The Determination of Newspaper Slant in Small Markets

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ABSTRACT

This paper takes the assertion, made by Gentzkow et al., that newspaper slant is primarily determined by demand as given. Both that paper and this one use Hotelling as a foundation. However, this paper considers what happens when the distribution of ideological preferences differs at national and county levels. This paper controls for the size of the market in which the newspapers are operating as well as for the make-up of the county-level population. Findings show that demand is a robust determinant of slant across market sizes and that supply-side factors rarely have significant impact on slant. In the two cases where ownership does have an effect on slant, it is in regressions where the largest-circulating newspapers have been dropped. We determine that if ownership is important it is when control is more centralized, if a newspaper is operating in a small market or if the owner chooses the slant before deciding which market to enter.

JEL classification: L2; L21; L22; L25; L4; L44 Y8;

Keywords: Firm Behavior; Conglomerates; Product Strategy;

I. Introduction

Consult any journalism textbook and you will find two key generalizations. Namely, i) objective and uncensored journalism is considered to be a pillar of any good democracy because it serves to disseminate symmetrical information and ii) the concentration of news outlets in the hands of corporate capitalists threatens the sanctity of democracy. A recent 'infographic' published by Business Insider laments the "illusion of choice" that exists in the market for media. According to the poster, "In 1983, 90% of the U.S. media was owned by 50 companies" by contrast "in 2011, that same 90% [was] owned by 6 companies…"[2] Policy makers fret over these statistics, worrying that with more concentrated media ownership there will be less ideological spread.

However, as economists such as Gentzkow and Shapiro (2010) have illustrated, this is a limited claim in that it fails to consider the fact that any major corporation in a competitive capitalist democracy serves a consumer demand and, where it fails to meet that demand, it will suffer financial setbacks. In a sufficiently competitive market, there is a fundamental difference between media being controlled by the government and media being controlled by a profit-seeking organization. Any corporation has a financial imperative to maintain its consumer base. Assuming that consumers have access to a diverse range of media sources at any given time, there is not enough incentive in the market for corporations to limit the information that they provide to the public or to push their own political agenda onto the public.

Taking Gentzkow and Shapiro's assertion [that ideological variation in the news is predominantly determined by demand] as

- [2]Lutz, A. (2012, June 14). These 6 Corporations Control 90% Of The Media In America. *Business Insider*. Retrieved October 31, 2013, from http://www.businessinsider.com/these-6-corporations-control-90-of-the-media-in-america-2012-6

given, this paper aims to explore how market size might dampen or augment demographic effects on newspaper slant. Furthermore this paper aims to discover what demographic factors affect slant the most in small markets and will control for ownership effects using binary variables. One expects to see that ownership factors will have little to no effect on slant. However, if this not the case it is likely due to companies owning papers in markets where the political leanings of the market match that of the owner. Moreover, if this *is* ever the case, one can expect that ownership is more concentrated in the firm in question.

It seems unlikely that a firm that is publicly traded, where thousands of people have stakes in the company, will be politically biased to the same extent that a company with a single owner could be. This is due to the fact that the group of shareholders can be seen as a sample from a population where variation in an individual's political preferences will be offset by another's. Therefore, the ideological leaning of the "owners" of a corporation with numerous shareholders can be approximated by the mean slant of a similar population. However, in a company with more concentrated ownership, the preferences of the owner are not offset in any way and so owners, who have more autonomy, might choose to operate in markets where their own political slant is dominant. This means that, in a regression, ownership variables will be correlated with voter share variables. In these cases it is difficult to disentangle supply-side effects on slant from demand-side ones.

II. Literature Review

It is only in recent years that economists have begun to analyze the economics of media content. Most economic reviews of the news examine the supply-side of the market. These studies aim to explain optimal pricing decisions in the two-sided market for news and the implications of news aggregation and the internet on circulation. However there is a group of economists, lead by Matthew Gentzkow

and Jesse M. Shapiro, that has recognized and studied how the demand side of the market shapes content and ideological spread in the news. Matthew Gentzkow has been responsible for studies that illustrate how online and print news are not as highly substitutable as is often posited[3] and, along with Jesse Shapiro and Michael Sinkinson, has illustrated the effect of newspaper entry on political participation of a society.[4] In the latter study, the trio found that the first newspaper to enter a market has a robust, positive effect on the presidential and congressional voter turnout. This paper is important because it is evidence for the aforementioned relationship between a strong democracy and a free press. One interesting finding in this paper is that there is no evidence for partisan newspapers having any effect on voter *share.* Gentzkow et al., then, explains that journalism is important for inciting political participation, though it does not necessarily determine the political bias of its market. This is something to bear in mind when considering this paper because this point is yet another example of how the second claim of journalism scholars, namely that excessive corporate control of newspapers will affect ideological spread in constituencies, is a problematic one.

Yet another Gentzkow and Shapiro paper[5] examines how competition in markets affects ideological diversity. Gentzkow, Shapiro and Sinkinson models the firm's decisions in discrete linear time. The first decision is whether or not to enter the market. The second decision is which political affiliation to choose: left or right. They find that ideology was one of the "main dimensions of differentiation along which competitive lines were drawn." Of course, if a town had Democrat papers only or Republican papers only it

[3] Gentzkow, M. (). Valuing New Goods in a Model with Complementarity: Online Newspapers. *American Economic Review*, *97*, 713-744.
[4] Gentzkow, M., Shapiro, J., & Sinkinson, M. (). The Effect of Newspaper Entry and Exit on Electoral Politics. *American Economic Review*, , 2980-3018.
[5] Gentzkow, M., Shapiro, J., & Sinkinson, M. (). Competition and and Ideological Diversity: Historical Evidence from U.S Newspapers. American Economic Review, , forthcoming.

would significantly affect the ideas and ideologies to which constituents were exposed. But the choice of slant that the newspaper owners faced, as is stated in the paper, "hinge[d] on the strength of the newspapers' incentives to differentiate ideologically from their competitors". Essentially, if there were enough readers in a market whose ideological preferences were not already channeled by the existing papers in circulation, the new firm would choose a slant that would allow an untapped side of the market to be captured. This is made clearer when we consider the Hotelling model. However, before we discuss Hotelling's theory in more detail and how it affects the firm's choice of slant, we must consider how ideology is distributed in different markets.

