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DO LOCAL NEWSPAPERS SERVE LOCAL GOVERNMENTS?

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A Karla por su apoyo, amor y compañía.

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Abstract

This paper analyzes how local newspapers catered news stories in the 2012 Mexican local elections to find evidence whether these media outlets favored the incumbent party during campaigns as they constitute one of the main sources of local information for political decision-making and partiality, if the case, is likely to be found not only in elections but in important political events. To accomplish this, I evaluate bias understood as tone and amount of coverage for the incumbent during 15 months, 7 months before the election up to when the incoming government takes control. I find evidence of growing bias with rising competitiveness that can be associated to media capture. For municipalities in which newspapers could forecast the winner, with important presence of a second party, they always favored the winner. But in municipalities with scarce competitiveness there is almost non-existent bias supporting any party.

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1 Introduction

In a framework in which democracy and institutions contribute to economic development (Acemoglu et al. (2014), Acemoglu et al. (2012), Robinson et al. (2005)) and private investment is encouraged by social stability (Perotti (1996)). Elections, as political institutions serve to analyze how information is catered to citizens by media outlets as fundamental means for quality of public decision-making. Political information not only contributes to voters decision making in whom to vote for, also helps to keep politicians accountable (Snyder and Strömberg (2010)). Thus, answering if local newspapers serve local governments by biasing news stories towards incumbent party during elections contributes to measure a probable accomplice relationship that may last beyond elections and manifest whenever a political important event is approaching. Harming accountability, quality of citizens decision-making and, overall, economic development and welfare in the long run.

Although much attention was attracted by Mexican national politics after 2000 when PRI, the party that ruled national politics for 71 years lost the Presidential election, in an event considered as a wave of democratization (Greene (2011)). Many questions remain open, specially at local levels and how media outlets cater news stories during local elections, as a way of assessing local newspapers profit maximizing decisions on political coverage.

During elections democratic institutions are tested as incumbents make efforts to keep political power in municipalities using means like media capture. By controlling media outlets citizens' disposable information is biased affecting voting decisions (Besley and Prat (2006)). Hence, biased media outlets are useful for incumbent but have negative impacts on citizens political decision-making.

This paper analyzes how 45 State newspapers covered partisan news stories in 59 Mexican Municipalities, forming 193 groups of local newspapers and municipalities, as some newspapers cover at least the municipalities of the state, in most of the cases¹. This is done for the 2012 City Council elections, to find evidence if local media outlets bias tone and amount of coverage to

¹Only municipalites in the same State of local newspapers are considered.

favor local incumbent parties primarily during campaigns, when partial media can be recognized as local governments push sympathetic media to cooperate and local newspapers may choose to favor a party in exchange of future benefits.

Elections are natural experiments in which local governments increase the promotion of their agenda to keep political power in municipalities through means at their disposal. Citizens on the flip side have the power to reaffirm the party or elect another one of the multi-party Mexican system. For these two sides, information is an asset and analyzing who is favored by media outlets, whether citizens with unbiased data or incumbents colluding with media outlets points toward the health of democratic local institutions.

According to the National Survey of Political Culture (Encuesta Nacional de Cultura Política) of 2012, for 76.1 percent of Mexicans, television is the main source to be informed about politics. Far behind, only 5.36 percent cite newspapers. But 84.73 percent of Mexicans hear about politics in conversations with family, coworkers and friends. Even though, newspapers are not read by a big share of population, their influence goes beyond readers, as being exposed is understood as come into contact with news through a medium (Price and Zaller (1993)), and it is likely that somebody in family, work or friends is exposed to news stories.

Mexican television is highly concentrated, in broad terms is national only. Thus, governments and opposition recieve fewer attention, if any, during elections. It is plausible to think that local newspapers constitute one of the main sources of local politics information. Specially about candidates running for Municipalities. Bearing this in mind, local incumbents have substantial incentives to capture the local press.

The general picture of journalism in Mexico is not promising; this country is considered as a not free country to practice journalism since 2007 by Freedom House. Reporters Without Borders in the World Press Freedom Index locates Mexico in the 149, 153 and 152 positions for 2012, 2013 and 2014, respectively, of 180 countries, where the last is the worst. On the other hand, turnover and competitiveness in local elections has surged since 1994, reflecting a democratic reality. This combative scenario is likely to have an influence on media outlets coverage and

how local governments and media outlets interact. In addition Mexican voter shows sophisticated behavior with split-ticket voting in local and federal elections.

Even rational voters when having limited information can make wrong decisions (Anderson and McLaren (2012)). In conjunction with low-information elections, with no priors to form a criterion of choice, name recognition bolsters candidates support (Kam and Zechmeister (2013)). Newspapers have economic motivations to be sympathetic to get profits in the form of bribes (Besley and Prat (2006) and McMillan and Zoido (2004)), or gaining advertising contracts with local governments influencing editors to bias news stories (Reuter and Zitzewitz (2006)). Since newspapers compete in a two-sided market: advertising and newspapers sells. Media targeting improves benefits on newspapers and readers, but also competition drive prices of circulation down (Chandra (2009)). To this regard, it is expected that in a hard-won election newspapers segment their coverage to cater for supporters of a specific party. Thus, competition contributes to avoid withholding valuable information "just as market forces motivate auto-makers to produce better cars" (Mullainathan and Shleifer, 2005, p. 1031). On the other hand, monopolistic newspapers reduce value of information to readers and advertisers inevitably influence news stories (Ellman and Germano (2009)).

There is a growing literature investigating bias on media in empirical and theoretical models. To my knowledge this is the first time that all news stories are scraped and categorized with a machine learning algorithm wich enables consistent classification and opens up the possibility to analyze amounts of data where human coders cannot be efficient. To answer whether newspapers collude with local incumbents, I make a panel of partisan tone of coverage from January 2012 to March 2013, which comprises different stages of political periods from months before the election to months after the incoming government rules the Municipality in order to analyze how newspapers give coverage to this periods, principally during campaigns, by comparing municipalities with or without turnover, as a shock or treatment to identify an obsequiousness relationship.

There are clear limitations with this dataset since many local newspapers changed their website and destroyed previous versions there was no way to retrieve this content and have to be excluded from this research. Another drawback is few municipalities, as only cities with at least 100,000 habitants had information available about quality of government. This two main weaknesses restrains external validity and keep statistical power low. Another limitation relies on the measurement of explicit party mentions when bias may come in more subtles forms.

The empirical strategy consists on an OLS model in which I consider partisan bias in local newspapers favoring the incumbent against the main challenger as the dependent variable, the explanatory variables are dummies of time effects, in this case political periods, and interactions with turnover, controlling for market structure, demand preferences, and structural political factors. The main empirical challenge in this model is that the relationship between bias and turnover can go either way. To avoid possible reverse causality I run the model for municipalities with different levels of competitiveness since newspaper sway varies in literature from 1 up to 5 percentage points (Ansolabehere et al. (2006)). Hence reverse causality of partisan bias with turnover can be discarded in municipalities where the margin of victory was bigger than 5 percentage points.

Results show that local newspapers bias news stories during campaigns towards the party that later is elected, this happens in municipalities with or without turnout when they can forecast the results as competitiveness allows but there is relatively high presence of the second-place party. In municipalities with a margin of victory of less than 5 percentage points a growth in competitiveness of a standard deviation results in an average of 44 more neutral news stories of the incumbent over the main challenger during the months of campaigns or 22 news stories with positive tone in the same period. In contrast, in municipalities where the winner was elected with a least a margin of victory of 15 percentage points, an increase of a standard deviation in competitiveness results in 2 more neutral news stories of 1 news story with positive tone. I find evidence of less partial coverage when newspaper market is more competitive.

2 Literature review

Newspapers are considered as firms with economic and political incentives that have the power to bias or withhold information, hence can sway readers and affect the political decision-making. To keep news unbiased and publicly known, two main forces arise, two sided market competition and institutions relative to freedom of the press (Gentzkow et al. (2014)). Ansolabehere et al. (2006) with US data found that during the 1940s incumbents had endorsements 60 percent of the time, but this percentage grew to 90 percent nowadays, the benefits of an endorsement is to recieve 1 percent to 5 percent of more votes. In Mexico the money for campaigns is primarily public funding, hence newspapers do not endorse candidates but may have preference for any in editorials and columns. Chiang and Brian (2008) found that if readers are able to recognize bias the sway is reduced, thus I consider only news stories as the information available to readers as Gentzkow and Shapiro (2010) did.

"Several papers have shown that changes in the news coverage of a single local newspaper or television station can have larger effects on consumer knowledge about politics" (Gentzkow and Shapiro, 2008, p. 151) and later how they vote. Favoring the incumbent party is understood as giving more and favorable coverage in news stories against the main challenger, this is relevant since "[m]edia owners can manipulate political outcomes by distorting the information that consumers of news receive" (Anderson and McLaren, 2012, p. 854). The bias literature can be divided in four types according to the purpose of this paper:

Table 1: Dimensionality of Bias						
Dimension	Dimension Elements					
Politics	Partisan	Structural				
Preferences	Supply	Demand				
Content	Explicit	Implicit				
Market	Advertisement	Credibility				

In the **politics** dimension, utterly described in Hofstetter (1976), I mainly use two elements: partisan and structural bias. To illustrate this concept, lets consider an election where two contenders are in the race; an experienced politician, the incumbent party candidate, versus a non ex-

perienced, the challenger. Evidently the experienced politician may receive beneficial coverage as a matter of curricula and as the incumbet he generates more news interesting to the audiences. This is considered the structural bias where media outlets have to pick news appealing to its consumers. Whereas partisan bias relies primarily in supporting the experienced or the non experienced candidate only by his party affiliation. The theoretical difference is obvious, but not so easy to identify in the contents. With this background to gauge bias assuming a perfectly balanced benchmark candidates is rather not credible. Schiffer (2006) did not find alarming results in bias coverage of US Senate candidates controlling structural bias in newspapers. An additional problem in structural bias is related with coverage due to government activities. Because of this, I will only consider news stories that contains the political party name, not alluding to government responsabilities.

Controlling for effects going from the press to readers, and backwards, is another challenge. This happens because readers preferences may affect what is reported and how this is made. In other words, people prefer to read news according to their prejudices. But not only consumers have predisposition, also do editors and journalists. This causal effect of readers preferences having a causal impact in newspapers is the main concern in Gentzkow et al. (2014), as their analysis is made in the long term. In the short run is more likely to observe how newspapers respond to differente levels of competitiveness and contrasting ideology competitors during elections

In the second dimension of bias analysis, **preferences**. On the demand side, Mullainathan and Shleifer (2005) concluded that newspaper accuracy is mantained by reader heterogeneity over media competition. Gentzkow and Shapiro (2006) analyzed how slant is related to priors of consumers. Later Gentzkow and Shapiro (2010) modeled the slant of newspapers as profit maximizers organizations taking demand as given, considering implicit slant that later will be described. Puglisi and Snyder (2011) showed that in the national level scandal coverage was aggresively published by opposite ideology newspapers, in a supply driven bias practice. At the local level, coverage was slanted following the ideology of readers in a demand driven bias. To limit this influence on the results, I use the opinion of citizens about the government and voting results in past elections to control for demand preferences.

