ($t(H) = 0$) in the race, solving the following problem:

$$Max_{t(H)\in\{0,1\}} \qquad t(H)[RES - NRES]$$

1.5.3 Choice Probabilities and Estimation Procedure

The model is estimated by maximum likelihood. For the construction of the likelihood function, one needs to derive the choice probabilities. I will first specify the probability of a decision to research and the conditional probabilities of an endorsement after the newspaper has decided to invest in the research process. Next, I specify the likelihood function, and the estimation procedure.

Choice Probability of Research. In the first decision, the probabilities of research ($t(H) = 1$) and non-research ($t(H) = 0$) are derived based on integration over ζ_j and described:

$$\Pr(t(H) = 1) = \frac{\exp(E(CAN_j) - COST(RC_j))}{1 + \exp(E(CAN_j) - COST(RC_j))}$$

$$\Pr(t(H) = 0) = \frac{1}{1 + \exp(E(CAN_j) - COST(RC_j))}$$

Choice Probability of an Announcement after Research: Conditional on investing in research, the newspaper learns ε_j^i, and decides which announcement to make. Integrating the shocks, the probabilities of endorsing a Democrat, a Republican, or declaring "no endorsement for either candidate" are respectively:

$$\Pr(i(H) = R) = \frac{\exp(Z^R(CAN_j))}{1 + \exp(Z^R(CAN_j)) + \exp(Z^D(CAN_j))}$$

$$\Pr(i(H) = D) = \frac{\exp(Z^D(CAN_j))}{1 + \exp(Z^R(CAN_j)) + \exp(Z^D(CAN_j))}$$

$$\Pr(i(H) = \varnothing) = \frac{1}{1 + \exp(Z^R(CAN_j)) + \exp(Z^D(CAN_j))}$$

The likelihood of an endorsement observation for a given race e and a given newspaper political orientation type is denoted by L_{je}:

$$L_{je}(H) = [\Pr(t(H) = 0)]^{I(t(H)=0)} + [\Pr(t(H) = 1)\Pr(i(H))]^{I(t(H)=1)}$$

Likelihood of the Entire Newspaper Endorsement Profile

Multiple endorsement choices are observed for each newspaper. By combining the sequence of endorsement choices and summing over the possible types of political orientation, the contribution of a newspaper j is Y_j :

$$Y_j = \sum_{H \in \{h_1, h_2, h_3\}} \Pr(H) \left\{ \prod_e L_{je}(H) \right\}$$

The log-likelihood function is then equal to the sum of the log of the individual contributions Y_j, over all newspapers in the sample: $K = \sum_j \ln\ Y_j$. The parameters to be estimated are: i) editorial boards' valuation of politicians' characteristics; ii) newspapers' costs of making endorsements and iii) a probability distribution for newspapers' political orientation. The estimated parameters are the ones that maximize the log-likelihood.

Table 1.6: First decision payoffs: determinants of endorsement cost

	Estimate	Stand Error
β_0	10.413**	0.851
β_0· statewide race	-0.135	0.309
β_0· open race	-1.088**	0.273
β_0· close race	0.391	0.248
β_0· 2002 election	-0.473**	0.197
β_0· Top 100 newspaper	-0.978**	0.223
β_0· Newspaper reader share	-3.598**	0.365
β_0· Urban	-0.164	0.285
β_0· Population	0.626**	0.321
β_0· Income	-0.784**	0.238
β_0· College educated	0.114	0.248
β_0· Political homogeneity index	3.206**	0.865
β_0· Overall homogeneity index	2.431*	1.423
β_0· John Kerry vote share	2.109**	0.754
β_0· White	0.272	0.333
β_0· Black	0.892**	0.235
β_0· Hispanic	0.971**	0.270
β_0· Male	0.097	0.212
β_0· Competitive	0.315	0.332
β_0· Duopolistic	0.262	0.366

Note: ** Statistically significant at 5% level, *10% level.

1.5.4 Results

The estimates for the first decision parameters are described in Table 1.6. These are the determinants of newspapers' endorsement costs. The parameters are measured in a utility metric, so I will focus the interpretation on their sign. These different costs are determined by newspapers' likelihood of making endorsements across districts: newspapers face lower (higher) costs in districts where they are more (less) likely to make endorsements.

The results point to a positive cost of making endorsements as revealed by the sign of β_0 (10.413). Papers face different costs according to election, readership and newspaper characteristics. The cost is lower as the share of a newspaper's readers that live in the district increases. This is consistent with the expectation that newspapers hold more political knowledge and face lower re-

search costs in these elections. Characteristics such as number of employees and overall newspaper resources also explain different costs. Newspapers faced lower costs in the 2002 election than in the 2006 election. This is consistent with the downsizing of the industry commonly associated with the expansion of online news (Gentzkow 2007). In the 2002 election, newspapers may have had more resources and staff to investigate elections and provide political advice. Larger newspapers (those among the 100 largest newspapers in the US) face lower costs, and therefore are more likely to make endorsements, than other newspapers.

The cost depends on readership race, political leaning and degree of homogeneity. Newspapers face lower costs (and are more likely to make endorsements) in districts more Democratically-oriented districts and in districts with more homogeneous readerships, both politically and racially.

Newspapers face higher costs of making endorsements in a competitive and duopolistic market structure than in a monopolistic environment. The sign of these coefficients are consistent with the ones estimated in the probit model presented in Table 1.4. However, under this empirical specification, they are not statistically significant.

The estimates for the second decision payoff parameters are described in Table 1.7. They show that both incumbency and political alignment between candidate and newspaper are determinants of endorsements. The respective estimated parameters are positive and statistically significant. The coefficient associated with the political alignment between newspaper and candidate is larger for left-wing than for right-wing newspapers. This suggests that left-wing newspapers are more partisan than right-wing newspapers. However,

Table 1.7: Second decision payoffs

	Estimate	Stand Error
Incumbent	2.066**	0.161
Incumbent in Competitive Districts	0.237	0.386
Incumbent in Duopolistic Districts	0.037	0.406
Political alignment with candidate		
Right-wing newspaper: γ_R	1.447**	0.252
Left-wing newspaper: γ_D	1.744**	0.183

Note: ** Statistically significant at 5% level.

Table 1.8: Predicted probability of political orientation

Left-wing	Neutral	Right-wing
0.422	0.281	0.297

the large standard errors do not allow me to reject the hypothesis that these coefficients are equal.

The coefficient associated with newspaper evaluation of the incumbent is higher when the newspaper is operating in a competitive district than in a monopolistic district. However, these are also not statistically different from zero.

The model predicts newspapers are more likely to be partisan (have a left-wing or a right-wing orientation) than non-partisan (have a neutral orientation), as described in Table 1.8. These results (of being more likely to be partisan than non-partisan, and tending to value their political alignment with candidates) are consistent with the general view of newspapers as politically biased (Pew, 2005).