This paper assumes that though there might be polarization between competing newspapers on a national scale, in smaller markets the ideological distribution of consumers could be approximated by a skew normal distribution. We allow for the fact that there may be a dual-peaked distribution at a national level where ideological preferences are polarized. Using Hotelling (1929) as a basis for the model, it is acceptable for there to be more convergence (in newspaper ideology among competitors) to the median ideological preference in a smaller market than in a more polarized national market.

In 1929, Hotelling[6] famously theorized the consequences of a duopoly in a bounded market. He fundamentally disagreed with the idea that duopolies create market instability and produced a model that demonstrated how equilibrium under a duopoly, while different from the one achieved under competition, could nonetheless be obtained. The (two-dimensional) argument is as follows:

Consider two firms (A and B) who sell similar products at different prices. In this market, of size (length) X, firm A is length *a*

[6] Hotelling, H. (). Stability in Competition. *The Economic Journal*, *39*, 41-57.

away from the lower bound of the market and firm B is length *b* away from the upper bound. Assuming sufficiently low pricing on the part of each store, all consumers in space *a* will be supplied by A and all consumers in space *b* will be supplied by B. However, when the opportunity cost of travelling to the other store is less than the price differential between the two, people are willing to travel to purchase their goods. The consumers that lie between these two firms are able to choose between the two. As such, each firm faces a unique pricing decision wherein they each will adjust their prices so that they can maximize their profits by capturing as much of the competitor's market as possible.

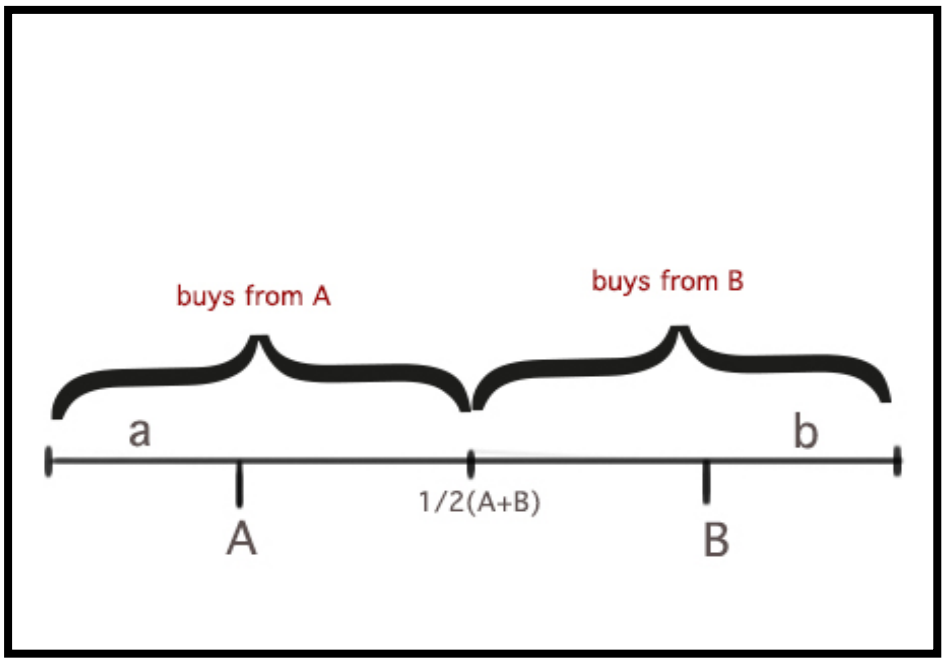


Figure a. Illustration of the Hotelling Model.

The model describes an underlying pricing mechanism as follows: each firm will converge to a pricing decision such that one store may have higher prices, but only insofar as the higher price remains lower than the opportunity cost of traveling to the other store. Since both producers face a similar problem, they slowly converge toward a similar equilibrium price point. Similarly, this

model can also be used to explain how two similar firms might end up geographically close to one another or how two separately owned media firms would provide similar content rather than diversify.

This theory is the cousin of the Median Voter Theorem which posits that, in a majority-rule, democratic environment the outcome of an election will be closely approximated by the preference of the median voter. This theorem depends upon the assumption that voters can place all alternatives on a one-dimensional spectrum (i.e. they can map their preferences in horizontal space) and that individual preferences are single-peaked. Consider the following matrix (Table 1) for an example of how this theory can be used to explain slant in newspapers.

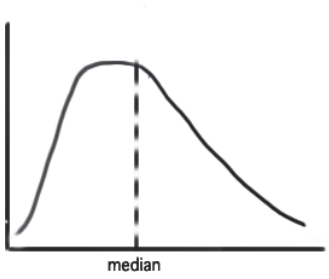
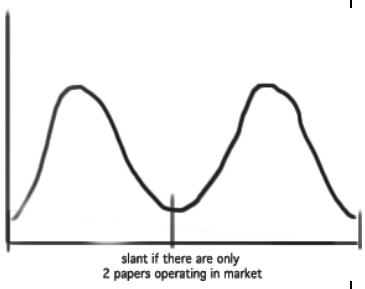
	"Small" market	"Large/national market"
Political distribution (y-axis ranges from liberal to conservative and x-axis gives #people)		
Expected media slant	Median political preference in market	If two, separately owned papers are operating in this space: each will be slanted towards the center in order to maximize readership. However, if sufficiently peaked and if not everyone is purchasing newspapers, or if there is a single-owner in the market you could see two different slants

Table 1. Hotelling, the Median Voter Theorem and Newspaper Slant

Gentzkow and Shapiro published a paper in 2010 entitled "What Drives Media Slant? Evidence from U.S. Daily Newspapers." [7] Gentzkow et al. assumes Newspaper owners to be monopolists in local markets and, by constructing a price-maximizing slant as well as an estimated model of the supply of slant, illustrates all of the effects that we hypothesized above. Specifically, the paper demonstrates that ownership does not have statistically significant explanatory power over the variation in newspaper slant. Furthermore, the authors conclude that the ideology of the market in which the newspaper operates is a far more important factor to consider.

