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Dr. Jonathan Levy
Deputy Chief Economist
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Washington, DC 20554

Subject: Peer Review of Study 3 of the FCC Media Ownership Studies, "Report to the FCC: How the Ownership Structure of Media Markets Affects Civic Engagement and Political Knowledge, 2006-2008"

Dear Dr. Levy:

This letter contains my peer review of the Vavreck, Jackman, and Lewis contribution to the FCC's 2010 Quadrennial Review of Media Ownership Rules Proceeding (MB Docket No. 09-182). The Vavreck, Jackman, and Lewis study aims to examine how media market diversity and localism affect levels of civic engagement and knowledge of public affairs. Your letter charged me to:

> "consider, among other things, whether: (1) the methodology and assumptions employed are reasonable and technically correct; (2) whether the methodology and assumptions are consistent with accepted theory and empirical (e.g., econometric) practices; (3) whether the data used are reasonable and of sufficient quality for purposes of the analysis; and (4) whether the conclusions, if any, follow from the analysis."

The assessment that follows first considers the available datasets that the authors could have used to study the relationships of interest. Each of the projects in the study are then assessed in turn, before offering final conclusions and recommendations.

Available Datasets for Testing the Relationships of Interest

To my knowledge, there are only four existing survey data collections that have sufficient numbers of respondents within a wide range of media markets to provide a rigorous test of how media market structures influence civic engagement and political knowledge at the individual level: the Current Population Surveys (CPS), the National Annenberg Election Surveys (NAES), the Cooperative Congressional Election Study (CCES), and the Cooperative Campaign Analysis Project (CCAP). Among these, I am most familiar with the NAES and CPS datasets.

Although these four data sources contain the needed number of survey respondents to do a broad, cross-sectional analysis across media markets, their survey instrumentation is poorly suited for examining how localism and diversity in local media markets affect civic engagement. The problem is in the mix of dependent and independent variables available through these surveys: CPS only measures self-reported turnout without including other measures of civic engagement or of key factors known to predict civic engagement, the NAES and CCAP focus primarily on measures of national rather than local political engagement. The CCES is the only one of the four to have a good measure of congressional candidate knowledge (which is a useful measure of local information flows that are politically relevant), but since only a subset of respondents were asked such knowledge questions, broader generalizations are difficult to make with these data.

The Vavreck, Jackman, and Lewis study makes excellent use of the available subset of CCES data, and does an admirable job of fleshing out relationships of interest within the limitations of the CCAP data. Little value would probably be gained from adding the CPS data to the mix, as the authors have added a validated turnout measure to the CCAP data that is superior to the self-reported turnout measure available in the CPS. The only other survey dataset that the authors could have considered is therefore the NAES, which shares a similar national focus as the CCAP data. The NAES has one notable advantage over the other data sets that might be worth exploring in future studies on this topic: it has especially good batteries of self-reported exposure to both local and national media outlets. Despite this, it is unclear whether studying localism and diversity within the limitations of the NAES data would offer a more refined perspective on the relationship between local media market structures and civic engagement than the CCAP data that are employed in the present study.

In short, the authors are using two of the best available datasets for studying the relationships of interest. Furthermore, the study's data analysis is carefully done and findings are rigorously cross-checked. The authors freely acknowledge many limitations of these data for testing the relationships of interest, and they are appropriately cautious to qualify the conclusions they draw from their analysis. That said, because neither of the datasets used by the authors were designed to test how the structure of media markets affect civic engagement, both have serious shortcomings as instruments for analyzing this relationship. As exemplary as the Vavreck, Jackman, and Lewis study is in many respects as a careful exercise in data exploration, these shortcomings in the available data limit the study's ability to shed clear light on the relationships between market structure and civic engagement.

Before discussing each of the two projects that form the empirical backbone of the Vavreck et al. study, it is important to address a potential objection that might be raised about the use of CCES and CCAP data in this study. Unlike traditional random-probability surveys using random digit dialing techniques, the CCES and CCAP data are convenience samples drawn from online panels. Beginning with a non-random respondent selection process, the CCES and CCAP data employ a post-hoc matching strategy to approximate the demographic characteristics of a truly random sample. The main challenge with non-random data of this sort is the difficultly in ascertaining whether such a sample is representative of the population it is

taken to stand for.[1] As a result, use of non-random data for social science research has met with controversy in some academic circles.[2] The matching technique used for CCAP and CCES data probably improves the representativeness of the convenience samples, but the challenge for assessing the validity of these data is that there is no obvious way to tell whether they are statistically representative of the U.S. population. The study's discussion of "representation ratios" and numbers of respondents within each media market (pp. 4-10) are unconventional indicators of sample validity, and do not represent accepted standards for evaluating the quality of the sample because they have little bearing on how representative the respondents representing each media market are to the populations from they were drawn.