1.5.5 Counterfactual - Media Bias and Competition

A nice feature of the econometric model is that one can conduct counterfactuals with the estimated parameters of the model. I next present estimated probabilities of endorsement, exogeneously changing both market structure faced by all newspapers in the sample, and their degree of partisanship. The goal is to understand whether and to what extent competition reduces media bias and makes partisan newspapers behave like non-partisan ones.

For the counterfactual exercises, I assume that newspapers have only two possible political orientations, neutral and left-wing. I varied their probability of being non-partisan (having a neutral orientation) and partisan (having a left-wing orientation). In the model, I assumed that partisan newspapers have an extra incentive to make endorsements in comparison to non-partisan papers: that of supporting candidates with similar political views.[26] The implication is that partisan newspapers are more likely to incur costs of making endorsements. As the probability of newspapers being partisan increases, so does the predicted probability of newspapers making endorsements. The predicted probability (of making an endorsement) is reported, assuming all newspapers to be operating in a specific market structure – competitive, monopolistic – or in the market structure observed in the data (baseline). The more partisan a newspaper be-

[26]Data shows that this is a reasonable assumption. The model assumes newspapers make two sequential choices. However, one can also imagine that newspapers make endorsements without a research process, using only the information they have on hand. In this case, the newspaper endorsement decision could be modeled by a multinomial logit. I compared this model's predictions with those of a multinomial logit with the same number of control variables. The model achieves a higher log-likelihood value (-813.80) than the multinomial logit (-855.18), and predicts newspapers' actual choices with higher success than a multinomial logit does in 57.4% of the cases. This evidence suggests that the adopted model' assumptions reflect the data better than the ones behind the simple model. Table 10 presents the distribution of the endorsement profiles – endorsement for the Democratic candidate, endorsement for the Republican candidate, no endorsement for either candidate and no endorsement announcement – predicted by the model and the distribution observed in the data.

comes, the more its endorsement probability differs from a non-partisan paper. Under competition, partisan papers become less likely of making endorsements, resembling the behavior of non-partisan newspapers. Nonetheless, as Figure 3 shows, this effect is small.

1.6 Conclusion

This chapter examined the determinants of newspaper political endorsements. I presented results from probit regressions and from a simple structural model. This model quantifies media bias and take into consideration the interdependence of newspapers' choice whether to make an endorsement and who to endorse.

I investigated the empirical association between market competition and newspaper political endorsements, exploring variation of market competition faced by newspapers across districts. Data and regression results show that endorsements are more frequent in monopolistic than in duopolistic or competitive districts. In monopolistic markets, newspapers might have more space to make discretionary endorsements. The probit regressions suggest that this behavior can be explained at least two reasons. Newspapers that self-select into competitive markets are inherently less likely to make endorsements. Also, newspapers react strategically to market competition in becoming less likely to endorse candidates.

The estimates for the structural coefficients show that newspapers are more likely to be partisan (having a left- or right-wing orientation) than non-partisan. Partisan papers consider their political alignment when deciding which candi-

date to endorse. This makes partisan newspapers more likely to make endorsements. Therefore, a larger amount of ”partisan” endorsements might be observed than ”non-partisan” endorsements. The counterfactual exercises show that under more competition, partisan newspapers' endorsement practices resemble those of non-partisan papers. However, this effect is small.

This chapter advances the understanding of newspaper determinants regarding political endorsements. However, further research is needed to understand newspapers' motivations in making endorsements (such as a desire to influence elections) and the mechanisms by which market competition might affect newspapers.

CHAPTER 2

THE TUESDAY ADVANTAGE OF CANDIDATES ENDORSED BY AMERICAN NEWSPAPERS

2.1 Introduction

Newspapers play an important role in society. They serve as a tool for shaping thought, a forum for public discussion and debate, and a way to inform the public of wrongdoing (Martin and Copeland 2003). The literature presents evidence that newspapers influence politicians' behavior and politically inform readers (Snyder and Stromberg 2008, Barabas and Jerit 2009).

Besides providing news and campaign coverage, many American newspapers make political endorsements during elections. Newspapers publish their political recommendations one or two months before the election, allocating part of the editorial page to feature their rationale for a particular endorsement. Closer to the election, they republish a summary list of their endorsement choices. They may provide a more succinct explanation of their decisions in two or three lines, and in many cases just mention the names of endorsed candidates.

This chapter examines the electoral performance of candidates endorsed by American newspapers that have their endorsements republished within one week of the election. It documents a "Tuesday Advantage": candidates who have a newspaper endorsement republished on Election Day present an electoral advantage in comparison to other candidates who have a newspaper endorsement republished in the week preceding the election.

I argue that the "Tuesday Advantage" is explained by readers who vote according to newspaper endorsements read on Election Day. Readers might be more attentive to this information on the day of the election, when they need to use the endorsement advice, than if they see it prior to that day.[1] In this case, the "Tuesday Advantage" implies both a causal effect of newspaper political endorsements on voting outcomes, and that the date of the endorsement publication determines the effectiveness of this advice.

This interpretation (of a "Tuesday Effect") relies on the following evidence.[2] First, I investigate whether the "Tuesday Advantage" is driven by a selection effect (endorsements of "stronger" candidates being more likely to be published on Election Day). I find that endorsed candidates that have their name published on Election Day, in fact, are less likely to have favorable electoral characteristics (they are less likely to be incumbents) than other endorsed candidates. In addition, newspapers do not show signs of strategic behavior in their timing decisions: most of them do not change their endorsement timing across elections.

Second, I restrict the sample of endorsed candidates to only those endorsed by newspapers that switched their endorsement timing across elections. Newspapers do not self-select into endorsing candidates with stronger electoral characteristics. However, the endorsements become more effective when they are announced on Election Day than otherwise.

[1] The behavioral literature finds evidence that limited attention affects people's behavior. For example, DellaVigna and Pollet (2008) finds that investors are inattentive to news about earnings on Fridays in comparison to other weekdays.

[2] I refer to endorsements published on Election Day as "Tuesday Endorsements." The "Tuesday Effect" refers to the causal effect of a "Tuesday Endorsement" on election outcomes and it is a suggested interpretation of the "Tuesday Advantage." These expressions are used because American elections take place on Tuesdays.

This study's first contribution is to document the "Tuesday Advantage." This advantage is found within a similar group of candidates—the endorsed ones. In addition, I control for candidate and newspaper characteristics to circumvent a remaining selection problem. The identification strategy is based on exploring variation in endorsement publication –on Election Day or just before– among a homogeneous group of candidates. To the best of my knowledge, this is the first study that shows that the date of an endorsement determines its effectiveness and that tests whether newspaper endorsements affect election turnout. The variation in the dataset allows me to quantify relevant heterogeneity patterns of the "Tuesday Advantage" across newspaper and candidate characteristics. I attempt to identify the determinants of the effectiveness of newspaper endorsements by examining this heterogeneity. This is the second contribution of this study. This article reaches conclusions similar to those of other recent studies about newspaper endorsements' effects on voting (Ladd and Lenz 2009, Knight and Chiang 2008): newspapers' political recommendations matter and persuade readers to vote for different candidates. In addition, I find that a "Tuesday Endorsement" affects candidates' vote share, but not election turnout. Data and regression results suggest that newspapers that republished their endorsement on Election Day are more partisan (are more likely to endorse candidates with their political orientation) than other newspapers. This led them to favor candidates that would get fewer votes in the absence of a "Tuesday Endorsement." In light of these results, this chapter also relates to the literature that seeks to understand how and whether newspapers' partisan behavior affects election outcomes (DellaVigna and Kaplan 2007, Kahn and Kenney 2002). It asks: Are newspapers helping to elect "weaker" candidates that share their political views with their "Tuesday endorsements"? The answer is

no. Although, candidates that share newspapers'political orientation are more likely to have an endorsement published on Election Day, these candidates do not seem to derive any benefit from that endorsement. Only candidates whose politics differ from their endorsing newspapers benefit from this endorsement.