On the supply side, Baron (2006) identifies slant in press through the journalists who want to advance on their careers, for example writing first page news, biasing the information in the editors ideology. Gans and Leigh (2012) found that in Australian newspapers editors are more partisan than journalists. The coverage of economic issues related to partisan preference of newspapers is analyzed by Larcinese et al. (2011) in whose results is shown that in a national context, newspaper political affiliation change the amount of coverage, changing accuracy to favor a political party. Lott and Hasset (2014) found similar results to the latter article. Djankov et al. (2003) studying State ownership of media in a sample of 97 countries found that this phenomena is primarily related to less democratic countries with weak economies, therefore big bias in the media. Linking demand and supply, Stone (2011) analyzed how priors in both sides of the market affect accuracy.

Preferences and beliefs about accuracy are not the complete story. Rather, persuassion of the media has been documented in DellaVigna and Kaplan (2007) where the voting share of a party was increased introducing a same ideology media outlet.

If readers are unable to correctly identify the bias of the media outlets when reading news they are clearly more susceptible to persuasion Milburn (1991). It should be easy to identify partisan preferences on columns. Following Chiang and Brian (2008) confirmation of Milburn (1991) hypothesis, this influence is reduced as readers are able to recognize the bias. As a consequence, columns may not sway voters as biasing news, hence accuracy of the media plays a major role during elections. This assumption, combined with political polarization and heregenous readers, in a model devepelod by Bernhardt et al. (2008), increases the probability of electing the wrong candidate. In this regard I only analyze news, not columns or editorials, as this entries in the newspapers have bigger impacts on readers.

In the **content** dimension of bias, the intention is to recognize ideological stance, whether it is explicit or implicit. Scholars have used both forms of analysis, the former essentially consists on measuring visible elements as front page relases. The latter uses sophiscated methods primarily associating rethoric of the newspapers to parties.

In the implicit branch analysis to find ideology of newspapers, Gentzkow and Shapiro (2010)

examined the phrases used by members of Congress in the 2005 in the *Congressional Record* identifying those in the news coverage. In this papers authors analyzed around 70 percent of total daily newspapers in United States with the help of an automated script. A pioneer paper in this branch is the one written by Groseclose and Milyo (2005), which used the number of times a media outlet cited a think tank and policy groups and compared this results against the citations of Congress upon the same groups. Gans and Leigh (2012) used 3 approaches combining citations as Groseclose and Milyo (2005) and explicit analysis finding that Australian media is quite centrist, possibly as a result of lack of competition. Thus, literature analyzing media outlets with a scientific methodology has grown, as it has importance on the quality of information do citizens count on.

In the explicit branch, Kahn and Kenney (2002) found slant in news towards the endorsed candidate in editorials and the influenced it provoked on voters as having better opinion of endorsed candidates in comparison with the non-endorsed ones. The closeness of the race also impacted on newspapers reports with negative criticism to candidates. Ho and Quinn (2008) coded editorial position as liberal or conservative of 25 US newspapers and compared this with their press releases of Supreme Court decisions in dosis-response pattern, finding results that were pretty similar to a database in which people vote for a position of the newspaper.

The **market** dimension of bias, serves as a counterpart to government capture, as advertisers rather choose a credible medium to advertise. But this should be taken with cautious, since governments "use tools such as regulatory authority or priviledge access to information to support sympathetic media" Gentzkow et al. (2014). However economic incentives would also lead newspapers to bias when government is an advertiser as subsequently studied.

To this extent Besley and Prat (2006) constructed a model aimming to identify media capture by the incumbent as endogenous, driving to conclude that media pluralism is an effective protection. Also, bias in the media reduces interesting news to the consumers, thus reducing commercial profits. Moreover, government is one of the biggest consumers of advertisement. Besley and Prat (2006) considers primarily the sell of news but the other side of the market are the advertising sells, which also affects bias. In Argentina, Di Tella and Franceschelli (2011) found that an increase of one standard deviation of government advertisement is associated with a decrease of 18 percent of a standard deviation in corruption coverage in a front page per month. Reuter and Zitzewitz (2006) observed personal finance publications favoring advertisers, but failed to find this effect on national newspapers. In Italy Durante and Knight (2012) exploiting a natural experiment in which Berlusconi came to power, reported a shift in ideology of public television to the right, in the same direction of government's ideology. Resulting in a demand shift, as viewers opted for different channels according to their political leaning. A documented case of bribery and corruption in media was done by McMillan and Zoido (2004) of the Peruvian government. Gambaro and Puglisi (2009) analyzing Italian press found that as advertisers bought more ads, newspapers published more articles related to that company than before.

Mantaining a high-credibility endorsement in newspaper has more influence than a low-credibility (Chiang and Brian (2008)), but influence or lack of accuracy can be exploited to sway voters as explored before. Gentzkow and Shapiro (2008) take this last argument and measure it against what happened with harmful news to the government. Concluding that, indeed, pluralism serves as a guarantee to the government's capture. Competition and economic incentives to supply demand for news, conforms the bedrock to diminish government power over media. But this effect is not very clear with newspapers advertisement sells constitute a bigger share of profits compared to the sells in the readers market, possibly the case of local newspapers in places with short demand.

Considering the size of the advertisement market in a theoretic model Gehlbach and Sonin (2014) showed that as the market grows, holding ownership constant, private media are less biased. But after a certain point, the government is inclined to takeover the media, ending with a more biased media outlets. The latter may fail to hold, but this could be a potential reason for threating journalists as happens in Mexico, as a consequence of relative concentrated market.

A possible mechanism which enables press to sway voters could be found in how mass media introduce ideas or, even, recognition of candidates. With low-information elections name recognition proved to bolster support Kam and Zechmeister (2013). In a local election name repetition

in the press may spur support. But in a presidential election, where there is more information available, may not have significance.

There is also a vast literatue analyzing the influence of newspapers' ideology on voting results as Erikson (1976), Druckman (2005), Chiang and Brian (2008), and Gerber et al. (2009). These papers compare explicit bias and known endorsement of newspapers with voting results taken from exit polls primarily. This strategy enables the researcher to measure what information did voter have and compare with whom did he vote for.

This papers aims to contribute to empirical literature identifying bias in newspapers by exploring and analyzing the coverage of an important political event as local elections in which partisan goals are clear. This is relevant since if partial media is found then the same partiallity is to be expected in other political important events where bias is rather impossible to identify in a scientific approach, endangering informed political decision-making and democracy itselt.

The main empirical challenge in this paper is to control for possible endogeneity in the competitiveness caused by bias in the newspapers. If newspapers swayed voters then the observed competitiveness and turnover could be influenced by the bias, which is the explained variable. Unfortunately it is not possible to estimate this influence in Mexico since, to my knowledge, there are not empirical studies conducted measuring the sway. Using Ansolabehere et al. (2006) results as a ceiling of 5 percent more votes when having and endorsement in US. Splitting municipalities with less than 5 percent of victory margin and controlling for political preferences, newspaper market incentives are captured by the Herfindahl-Hirchsmann Index. I also control for demand preferences, possible effects of the Presidential election that was coincident with local elections and for population characteristics.

3 Data

Partisan bias is understood as the result of other forms of bias as structural factors, market, and supply and demand preferences. In consequence it is necessary to get variables that characterize

these types of bias. In the case of partisan bias it is observed in news stories, but it is important to explain it in contrast of the refered forms of bias, because otherwise it is possible to partial media choices to publish favoring news stories to a better candidate when this is a factor of structure and could not be associated with partiality, among many other examples.

To get the partisan bias I used a web scraper algorithm to get all the press releases available since January 2012 from local and national newspapers websites. All sections except for columns were scraped, whenever possible. The main drawback using a web scraper is that a big share of newspapers changed the website structure and did not keep older records, therefore those are not included in the analysis. 10 Municipalities are not included due to not having at least 10 months and 100 news stories of coverage. In total 193 observations of a local newspaper covering the municipalities within the operations State.

The amount of coverage obtained by searching the parties names or the main abbreviations for them in all the lines of the scraped press releases. The tone of coverage of the partisan lines of press releases is obtained with a Naïve Bayes classifier with two categories: positive and neutral, which in a nutshell given the vector of features, assign a weight to each one given the class the document belongs, when classifying unseen data it matches the weights of the document's features and by maximum likelihood assign the partisan line to the defined categories. The features for partisan lines are stemmed words, bigrams and trigrams. To train the classifier 2,600 partisan lines were manually classified. To test the classifier a third of the classified set randomly assigned to the training set the two thrids are used as testing set. Whenever two or more parties appear in the same line the algorithm is run for each party, considering commas to take into account syntax. This results in around 3,000 partisan lines.

The overall precision of this classifier is 74 percent. Table 2 shows how the NB classifier performs with each category of the testing set. The most informative features are stems for "society", "trust", "necessary", "Mexicans", "important" are one of the most used in positive category, "duty" for example is the main feature for the neutral category. With this approach news stories are divided upon lines then to assing a tone because a party may appear many times, the last time

Table 2: Classifier confusion matrix

			NB Classifier			
			Positive	Neutral	Total	
	Docitivo		262	154	416	
Manual Classification	rositive	%	62.98	37.02	100	
	Neutral		372	1242	1514	
		%	23.05	76.95	100	

Notes: To guarantee that the method to choose features further explained in Appendix 6.3, is consistent the training set was randomized many times with similar results.

it appears is analyzed with the classifier and the tone is given.

This algorithmic classification is based upon manual classification, offers advantages and disadvantages over human coders, the main benefit is opening the possibility to classify big data efficiently and consistently, but failing to understand nuances in the use of words that a human can easily understand. Since it was necessary to classify around 50 thousand news stories, the NB classifier is desirable over manual coders. From January 2012 to March 2013 the amount of news stories in the database is 1'394,175 of those 103,344 are partisan from which 41,282 belongs to the considered municipalities within the State of local newspapers. From these news stories I get the coverage simply as the the number of press releases refering to the incumbent party and the main challenger in the Municipality. The variable coverage then is measured as $\sum_{i=1}^{n} news_story_i$ where *i* are the news stories by newspaper coverage within the municipalities of its State, and *news_story* is an indicator variable that takes the value 1 if the news story explicitly covers the incumbent party or the main challenger's party.

In Mexico it is customary that small parties make alliances with the main national parties for elections at municipalities. Thus, I only take into account bigger parties as the ruling party and main challenger in most of the cases, breaking this rule when the left wing party PRD formed a coalition with the right wing party PAN, and when PT and MC, two left wing small parties formed a coalition. In those cases the coalition is considered as two joint parties, this is, if a new story covers both parties is considered two times. This reasoning may lead to double counting but the coalition PAN-PRD was unstable and its purpose was to defeat PRI in 2009, in 2012 both

parties were defeated, this coalition happened in 2 of the 59 municipalities, hence, they should be considered as the same party in 2012.