This uncertainty about the validity of the data would be a concern if the data were used to infer characteristics of the population, such as describing the turnout rates of particular media markets. However, neither project does anything like this. Instead, Vavreck et al. use these data in an essentially quasi-experimental design in which "real world" market characteristics are allowed to vary across individuals. When using the data in this way, as the authors are careful to do, the risk of mistaken inferences about population characteristics is essentially nil. Their cautious approach demonstrates how non-random data collection strategies can yield potentially useful findings for social science research.

Project A: Analyzing Civic Engagement and the Diversity of Market Structures

Project A examines whether ownership characteristics of media markets are related to several measures of civic engagement related to the 2008 presidential election. The civic engagement measures are drawn from the 2008 CCAP supplemented with validated turnout data, while market-level ownership characteristic variables for television, radio, and newspapers are drawn from FCC data, and presidential advertising intensity measures for each market are drawn from Nielsen data. It is fair to say that this extensive combination of individual-level survey responses and market-level contextual variables makes the Vavreck, Jackman, and Lewis study more extensive in scope and contextual detail than any previous study that has examined the effects of market structures on individuals.

The authors present a detailed analysis that entails a high degree of methodological sophistication and analytical rigor. The main limitations of Project A lie not in the analysis of data or presentation of findings, but in the limited ability of the civic engagement measures and market-structure variables to shed clear light on the relationships of interest. This is not to

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[1] The accepted scientific standards for inferring from sample characteristics to population characteristics require the use of random probability sampling (e.g., see the "Best Practices" standards of the American Association for Public Opinion Research at http://www.aapor.org/Best_Practices/2845.htm). When respondents are selected randomly with equal and independent probabilities of being sampled from the population of interest, even a small number of respondents should provide a representative cross-section of the population they are drawn from.

[2] For a review of this controversy, see Baker, Reg, Stephen Blumberg, J. Michael Brick, Mick P. Couper, Melanie Courtright, Mike Dennis, Don Dillman, Martin R. Frankel, Philip Garland, Robert M. Groves, Courtney Kennedy, Jon Krosnick, Sunghee Lee, Paul J. Lavrakas, Michael Link, Linda Piekarski, Kumar Rao, Douglas Rivers, Randall K. Thomas, and Dan Zahs. 2010. "AAPOR report on online panels." Prepared for the AAPOR Executive Council by a task force operating under the auspices of the AAPOR Standards Committee. American Association for Public Opinion Research. Available URL: http://www.aapor.org/AM/Template.cfm?Section=AAPOR_Committee_and_Task_Force_Reports&Template=/C M/ContentDisplay.cfm&ContentID=2223

criticize the authors or their approach to the data. It is rather to acknowledge that no existing dataset lends itself easily to studying the core questions that the authors were commissioned to examine. Given the limited state of current theorizing about the potential relationships between market factors and civic engagement, Vavreck, Jackman, and Lewis have probably done what they can with the available data, and their effort desires careful attention from the scholarly community.

Among the dependent variables used in the analysis, the validated turnout data have a high degree of validity for leveraging the relationships of interest. The other indicators of civic engagement are standard variables in the political science literature, but have limited applicability to analyzing the effects of local rather than national media market structures. Interest as measured by the CCAP is a general rather than local orientation, and recent work suggests that political interest may be influenced more by early socialization than by current characteristics of a person's information environment.[3] Candidate placement on issues focused on the stances of presidential candidates, not local candidates, so the ownership characteristics of local media markets are unlikely to influence such placement. The political knowledge items measured recall of correct factual knowledge about national political figures and issues. None of the knowledge items measured knowledge of local issues or candidates.

The independent variables representing market structure characteristics presented Vavreck, Jackman, and Lewis with special problems, because six of the eight market structure variables were correlated with one another at levels ranging from to .53 to .84 (see Figure 16). As the authors took pains to point out in several places, these high levels of collinearity within the set of market structure variables inflates standard errors and makes it difficult to detect clear effects. In such cases, the significance level of any particular coefficient within the set is no longer a clear indicator of potential importance. The authors used the market data exactly as supplied by the FCC, and the collinearity resulted from so many of these variables being counts of stations or companies: because larger markets can support a greater number of entrants, most of these counts had high positive correlations with the size of the adult population in the market (hereafter, *market size*). Transforming these variables into indexes or measuring them as proportions rather than counts might reduce the collinearity problems and improve the chances of finding effects. For example, the logic of using count variables in these models expects that two parent companies owning more than one television station should have a measurable effect on civic engagement that is larger than the effect from just one parent company with multiple stations. However, no compelling theoretical argument has yet been advanced in the literature that would tie the number of parent companies to civic engagement patterns. To the contrary, the existing literature in economics, political science and communication gives Vavreck et al. little theoretical guidance of any sort, as this literature has only recently begun to use market-level characteristics in individual-level models.