This chapter uses a self-collected dataset containing election results for 817 politicians (158 U.S. House Representatives, 511 state representatives and 148 state senators). They are candidates endorsed by at least one of 103 newspapers in eight states (California, Florida, Michigan, Nebraska, Ohio, Oregon, Texas and Wisconsin), comprised of 696 counties, during the 2002 and 2006 elections.

It proceeds as follows. Section 2.2 presents a brief overview of the existing literature. Section 2.3 describes the data. Section 2.4 discusses newspapers' decisions about endorsement timing and endorsed candidates' profiles. Section 2.5 presents the regression results. It first documents the "Tuesday Advantage." Then it tests other mechanisms, besides the information provided on Election Day, that could also explain the effectiveness of the "Tuesday Endorsement." Lastly, it explores the heterogeneity of the "Tuesday Effect" across candidate and newspaper characteristics to understand the determinants of this endorsement's effectiveness. The chapter concludes in Section 2.6.

2.2 Existing Literature

This study relates to the literature evaluating media effects on readers' political behavior. The political alignment between media outlets and readers/viewers (Gentzkow and Shapiro 2010) presents a fundamental complication in quantifying media effects on voting. Viewers choose which media outlets to access

based on their political standpoint. Thus, it is difficult to identify whether it is the media outlet that is influencing the viewer, or whether the media outlet is responding to viewers' preference in the presentation of political issues.

The literature has found ways to circumvent this complication by exploring how readers/viewers react to media messages exogenous to their political preferences. Part of the literature has explored natural experiments, comparing political outcomes pre- and post-entry or -exit of media outlets in the market. One of these studies show that the entrance of Fox News led to an increase in turnout and vote share for Republican candidates (DellaVigna and Kaplan 2007). The closure of The Cincinnati Post affected both politicians and citizens' behavior. Voter turnout decreased, fewer candidates ran for municipal office, and incumbents became more likely to win re-election (Schulhofer-Wohl and Garrido 2009).

Snyder and Stromberg (2008) explored variation in the geographical fit of newspapers and congressional districts to identify an effect of newspapers on readers' political behavior. They find that an increase in newspaper coverage affects readers' political information. Gerber, Karlan and Bergan (2009) conducted a field experiment, randomly assigning free newspaper subscriptions to non-newspaper readers. They assigned individuals newspapers with different political leanings (The Washington Post and The Washington Times.) They found that individuals receiving either paper became more likely to support the Democratic candidate as compared to non-newspaper readers (their control group).

The identification of newspaper endorsement effects on voting is plagued by similar problems. Readers' information about candidates is not observed by

the researcher. Readers and their respective media outlets might have similar standards for evaluating candidates. Thus, it is difficult to determine whether a positive correlation between endorsement and vote is due to readers voting according to newspaper recommendation, or whether readers choose candidates independently from the newspaper recommendation, but using the same criteria.

Previous literature explores the electoral advantage of endorsed candidates with respect to non-endorsed candidates. In order to circumvent the endogeneity of endorsement, these studies control for other candidate characteristics correlated with the likelihood of receiving a newspaper endorsement (such as campaign contributions). In this fashion, the regressions are intended to capture the true effect of newspaper endorsement on votes. These studies include Krebs (1998), Bullock (1984), Coombs (1981) and Lieske (1989). They find a positive and statistically significant correlation between endorsements and voting patterns.

This study explores the electoral advantage within endorsed candidates to lessen the selection problem and determine the effect of newspaper political recommendations on elections. This effect is identified based on the date a newspaper last republishes its endorsements: on Election Day, or before. This study identifies a "Tuesday Advantage" and proposes an explanation for it: it is driven by votes that are decided based on endorsements read on the day of the election. The "Tuesday Advantage" identifies a lower bound effect of endorsements on vote outcomes.[3]

[3]This is because I only identify the difference of vote counts among endorsed candidates. I do not measure the initial effect of endorsements; that is, the difference endorsed and non-endorsed candidates.

Two other recent papers find a newspaper endorsement effect on voting, using individual-level data. Ladd and Lenz (2009) utilize the British Election Panel Study and a "natural experiment approach" to identify the effect of endorsements on voting. They explore the shift in newspaper endorsements in the 1997 British election to favoring the Labour Party. They ask whether readers of newspapers that switched their endorsements in the 1997 election became more likely to vote for the Labour Party in comparison to similar individuals who did not read these endorsement-switching newspapers. Their results show that newspapers persuaded a large fraction of readers (between 10% and 25%) to vote differently from the control group.

Knight and Chiang (2008) explore National Annenberg Election Survey data. They find that readers interviewed after the publication of an endorsement are more likely to support the endorsed candidate than other readers interviewed before the endorsement announcement. In order to understand how and whether readers filter political bias from newspaper endorsements, they structurally estimate the relationship between the candidate and endorsing newspaper's political affiliation and the influence of the newspaper endorsement. They find that endorsements for the Democratic candidate from left-wing newspapers are less influential than those from neutral or right-wing newspapers. This finding is interpreted as evidence that readers take into account newspaper political orientation when evaluating endorsements.

This study closely relates to Knight and Chiang (2008) in an attempt to understand the determinants of the effectiveness of newspaper endorsements on election outcomes. Like that paper, this tests whether candidates with a political alignment with the endorsing newspaper benefit differently from the ("Tues-

day") endorsement than other candidates.

2.3 Data

I collected a new dataset matching county-level data on endorsed candidates' election results with newspaper and county characteristics. In constructing the dataset, I first identified the endorsed candidates, looking for information about newspapers' political endorsements. The search for endorsements was performed on Lexis and Newsbank databases and newspapers' websites. It was focused only on newspapers covered by the Audit Bureau of Circulation.[4] The appendix lists all newspapers in the sample. The search for political endorsements was focused on 103 newspapers in California, Florida, Michigan, Nebraska, Ohio, Oregon, Texas and Wisconsin in the 2002 and 2006 general elections.[5] When gathering the data from online resources, I searched for key words such as "election," "endorsement," or "recommendation," limiting dates to the range of October 15th until Election Day. I looked for newspaper endorsements of candidates running in the following races: the U.S. House of Representatives, the state House, and the state Senate.