The tone of coverage is a weight that takes the value 2 when the tone of coverage is positive and 1 when it is neutral, relative to the coverage. With these variables the measure bias favoring the incumbent party as the main explained variable is measured as:

$$bias_favoring_incumbent_party = \sum_{i=1}^{n} tone_coverage_incumbent_party_i - \sum_{j=1}^{n} tone_coverage_main_challenger_party_j$$
(1)

The bias favoring incumbent party is interpreted as the amount of coverage weighted by its tone that the incumbent recieve over the main challenger party. To simplify its interpretation over time I keep the same parties as the incumbent and challenger over time, even after elections. Suppose that a local newspaper was favoring the incumbent party we should expect a positive number during campaigns, but there is turnover, if after the results are known the newspaper bias its coverage to favor the new incumbent we should expect a negative number. Hence keeping the same parties in its position before elections helps to the interpretation of results.

Observations correspond to each month and a local newspaper covering the Municipality within its State, this groups have at least 11 months of 15 months and a minimum of 100 partisan news stories over the coverage period. In total there are 193 groups with an average of 14.9 months of coverage. Including group and month in Equation 1.

The Herfindhal-Hirschman Index (HHI) of newspapers was calculated with public data available in the Mexican Ministry of Interior (Secretaría de Gobernación) in the National Register of Print Media (Padrón Nacional de Medios Impresos), with weighted averages for those who did not report numbers were computed from the complete reports from the same locations. HHI is used as measure of market concentration.

Because this paper focuses on 2012 local elections it is necessary to get all electoral information of competitiveness, turnover and historical trends of municipalities elections. This dataset was

build up from multiple sources and covers from the 1988 elections to 2012 elections considering City Councils results. The latter local election was concurrent with the Presidential, hence some effects of the National level have influence in the local sphere through political structure including the incument party at the City Council and competitiveness.

I use the citizens opinion of Municipal Services and Corruption as proxy variables to demand preferences. This data was taken from the National Survey of Governmental Impact and Quality (Encuesta Nacional de Calidad e Impacto Gubernamental) conducted by the The National Institute of Statistics and Geography (known in Spanish as INEGI) performed in 2011. This covers the period before the election.²

3.1 Municipalities elections

The Mexican electoral system suffered transformations with the time, tending to be more democratic as the population demanded. In figure 1 is represented the evolution of turnover, competitiveness, split-ticket voting of Presidential elections versus City Council elections and the share of ruling parties in the 59 analyzed municipalities since 1988 to the 2012 election. Competitiveness is calculated as 1 - (margin of victory).³ The Mexican electoral system is composed primarily by 7 parties, the main competitors are PRI (Partido Revolucionario Institucional) a centrist party which ruled the country for 71 years, until 2000 when lost against PAN, but in 2012 won again the Presidential elections, the right-wing party PAN (Partido Acción Nacional), the left-wing party PRD (Partido de la Revolución Democrática) and another 4 smaller parties which usually make coalition with the former 3 parties.

In the first panel of Figure 1, competitiveness surged in 1994 and kept high during all the subsequent years. With competitiveness turnover rose. These facts account for a considerable awareness of citizens when deciding whom to vote for, which is supported by a considerable split-

²Both surveys were conducted in areas with more than 100,000 habitants, combined with the requirement of having had local elections, only 66 Municipalities were left.

³Some municipalities before 2012 had elections that did not coincide. To simplify, all elections were recentered in the same years.

ticket voting whenever City Council elections coincide with Presidential elections. In the last panel can be seen how the share of municipalities by the main three parties changed over time, a downfall of PRI until 2006 where began to gain political ground, it seems that PAN moves in the contrary direction as PRI does, but PRD keeps relatively stable to the volatility of the other two parties.

Figure 1: Municipalities voting evolution



Notes: Graphs shown for the 59 municipalities analyzed. Split-ticket voting is calculated as the difference between the winner in City Council elections and the winner within the Municipality in Presidential elections when coincided. All elections were recentered in the same years, when necessary, to make them concurrent.

In 2012 City Council elections, competitiveness and turnover is related in table 3, in which municipalities are divided into four groups considering the competitiveness of the election. As long as competitiveness grows the bigger is the chance of turnover. Municipalities with High

Competitiviness (HC), with a margin of victory of less than 5 percent, hence a competitiveness equal or more than 0.95. The same logic applies to the group with Medium Competitiveness (MC) with values between 0.85 and less than 0.95, to the group with Low Competitiveness (LC) and for the group with None Competitiveness (NC).

The idea behind this division of municipalities with respect to the competitiveness observed in the election of interest relies on considering differences on political structure and preferences of voters that may change the coverage of newspapers regardless of alignment with incumbents. As the treatment consists on turnover it is also strategic for the newspapers to forecast who the winner will be to make a decision whether biasing coverage during campaigns, but in a hard-won election they are not able to do this and will reveal their favorite if any as the case in HC. For the other groups structural bias should grow since the odds for correctly forecasting who the winner will be bigger with less competitiveness, then a more competitive political structure has a negative correlation with competitiveness.

		Т	urnover	
Group	Competitiveness	No	Yes	Total
NC	<0.6	2	0	2
NC	%	100	0	100
	$0.6 \le x < 0.85$	19	4	23
LU	%	82.61	17.39	100
MC	$0.85 \le x < 0.95$	11	8	19
MC	%	50	50	100
ПС	0.95≤x<1	6	9	15
пс	%	40	60	100
	Total	38	21	59
	%	64.41	35.59	100

Table 3: Competitiveness by Turnover in 2012 Municipal Elections

Notes: Competitiveness is measured as 1 - (margin of victory). Data from election results was taken from Local Electoral Institutes.

3.2 Model

3.3 Theoretical Model

In the theoretical model explicit partisan bias is a consequence of editors choices to maximize profits based on their preferences, readers preferences, market and political structure, but also may choose to benefit incumbent party to gain advertisement or being benefited. The market competition refers to the amount of that have impacts on advertisement and circulation prices. Political structure are elements in the political scenario that promotes interest on certain candidates or in specific events as elections. During 2012 City Council elections reelection was forbidden, the only way to preserve political power is through their party, hence partisan bias is a good measure for media capture by comparing municipalities with homogenous characteristics and easier to identify when campaigns take place being a moment when partisan coverage grows and whether there exists bias it would easier to recognize. This is graphically presented in Figure 2.

Figure 2: Relations between variables



However incumbent bribes or any means to capture media are not observable nor editors preferences but have effects over partisan bias, in this case the dependent variable. A potential drawback is endogeneity between partisan coverage and readers preferences, in literature this effect over voting preferences is about 1 to 5 percentage points Ansolabehere et al. (2006). Using turnover as a treatment may be endogenous in municipalities with margins of victory of less or equal to 5 percentage points.

The reduced functional form of this model is:

Partisan Bias = f(Readers Preferences, Editors Preferences,

Market, Political Structure) (2)

Hence, I understand explicit partisan bias as a function of the refered four variables, following the dynamics in Figure 2. Media capture is internalized in the model considering changes over editors preferences. In the short run, turnover do not have impact in market. Editors make profit maximizing choices of partisan coverage catering news stories to readers with political preferences or swing voters seeking information to decide for whom to vote for, in the latter case bias have more sway over voters. In the market concentration, more competition prevents bias by the effects on the two-sided market. In the circulation side reducing prices and increasing unbiased information that readers prefer. On the advertisement side, in a monopoly advertisers automatically bias coverage, but as competition grows this effect diminishes. In the case of political structure, more competition of political parties leads to bigger coverage.

Media bias is endogenous to consumers priors and competition in the circulation market of newspapers (Gentzkow and Shapiro (2006)). Assuming that readers prefer news stories confirming their priors, catering information in the direction of readers priors make reputation. But potential bias may arise when this information is different from true State of affairs and readers have no other source to verify this data. As a consequence competition keeps information unbiased, because whenever readers verify that a media outlet is biased from truth in other press releases available, it lost its reputation. Hence, competition prevents bias by promoting to reveal information as dependable as possible. This mechanism enables segmentation promoting an increased welfare for readers and newspapers more competition drives prices down and targets news stories to matching audiences (Chandra (2009)).

In the natural experiment turnover is employed as an ex post change that shocks that during campaigns as a credible threat to incumbent parties, for municipalities where turnover occured with a big margin of victory the rotation was inevitable media capture would not the best strategy avoiding the costs it carries. But in the cases where triumph was not certain or the challenger party is threat, this political environment spurs intents to capture media. As a consequence political structure provoke different strategies and effects over partian bias.

Thus, the next assumptions are made:

- Market competition diminishes influence of incumbent over newspapers, reducing bias favoring incumbent,
- Political structure affects how partisan news stories are published by the interest on elections, more competition between parties is related with more partisan coverage, hence making bias more evident and vice versa,
- Readers preferences bias news stories towards a prefered party, and
- Editors preferences determine partisan bias and media capture, changes this preferences.

During the natural experiment five things can happen with bias favoring incumbent party as measured in Equation 1:

Table 4: Sign	of Bias I	Favoring	Incumbent Pa	arty during	Elections	(BFIP)
0		0		5 0		· /

	Scenario	Sign of BFIP
1	Newspaper bias news towards the incumbent party and wins the elections	+
2	Newspaper bias news towards the incumbent party and the challenger wins the elections	+
3	Newspaper bias news towards a challenger's party and the incumbent's party wins the elections	-
4	Newspaper bias news towards a challenger's party and wins the elections	-
5	Newspaper do not bias news	0

Analyzing only the sign of bias favoring incumbent party (BFIP) would not give any answer of obsequiousness, since newspapers' editors make their profit maximizing decisions about partisan coverage with other four elements described in Figure 2. Political structure also enables newspaper editors, through competitiveness, to forecast who the winner will be, as voters have clear preferences. This constitutes a compelling argument to include competitiveness as the main variable for political structure, as parties will try to make the best as they see bigger chances of winning the

election, then incumbents may push harder to local newspapers. If they respond in good manners then we would see an increase of bias towards incumbent party during campaigns with rising competitiveness taking into account the other three factors.

The aiming in this model is to capture effects of the forces driving bias, specifically to answer whether local newspapers serve local incumbents, which in the model is captured by editors preferences. This is done by comparing the tone and amount of coverage of incumbent party against the main challenger and how this measure evolves with subsequent months. In order to ease the identification of bias favoring incumbent party I use the 2012 City Council elections, since parties will try to make their they best to win elections and sympathetic media will reveal their preferences with bias supporting their favorite. This effect should be increased by threating presence of challenger party, thus treatment is ex post turnover.

To this purpose the analysis is done during 15 months in which it is not likely that new competitors enter in the newspaper market changing market structure. Taking into account that attention to candidates and chances of loosing the election are defined before the campaign, if anything so important happens before, it is already internalized given political structural during campaigns.