However, what the paper does not consider is how newspapers operating in markets of different sizes might face a different problem when determining slant. All of the Gentzkow and Shapiro papers presuppose Hotelling's law to be true but Hotelling does not often consider what happens in markets whose preferences are not distributed normally with single-peaks. As mentioned, ideological preferences may not have such a distribution. Therefore papers operating in larger markets (in this paper we consider the county in which the newspaper operates) may not face the same problem as papers in smaller markets. Ideological preferences will be measured using county-vote share that went Republican. However, if we consider the proportion of people who actually vote, this may not be as important an indicator of ideological demand as other demographic variables such as race, income and age.

III. Data & Findings

This paper will account for market size using dummy variables for those newspapers with the highest circulation in the country. As a robustness check, several regressions are included: first on all newspapers, then on all newspapers minus the top 25 most circulated

[7] Gentzkow, M., & Shapiro, J. (). What Drives Media Slant? Evidence From U.S. Daily Newspapers. *Econometrica*, *78*, 35-71.

ones and so forth. Included in the model are demographic controls at county level, as well as owner dummies. The table on the following page gives a more comprehensive outline of the variables used in the paper's regressions.

Gentzkow and Shapiro used word frequency analysis of the 2005 Congressional Record to construct the slant variable. The text of speeches for each congressperson in the record was stripped of common words such as "to", "the", and "from". For each speech in the record, the occurrence of two-and-three word phrases was recorded. Phrases with common roots were counted as the same phrase. The frequency of phrases in the congressional record is then compared to the frequency in newspaper texts for all articles published in the cross-sectional year. The slant measure, therefore, illustrates whether or not the language of articles in a given newspaper is more alike to a Democrat or Republican speaker's rhetoric.

Variables that have been excluded so as to avoid multicollinearity are: the percent of the county population that identifies as white as it is highly correlated with the percentage that identifies as black. The regressions that will be discussed in the remainder of this paper are those that respectively exclude the top 100 most circulated papers and the top 75 as they had the most robust explanatory power. Other regression tables can be found in the Appendix. In all regressions, the owners that demonstrated statistically significant bearing on slant were Hearst and Lee Enterprises. Neither owned a large number of papers in the dataset. Papers owned by Lee Enterprises were geographically clustered in the West and Midwest. Papers owned by Hearst are more evenly distributed in both geographically and politically and so it seems that ownership is playing a role in determining slant in these cases. Nonetheless, these owner effects are only significant at the 10% level. However the coefficient on Hearst Enterprises holds plenty of explanatory power, suggesting that this owner is an anomaly. This

will be discussed. Refer to Table 2 for explanations of variables included in the regressions.

Note that the data are a cross section from the year 2005. The vote share measure references the 2004 presidential elections as a measure for ideological preference. Demographic variables are taken from census data that is publicly available.[8]

Republican vote share holds the most explanatory power among all variables (except Hearst). This is consistent across regressions. % Black is also significant at the 1% level across regressions and has a notably high coefficient. The coefficient on Hearst is high but only statistically significant at the 10% level. Note that Hearst has remained under the same family control for generations and the motives of this ownership structure may not always be profit maximizing. This is an example of economies of scale as it is cheaper to produce content for similar markets than for diverse ones. Prior regressions included more county-level variables as well as some interaction variables to control for which segments of the population that are more likely to read. These variables were omitted in the table above due to lack of explanatory power. However, the regression tables can be found in the appendix.

[8] Inter-university Consortium for Political and Social Research. County Characteristics, 2000-2007 [United States]. ICPSR20660-v2. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2008-01-24. doi:10.3886/ICPSR20660.v2

OWNERS	Binary variables indicating holding company. Only those companies that own five or more papers in the sample are listed.
Advance	
Berkshire Hathaway	
Cox	
E.W. Scripps	
Gannett	
Gatehouse	
Hearst	
Knight Ridder	
Lee	
McClatchy	
MediaNews	
Morris	
COUNTY DEMOGRAPHICS	
Republican vote share	% county that voted republican in 2004
Median Age	County-level measure
% Black	Controls for racial make-up of county. White excluded
% Asian	
Unemployment rate	Measured in 2005
Median age squared	
MARKET SIZE	
Top75	Binary indicator for papers in the top 75
Top100	Binary indicator for papers in the top 100

Table 2. Regression Variables

In general, regressions that include type of owner (publicly traded or family-owned) do not find ownership concentration to have significant bearing on slant. The most important determinants of slant as shown in the regressions are Republican vote share, county per capita income and percent of population that identifies as black. Results are robust across regressions that control for different market sizes.

Table 3 illustrates these results. Note that slant is continuous on the closed interval zero to one where zero is perfectly liberal and one is perfectly conservative. Though coefficients may looks small, they are important given that the slant index is a fraction. As an overview, the mean slant in the sample is around .474 with a standard deviation of .048. Any slant that is two standard deviations above or below the mean is considered very conservative or very liberal, respectively. There were eight non-outlier papers that fell into the "very liberal" category and two that fell into the "very conservative" category.[9] Of the "very liberal", four were circulated in counties where the black population was over 40%.

Given the coefficients on market-size dummies (see regression tables in the appendix), it seems that market-size does not have a significant bearing on the slant of newspapers. However, as more-circulated newspapers are dropped, the coefficients on % Black and on Republican vote share grow larger and more significant.

[9] "Very Liberal" papers include: "The Greenwood Commonwealth", of Greenwood, MS, "The Jersey Journal", of Jersey city, NJ, "The Montgomery Advertiser" of Montgomery, AL, "The Daily News" of Windham, NY, "The Chicago Sun-Times" of Chicago, IL, "The Philadelphia Daily News" of Philadelphia, PA, "The Pasadena Star-News" of Pasadena, CA, and "the Detroit Free Press" of Detroit, MI.

"Very Conservative" papers include: "Billings Gazette" of Billings, MT, "The Daily Sentinel" of Grand Junction, CO.