After identifying the endorsed candidates, their electoral outcomes—collected from the Election Division of the Secretary of State—were matched

[4]The Audit Bureau of Circulations (ABC) is a non-profit circulation-auditing organization. ABC's conducts independent, third-party audits of newspaper print circulation. Other newspapers not audited by ABC also made political endorsements. They are not included in this analysis because information about their circulation is not available.

[5]These states were selected because the group of newspapers audited by ABC is more representative of the total number of newspapers than in other states. They represent around 30% of total newspapers in these eight states. For the remaining states, ABC's sample represents around 20% of total newspapers. Representativeness is crucial to the analysis. Locations where ABC newspapers are not representative are more prone to have county electoral outcomes erroneously matched with a newspaper, and therefore with its last endorsement publication date.

with the newspapers that made the endorsements.[6] Note that candidates are endorsed at the district level, while their electoral outcome is measured at the county level. I do this because examining political outcomes at a (sometimes) finer level (county rather than district level) allows me to explain variation of electoral outcomes within districts.

Candidates were also matched with characteristics of their endorsing newspaper. These are political position, total circulation, total number of counties in which the newspaper circulates and endorsement dates. Newspaper circulation was collected from the 2005 Audit Bureau of Circulation reports. The date that each newspaper last published its political endorsements was also collected from Lexis/Newsbank and the newspapers' websites.

The utilized measure of newspaper political partisanship, referred to as the GS newspaper political index, was estimated in Gentzkow and Shapiro (2010). In this study, they estimate newspaper political partisanship by examining the extent to which newspapers used politically charged phrases in their news coverage that resembled phrases used in the speeches of congressional Democrats or Republicans. They used congresspersons' ideological positions to identify newspaper political partisanship. In their study, the congressperson's ideology is measured by the share of the 2004 two-party presidential vote total going to George W. Bush in the congressperson's constituency. Their political partisanship index varies between zero (in the case that the newspaper's ideology resembles more closely the ideology of a congressperson with a constituency that did not vote for Bush at all) and one (if the newspaper resembles more closely the ideology of a congressperson whose entire constituency voted for Bush).

[6] If a candidate received an endorsement from multiple newspapers, his/her electoral outcome was matched to the endorsing newspaper with the highest circulation in the county.

In addition to this continuous measure, newspapers were classified as: (i) left-wing or right-wing; as (ii) moderate or extreme. A newspaper was assumed to have a right-wing orientation if its GS newspaper political index is greater than 0.5. A newspaper for which the GS newspaper political index is lower than 0.5 was assumed to be a left-wing newspaper. Based on the newspaper relative political position, they were classified as moderate or extreme. I consider the distribution for all newspapers in the Gentzkow and Shapiro (2010) sample. Newspapers in the sample are classified as extreme if their political index is greater than that of newspapers in the fourth quartile of the distribution in the GS sample distribution or if the GS newspaper political index is lower than that of newspapers in the first quartile of the distribution. The remaining newspapers were classified as moderate.

Data about politicians' characteristics, like incumbency and partisanship, were obtained from the Election Division of the Secretary of State. I identified the situation in which the candidate had the same political views as the newspaper endorsing him. This was the case when Democratic candidates received an endorsement from a left-wing newspaper, or Republican candidates received an endorsement from a right-wing newspaper. For the endorsed US House candidates running in the 2006 election, I collected data about number of previous winning elections, total money receipts in the race, total opponents' money receipts in the race from the Congressional Quarterly Politics. In addition, poll results from the New York Times were collected.[7]

Demographic characteristics—education, race, and age—are measured at the county level. They were collected from the Census Bureau. To identify county political views, I use the two-party Democratic vote share in the 2004

[7] http://www.nytimes.com/ref/washington/2006ELECTIONGUIDE.html

presidential election. This was collected from the Election Division of the Secretary of State. In addition, I constructed an index to identify a measure of county political homogeneity. This is the absolute distance of the county-level vote share from the national 2004 presidential vote-share of John Kerry (which represents a bipartisan county). This index can vary between 0 and 0.5. For example, if John Kerry received one hundred percent of the votes (or zero percent of the votes) in a county, this index would be equal to 0.5. If he received half of the votes, this index would be equal to zero. According to this variable, heterogeneous counties are closer to zero and more homogeneous counties are closer to 0.5.

All total, the dataset contains electoral results of 817 candidates–158 for the U.S. House representatives, 511 for the state representatives and 148 for the state senators. They are candidates endorsed by at least one of 103 newspapers in eight states (California, Florida, Michigan, Nebraska, Ohio, Oregon, Texas and Wisconsin), comprised of 696 counties, during the 2002 and 2006 elections.

2.4 Endorsement Timing and Candidates' Profile

Table 2.1 shows the average vote share and characteristics of candidates according to the last day their endorsing newspaper published its political recommendations.

Candidates that have a newspaper endorsement published on the day of the election have only a slightly higher (and not statistically different from zero) vote share than other endorsed candidates. A remaining selection effect masks the "Tuesday Advantage": incumbents are less likely to have an endorsement

Table 2.1: Vote share and candidate characteristics by last endorsement Publication

	Election Day	Before Election Day
Vote Share	59.25	58.84
	(13.26)	(12.54)
number of counties	1305	1432
Candidates' characteristics		
Incumbent (%)	53.5	60.5
Same political orientation from the newspaper (%)	54.7	47.7
number of candidates	528	560

Notes: 1) Vote share is measured at the county level. Candidates' characteristics are measured at the candidate level.
2) Standard deviation are reported in parenthesis.

republished on Election Day. Incumbency status is a strong predictor of candidate vote share and of the election winner (Jacobson 2004.) Of candidates endorsed on Election Day, 53.5% were incumbents, as opposed to 60.3% of those receiving an endorsement before Election Day.[8] Table 2.1 also reveals that different newspapers weight candidate characteristics differently. Newspapers that publish their endorsement on Election Day may value political alignment with candidates more strongly, making them more likely than other newspapers to endorse challengers.

In order to better understand the nature of selection across candidates, it is necessary to understand newspaper behavior and why variation in the timing of endorsements across newspapers is observed. Table 2.2 shows the distribution of endorsements according to the last day they were published in the 2002 and

[8]To test this relationship formally, I estimated a probit model explaining the outcome of candidates having a newspaper endorsement published on Election Day as a function of three candidate characteristics: incumbency, being a Democrat, and having the same political orientation from the endorsing newspaper. The incumbency characteristic is found to be a statistically significant predictor of this outcome. On average, incumbents are 6.1% less likely to have their endorsement announced on Election Day.

Table 2.2: Timing: last day of endorsement publication

	Election			
	2002		2006	
	number of newspapers	(%)	number of newspapers	(%)
Tuesday (Election)	30	36.1	38	43.2
Monday	14	16.9	14	15.9
Sunday	29	34.9	29	33.0
Before Sunday	10	12.0	7	8.0
Total	83		88	

2006 elections.