Keeping in mind that 2012 local elections coincided with the Presidential election, as PAN lost the latter, voting preferences may also depend on who was ruling in the Municipality, since voters may not prefer PAN rather PRI as an effect dragged by national policis. Thus it is needed to control for population opinion and incumbent party in the Municipality to avoid omitted variables. Editors preferences captures the newspaper decision to cooperate with local incumbents, by force or voluntarily as it is dangerous to practice journalism in Mexico, but this effect would define the information available to voters as a choice of the local newspaper endangering the quality of political decision making. But editors preferences are not observed, the idea is to include dummy variables of time to capture potential changes considering the five scenarios of bias shown in Figure 2.

The base theoretical model for the natural experiment, including controls for population characteristics, taking into account that bias favoring incumbent party is transformation of partisan bias of Equation 1 for Municipality and newspaper. Taking as a group a local newspaper that covers the Municipality within the same State and as national papers are based on Mexico City taking them as local newspapers for the Mexico City municipalities (Delegations). The model is:

$$BFIP_{g,t} = \beta_0 + \beta_1 Readers_Preferences_{m,t} + \beta_2 Editors_Preferences_{g,t} + beta_3 Editors_Preferences_{g,t} \times Turnover_m + \beta_4 Market_m + \beta_5 Political_Structure_m + \beta X + \epsilon_{g,t}$$
(3)

In Equation 3, g is the group for Municipality m of a local newspaper and t, time measured in months, editors preferences coefficients denote how much of BFIP is attributable to the average editors choices of coverage through time and this coverage is not associated to other sources of bias rather than editors preferences that are susceptible to change due to media capture. The 2012 election is used as a natural experiment to test if this preferences align with the incumbent party. Hence, interaction terms capture how did the newspaper biased news stories ex ante in municipalities that later had turnover as a catalyst for revealing their favorite when are able or not to forecast the winner. But editors preferences are not observed, time dummies capture changes in editors preferences, then the theoretical model is:

$$BFIP_{g,t} = \beta_0 + \sum_{t=2}^{15} \beta_{t-1}d_time_t + \sum_{t=1}^{15} \beta_{t+14}d_time_t \times Turnover_m + \beta_{30}Readers_Preferences_{m,t} + \beta_{31}Market_m + \beta_{32}Political_Structure_m + \beta X + \epsilon_{g,t}$$
(4)

Where g is the group for Municipality m of a local newspaper and t, time measured in months.

3.4 Comparability between groups

If control variables are well-balanced, considering political preferences, newspaper market structure, population characteristics, satisfaction with public services and opinion on Municipality corruption. Then partisan then we can control for other than partisan and supply preferences as sources of bias. As the aim of this paper is to gauge partisan bias in local newspapers as a mean to evaluate disposable information for voters in political decision making. Partisan bias may come from threats of stakeholders, preferences of editors or both. As important topics on their own, for the purposes of this paper are irrelevant, since the pervasive effects over citizens affect the same way the catering of partial information.

Using municipalities with no turnover as counter factuals for the ones with party rotation have more sense with higher competitiveness, but important conclusions can be made with changes in competitiveness while being aware of differences in the control and treatment groups. With the ceiling influence of newspapers of voters of 5 percentage points the group HC, a model for explaining the bias favoring incumbent party may suffer from endogeneity.

For citizens opinion on City Services and corruption is taken into account. For economic bias the HHI⁴ of newspapers within the Municipality. Last, population characteristics. These variables are used as control variables considered for bias, if they are balanced in the groups of competitiveness, then measuring bias within groups should not capture the structural, demand preferences and economic bias, leaving partisan bias easier to gauge.

In general in Table 5 shows that there is no statistical difference of means between the municipalities with and without turnover, this may be due to small groups. The average number of analyzed newspapers is near 3 in most the cases, this number resulted from the internet versions of the local newspapers with news stories after and including February 2012. The standard deviation of HHI for each group is high⁵ which helps to keep no statistical difference in averages between treatment and control groups, the same happens for the rest of variables that potentially cause bias.

⁴The Herfindahl-Hirchman Index (HHI) is calculated as follows, $\sum_{i=1}^{n} (s_i * 100)^2$ where s_i is the share of newspaper *i* in the market of all newspapers, whenever the Municipality belongs to metropolitan area, the market is considered as the same, then the Index is calculated for the whole metropolitan area.

⁵It is customary to consider a number below 1,000 as market not far from perfect competition. A number above the threshold of 2,500 shows signs of market concentration.

	Municipalities no turnover			Mun	icipalities wi	Mean difference		
	Group	Obs	Mean	SD	Obs	Mean	SD	P-Value
	NC	2	4	4.24	-	-	-	-
Newspapers	LC	19	3.89	2.78	4	3.5	1.73	0.79
analyzed	MC	11	1.34	0.4	8	2.87	2.79	0.88
-	HC	6	3.67	2.94	9	3	1.58	0.57
	NC	2	443.59	0.00	-	-	-	-
Newspaper	LC	19	893.4	833.87	4	1296.82	359.05	0.36
HHI	MC	11	1156.12	692.28	8	2019.72	1613.29	0.12
	HC	6	1838.8	1429.61	9	1152.89	562.71	0.21
	NC	2	1118271.00	989493.00	-	-	-	-
Description	LC	19	505819.42	253382.9	4	710323.25	374088.72	0.18
Population	MC	11	747101.7	529113.3	8	410961.1	250780.5	0.11
	HC	6	393889.3	244800.1	9	526544.8	424867.8	0.5
Varia	NC	2	26.08	0.20	-	-	-	-
Young	LC	19	25.43	1.52	4	26.59	1.46	0.17
People	MC	11	26.6	1.32	8	25.81	1.69	0.27
Percentage	HC	6	25.86	2.74	9	27.61	1.24	0.11
Non Poor	NC	2	26.09	3.34	-	-	-	-
nor	LC	19	29.89	6.60	4	26.83	9.65	0.44
Vulnerable	MC	11	26.21	8.55	8	28.14	12.93	0.69
Percentage	HC	6	27	14.27	9	21.95	6.88	0.37
-	NC	2	32.90	6.32	-	-	-	-
Poor People	LC	19	29.42	7.86	4	37.78	13.02	0.09
Percentage	MC	11	32.98	11.87	8	34.19	15.95	0.85
	HC	6	32.83	13.29	9	40.18	14.52	0.33
	NC	2	-1.4	0.13	-	-	-	-
Expected corruption in	LC	19	-0.92	0.29	4	-0.72	0.18	0.21
2012 compared to 2011	MC	11	-0.81	0.38	8	-1.02	0.45	0.27
	HC	6	-0.95	0.19	9	-0.86	0.28	0.52
Corruption	NC	2	-1.27	0.16	-	-	-	-
in 2011	LC	19	-1.03	0.22	4	-1.01	0.11	0.81
compared to	MC	11	-1.11	0.29	8	-1.14	0.24	0.79
2010	HC	6	-1.24	0.56	9	-0.93	0.55	0.31
City	NC	2	0.11	0.32	-	-	-	-
Services	LC	19	0.1	0.27	4	0.13	0.26	0.82
Satisfaction	MC	11	0	0.31	8	0	0.39	0.99
Sausiacuoli	HC	6	0.29	0.29	9	0	0.27	0.06

Table 5: Variables causing potential bias

Notes: only newspapers with a website with news stories from January 2012 and after are analyzed. The HHI of newspapers are estimates that the author made with information available in Secretaría de Gobernación. Corruption and City Services Satisfaction were taken from Encuesta Nacional de Calidad e Impacto Gubernamental of 2011 made by Instituto Nacional de Estadística y Geografía.

3.5 Coverage of the two main parties

During campaigns the coverage of the two main parties may change depending on the competitiveness of the election and whether there is a chance of turnover. Figure 3 shows how coverage changes with competitiveness splitting this trend between the municipalities with and without turnover.



Figure 3: Competitiveness and partisan coverage during campaigns

Notes: Competitiveness is measured as 1 - (margin of victory). Partisan bias is the sum news stories making reference to the incumbent party and the news stories of the main challenger party. In total there are 193 observations that correspond to one of the 45 local newspapers covering one of the 59 municipalities within the same State with City Council elections in 2012. The dotted line is a linear approximation to the data.

The coverage is the average number of news stories during April, May and July; the months that

conforms the campaign period.⁶ It can be seen that after the competitiveness goes beyond 0.9 some newspapers start to have a decisive coverage which is expected as more attention is demanded, but opens the possibility of favoring a party and if the case, as the number of news stories grows, it would be easier to identify bias, which if the case for little coverage would be harder to detect as problems with statistical power may arise.

Substantial coverage is essential in any case for greater bias favoring incument party. In Figure 3 coverage moves in the way expected from Literature Review in 2 caused by two main channels: hard-fought elections have a political structure that promotes interest seized by newspapers by targeting to supporters improving profits, the other way is by the incumbent pushing newspapers to contribute to campaign.

If newspapers improve partisan coverage during high competitive elections and bias do not grow as consequence, then it could be presumed that market structure restrains incumbents from capturing media during a period in which incumbents will try to be favored at any means at their disposal.

In Figure 3 with the exception of some municipalities which, coverage is lower in municipalities with no turnover, but there few observations to make it statistically concluding, but seems also to confirm less reportage for municipalities with less competitiveness. As a consequence of a political structure demanding less attention.

In Figure 4 the coverage is the average value of the municipalities by competitiveness level. The months begin in January 2012 as 1 to March 2015 as number 15, therefore with the beginning of the seventh month the campaigns finished and soon results are published. To facilitate the analysis the months are joint into periods by their average number: months 1 to 3 are considered precampaigns; months 4 to 6, campaigns; months 7 to 8, results; months 9 to 11, last government; and 12 to 15, new government. This Figure reveals levels of difference between control and treatment groups, which are revealing more coverage as a proxy of interest in elections in general for the ones that had turnover in all the periods, except for the municipalities with competitiveness between 0.85 and 0.95.

⁶This months do not necessarily are the legal periods for campaigns, nevertheless are months with bigger partisan coverage

I use 2012 City Council elections as natural experiment where turnover is the treatment to measure if explicit bias favoring incumbent party changes in with treatment as consequence of media capture or editors choices. Bias needs coverage, but it is not a consequence. In Figure 4 coverage in municipalities with turnover is higher than without in high competitiveness, which requires further analysis done in the next sections, to answer whether this numbers favored incument party or covered both main parties as a consequence of high competitiveness. Coverage is inverted for municipalities with moderate competitiveness with more reporting for municipalities without turnover this implies more attention of the media to places where incumbent won again the election, but few observation in places with turnover and newspapers, which could be associated with substantial editors preferences for the incumbent. For municipalities with low competitiveness elections only in the case of turnover attention of the media is substantial which could be connected with political elements that induce more attention as rotation of parties accompanied by huge difference in margin of victory.

Partisan coverage gets to its peak at campaigns, in period 2. As expected dimishes through time consistent with changes in political structural elements and demand for rather other news stories than partisan considering that there is limited space in websites and printed editions.