TABLE 3	Estimates of the Effect of Demand-side variables on Newspaper Slant (2005)	
SLANT	(1)	(2)
Newspaper Variables		
Advance	-.0118062	-.0120331
	(.0126464)	(.014793)
Berkshire Hathaway	-.0140825	-.0145045
	(.0215741)	(.0220235)
Cox	.0078772	.0120363
	(.012)	(.0127058)
E.W. Sripps	.0006124	.0011797
	(.0133138)	(.0141947)
Gannett	-.0002451	-.0023874
	(.0066341)	(.0069789)
Gatehouse	-.0005685	-.0011622
	(.0162134)	(.0165352)
Hearst	.0253044*	.0246484*
	(.0138281)	(.0141249)
Knight Ridder	.0011037	.0016658
	(.013803)	(.015549)
Lee	.0170842	.0165229
	(.012686)	(.0129593)
McClatchy	-.012588	-.0157629
	(.0152697)	(.01660008)
Medianews	-.0073119	-.0075397
	(..0076801)	(0079933)
Morris	.0092277	.0087578
	(.019471)	(.0198789)
New York Times Co.	-.0213644	-.02214
	(.0190455)	(.021634)
County-level data		
%Black	-.0013056***	-.0013206***
	(.0002241)	(.0002362)
%Asian	.0003556	.0002303
	(.0009052)	(.0009317)
% Republican vote-share	.0010321***	.0010497***
	(.000226)	(.0002401)
Income Per Capita	-8.5507**	-8.53e-07**
	(3.59e-07)	(3.76e-07)
Unemployment Rate	-.0031611	-.0031118
	(.0019345)	(.0020087)
Const.	**.4798687*** **	**.479468*** **
	(.026481)	**(.0279583)**
No. Obs	341	319
Adj R-Square	.2809	.2687

* 0.1<p<0.05 **0.05<0.01 ***0.01<p

(1) Slant, as measured by Gentzkow and Shapiro, regressed on newspaper owner binaries and county-level census data wuth top 75 most circulated papers omitted. (2) Same as above but top 100 most circulated are omitted.

To illustrate why this is the case, a kernel density map was created to illustrate how newspaper slant is distributed in markets of different sizes (figure 2). T-tests[10] run on the two distributions reveal that the means of slant in the two markets are significantly different from one another. Therefore, the distribution of slant in nationally circulating papers differs from that of those in small markets. However, the variances are not significantly different from one another, based on a Levene's test[8], and neither distribution is bimodal. Based on kernel density estimates and the lack of significance on coefficients for market-size dummies, it seems that the difference in ideological distribution at the national level is not large enough to have notable effects on the determination of slant. What is likely happening at a national level is that as these newspapers grow they break into new markets and the paper's slant to meets the new demand. There is likely some dual causality there as well because the new markets are probably consuming the growing papers due to an established slant that meets the preference of this market. This is a mechanism that is difficult to capture without panel data.

[10] Results available upon request

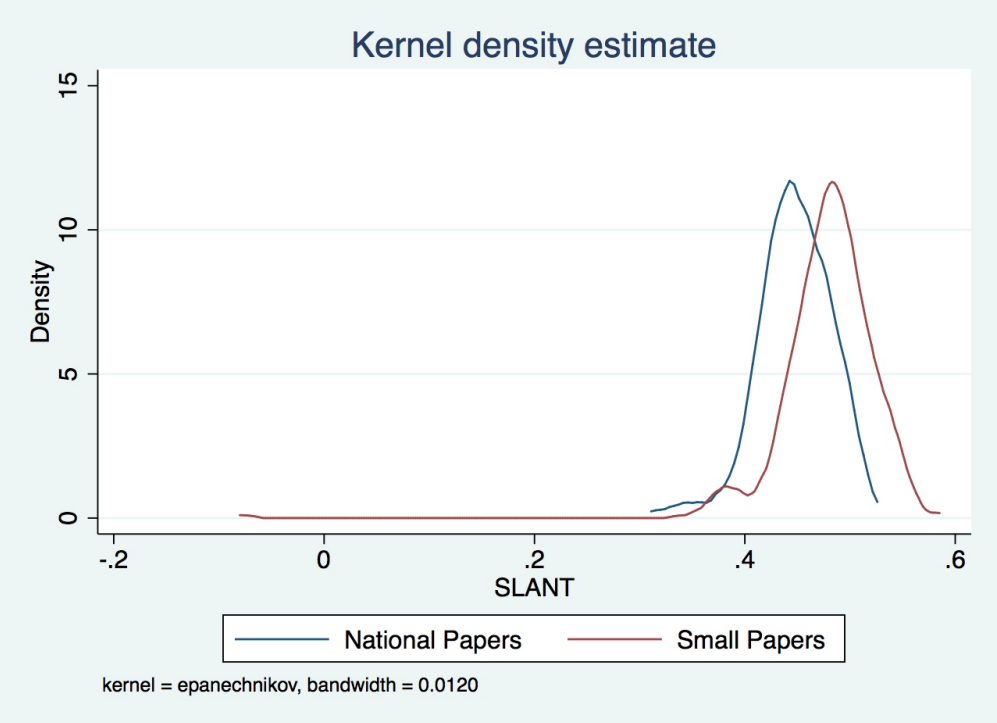


Figure 2. Kernel Density Estimate for slant in large and small markets.

The adjusted R-squared values in all regressions range from .26-.31. This is not a great number but can possibly be explained by the fact that newspaper markets are two-sided. One must therefore consider the possibility that not all content is driven by consumer demand but might also be affected by the types of organizations that routinely advertise in these papers. As such, the R-square values are reasonable for the data included in these regressions and residual maps confirm that errors are randomly distributed around zero.

IV. Concluding Remarks

The model described in this paper assumes that in small markets, ideological distributions are single-peaked functions though there is room for them to be skewed. There is no assumption regarding the distribution for ideology in larger markets but it is allowed for these to be dual-peaked. As such, the regressions included control for market-size. Each regression is run several times, omitting observations from larger markets in each case so as to check for robustness of estimators. This is done so as to ensure that papers

circulating in larger markets are not dampening or amplifying effects seen at a more micro-level. However, market size does not seem to compromise the findings of this paper. In fact, from these regression results and kernel-density estimates, it seems that ideology may in fact be a single-peaked function but to determine this is difficult without panel data.

The regressions support the hypothesis that ownership does not significantly affect slant in the majority of cases. However, from geographical clustering of newspapers owned by Lee Enterprises, it seems that this owner selects its markets based on slant. In other words, Lee Enterprises appears to invert the order that Gentzkow and Shapiro claimed owners make entry-decisions. Hearst is an owner with a more diverse media portfolio however it is the only owner that seems to have any bearing on the slant of papers under its control. Hearst's ownership is under the common control of five family members and eight outside trustees. This trust selects the twenty-two executive board members who manage the corporation. This supports the idea that more centralized control might provide owners with the opportunity to push their own agenda through the newspaper.