Most newspapers in the sample last published their list of endorsements on the day of the election or on the last Sunday before the election. The vast majority of newspapers in the sample published their list of political endorsements within two days of the election, both in 2002 (88%) and 2006 (92%).

I conducted interviews with seven newspapers to understand the reasons behind their timing choices. Most newspapers claim to follow the same practice over the years. This is consistent with endorsement behavior in the 2002 and 2006 elections (Table 2.3). Most of newspapers in the sample (76%) did not change their endorsement timing during these elections. This evidence is consistent with the idea that most newspapers do not behave strategically in their choice of when to republish their endorsements (and that the different profile of endorsed candidates is explained by newspapers' intrinsic characteristics, like their political views.) However, 24% of newspapers switched their endorsement timing across 2002 and 2006 elections. Those are more likely to act strategically. This behavior could make difficult to identify the effect of endorsements republished on Election Day on candidates' vote share. Newspapers could choose to republish their list of endorsements on Election Day (when readers might be more informed) only when they are more confident about their endorsed can-

Table 2.3: Vote share and candidate characteristics by last publication date - 2002 and 2006 elections

	Same day in both elections	
	Election Day	Before Election Day
vote share	60.5	58.45
number of counties	745	866
Characteristics		
Incumbent (%)	51.9	56.4
Same political orientation from the newspaper (%)	55.3	49.7
number of candidates	308	330
number of newspapers	21	31

didates' chance of winning the election. In this case, it would be difficult to separate this selection effect from a possible "Tuesday Effect." However, a brief scan of endorsed candidates' profile show that, in fact, the bias occurs in the opposite direction. TableS 2.3 and 2.4 shows those newspapers that switched their endorsement timing across 2002 and 2006 elections, and those newspapers that did not, have the same pattern of endorsements. Switching newspapers become less likely to endorse incumbent candidates when they publish the endorsement on Election Day. Despite that, the average vote share of their endorsed candidates increased (from 58.63% to 58.84%) when the endorsement was published on the day of the election. This is one piece of evidence for the "Tuesday Effect."

Table 2.4 shows that newspapers that publish their endorsement on the day of the election are more likely to be extreme and have a left-wing orientation, possibly making them more partisan (demonstrated on Chapter 2.) In addition, Table 2.5 shows that larger newspapers, like The St Petersburg Times or The Detroit News are more likely to republish their endorsement lists on Election Day. Conversely, newspapers that do not follow this practice are more likely to be

Table 2.4: Vote share and candidate characteristics by last publication date - 2002 and 2006 elections

	Different dates across elections	
	Election Day	Before Election Day
vote share	58.84	58.63
number of counties	416	291
Characteristics		
Incumbent (%)	50.6	62.8
Same political orientation from the newspaper (%)	54.5	50.7
number of candidates	165	148
number of newspapers	16	

Table 2.5: Newspaper characteristics by last endorsement publication - Mean Values

	On Election Day in both 2002 and 2006 elections	Before Election Day in both 2002 and 2006 elections	Switched its timing across elections
Newspaper Political Orientation (%)			
Extreme	71.4	37.0	25.0
Extreme	71.4	37.0	25.0
Left-wing	95.2	77.4	93.7
Size			
Total circulation	311,701	127,312	165,276
	(287,229)	(129,795)	(187,638)
Number of counties	23.9	14.1	14.7
in which it circulates	(31.6)	(18.7)	(17.7)

Note: Standard deviations are reported in parenthesis.

small and local. Another explanation for the "Tuesday Advantage" is a varying endorsement effect across newspapers. Those that self-select into publishing their endorsements on Election Day might be more influential than others (this explanation is further explored in Section 2.5.2).

In this section, I have shown that candidates that have endorsements last published on different times are not homogeneous. Therefore, a simple com-

parison of their vote share (as in Table 2.1) does not illustrate the ”Tuesday Advantage.” In the next section, I present the regression results from an attempt to make this comparison in a more similar group of candidates.

2.5 Empirical Results

The results are organized in the following way. I document and quantify the ”Tuesday Advantage” within a regression framework. Then, I explore some possible mechanisms driving the ”Tuesday Effect.” Lastly, interactions of the ”Tuesday Endorsement” with newspaper and candidate characteristics are explored in order to understand whether and how the ”Tuesday Effect” varies according to these characteristics.

2.5.1 Tuesday Electoral Advantage

The empirical strategy is to compare the county-level electoral outcomes of endorsed candidates who have a newspaper endorsement republished on Election Day with those of other endorsed candidates. The variable, y_{pjct}, is the electoral outcome of candidate p endorsed by newspaper j, in county c, in year t. The baseline specification is expressed by (1). The parameters are estimated by ordinary least squares.

$$y_{pjct} = \alpha + \gamma T + \beta_c x_c + \beta_z z_j + \beta_{pt} v_p + \theta_t + \theta_r + \varepsilon_{pjct} \qquad (1)$$

A dummy, denoted by T, indicates whether the candidate had a newspaper endorsement republished in a print edition on Election Day. The ”Tuesday

Table 2.6: Effect of endorsement republished on election day on endorsed candidate vote share

	(1)	(2)	(3)	(4)
Had an endorsement published on Election Day	0.126 (0.585)	-0.317 (0.578)	0.993 (0.490)**	1.833 (0.545)**
Candidate characteristics	n	n	y	y
NYC Poll Results	n	n	n	n
Newspaper characteristics	n	n	n	y
County characteristics	n	y	y	y
State, Year and Race-fixed effects	n	y	y	y
R^2	0.000	0.089	0.325	0.337
Number of observations	2681	2673	2540	2385

Notes: 1) The dependent variable is candidates' vote share.
2) Robust standard errors clustered at the county level are reported in parenthesis. ** 95% significance, * 90% significance.
3) The unit of observation is endorsed candidate-county-election-year.

Advantage" is identified by γ. This reflects the estimated difference in electoral outcome between candidates that had an endorsement published on Election Day and other endorsed candidates.

Other characteristics possibly correlated with the vote share of endorsed candidates are controlled for. These are x_c, representing county demographics and measures of ideological views, and z_j and v_{pt}, representing newspapers' and candidates' characteristics, respectively. Year- and political race-fixed effects are represented by θ_t and θ_r, and ε_{pjct} represents a stochastic error term. The standard errors are clustered at the level of the 696 counties.

I first estimate (1) using candidates' two-party vote share as the dependent variable. The results are reported in Table 2.6.

Column 1 gives the results controlling only for a constant that represents the average vote share of endorsed candidates. Column 1 also shows that the vote

share of candidates that have an endorsement republished on Election Day is not different from the vote share of other endorsed candidates. The significance of this coefficient does not change when county (census and ideological) characteristics are included in the regression (Column 2). As candidate characteristics are controlled for (Column 3), the coefficient associated with the "Tuesday Advantage" becomes statistically different from zero and its size increases. This reflects the fact that candidates endorsed on Election Day are less likely to be incumbents (and incumbents have an advantage of 11 percentage point in their vote share with respect to other endorsed candidates.) Furthermore, the "Tuesday Endorsement" occurs in more right-wing counties. In these counties, voters are less likely to vote for candidates with characteristics that render them more likely to receive "Tuesday Endorsements" (e.g., Democratic identification).