Figure 4: Evolution of coverage

Notes: Partisan Coverage is the average for the months of each period. Period 1 (Precampaigns) comprenhends from January to March 2012. Period 2 comprenhends from from April to June (Campaigns). Period 3 (Results) comprenhends from July to August. Period 4 (Between Governments) comprenhends from September to December. Period 5 (Incoming Government) January to March 2013. Municipalities in HC (High Competitiveness) includes: 9 with turnover and 6 without turnover. Municipalities in MC (Moderate Competitiveness) includes: 8 with turnover and 11 without turnover. Municipalities in LC (Low Competitiveness) includes: 4 with turnover and 19 without turnover. Municipalities in NC (No competitiveness) includes: 2 without turnover.

3.6 Bias favoring incumbent party

Bias favoring incumbent party is measured as described in Equation 1. This is relevant since not only the coverage of the main two contenders is crucial in the market of information but how newspapers cover those news stories by using different tone. This measure combines how much and the tone of the coverage. A positive number is associated with partisan bias supporting the incumbent party. A negative number would reveal bias in the coverage, in the case of no party rotation supporting the main challenger party, and when there is turnover favoring the next incumbent party. The first question to answer empirically is whether bias in favor of incumbent party is catalyzed by an increase in competitiveness, and how newspapers cover parties when they can forecast the winner of the coming election.

In the model supporting this paper it is expected that as the probability of loosing the election grows, incumbents will respond with bigger compromises for their partners and spending more money on the campaign, thus a higher number in the bias for incumbent party could reveal stronger ties between the local newspaper and the local incumbent and more resources, legal or illegal, spent on the campaign. In the case of a not submissive newspaper it woult not increase its support.

In Figure 5 there are differences in bias favoring incumbent party when there is turnover, when the competitiveness is below 0.9, hence its possible to forecast the winner, three newspapers prefer to give better tone and coverage to the next incumbent during campaigns, which could be a sign of aligment, even before the new government is sworn in.

When competitiveness is high and there was turnover three newspapers biased in huge amounts the tone and coverage to favor the incumbent, this can be attributed to obsequious media outlets because even though I am not considering other elements causing or restraining bias as readers preferences and market competition. Newspapers with huge amount of coverage are in the same market as others and face the same readers preferences, therefore this difference in bias is not likely to be caused by other factors except editors preferences enhaced by the high levels of competitiveness in the political structure.

Overall when there with or without turnover newspapers favored the incumbent for the cases of



Figure 5: Bias favoring incumbent party during campaigns

Notes: Competitiveness is measured as 1 - (margin of victory). Partisan bias is the sum news stories making reference to the incumbent party minus the news stories of the main challenger party, weighted with a 1 if new story has neutral tone or 2 when having a positive tone. In total there are 193 observations that correspond to one of the 45 local newspapers covering one of the 59 municipalities within the same State with City Council elections in 2012. The dotted line is a linear approximation to the data.

high competitiveness during campaigns, This is consistent with literature for US in Ansolabehere et al. (2006). In Mexico the money for campaigns is primarily from a public budget, this endorsements are not secured with private money which raises questions about the nature of using public money to ensure that parties can compete. Further statistical analysis on this is find in section 4. Political structural is likely to be causing bias in municipalities beside the ones with high competitiveness. In the case of the latter group bias s on average positive during campaigns in municipalities which is associated with newspapers serving local incumbents when reelection of the party is endangered this can be seen in Figure 6. This could be caused by low competition on the newspaper market which is not the case as seen in Table 5 and editors preferences always for the incumbent party with no media capture is not sustained as in Figure 6 is shown that after the results are known bias favoring incumbent party is zero for municipalities with and without turnover, consequently this can only be assumed by media capture during campaigns.

In municipalities where newspapers could forecast the winner in municipalities with moderate and low competition. Only in the case of no turnover and moderate competition newspapers report bias during campaigns, this is explained by incumbents making efforts to diminish the presence of challenger party that keeps a threating presence for the incumbent, as this bias cannot be explained by readers preferences due to considerable base of supporters for the challenging party and market competition is not statistically different from municipalities with moderate competition and no turnover.



Figure 6: Evolution of bias favoring incumbent's

Notes: Partisan Coverage is the average for the months of each period. Period 1 (Precampaigns) comprenhends from January to March 2012. Period 2 comprenhends from from April to June (Campaigns). Period 3 (Results) comprenhends from July to August. Period 4 (Between Governments) comprenhends from September to December. Period 5 (Incoming Government) January to March 2013. Municipalities in HC (High Competitiveness) includes: 9 with turnover and 6 without turnover. Municipalities in MC (Moderate Competitiveness) includes: 8 with turnover and 11 without turnover. Municipalities in LC (Low Competitiveness) includes: 4 with turnover and 19 without turnover. Municipalities in NC (No competitiveness) includes: 2 without turnover.

3.7 Bias and partisan coverage

In Figure 7 bias do not follow any trend with coverage, before 50 partisan news stories during campaigns, but after this threshold coverage and bias favoring incumbent party follow a clear positive trend, this is not associated to any other type of bias except for editors choices since newspapers with more than 50 are in the same municipalities as others with less than this number. A possible explanation for this effect is related to incumbents trying to win again when the challanger is winning ground with voters, they react by organizing more events and interviews.⁷ The observations with heavy bias in favor of incumbent correspond to the same observations in Figure 3 this supports the previous reasoning. Since political parties have primarily public budget and are limited to spend a certain amount of money to be in similar opportunities, this is evidence that could exists violations to this principle in some cases when incumbents are threaten and still have the chance to win election.

3.8 Empirical Model

The information available to run model the theoretical model do not include readers preferences over time, hence assuming that partisan preferences do not change with time⁸ using proxies for preferences before the election, then dummy variables of time capture not also partisan preferences of editors but also demand preferences if they change over time, this is a drawback if readers preferences on political parties change within months. Another limitation of the empirical model is that it is not possible to measure how much of the change in partisan preference is due to newspaper sway, using a ceiling of 5% as the maximum influence over votes of newspapers as the results found in Ansolabehere et al. (2006), then the group HC may suffer from endogeneity, but as shown in my dataset in section 3.6 in Municipalities with high competitiveness the bias is positive with or

⁷This is derived of the most common words used in positive tone in the classifier seen in Section **??**, as this words are used primarily by politicians in campaigns.

⁸This assumption is done as in the last year of the incumbent and when the incoming government rules only swing voters may change their mind with partisan bias in newspapers, thus the effect of readers partisan preferences is fixed for the Municipality in the considered time. For municipalities with high competitiveness there is potential reverse causality, since swing voters may end up deciding the winner, which should be diminished by other exogenous variables, but this is a drawback in this model for hard-won elections.

Figure 7: Bias favoring incumbent party and Partisan coverage during campaigns



Notes: Partisan bias is the sum news stories making reference to the incumbent party minus the news stories of the main challenger party, weighted with a 1 if new story has neutral tone or 2 when having a positive tone. In total there are 193 observations that correspond to one of the 45 local newspapers covering one of the 59 municipalities within the same State with City Council elections in 2012.

without turnover during campaigns, thus the hypothesis of newspaper influence to provoke turnover is not empirically important in this dataset.

The incumbent favoring bias in local newspapers as defined in Equation 1, averaged by the periods considered in section 3.5. Then, the 15 months of coverage analysis is divided in 5 periods: precampaigns, campaigns, results, between governments, new government. Equation 1 is transformed into:

 $bias_favoring_incumbent_party_{g,p=\rho} =$

$$\frac{1}{|t \in \rho|} \left(\sum_{i=1, if \ t \in \rho}^{n} tone_coverage_incumbent_party_{i,g,t} - \sum_{i=1, if \ t \in \rho}^{n} tone_coverage_main_challenger_party_{i,g,t}\right)$$
(5)

Where $\rho \in \{\text{precampaigns, campaigns, results, between governments, new government}\}$. Bias favoring incumbent party is abbreviated as BFIP, hence the empirical model combining Equation 5 and Equation 4 is:

$$BFIP_{g,p} = \beta_0 + \sum_{p=2}^{5} \beta_p \ d_period_p + \sum_{p=1}^{5} \beta_{p+5} \ d_period_p \times d_turnover_g + X_g\beta + \epsilon_{g,p}$$
(6)

Where all the explanatory variables beginning with d_{-} are dummies and capture the change in coverage with periods, the interaction terms capture de difference in BFIP in time when there was turnover, controls for population characteristics and variables causing potential bias as the HHI of local newspaper market. For readers preferences I use City Services satisfaction, expected corruption from 2011 to 2012, change in corruption from 2010 to 2010, both from City authorities. and the incumbent party during the election.

Precampaigns is the base bias in the empirical specification in Equation 6, this model is run for each category of competitiveness, results are shown in Table 6. Dummies for incumbent during

election are the change with respect to base category PRI.

In the pooled OLS structural bias and partisan bias are captured by the coefficients as municipalities with different levels of competitiveness have different political backgrounds. To minimize this effect I run the regression for each group of competitiveness levels.

4 Results

To answer whether local newspapers serve local governments via partisan bias favoring incumbent party measured as the difference of explicit coverage of the incumbent party minus the coverage of the main challenger party during campaigns, weighted by tone of the news stories with a 2 for a positive and 1 for a neutral. Thus, a positive number implies more coverage for the incumbent party and a negative number represent more coverage for the main challenger during campaigns. This roles are not changed after elections to keep comparability in this measure. Therefore, a negative number in the bias dependent variable during campaigns and also negative number after with turnover should be understood as a favoring bias for the main challenger during campaigns and after this party wins elections. A positive number during campaigns and a negative number afterwards indicate bias favoring incumbent party in campaigns but later favoring the party that was the main challenger with or without turnover. In total there are 4 different possible scenarios for the sign of bias.

The periods analyzed focus on campaigns including: precampaigns, election results, between governments and incoming government. Taking into account variables that predispose coverage, I analyze the effect of political periods in municipalities with and without turnover to measure if newspaper editors prefer to endorse incumbent parties in political decisive times as campaigns.

	Table	6:	OLS	Results
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	Dependent variable: Bias Favoring Incumbent Party				
	NC	LC	MC	HC	
Campaigns	-1 625*	-0.511	9 632*	1 712	
Campaigns	(0.765)	(0.438)	(4.336)	(2.262)	
Results	-1.083	-0.667	-3.563	-1.242	
	(0.670)	(0.395)	(1.948)	(1.297)	
Dracompoints V Turneyor		-0.885	-10.42*	6.283	
Precampaigns × Turnover		(2.348)	(5.109)	(11.94)	
Compaigne V Turnovar		-2.502	-17.96*	0.357	
Campaigns × Turnover		(4.388)	(8.015)	(11.23)	
Desults X Tumovan		0.0120	-6.200	-1.115	
Kesuits × Turnover		(2.561)	(5.020)	(9.490)	
Potential Bias					
Standardized Compatitivanasa	-20.82	1.963*	17.59	44.87*	
Standardized Competitiveness	(12.53)	(0.995)	(10.73)	(18.09)	
Stondardized IIII		2.027	0.744	1.628	
Standardized HHI		(1.450)	(0.702)	(1.324)	
Incumbent during elections					
PAN		-5.192*	-12.33	-21.94**	
		(2.110)	(8.438)	(7.346)	
PRD		-2.024			
		(1.240)			
N	40	430	259	233	

Notes: Standard errors in parentheses. * p < 0.05, ** p < 0.01, *** p < 0.001

Regressions include controls for population characterisctics. 2 Municipalities have None Competitiveness (NC) with 7 local newspapers analyzed. 23 Municipalities have Low Competitiveness (LC) with 31 local newspapers analyzed. 19 Municipalities have Medium Competitiveness (MC) with 35 local newspapers analyzed. 15 Municipalities have Competitiveness (MC) with 32 local newspapers analyzed.