The racial profile of a community and the Republican vote share of that community, and the per capita income have robust and high coefficients. An increase in black population is likely to lead to a more liberally biased newspaper slant. Due to the fact that only a small portion of the population actually votes, this variable is likely picking up demographic information inherent to demand that vote share does not. Therefore, findings support the hypothesis that ownership is not a significant determinant of newspaper slant. Rather, the preferences of the target market for that newspaper is what accounts for the variation in slant and this is robust when market size is controlled for.

APPENDIX[11]

TABLE 1 Estimates of the Effect of Ownership and Demand-Side Variables on Newspaper Slant (2005)

SLANT	(1)	(2)	(3)	(4)	(5)
Newspaper Variables					
Advance	-.0061797	-.0090938	-.0078389	-.0093703	-.0101381
	(.0110478)	(.0120825)	(.0123685)	(.0129054)	(.0148754)
Berkshire Hathaway	.0047201	.0042125	.005573	-.0109451	-0.108223
	(.0165332)	(.0165241)	(.016217)	(.0218261)	(.0222451)
Cox	.0054293	.005765	.0063896	.0087896	.0131902
	(.108556)	(.0111437)	(.011428)	(.012176)	(.0128849)
E.W. Sripps	.0026078	.0030025	.0031449	.0032342	
	(.0126952)	(.0127142)	(.0130236)	(.0136417)	.0037222 (.01447)
Gannett	-.0020984	-.0020633	-.0010748	.0009096	-.0007938
	(.0062101)	(.0063569)	(.0066575)	(.0069485)	(0072874)
Gatehouse	-.0000812	-.0024441	-.0017969	-.000855	-.0013195
	(.0159046)	(.015891)	(.0162329)	(.0163271)	(.0166283)
Hearst	.0147382	.0219816*	.0264729*	.0273091*	.0272255*
	(.0118601)	(.0128994)	(.0138186)	(.0139238)	(.014218)
Knight Ridder	-.0012202	-.0013841	.0002773	.0010955*	.002342
	(.0121361)	(.0121357)	(.0139503)	(.0140509)	(.0156671)
Lee	.0208901	.0176577	.0185364	.0196957	.0196706
	(.0127137)	(.0127273)	(.0130399)	(.013163)	(.0134251)
McClatchy	-.0183689	-.0240155*	-.0215964	-.0193258	-.0234293
	(.0122895)	(.0129109)	(.0143979)	(.0159676)	(.0173433)
Medianews	-.0113304	-.0132766	-.0130423	-.0119982	-.0112906
	(.0079488)	(.0081109)	(.0085263)	(.008736)	(.0090546)
Morris	.0042046	.0029095	.0043252	.0129017	.0132595
	(.0174729)	(.0174614)	(.0178807)	(.0194704)	(.0198368)
New York Times Co.	-.0171189	-.0294636	-.0294485	-.0284631	-.0261416
	(.0175588)	(.0191662)	(.0196219)	(0197658)	(.0219483)
Family-Owned	.0034518	.0011311	.0013329	.002075	.0033136
	(.0072288)	(.007439)	(.0007815)	(.0079792)	(.0083364)
0-25 most circulated	-.0062276				
	(.0096855)				
26-50 most circulated	-.0038048	-.0019659			
	(.0098029)	(.0098197)			
51-75 most circulated	-.0038048	-.0071928	-.0067274		
	(.0098029)	(.0095461)	(.00987675)		
76-100 most circulated	-.0085225	-.0079656	-.0078791	.0072772	
	(.0092403)	(.0092411)	(.0094438)	(.0095136)	
Regional Dummies					
South		-.0067698	-.0048546	-002126	-.0029407
	-.006888 (.007028	(.0072539)	(.007814)	(.0081364)	(.008601)
West	.0117651*	.01420278*	.0155002***	.016084*	.0145448*
	(.0068266)	(.0070869)	(.007429)	(.0076632)	(.0079976)
Northeast	.0047549	.0029288	.003254	.0071404	.0058471
	(.006444)	(.0070869)	(.0068994)	(.0071776)	(.0075512)
County-level data					
%Black	-.000633**	-.0006299**	-.0007397**	-.0008614**	-.0008597***
	(.0002738)	(.0002816)	(.0002999)	(.0003164)	(.00033)
%Asian	.0005687	.0002731	.000165	.0001372	.0000621
	(.0009119)	*.000914)	(.0009359)	(.0009424)	(.000966)
% Republican vote-share	.0012791***	.0012013***	.0011879***	.0011945***	.0012126***
	(.0002266)	(.0002333)	(.0002435)	(.0002537)	(.0002653)
Income Per Capita	-4.41e-07 (2.90E-	-1.03e-06***	-1.05e-06***	-1.11e-06***	-1.12e-06***
	07)	(3.42e-o07)	(3.57e-07)	(3.86e-07)	(3.87e-07)
Unemployment Rate	-.0028736	-.0041918**	-.0040595**	-.0039268*	-.0038897*
	(.00186170	(.0019305)	(.0020104)	(.0020633)	(.0021296)
Median Age	-.0033897	-.0033359	-.002552	-.0022882	-.0035142
	(.0061731)	(.0062031)	(.0064008)	(.0064833)	(.0069962)
Median Age Squared	.0000701	.0000762	.0000652	.0000602	.0000796
	(.0000847)	(.0000852)	(.000088)	(.0000892)	(.0000967)
Sex Ratio	-.0049926	.0184468	.0088081	.0124961	.0176097
	(.0564856)	(.0573787)	(.0599632)	(.0614112)	(.0629889)
Const.	**.4782721***	**.4773636***	**.4724218***	**.4655969***	**.4790227***
	(.1306415)	**(.1316354)**	**(.1352819)**	**(.1370143)**	**(.1451904)**
No. Obs	408	384	363	341	319
Adj R-Square	0.3069	.3053	.2900	.2929	.2832

* 0.1<p<0.05 **0.05<0.01 ***0.01<p

(1) Slant, as measured by Gentzkow and Shapiro, regressed on newspaper owner binaries, whether or not they were among the most circulated dailies, and county-level census data. (2) Same as 1 but with the top 25 most circulated dailies omitted. (3) Same as above but the top 50 most circulated dailies omitted. (4) Same as above but with the top 75 most circulated dailies omitted. (5) Same as above but top 100 most circulated are omitted.