Candidates still might be selected based on unobservable characteristics. For example, challengers that have an endorsement published on Election Day might be "higher-quality." In order to circumvent this possible confounding effect, I control for the political position of the endorsing newspaper.[9]

In Chapter 1, I present a model of endorsement decisions, where I estimate newspapers' preferences for candidate characteristics. I find that right-wing newspapers value political alignment with candidates less highly than left-wing newspapers do. Roughly speaking, newspapers face a trade-off be-

[9] Another way to deal with unobservable heterogeneity across candidates should be to compare endorsed candidate vote share, exploring within-candidate variation in endorsements with the inclusion of candidate fixed-effects in the regressions. The problem with this approach is that most of the studied races are observed at the local level and in 70% of the cases, candidates receive only one endorsement. This makes it difficult to perform such a comparison. Another alternative way to establish the causal effect of the "Tuesday endorsement" on voting is to use an instrument for the "Tuesday endorsement." The difficulty is that the editorial board of a newspaper decides the timing of endorsements and the choice of candidates. If journalists' political ideology drives both decisions, these choices cannot be disentangled. In this case, there is no variable that conveys variation of the timing of the endorsement uncorrelated with candidates' characteristics.

tween candidates' quality and political alignment when deciding which candidate to endorse. The implication of this asymmetry of preferences is that, on average, right-wing newspapers are more likely to endorse higher-quality candidates than are left-wing newspapers. Candidates endorsed by newspapers with higher GS newspaper index values—more extremely right-wing newspapers—present a higher vote share.

Under the assumption that newspapers with the same political position will face the same trade-off between candidate political alignment and other candidate characteristics that accounts for their "quality," their endorsed candidates, on average, should be homogeneous. In this case, the GS newspaper political index variable controls for a remaining selection on unobservable characteristics across candidates endorsed by different newspapers. Interestingly, when this variable is included in the regression, the size of the coefficient associated with having an endorsement published on Election Day becomes larger. This suggests that candidates endorsed on Election Day are also selected in "weaker" unobservable characteristics (they are both less likely to be incumbents and more likely to have other characteristics that garner them fewer votes.)[10]

As a robustness check, I restrict the sample only to US House of Representative candidates running during the 2006 election (since more information about their political career and poll results are available.) Table 2.7 bring the results. Column 1 shows the regression results with the previous controls. The coefficient associated with having an endorsement published on Election Day is positive and statistically significant at 7% level. Column 2 contains the results including additional variables to control for candidates' characteristics that possibly make them more likely to receive more votes (regardless of receiving an

[10]The regression results describing all the covariates are in Leon (2009).

Table 2.7: Effect of endorsement republished on election day on endorsed candidate vote share

	(1)	(2)
Had an endorsement published on Election Day	1.647	1.802
	(0.963)*	(0.982)*
Candidate characteristics	y	y
NYC Poll Results	n	y
Newspaper characteristics	y	y
County characteristics	y	y
State, Year and Race-fixed effects	y	y
R^2	0.408	0.573
Number of observations	538	478

Notes: 1) The dependent variable is candidates' vote share.
2) Robust standard errors clustered at the county level are reported in parenthesis. ** 95% significance, * 90% significance.
3) The sample is restricted to US House candidates in the 2006 election.
4) The unit of observation is endorsed candidate-county-election-year.

endorsement.) These are: number of previous winning elections, total money receipts in the race, total opponents' money receipts in the race, and New York Times Poll results. The size and significance of the coefficient related to the "Tuesday Advantage" is not affected by the inclusion of these extra variables. This is additional evidence that the reported advantage is explained by a "Tuesday Effect."[11]

Table 2.8 presents the regressions explaining turnout in a political race. The dependent variable is the logarithm of the ratio between the total turnout in the county for the studied race and county population.

Column 1 shows that races in which the endorsement is republished on the day of the election have lower turnout than other races. This effect disappears when controls are added to the regression (Column 2.) Controlling for state- and year-fixed effects, none of the newspaper or county ideological characteristics

[11] See Leon (2009) for more details about these regressions.

Table 2.8: Effect of endorsement republished on election day on turnout

	(1)	(2)	(3)	(4)
Had an endorsement published on Election Day	-0.149 (0.097)	-0.045 (0.061)	-0.050 (0.150)	-0.296 (0.313)
Candidate characteristics	n	y	y	y
Newspaper characteristics	n	y	y	y
County characteristics	n	y	y	y
State, Year and Race-fixed effects	n	y	y	y
R^2	0.000	0.381	0.515	0.385
Number of observations	2681	2385	469	221

Notes: 1) The dependent variable is log(turnout/population).
2) Robust standard errors clustered at the county level are reported in parenthesis. ** 95% significance, * 90% significance.
3) The unit of observation is county-election-year.

seem to be correlated with the turnout in political races.

This null result holds in aggregate (Column 1 and 2.) However, newspaper endorsements might have ambiguous effects on turnout. The vote decision might depend on voters evaluation of candidates and voters might decide to vote only if they think highly of the preferred candidate.[12] If newspaper endorsements affect candidate evaluation, they might, thereby mobilize supporters to vote for the endorsed candidates and inhibit voting among other candidates' supporters. Voters' predisposition toward voting for a specific candidate is not observable. To proxy for that, I identified a group of counties that are likely to support the endorsed candidate, and a group of counties that support the endorsed candidate's opponent (regardless of the newspaper endorsement.) This county classification is based on election results. I consider endorsed candidates' "county supporters", the counties in which the endorsed candidate received more than 70% of two-party election votes. Counties in which the endorsed candidate received less than 40% of votes were assumed to support the

[12]This assumption was used by Degan and Merlo (2009), for example.

opponent.

The problem with this proxy is that vote share is an endogenous variable. Clearly (as defended in this chapter) the endorsement published on Election Day most likely affect candidates' vote share. Nevertheless, the magnitude of this effect is modest (between 1 and 2 percentage points). For these considered counties, it is reasonable to assume that they were supporting the endorsed candidate or his/her opponent, regardless of any endorsement made. Column 3 (4) shows the results restricting the sample only to counties assumed to be supporting the endorsed candidate (endorsed candidate's opponent.) Again, the coefficient associated with Election Day endorsement publication is not statistically significant.

In summary, Tables 2.6, 2.7 and 2.8 results show that the "Tuesday Endorsement" might play a role in readers' decisions of whom to vote for. However, I did not find evidence that it affects readers' decision of whether to vote or not. A possible explanation is that readers who seek newspaper advice have already made up their minds to vote, and so this decision is not affected by newspaper endorsements. The results presented in this section show that, for candidates running for election in these relatively low visibility races—the US House of Representatives, state house and state senate—having a newspaper endorsement republished on Election Day increases their vote share by 1.9 points. In non-presidential general election years, most information in the media, and in the voter's general interest, is in high-visibility races such as gubernatorial races and U.S. Senate races. One explanation for a possible "Tuesday Effect" is that readers' attention is focused on these large-scale elections. On Election Day, if readers are uninformed about candidates running in local races, they might

follow last minute political recommendations, such as those made by newspapers.[13]

2.5.2 "Tuesday Effect" Mechanisms

In this section, I address some possible mechanisms driving the "Tuesday Effect." It might be explained by a same-day effect (for example, if readers pay more attention when they read a newspaper recommendation on Election Day than before). Or it could be due to other factors correlated with this endorsement.