Time effects and their interactions with turnover dummy variable capture the influence of editors

preferences through time before, during and after elections. In the theoretical model I assume that editors decide their profit maximizing bias favoring incumbent party taking into account: readers preferences, market competition, political structure and their own preferences. Hence I include these variables in the model to contrast how the impact on bias favoring incumbent party. The threat of media capture in Mexican local newspapers is compelling since Mexico is classified as not free country to practice journalism. With this model I explain bias favoring incumbent party over the main challenger as an editors decision based on their own preferences changing with time that is derived by media capture as a result of preferences of population in the Municipality, HHI measuring market concentration of newspapers at City level, competitiveness and incumbent party as proxies for political structure.

In Table 6 all regressions include controls for incumbent party and population characteristics. For newspapers reporting the two municipalities with No Competitiveness (NC) in general there are no changes in bias with time or other explanatory variables. This results are explained by a political structure where elections are pretty much defined before citizens cast their votes, therefore few attention is put on newspapers news stories and incumbents have no incentives to capture media during this period because of their large support compared to opposition, the margin of victory was bigger than 40 percentage points.

For newspapers covering municipalities with Low Competitiveness (LC) winners made it with a margin of victory of 15 to less than 40 percentage points, positive bias favoring incumbent party is explained mainly by competitiveness. A standard deviation of competitiveness have an effect of 2 more neutral news stories for the incumbent party or 1 positive reportage more. If PAN was the incumbent party it received 5 neutral news stories less or combinations between positive and neutral, compared to main challenger. The former effect confirms assumptions of incumbents making efforts to keep its political power when there is presence of a not so weak challenger party, the latter effect is associated to a National phenomena that is dragged by local newspapers and could be interpreted as editors choices in partisan bias internalizing presumptions of readers preferences and National political structure.

Newspapers in municipalities with Moderate Competitiveness (MC) where there is a threatening presence of the challenger party, not enough to make them win the election or cast doubts in forecasts. But when challenger won the election made it in way that could be predicted during campaigns or even before. In theses cases newspapers changed bias with time favoring the next winner in the election, for the cases where there was no turnover it could be a result of media capture but for those municipalities with turnover this effect could be explained by being sympathetic to the next incumbent and also driven by readers preferences. Considering the differences in bias during campaigns in municipalities with and withoud turnover are almost the same, the winner recieved around 10 more neutral tone news stories or 5 positive tone or any combination of them, in reference to precampaigns, it is possible to attribute most of the bias due to readers preferences, since the differences are symmetric, if there were media capture there would be bigger bias for municipalities without rotation.

In the group of municipalities with High Competitiveness (HC) accompanied by no chances of correctly predict the winner during campaigns or before. With possible endogeneity between the winner and bias favoring a party. Results show no effect in bias favoring incumbent party in the change of political periods. But an increase of one standard deviation on the competitiveness leads to an average of 45 more neutral news stories covering the incumbent party or its equivalent with positive of mixed news stories, this effect is huge and in this case the only channel left to explain this enormous effect is through media capture motivated by having the probabilities against but possibly being able to sway voters. Whenever PAN was the incumbent party the effect against this party is around 22 less news stories with neutral coverage, or 11 positive tone news stories favoring the main challenger or any combination in between.

For other factors influencing editors decisions on bias as market competition, my findings are in the same direction as literature predicts, less competition leads to more bias favoring incumbent as market competition deters media capture. For variables used as proxies for readers preferences I find no evidence of its implications on partisan bias due to the nature of the proxies which are generalized for the population, not for the readers of each newspaper. In municipalities were PAN was the incumbent during 2012 local elections it received less coverage than PRI, specially in municipalities where the margin of victory was equal or less than 5 percentage points. This is a consequence of the worsened image of PAN at national level dragged at the Municipality level and PRI regaining political ground. This effect over bias is the biggest of all the regressors and is likely causing media capture by being sympathetic with PRI as incumbent and harsh with PAN taking into account that this party could loose election and citizens opinion on this party was unfavorable.

The effects of period change from campaigns to results and later incoming government diminishes partisan coverage as expected from less demand of this kind of news stories and a different political structure with different interests. This phenomena allows to compare how newspapers bias partisan news stories during a political important period as campaigns and afterwards partisan coverage falls, hence bias is more subtle to identify.

5 Conclusions

Demand preferences and political structure play an important role in local catering of partisan news stories, specially in Municipalities where there is competitiveness in parties for political power. In those Municipalities where competitiveness is present but during campaigns is likely to correctly forecast the winner, newspapers bias coverage towards the next winner due to political structure and readers preferences, as people prefer news stories confirming their priors and beliefs (Mullainathan and Shleifer (2005), Gentzkow and Shapiro (2006)).

In hard-won municipalities, with a margin of victory of less than 5 percentage points, an increase of a standard deviation in competitiveness pushes bias in favor of the incumbent to around 45 more netural tone news stories over the main challenger, this effect is only explained by media capture of local newspapers. As incumbents face a scenario where the challenger has enough chances of winning the election, incumbents use all means at their disposal to try to sway voters and keep the Municipality. Media capture is more related to Municipalities that had turnover, thus the ceiling

effect found in literature of 5 percentage points of more votes to an endorsed party (Ansolabehere et al. (2006)) cannot be the case in Mexican City Council elections. This is explained by two channels: a) Mexican voters can identify biased media outlets dimishing their sway (Chiang and Brian (2008)), and b) the low share of newspapers readers fades the effect of bias. If the second channel is predominant, then political decision-making is endangered by noisy signals of the true State of the world sent by newspapers, but few recievers of this political signals, indispensable for the quality of political decision-making.

Results on the pooled OLS confirm that market competition restrains bias favoring incumbent party, a decrease of a standard deviation in the Herfindahl-Hirchmann Index of newspaper market has an effect in my dataset of 1 news story less covering the incumbent against the main challenger party. Compared to results in Gentzkow and Shapiro (2006) who measured bias with a transformation of the difference of seconds of coverage for candidates, finding that a new media outlet has a reduction of a third of a standard deviation of bias. I find an effect of a fourth of theirs, but measurements are different because their bias variable goes from 0 to 0.25 while my empirical results go from -1 to 16 and I quantify competition with the standardized HHI, which is better suited to measure the concentration of the market, hence, better picture of competition and reach of newspapers. In any case, my results confirms economic theory of reduction of bias with improved competition.

The coverage during campaigns in municipalities with low or none competitiveness shows no sign of favoritism to any candidate. This is not a result of fewer coverage compared to more competitive Municipalities, with the exception of hard-wons. In these cases incumbents do not have incentives to fight challengers with disposable resources, as the results are practically defined before the election take place.

Media capture is detected whenever local incumbents require support to accomplish a politically important event, to fulfill this capture it is likely that they use public resources at their disposal. This has important implications for political events because this results cast doubts about impartiality of local newspapers when pushed by local incumbents as a result of bribes or threats.

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These results cast doubts about partiality of media when local incumbents require their endorsement with the pervasive effects on disposable information for quality of political decision-making. Media competitiveness proves to be a barrier to deter media capture and promote unbiased coverage, thus policies promoting new entrants and more consumption of newspapers, in printed or online versions, are recommendable to keep information available and impartial, to ensure better political institutions.

6 Appendix

6.1 Tone of coverage classifier

The Naïve Bayes classifier was implemented on Python with the NLTK package, using the classifier that is built in. A Bernoulli probability distribution to evaluate by maximum likelihood the a posteriori probability of an unseen partisan paragraph.

The news stories were divided by dots to find complete sentences, whenever more than party appeared in the same line this sentence is split by commas to capture possible differences in the tone of coverage of two or more parties. If only one party appeared the whole sentence was used.

The features used to classify news stories are unigrams, bigrams and trigrams. To avoid potential n-grams that were repeated in both categories I used only the ones that had repetitions outside an interval of $\pm 20\%$ of the number of repetitions in each category.

All n-grams were stemmed using the snowball rule for spanish to keep the lexigraphic richness of the text but at the same time keeping the number of features as small as possible.