[11] Please note that clearer, printable, versions of these tables are available upon request

TABLE 2 Estimates of the Effect of Demand-side variables on Newspaper Slant (2005)

SLANT	(1)	(2)	(3)	(4)	(5)
Newspaper Variables					
Advance	-.0045666	-.0098238	-.0089081	-.0113986	-.0136444
	(.010939)	(.0120011)	(.0122623)	(.0127585)	(.0147612)
Berkshire Hathaway	.0049008	.0041155	.0055369	-.0119929	-.0125306
	(.0165714)	(.016638)	(.0170111)	(.0218539)	(.0222593)
Cox	.0031327	.0043641	.0054273	.0085455	.0122312
	(.0106602)	(.0109707)	(.0112178)	(.0120586)	(.0127418)
E.W. Sripps	.0016772	.0016021	.0025119	.0022785	.0027488
	(.0124571)	(.0125139)	(.0127824)	(.0133793)	(.0142314)
Gannett	-.0019087	-.0012886	.0001424	.001813	-.000229
	(.0059977)	(.0061904)	(.0064882)	(.006754)	(.0070924)
Gatehouse	-.0035261	-.0033829	-.0026688	-.0021272	-.0028041
	(.0158304)	(.0158702)	(.0161946)	(.0162787)	(.0165642)
Hearst	.0159738	.0181413	.0231111*	.0239001*	.0238356*
	(.0119473)	(.0129672)	(.0139494)	(.0140912)	(.0143869)
Knight Ridder	-.0006829	-.0015938	.0017184	.0026604	.0040198
	(.0120637)	(.0121213)	(.013929)	(.014012)	(.0156305)
Lee	.0209832*	.0205666	.0220948*	.021928*	.0216962
	(.0124919)	(.0125444)	(.0128691)	(.0129694)	(.0132059)
McClatchy	-.0144967	-.0185541	-.0151472	-.0119496	-.0171065
	(.012037)	(.0125828)	(.140668)	(.0155565)	(.0169842)
Medianews	-.0090033	-.0085581	-.0072344	-.0065462	-.0068776
	(.0071703)	(.0073584)	(.0076292)	(.0077901)	(.0080752)
Morris	.0019115	.0016219	.0030023	.0110434	-.0068776
	(.0174537)	(.0175079)	(.0178929)	(.0194947)	(.00198514)
New York Times Co.	-.0214259	-.0279067	-.0264673	-.0257792	-.0242488
	(.0174276)	(.0189339)	(.0193443)	(.0194544)	(.216854)
0-25 most circulated	-.0095626				
	(.0098056)				
26-50 most circulated	-.0039527	-.0035518			
	(.0097775)	(.009831)			
51-75 most circulated	-.0071399	-.006439	-.0058368		
	(.0096086)	(.0096548)	(.0098685)		
76-100 most circulated	-.0072917	-.0076867	-.0075508	-.0070585	
	(.009273)	(.0093266)	(.0095256)	(.0095851)	
County-level data					
%Black	-.0010373***	-.0010434***	-.0011181***	-.0012048***	-.0011868***
	(.0002347)	(.0002407)	(.0002548)	(.0002689)	(.00028)
%Asian	.0007451	.0007037	.0006419	.0005901	.0004511
	(.0008831)	(.000885)	(.0009042)	(.000909)	(.0009355)
% Republican vote-share	.0024339	.0024076	.0030077	.0021011	.0030735
	(.0018388)	(.0019016)	(.0019982)	(.0020312)	(.0020807)
Income Per Capita	3.86e-07 (5.21e-07)	-1.15e-06 (7.97e-07)	-1.19e-06 (8.05e-07)	-1.32e-06 (8.11e-07)	-1.26e-06 (8.31e-07)
Unemployment Rate	.006428	.0063603	.0079723	.0076283	.0069073
	(.0072578)	(.0076431)	(.0082658)	(.0084444)	(.0090862)
Median Age	-.0009191	-.0000398	.0016458	.0019947	.0005682
	(.0069656)	(.0070539)	(.0073296)	(.0074124)	(.0079656)
Median Age Squared	.0000303	.0000399	.0000267	.0000253	.0000458
	(.0000843)	(.0000853)	(.000088)	(.0000891)	(.0000969)
Sex Ratio	.0273895	.0448472	.0350262	.0363407	.0391396
	(.0560391)	(.0571618)	(.0596227)	(.0610693)	(.0624986)
Interactions					
Unemployment Rate and Republian Vote Share	-.0001708	-.0001694	-.0001963	-.0001917	-.0001774
	(.0001297)	(.0001362)	(.0001456)	(.197)	(.0001588)
Per Capita Income and Republican Vote Share	-2.27e-08*	5.88e-09 (1.77e-08)	5.95e-09 (1.83e-08)	7.95e-09 (1.86e-08)	4.82e-09 (1.92e-08)
	(1.33e-08)				
Median Age and Republican Vote Share	6.47e-06	-.0000201	-.000033	-.0000381	-.0000358
	(.0000464)	(.0000478)	(.0000499)	(.0000508)	(.0000523)
Const.	**.352211****	**.3451245***	**.3040139***	**.298497**	.3188764
	(.1306415)	**(.1788835)**	**(.1858179)**	**(.1876893)**	(.1966983)
No. Obs	408	384	363	341	319
Adj R-Square	.3059	.2985	.2842	.2875	.2787

* 0.1<p<0.05 **0.05<0.01 ***0.01<p

(1) Slant, as measured by Gentzkow and Shapiro, regressed on newspaper owner binaries, whether or not they were among the most circulated dailies, and county-level census data. (2) Same as 1 but with the top 25 most circulated dailies omitted. (3) Same as above but the top 50 most circulated dailies omitted. (4) Same as above but with the top 75 most circulated dailies omitted. (5) Same as above but top 100 most circulated are omitted.