For one, "Tuesday Endorsements" are republished more often than other endorsements. Table 2.9 presents the distribution of number of times that newspapers republish their endorsements in the three days preceding the election.[14] Most of the newspapers that publish their endorsements on Election Day do it more often (once or twice) than newspapers that do not publish their endorsements on the day of the election (zero or one time). If readers retain endorsement information read before Election Day, but randomly choose when to read the newspaper editorial section, candidates that have their endorsement republished more often are more likely to gain votes due to the endorsement. This could be an explanation for the "Tuesday Advantage."

To account for this mechanism, I conducted the regressions including dummies indicating the number of days the endorsed candidate had the endorsement republished. The results are reported on Table 2.10.

[13]Consistent with this interpretation, I performed the estimations for the gubernatorial race and I did not find a "Tuesday Advantage" result.

[14]Most newspapers in the sample (75%) start reprinting their endorsement list on the last Sunday before the election.

Table 2.9: Percentage of newspapers by last endorsement publication

	2002 election		2006 election	
Total number of publication days	Before Election Day	Election Day	Before Election Day	Election Day
0	18.9	0.0	18.0	0.0
1	75.5	23.3	82.0	23.3
2	5.7	60.0	0.0	60.0
3	0.0	16.7	0.0	16.7
Number of newspapers	53	30	50	38

Note: Total number of publication days refers to the times that newspapers republish their endorsements in the three days preceding the election.

Table 2.10: Effect of endorsement republished on election day on endorsed candidate vote share

	(1)	(2)	(3)	(4)
Had an endorsement published on Election Day	0.767 (0.774)	0.823 (0.681)	1.856 (0.601)**	1.720 (0.643)**
Number of publication days				
Three	0.195 (1.594)	-0.820 (1.897)	0.256 (1.786)	0.902 (2.148)
Two	-2.850 (1.493)**	-2.950 (1.672)*	-1.248 (1.593)	-1.184 (1.872)
One	-1.429 (1.312)	-1.159 (1.561)	0.049 (1.516)	-0.846 (1.792)
Candidate characteristics	n	y	y	y
Newspaper characteristics	n	n	n	y
County characteristics	n	n	y	y
State, Year and Race-fixed effects	n	y	y	y
R^2	0.006	0.099	0.324	0.339
Number of observations	2615	2607	2474	2372

Notes: 1) The dependent variable is candidates' vote share.
2) Robust standard errors clustered at the county level are reported in parenthesis. ** 95% significance, * 90% significance.
3) The unit of observation is endorsed candidate-county-election-year.

The coefficient associated with having an endorsement published on Election Day is robust to this specification and the days-dummies are not statistically significant. This shows that the frequency with which the endorsement is published is not correlated with candidates' vote share, while having an endorsement published on Election Day is correlated with vote share.

Table 2.11: Effect of endorsement republished on election day on endorsed candidate vote share

	(1)	(2)
Had an endorsement published on Election Day	1.823	1.379
	(0.848)**	(0.894)
Candidate characteristics	y	y
Newspaper characteristics	y	y
County characteristics	y	y
State and Race-fixed effects	y	n
Newspaper and Race-fixed effects	n	y
R^2	0.408	0.438
Number of observations	682	682

Notes: 1) The dependent variable is candidates' vote share.
2) Robust standard errors clustered at the county level are reported in parenthesis. ** 95% significance, * 90% significance.
3) The sample is restricted to candidates endorsed by newspapers that switched endorsement timing across elections.
4) The unit of observation is endorsed candidate-county-election-year.

Another explanation for a "Tuesday Effect" is that endorsements from national and larger newspapers are the ones influencing voters. These newspapers are also more likely to publish their recommendations on Election Day, as illustrated in Table 2.4.

I conduct regressions restricting the sample only to candidates endorsed by newspapers that switched their endorsement timing across the 2002 and 2006 elections. These are newspapers that last republished their list of political endorsements on Election Day in the 2002 election, and last republished their list of political endorsements before Election Day in the 2006 election, or vice-versa. I test whether, on average, endorsed candidates have a higher vote share when the newspaper publishes its endorsement on Election Day than otherwise. The purpose of this is to test whether the "Tuesday Advantage" result is robust to the characteristics of newspapers that self-select into republishing their endorsements on Election Day.

Table 2.11 illustrates the results. The coefficient associated with the ”Tuesday Endorsement” is positive (1.82) and it is statistically significant, different from zero at the 7% level of confidence (Column 1). In Column 2, I present the results obtained by controlling for newspaper-fixed effects. The coefficient is still positive (1.38), but in this case the ”Tuesday Advantage” is only statistically significant at the 12.5% level of confidence. These results are not as strong as the ones shown in Table 2.6. However, the point estimate for the coefficient associated with having an endorsement published on Election Day is very similar. An explanation for this ”weaker” result is the smaller sample size (it is 3.45 times smaller than the one for which the regressions in Table 2.6 were conducted), combined with a larger number of covariates being controlled for. Under this specification, the test might not have enough power to detect an effect.

2.5.3 Heterogeneity of the ”Tuesday Effect”

If the ”Tuesday Advantage” is explained by readers basing their votes on endorsements, it should be larger in cases of more influential endorsements. In an attempt to identify what determines the effectiveness of the ”Tuesday Endorsement,” I perform an analysis of interactions of a dummy indicating whether the candidate had an endorsement republished on Election Day with candidate and newspaper characteristics. The purpose is to quantify whether the ”Tuesday Effect” varies according to these characteristics.

Column 2 in Table 2.12 presents the results of the interaction of the coefficient associated with the ”Tuesday Advantage” with two newspaper characteristics. The first is whether the endorsing newspaper is among the top 100 largest pa-

pers in the US: larger newspapers might be perceived as more reliable and be more influential. I also test whether the "Tuesday Effect" differs if the endorsement is made by moderate or by extreme newspapers. Extreme newspapers could be more politically biased, and their endorsements might be perceived differently.[15]

The regression results does not detect heterogeneity across these newspaper characteristics. It does not reject the hypothesis that top 100 largest newspapers are more influential than other papers. It also suggests that endorsements made by extreme newspapers are not perceived differently than endorsements made by moderate newspapers.