OLS Full Results 6.2

	Dependent variable: Bias Favoring Incumbent Party									
	By competitiveness level									
	Ро	oled	NC LC		МС		НС			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Campaigns	2.020 (1.324)	2.020 (1.287)	-1.625* (0.765)	-1.625* (0.765)	-0.511 (0.458)	-0.511 (0.438)	9.632* (4.760)	9.632* (4.336)	1.712 (3.010)	1.712 (2.262)
Results	-1.424* (0.606)	-1.424* (0.586)	-1.083 (0.670)	-1.083 (0.670)	-0.667 (0.409)	-0.667 (0.395)	-3.563 (2.045)	-3.563 (1.948)	-1.242 (1.189)	-1.242 (1.297)
Between Governments	-1.578** (0.580)	-1.578** (0.560)	-1.083 (0.613)	-1.083 (0.613)	0.0731 (0.306)	0.0731 (0.282)	-4.931* (2.011)	-4.931* (2.028)	-2.818* (1.112)	-2.818* (1.401)
New Government	-1.551** (0.569)	-1.533** (0.544)	-1.615* (0.635)	-1.615* (0.635)	-0.193 (0.304)	-0.193 (0.285)	-3.987* (1.952)	-3.748* (1.872)	-2.879** (1.098)	-3.139 (1.610)
Precampaigns \times Turnover	0.700 (2.474)	2.310 (2.658)			-0.709 (0.902)	-0.885 (2.348)	-7.902** (2.408)	-10.42* (5.109)	9.160 (6.004)	6.283 (11.94)
Campaigns × Turnover	-2.714 (2.336)	-1.104 (2.256)			-2.325 (4.388)	-2.502 (5.444)	-15.45*** (4.490)	-17.96* (8.015)	3.235 (5.262)	0.357 (11.23)
Results \times Turnover	-1.122 (0.868)	0.488 (0.924)			0.189 (1.350)	0.0120 (2.561)	-3.686* (1.625)	-6.200 (5.020)	1.762 (2.044)	-1.115 (9.490)
Between Governments \times Turnover	-2.815** (0.871)	-1.205 (0.991)			0.449 (1.228)	0.272 (2.690)	-3.782* (1.827)	-6.296 (5.122)	-0.342 (1.690)	-3.219 (9.697)
New Government \times Turnover	-2.587*** (0.603)	-0.986 (0.736)			-0.939 (0.534)	-1.116 (2.081)	-3.763* (1.468)	-6.515 (4.969)	0.373 (1.557)	-2.346 (9.800)
Potential Bias										
Standardized Competitiveness	1.766*** (0.302)	2.623*** (0.545)	-20.82 (12.53)	-20.82 (12.53)	2.404*** (0.635)	1.963* (0.995)	14.54 (7.447)	17.59 (10.73)	-3.666 (10.39)	44.87* (18.09)
Standardized HHI	0.213 (0.311)	0.772* (0.388)	0 (.)	0 (.)	0.444 (0.409)	2.027 (1.450)	1.024* (0.408)	0.744 (0.702)	2.088 (1.369)	1.628 (1.324)
City Services Satisfaction	0.0536 (0.901)	0.675 (1.114)	0 (.)	0 (.)	1.385 (0.870)	4.393 (3.353)	-4.293 (4.528)	6.887 (4.365)	-4.834 (4.113)	10.23 (14.01)
Municipal Corruption from 2010 to 2011	1.174 (0.899)	0.168 (0.934)	0 (.)	0 (.)	-0.532 (0.634)	-0.499 (1.475)	0.407 (2.001)	-3.542 (6.004)	-10.25 (5.651)	23.37 (20.65)
Expected Municipal Corruption from 2011 to 2012	-1.680 (0.890)	-0.506 (0.900)	0 (.)	0 (.)	-0.00668 (0.747)	-1.048 (2.174)	-7.745* (3.093)	-17.25 (9.599)	2.451 (3.657)	0.318 (8.223)
Incumbent during elections										
PAN		-5.393*** (1.121)				-5.192* (2.110)		-12.33 (8.438)		-21.94** (7.346)
PRD		-0.958 (0.794)		0 (.)		-2.024 (1.240)				
PT		1.997 (1.183)		0 (.)						
PAN-PRD		-1.572 (1.678)				6.153 (7.368)		-1.600 (10.68)		1.256 (2.082)
Population characteristics Young People		6.987 (28.28)		0 (.)		-130.9 (118.4)		-329.1* (139.7)		-101.0 (299.6)
Poor People		-19.97* (9.148)		0 (.)		-29.10 (29.58)		74.34 (134.3)		8.016 (28.54)
Not Poor nor Vulnerable People		-16.90 (13.57)		0		-48.68 (43.33)		61.25 (165.0)		22.63 (18.70)
Log Total Population		1.883***		0		-0.969		-3.099		12.46***
_cons	2.006^{*} (0.974)	-12.03	-42.18 (26.62)	-42.18	1.844* (0.807)	71.35	-10.08 (6.164)	63.97 (61.92)	0.174	-159.6* (80.13)
N	962	962	40	40	430	430	259	259	233	233

Notes: Standard errors in parentheses. * p < 0.05, ** p < 0.01, *** p < 0.001Regressions include controls for population characteriscites. 2 Municipalities have None Competitiveness (NC) with 7 local newspapers analyzed. 23 Municipalities have Low Competitiveness (LC) with 31 local newspapers analyzed. 19 Municipalities have Medium Competitiveness (MC) with 35 local newspapers analyzed. 15 Municipalities have Competitiveness (MC) with 32 local newspapers analyzed.

	Newspaper	State	Municipality
1	El Sur	Campeche	Campeche
2	El Sur	Campeche	Carmen
3	Diario La Voz del Sureste	Chiapas	San Cristóbal de las Casas
4	El Heraldo de Chiapas	Chiapas	San Cristóbal de las Casas
5	Diario del Sur	Chiapas	Tapachula
6	Diario La Voz del Sureste	Chiapas	Tapachula
7	El Heraldo de Chiapas	Chiapas	Tapachula
8	El Orbe	Chiapas	Tapachula
9	Defacto	Chiapas	Tuxtla Gutiérrez
10	Diario del Sur	Chiapas	Tuxtla Gutiérrez
11	Diario La Voz del Sureste	Chiapas	Tuxtla Gutiérrez
12	El Heraldo de Chiapas	Chiapas	Tuxtla Gutiérrez
13	El Orbe	Chiapas	Tuxtla Gutiérrez
14	24 Horas	Distrito Federal	Azcapotzalco
15	El Economista	Distrito Federal	Azcapotzalco
16	El Sol de México	Distrito Federal	Azcapotzalco
17	La Prensa	Distrito Federal	Azcapotzalco
18	La Razón	Distrito Federal	Azcapotzalco
19	Reforma	Distrito Federal	Azcapotzalco
20	24 Horas	Distrito Federal	Coyoacán
21	El Economista	Distrito Federal	Coyoacán
22	El Sol de México	Distrito Federal	Coyoacán
23	El Universal	Distrito Federal	Coyoacán
24	La Jornada	Distrito Federal	Coyoacán
25	La Prensa	Distrito Federal	Coyoacán
26	La Razón	Distrito Federal	Coyoacán
27	Reforma	Distrito Federal	Coyoacán
28	24 Horas	Distrito Federal	Cuajimalpa de Morelos
29	El Sol de México	Distrito Federal	Cuajimalpa de Morelos
30	La Razón	Distrito Federal	Cuajimalpa de Morelos
31	24 Horas	Distrito Federal	Gustavo A. Madero
32	Diario Imagen	Distrito Federal	Gustavo A. Madero
33	El Economista	Distrito Federal	Gustavo A. Madero
34	El Sol de México	Distrito Federal	Gustavo A. Madero
35	El Universal	Distrito Federal	Gustavo A. Madero
36	La Jornada	Distrito Federal	Gustavo A. Madero
37	La Prensa	Distrito Federal	Gustavo A. Madero
38	La Razón	Distrito Federal	Gustavo A. Madero
39	Reforma	Distrito Federal	Gustavo A. Madero
40	El Sol de México	Distrito Federal	Iztacalco
41	24 Horas	Distrito Federal	Iztapalapa
42	El Economista	Distrito Federal	Iztapalapa
43	El Sol de México	Distrito Federal	Iztapalapa

6.3 Considered Newspapers and Municipalities

44	El Universal	Distrito Federal	Iztapalapa
45	La Jornada	Distrito Federal	Iztapalapa
46	La Prensa	Distrito Federal	Iztapalapa
47	La Razón	Distrito Federal	Iztapalapa
48	El Sol de México	Distrito Federal	La Magdalena Contreras
49	La Razón	Distrito Federal	La Magdalena Contreras
50	Reforma	Distrito Federal	La Magdalena Contreras
51	24 Horas	Distrito Federal	Álvaro Obregón
52	El Economista	Distrito Federal	Álvaro Obregón
53	El Sol de México	Distrito Federal	Álvaro Obregón
54	El Universal	Distrito Federal	Álvaro Obregón
55	La Jornada	Distrito Federal	Álvaro Obregón
56	La Prensa	Distrito Federal	Álvaro Obregón
57	La Razón	Distrito Federal	Álvaro Obregón
58	Reforma	Distrito Federal	Álvaro Obregón
59	24 Horas	Distrito Federal	Tláhuac
60	El Economista	Distrito Federal	Tláhuac
61	El Sol de México	Distrito Federal	Tláhuac
62	La Razón	Distrito Federal	Tláhuac
63	24 Horas	Distrito Federal	Tlalpan
64	El Sol de México	Distrito Federal	Tlalpan
65	La Prensa	Distrito Federal	Tlalpan
66	La Razón	Distrito Federal	Tlalpan
67	Reforma	Distrito Federal	Tlalpan
68	El Sol de México	Distrito Federal	Xochimilco
69	24 Horas	Distrito Federal	Benito Juárez
70	Diario Imagen	Distrito Federal	Benito Juárez
71	El Economista	Distrito Federal	Benito Juárez
72	El Sol de México	Distrito Federal	Benito Juárez
73	El Universal	Distrito Federal	Benito Juárez
74	La Jornada	Distrito Federal	Benito Juárez
75	La Prensa	Distrito Federal	Benito Juárez
76	La Razón	Distrito Federal	Benito Juárez
77	Reforma	Distrito Federal	Benito Juárez
78	24 Horas	Distrito Federal	Cuauhtémoc
79	Diario Imagen	Distrito Federal	Cuauhtémoc
80	El Economista	Distrito Federal	Cuauhtémoc
81	El Sol de México	Distrito Federal	Cuauhtémoc
82	El Universal	Distrito Federal	Cuauhtémoc
83	La Jornada	Distrito Federal	Cuauhtémoc
84	La Prensa	Distrito Federal	Cuauhtémoc
85	La Razón	Distrito Federal	Cuauhtémoc
86	Retorma	Distrito Federal	Cuauhtémoc
87	24 Horas	Distrito Federal	Miguel Hidalgo
88	Diario Imagen	Distrito Federal	Miguel Hidalgo
89	El Economista	Distrito Federal	Miguel Hidalgo
90	El Sol de México	Distrito Federal	Miguel Hidalgo

91	El Universal	Distrito Federal	Miguel Hidalgo
92	La Jornada	Distrito Federal	Miguel Hidalgo
93	La Prensa	Distrito Federal	Miguel Hidalgo
94	La Razón	Distrito Federal	Miguel Hidalgo
95	Reforma	Distrito Federal	Miguel Hidalgo
96	El Sol de México	Distrito Federal	Venustiano Carranza
97	La Razón	Distrito Federal	Venustiano Carranza
98	El Sol de León	Guanajuato	Celaya
99	El Sol del Bajío	Guanajuato	Celaya
100	El Sol de Irapuato	Guanajuato	Guanajuato
101	El Sol de León	Guanajuato	Guanajuato
102	El Sol de Salamanca	Guanajuato	Guanajuato
103	El Sol del Bajío	Guanajuato	Guanajuato
104	El Sol de Irapuato	Guanajuato	Irapuato
105	El Sol de León	Guanajuato	Irapuato
106	El Sol de Salamanca	Guanajuato	Irapuato
107	El Sol del Bajío	Guanajuato	Irapuato
108	El Sol de Irapuato	Guanajuato	León
109	El Sol de León	Guanajuato	León
110	El Sol de Salamanca	Guanajuato	León
111	El Sol del Bajío	Guanajuato	León
112	El Sol de Salamanca	Guanajuato	Salamanca
113	El Sol del Bajío	Guanajuato	Salamanca
114	Debate Calentanos	Guerrero	Acapulco de Juárez
115	El Sol de Acapulco	Guerrero	Acapulco de Juárez
116	El Sur de Guerrero	Guerrero	Acapulco de Juárez
117	Jornada Guerrero	Guerrero	Acapulco de Juárez
118	Novedades Acapulco	Guerrero	Acapulco de Juárez
119	Debate Calentanos	Guerrero	Chilpancingo de los Bravo
120	El Sol de Acapulco	Guerrero	Chilpancingo de los Bravo
121	El Sur de Guerrero	Guerrero	Chilpancingo de los Bravo
122	Jornada Guerrero	Guerrero	Chilpancingo de los Bravo
123	Novedades Acapulco	Guerrero	Chilpancingo de los Bravo
124	Debate Calentanos	Guerrero	Iguala de la Independencia
125	El Sur de Guerrero	Guerrero	Iguala de la Independencia
126	Jornada Guerrero	Guerrero	Iguala de la Independencia
127	Novedades Acapulco	Guerrero	Iguala de la Independencia
128	El Informador	Jalisco	Guadalajara
129	El Occidental	Jalisco	Guadalajara
130	El Sur de Jalisco	Jalisco	Guadalajara
131	Jornada Jalisco	Jalisco	Guadalajara
132	Mural	Jalisco	Guadalajara
133	El Informador	Jalisco	Puerto Vallarta
134	El Occidental	Jalisco	Puerto Vallarta
135	El Sur de Jalisco	Jalisco	Puerto Vallarta
136	Jornada Jalisco	Jalisco	Puerto Vallarta
137	Mural	Jalisco	Puerto Vallarta