TABLE 2 Estimates of the Effect of Demand-side variables on Newspaper Slant (2005)

SLANT	(1)	(2)	(3)	(4)	(5)
Newspaper Variables					
Advance	-.0067406	-.0103338	-.0095004	-.0118062	-.0120331
	(.0107154)	(.0118254)	(.0121471)	(.0126464)	(.014793)
Berkshire Hathaway	.000362	.0005763	.0018655	-.0140825	-.0145045
	(.0159798)	(.0160522)	(.0165056)	(.0215741)	(.0220235)
Cox	.0020885	.0034395	.004278		.0120363
	(.105446)	(.0108558)	(.0111547)	.0078772 (.012)	(.0127058)
E.W. Sripps	-.0006103	-.00001	.0006736	.0006124	.0011797
	(.0123785)	(.0124275)	(.0127263)	(.0133138)	(.0141947)
Gannett	-.0037657	-.0028078	-.0020631	-.0002451	-.0023874
	(.0059091)	(.0060688)	(.0063637)	(.0066341)	(.0069789)
Gatehouse	.0005859	-.0010947	-.0007063	-.0005685	-.0011622
	(.0157337)	(.0157715)	(.0161262)	(.0162134)	(.0165352)
Hearst	.0124343	.0187677	.0246506*	.0253044*	.0246484*
	(.0116931)	(.0127394)	(.0136819)	(.0138281)	(.0141249)
Knight Ridder	-.0051804	-.0047655	-.0019582	.0011037	.0016658
	(.011822)	(.0118817)	(.0137093)	(.013803)	(.015549)
Lee	.0192743	.0173723	.0174787	.0170842	.0165229
	(.0122672)	(.0123117)	(.012605)	(.012686)	(.0129593)
McClatchy	-.0189118	-.0213998	-.0181763	-.012588	-.0157629
	(.0117421)	(.0122627)	(.0136977)	(.0152697)	(.01660008)
Medianews	-.0080948	-.0084812	-.0079	-.0073119	-.0075397
	(.0070788)	(.0072349)	(.0075295)	(..0076801)	(0079933)
Morris	.0002134	-.0006896	.0004984	.0092277	.0087578
	(.0173178)	(.0173814)	(.0178414)	(.019471)	(.0198789)
New York Times Co.		-.0222469	-.0216686	-.0213644	-.02214
	-.0147273	(.0185186)	(.0189398)	(.0190455)	(.021634)
County-level data					
%Black	-.0011276***	-.001172***	-.001223***	-.0013056***	-.0013206***
	(.0001895)	(.0001962)	(.0002116)	(.0002241)	(.0002362)
%Asian	.0006234	.00044737	.0004019	.0003556	.0002303
	(.0008767)	(.0008803)	(.0009005)	(.0009052)	(.0009317)
% Republican vote-share	.0010951***	.0010429***	.0010416***	.0010321***	.0010497***
	(.0002025)	(.0002102)	(.0002193)	(.000226)	(.0002401)
Income Per Capita	-3.66e-07 (2.72e-07)	-7.91e-07** (3.29e-07)	-8.24e-07** (3.44e-07)	-8.5507** (3.59e-07)	-8.53e-07*** (3.76e-07)
Unemployment Rate	-.0020248	-.0029252	-.0030197	-.0031611	-.0031118
	(.0017277)	(.0018013)	(.0018885)	(.0019345)	(.0020087)
Const.	**.4529529*** **	**.475365*** **	**.4770228*** **	**.4798687*** **	**.479468**
	(.0223202)	**(.0244409)**	**(.0256777)**	**(.026481)**	**(.0279583)**
No. Obs	408	384	363	341	319
Adj R-Square	.3059	.2942	.2779	.2809	.2687

* 0.1<p<0.05 **0.05<0.01 ***0.01<p

(1) Slant, as measured by Gentzkow and Shapiro, regressed on newspaper owner binaries and county-level census data. (2) Same as 1 but with the top 25 most circulated dailies omitted. (3) Same as above but the top 50 most circulated dailies omitted. (4) Same as above but with the top 75 most circulated dailies omitted. (5) Same as above but top 100 most circulated are omitted.

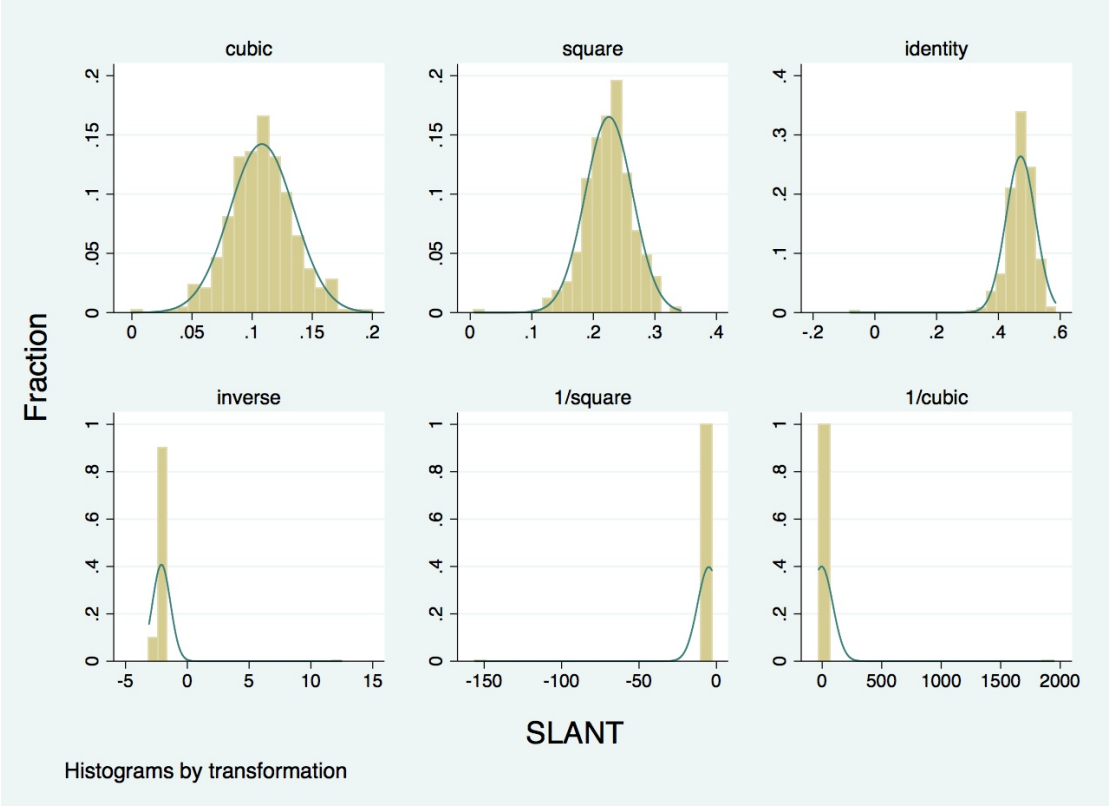


Figure 1. Transformations of the distribution of Slant for a random sample of 100 newspapers