Column 3 in Table 2.12 describes the results of interactions with two candidate characteristics –sharing the political orientation of the endorsing newspaper, and incumbency. Newspapers endorse both Republicans and Democrats, but the effect of the endorsement might vary, according to the match of a candidate's political point of view with that of the newspaper endorsing them. To test this, I interact the Tuesday endorsement with a dummy indicating whether the candidate shares the political orientation of their endorsing newspaper. Some studies claim that one of the reasons for the incumbency advantage in the United States is the name recognition of these candidates (Gerber 2004; Jacobson 1978, 1985). Incumbents might benefit more from "Tuesday Endorsements"

[15]Dellavigna and Kaplan (2006) develop a model to understand the consequences of media bias on readers/viewers evaluation of media announcements. Readers are assumed to be uncertain about candidates' quality and media political position. Readers update their beliefs based on media announcements (like their endorsements, for example.) The model makes predictions about readers' evaluation of candidates as a function of how extreme (and therefore politically biased) the endorsing newspaper is. They assumed two different cases: (i) readers process media information filtering out newspapers' political preferences; (ii) readers process media information without filtering out these preferences. Their result is that in case (ii), readers are affected by media bias and the size of this effect is increasing in the level of newspaper extremism. In case (i), readers are not affect by media bias and the level of newspaper extremism does not affect evaluation of candidates.

Table 2.12: Effect of endorsement republished on election day on endorsed candidate vote share

	(1)	(2)	(2)
Had an endorsement published on Election Day	1.833	2.776	3.424
	(0.545)**	(1.052)**	(1.313)**
Had an endorsement published on Election Day*Extreme Newspaper		-1.050	
		(0.795)	
Had an endorsement published on Election Day*Top 100 newspaper		-0.533	
		(1.151)	
Had an endorsement published on Election Day*Incumbent			0.432
			(1.076)
Had an endorsement published on Election Day*Same political orientation from the newspaper			-3.577
			(1.313)**
Candidate characteristics	y	y	y
Newspaper characteristics	y	y	y
County characteristics	y	y	y
State, year and race-fixed effects	y	y	y
R^2	0.337	0.336	0.340
Number of observations	2371	2371	2371

Notes: 1) The dependent variable is candidates' vote share.
2) Robust standard errors clustered at the county level are reported in parenthesis. ** 95% significance, * 90% significance.
4) The unit of observation is endorsed candidate-county-election-year.

since readers/voters are more familiar with these candidates and political recommendations could reinforce readers' propensity to vote for these candidates.

The results show that candidates with a political orientation different from that of the newspaper endorsing them, who also have a newspaper endorsement published on Election Day, have an advantage of 3.42 points with respect to other endorsed candidates (Column 3). The regression results show that incumbents do not benefit differently from endorsements than other candidates.

2.6 Conclusion

This chapter documents the electoral advantage of candidates who have a newspaper endorsement republished on Election Day in comparison with other candidates who have a newspaper endorsement republished on days prior to the election. This finding holds for low-visibility races, such as the state Senate, the state House and the U.S. House of Representatives.

Assuming that candidates endorsed at different times are otherwise comparable, the documented "Tuesday Advantage" amounts to a "Tuesday Effect" on votes. This is a sufficient condition to prove the existence of a newspaper endorsement effect on votes, and that the date of an endorsement's publication shapes its effectiveness. The estimated effect is a lower bound number to the total effect of newspaper endorsements on vote outcomes. This is because I do not measure the initial effect of endorsements on electoral outcomes for papers that last republish their endorsements on a date prior to the election.

I argue that newspaper endorsements affect candidates' vote share because readers make voting choices based on endorsements they read on the day of the election. Citizens might follow last-minute reliable recommendations, such as those made by their local newspaper on Election Day, in races in which they are still undecided by the time they have to vote. These recommendations might be taken more seriously than others because readers pay more attention on endorsements on the day they need to use this information.

The regressions performed in this study suggest that "Tuesday Endorsements" affect candidates' vote-share, but not voter turnout. A possible explanation is that readers who seek newspaper advice have already made up

their minds to vote, and so this decision is not affected by newspaper endorsements. The results show that a "Tuesday Endorsement" can affect candidates' vote share, on average, between 1.3 and 1.9 points.

The results also reveal that "cross-partisan" endorsements—Democrats endorsed by right-wing newspapers or Republicans endorsed by left-wing newspapers— are more influential than "same-partisan" endorsements. Knight and Chiang (2008) find results consistent with this chapter. Their explanation is based on readers' rationality. Readers understand that newspapers have lower standards in endorsing candidates with their political views. This leads readers to think more highly of the other endorsed candidates (who do not share the endorsing newspapers' political point of view.)

This study does not interpret the current results as conclusive evidence that readers filter out media bias when evaluating endorsements. This is because I did not find an effect on turnout. The results reveal that the way that the "Tuesday Endorsement" affect voters is only by helping readers to decide who to vote for. If readers not exposed to newspaper recommendations vote based on candidate's party identification[16], only the effect of "cross endorsements" are identified.[17] Therefore, the results found in this chapter are not conclusive about readers' behavior.

[16]See Ansolabehere, Rodden and Snyder (2008) and Jesse (2009.)

[17]To illustrate this point, consider the hypothetical case of a reader politically aligned with his newspaper, for example, a Democrat voter that reads a left-wing newspaper. In addition, assume this reader blindly follows his newspapers' recommendations if he sees them on Election Day or otherwise votes according to candidates' political orientation. In this case, if this Democratic reader see an endorsement of the Democratic candidate, he would vote just the same as he would vote in the absence of an endorsement. The endorsed Democratic candidate would not get an extra vote due to this endorsement. Nonetheless, if his newspaper had endorsed a Republican candidate, this candidate would get an extra vote due to the endorsement.

Despite that, this study's result addresses another important public policy concern. Are newspapers helping to elect "weaker" candidates that share their political views with their "Tuesday endorsements"? Does media bias affect election outcomes? In Section 2.4, I show that candidates that have a newspaper endorsement published on Election Day have characteristics, other than receiving this endorsement, that makes them get less votes. This can be explained by newspapers' incentives to advertise candidates that share their political views. Nonetheless, at least for the "Tuesday Endorsement" case, media bias does not affect election outcomes. Only candidates with different political views from the endorsing newspaper benefit from the "Tuesday Endorsement."

The chapter's results shed some light on both reader and newspaper behavior. The literature that theoretically models newspaper behavior is silent on how newspaper and reader interaction might affect each one's candidate evaluation. Dellavigna and Kaplan (2006) and Knight and Chiang (2008) model the effects of media announcements on readers' voting behavior. They assume that newspapers confront rational readers who evaluate newspaper recommendations. Readers have some prior knowledge about newspapers' political preferences, and use a Bayes' rule to recover the unknown parameter of interest that will affect their votes (in their case, the candidates' quality) from newspaper recommendations. However, newspapers' endorsement decisions are assumed exogenous to readers' preferences. A reasonable assumption is that, in their choices of who to endorse and when to publish the endorsement, newspapers internalize how readers react to their endorsements and their ability to affect elections. Further theoretical and empirical development is needed to understand newspapers' electoral motives and how citizens evaluate and respond to the advice of opinion makers, such as newspapers, interest groups, electoral

polls and student organizations, taking into account that those opinion makers' decisions respond to citizens as well.

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