138	El Informador	Jalisco	Tlaquepaque
139	El Occidental	Jalisco	Tlaquepaque
140	Jornada Jalisco	Jalisco	Tlaquepaque
141	El Informador	Jalisco	Tonalá
142	El Occidental	Jalisco	Tonalá
143	Jornada Jalisco	Jalisco	Tonalá
144	El Informador	Jalisco	Zapopan
145	El Occidental	Jalisco	Zapopan
146	Jornada Jalisco	Jalisco	Zapopan
147	Mural	Jalisco	Zapopan
148	Ocho Columnas	México	Atizapán de Zaragoza
149	Adelante Noticia	México	Ecatepec de Morelos
150	Ocho Columnas	México	Ecatepec de Morelos
151	Ocho Columnas	México	Huixquilucan
152	El Sol de Toluca	México	Metepec
153	Ocho Columnas	México	Metepec
154	Adelante Noticia	México	Naucalpan de Juárez
155	Ocho Columnas	México	Naucalpan de Juárez
156	Adelante Noticia	México	La Paz
157	Ocho Columnas	México	La Paz
158	Adelante Noticia	México	Техсосо
159	Adelante Noticia	México	Tlalnepantla de Baz
160	Ocho Columnas	México	Tlalnepantla de Baz
161	Adelante Noticia	México	Toluca
162	El Sol de Toluca	México	Toluca
163	Ocho Columnas	México	Toluca
164	Ocho Columnas	México	Tultitlán
165	Ocho Columnas	México	Cuautitlán Izcalli
166	Ocho Columnas	México	Valle de Chalco Solidaridad
167	El Sol de Cuautla	Morelos	Cuautla
168	El Sol de Cuernavaca	Morelos	Cuautla
169	La Unión	Morelos	Cuautla
170	El Sol de Cuautla	Morelos	Cuernavaca
171	El Sol de Cuernavaca	Morelos	Cuernavaca
172	La Unión	Morelos	Cuernavaca
173	El Sol de Cuernavaca	Morelos	Jiutepec
174	La Unión	Morelos	Jiutepec
175	Crucero	Nuevo León	Apodaca
176	Crucero	Nuevo León	San Pedro Garza García
177	El Norte	Nuevo León	San Pedro Garza García
178	Crucero	Nuevo León	Guadalupe
179	El Norte	Nuevo León	Guadalupe
180	Crucero	Nuevo León	Monterrey
181	El Norte	Nuevo León	Monterrey
182	El Norte	Nuevo León	San Nicolás de los Garza
183	Diario de Querétaro	Queretaro	Querétaro
184	El Sol de San Juan del Río	Querétaro	Querétaro

185	Noticias Querétaro	Queretaro	Querétaro
186	El Sol de San Luis	San Luis Potosí	Ciudad Valles
187	El Sol de San Luis	San Luis Potosí	San Luis Potosí
188	El Sol de San Luis	San Luis Potosí	Soledad de Graciano Sánchez
189	Diario Presente	Tabasco	Centro
190	El Heraldo de Tabasco	Tabasco	Centro
191	Novedades de Tabasco	Tabasco	Centro
192	Tabasco Hoy	Tabasco	Centro
193	Progreso Hoy	Yucatan	Mérida

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References

- Acemoglu, D., Naidu, S., Restrepo, P., and Robinson, J. A. (2012). Democracy, public policy and inequality. *American Political Science Review*, 106:495–516.
- Acemoglu, D., Naidu, S., Restrepo, P., and Robinson, J. A. (2014). Democracy does cause growth. Working Paper NBER.
- Anderson, S. P. and McLaren, J. (2012). Media mergers and media bias with rational consumers. *Journal of the European Economic Association*, 10(4):831–859.
- Ansolabehere, S., Lessem, R., and Snyder, J. M. (2006). The orientations of newspaper endorsements in u.s. elections, 1940-2002. *The Quarterly Journal of Political Science*, 1:393–404.
- Baron, D. P. (2006). Persistent media bias. Journal of Public Economics, 90:1-36.
- Bernhardt, D., Krasa, S., and Polborn, M. (2008). Political polarization and the electoral effects of media bias. *Journal of Public Economics*, 92:1092–1104.
- Besley, T. and Prat, A. (2006). Handcuffs for the grabbing hand? media capture and government accountability. *American Economic Review*, 96, No. 3:720–736.
- Chandra, A. (2009). Targeted advertising: The role of subscriber characteristics in media markets. *The Journal of Industrial Economics*, LVII:58–84.
- Chiang, C. F. and Brian, K. (2008). Media bias and influence: Evidence from newspaper endorsements. Knight, Brian G., and Chun-Fang Chiang. 2008. "Media Bias and Influence: Evidence from Newspa- per Endorsements." National Bureau of Economic Research Working Paper 14445.
- DellaVigna, S. and Kaplan, E. (2007). The fox news effect: Media bias and voting. *The Quarterly Journal* of *Economics*, 122, No. 3:1187–1234.
- Di Tella, R. and Franceschelli (2011). Government advertising and media coverage of corruption scandals. *American Economic Journal: Applied Economics*, 3:119–151.
- Djankov, S., Caralee, M., Nenova, T., and Shleifer, A. (2003). Who owns the media? *Journal of Law and Economics*, 46(2):341–382.
- Druckman, J. N. (2005). Media matter: How newspapers and television news cover campaigns and influence voters. *Political Communication*, 22:463–481.
- Durante, R. and Knight, B. (2012). Partisan control, media bias, and viewer responses: Evidence from berlusconi's italy. *Journal of the European Economic Association*, 10:451–481.
- Ellman, M. and Germano, F. (2009). What do the papers sell? a model of advertising and media bias. *The Economic Journal*, 119:680–704.
- Erikson, R. S. (1976). The influence of newspaper endorsements in presidential elections: The case of 1964. *American Journal of Political Science*, 20:207–233.
- Gambaro, M. and Puglisi, R. (2009). What do ads by? daily coverga of listed companies on the italian press. *Università Degli Studi Di Milano*, Working Paper.

- Gans, J. S. and Leigh, A. (2012). How partisan is the press? multiple measures of media slant. *The Economic Record*, 88:127–147.
- Gehlbach, S. and Sonin, K. (2014). Government control of the media. *Journal of Public Economics*, 118:163–171.
- Gentzkow, M., Petek, N., Shapiro, J. M., and Sikinson, M. (2014). Do newspapers serve the state? incumbent party influence on the us press, 1869-1928. *Journal of the European Economic Association*, 00:1–33.
- Gentzkow, M. and Shapiro, J. (2008). Competition and truth in the market for news. *Journal of Economic Perspectives*, 22, No. 2:133–154.
- Gentzkow, M. and Shapiro, J. M. (2006). Media bias and reputation. *Journal of Political Economy*, 114:280–316.
- Gentzkow, M. and Shapiro, J. M. (2010). What drives media slant? evidence from u.s. daily newspapers. *Econometrica*, 78, No. 1:35–71.
- Gerber, A. S., Karlan, D., and Bergan, D. (2009). Does the media matter? a field experiment measuring the effect of newspapers on voting behavior and political opinions. *American Economic Journal*, 1, No. 2:35–52.
- Greene, K. F. (2011). Campaign persuasion and nascent partisanship in mexico's new democracy. American Journal of Political Science, 55(2):398–416.
- Groseclose, T. and Milyo, J. (2005). A measure of media bias. *The Quarterly Journal of Economics*, 120:1191–1237.
- Ho, D. E. and Quinn, K. M. (2008). Measuring explicit political positions of media. *Quarterly Journal of Political Science*, 3:353–377.
- Hofstetter (1976). Bias in the news: A study of network coverage of the 1972 election campaign. *Columbus: Ohio State University Press.*
- Kahn, K. F. and Kenney, P. J. (2002). The slant of the news: How editorial endorsements influence campaign coverage and citizens' view of candidates. *The American Political Science Review*, 96, No. 2:381–394.
- Kam, C. D. and Zechmeister, E. J. (2013). Name recognition and candidate support. American Journal of Political Science, 57, No. 4:971–986.
- Larcinese, V., Puglisi, R., and Snyder, J. M. (2011). Partisan bias in economic news: Evidence on the agenda-setting behavior of u.s. newspapers. *Journal of Public Economics*, 95:1178–1189.
- Lott, J. R. and Hasset, K. A. (2014). Is newspaper coverage of economic events politically biased. *Unpublished working paper*.
- McMillan, J. and Zoido, P. (2004). How to subvert democracy: Montesinos in peru. *Journal of Economic Perspectives*, 18(4):69–92.
- Milburn, M. A. (1991). *Persuasion and Politics: The Social Psychology of Public Opinion*. Pacific Grove, CA.

- Mullainathan, S. and Shleifer, A. (2005). The market for news. *The American Economic Review*, 95:1031–1053.
- Perotti, R. (1996). Growth, income distribution, and democracy: What the data say. *Journal of Economic Growth*, 1:149–187.
- Price, V. and Zaller, J. (1993). Who gets the news? alternative measures of news reception and their implications for research. *The Public Opinion Quarterly*, 57, No. 2:133–164.
- Puglisi, R. and Snyder, J. M. (2011). Newspaper coverage of political scandals. *The Journal of Politics*, 73(3):931–950.
- Reuter, J. and Zitzewitz, E. (2006). Do ads influence editors? advertising and bias in the financial media. *The Quarterly Journal of Economics*, 121:197–228.
- Robinson, J. A., Acemoglu, D., and Johnson, S. (2005). Institutions as a fundamental cause of long-run growth. *Handbook of Economic Growth*, 1A:386–472.
- Schiffer, A. J. (2006). Assessing partial bias in political news: The case(s) of local senate election coverage. *Political Communication*, 23:23–29.
- Snyder, J. M. and Strömberg, D. (2010). Press coverage and political accountability. *Journal of Political Economy*, 118(2):355–408.
- Stone, D. F. (2011). Ideological media bias. Journal of Economic Behavior & Organization, 78:256–271.