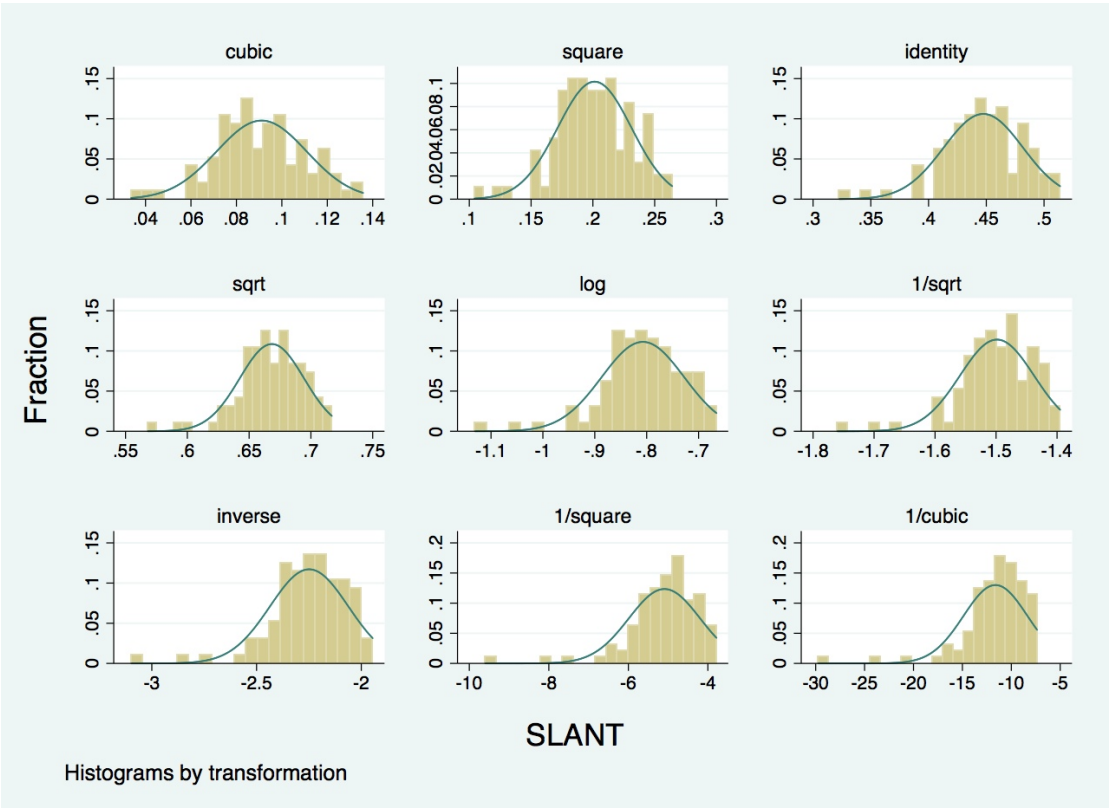


Figure 2. Transformations of the distribution of Slant for a the top 100 most circulated papers

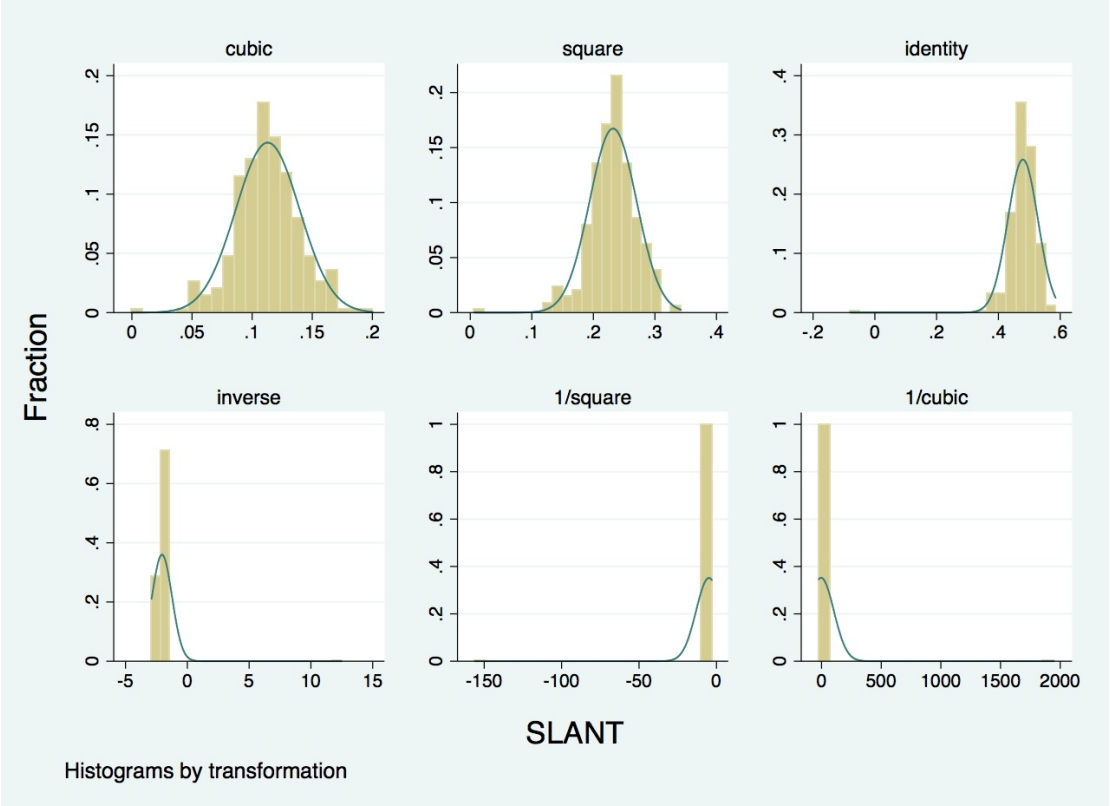


Figure 1. Transformations of the distribution of Slant for those papers not included in the top 100 most circulated

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