Recognizing that this limitation in the FCC's market data would tend to minimize any apparent within-market effects of the individual market structure variables when all were entered simultaneously in the same models, the authors smartly included an analysis of fixed effects across markets, in which the media markets themselves were dummy-coded and entered as a

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[3] Markus Prior, "You've Either Got It or You Don't? The Stability of Political Interest over the Life Cycle," *Journal of Politics* 72, no. 3 (2010).

block along with individual-level demographic variables. It is important to point out that the effects of ownership patterns should be only partly visible in an analysis that focuses narrowly on variance within and across markets. Because the same owners are often operating media properties in different markets, any common owner-specific effects on levels of civic engagement will not be observed in a market-level comparison, or in a comparison of individuals within markets. Detecting owner-specific effects on civic engagement would require individual respondents to be associated with the particular media outlets that they relied on for local information, so that the ownership characteristics of those particular media properties could be meaningfully compared and tested against media properties owned by other parent companies. In other words, these effects would require a comparison at the level of individual media properties or commonly-owned groups rather than at the level of the markets that contain them, so that common characteristics of each parent company could be meaningfully distinguished from those of other parent companies operating within and across markets. Because such an analysis would require special survey instrumentation, this aspect of ownership structure may be untestable with the data currently available to the authors.

Since variance in ownership structure variables is found both within and across markets, and since the effects of media diversity on civic engagement should plausibly be seen both at the market and media property levels, the small size of fixed effects for market-level variables is not surprising. Smallish effects in these data could indicate the potential for finding larger effects in data that are more sensitive to the relationships of interest. For example, in the turnout models (Table 4), adding fixed effects for market-level factors more than doubles the explained variance produced by individual-level variables alone (i.e., the r-square moves from .04 to .10). These models are still explaining little variance in validated turnout, in part because there may be little turnout variance to explain: 2008 was a high-turnout year and all respondents were registered to vote. This doubling of explained variance when market-level factors are entered suggests that market structures could have sizeable effects in elections where average turnout rates are lower than in 2008. In midterm election with lower average turnout levels, the relationship between market factors and individual turnout could be much larger, as suggested in previous research.[4]

In short, the existing datasets suitable for cross-market analysis at the individual level appear to be insensitive to variance in the quality and quantity of local information about civic matters that is the focus of the FCC's localism and diversity goals. That such datasets return findings of apparently small effects on civic engagement could be a sign that effects are small, or that the datasets are imprecise in their ability to detect them. The latter possibility seems more likely, in my judgment. To be clear, this is not a case of "the perfect being the enemy of the good": my concern is not that the authors have less-than-perfect data. My concern is rather that the data used by the authors in Project A is probably unsuitable for detecting the effects (if any are to be detected) of market-level ownership structures.

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[4] Scott L. Althaus and Todd C. Trautman, "The Impact of Television Market Size on Voter Turnout in American Elections," *American Politics Research* 36, no. 6 (2008). For relationships between market structures and turnout more generally, see Markus Prior, *Post-Broadcast Democracy: How Media Choice Increases Inequality in Political Involvement and Polarizes Elections* (New York: Cambridge University Press, 2007), David Strömberg, "Radio's Impact on Public Spending," *Quarterly Journal of Economics* 119, no. 1 (2004).

Project B: Identifying Pictures of Local Congressional Candidates

Project B examines whether market-level ownership structures influence the ability of survey respondents to correctly identify photos of their major party candidates for the U.S. Congress. The dependent variable for political knowledge in Project B is a high-quality measure that should be sensitive to visual information flows originating from local television stations.

However, the dependent variable offers a limited test of the relationship between market structures and political knowledge for at least two reasons. First, correctly identifying political candidates from photos primarily reflects exposure to television rather than newspaper or radio coverage. This means that the measure is sensitive to only one of the three forms of local public affairs information that survey respondents are likely to rely on for information about congressional races in their area. On the plus side, more people watch local television news than typically rely on either newspapers or radio news coverage, so this variable is well-matched to the most important source of local public affairs information.

Second, because local television stations rarely cover any of the congressional races within their markets,[5] this variable offers a limited test of how candidate knowledge is influenced by market-level ownership structures. Given this void in local television news coverage, the ability to recognize candidate photos should instead be highly sensitive to patterns of candidate-sponsored television advertising within markets. Not surprisingly, the study finds that the size of a candidate ad buy (measured in gross rating points) is a more significant predictor of correct photo identification than any of the market-level ownership structure variables.

The independent variables used to estimate effects of market structure characteristics are even more highly correlated in Project B than they were in Project A. This is because the dependent variable in Project B was asked of respondents in just nine of the more than 200 media markets in the United States. This challenge, combined with the small number of markets available for analysis in Project B, diminishes the likelihood that significant effects of market-level factors would be detected if they were in fact present in the data.

In short, these data limitations make it difficult to conclude whether Project B's finding of null effects for market-level factors other than the size of television advertising buys are evidence that the effects are not there to be found, or that the research design was insufficiently sensitive to detect them. Having said this, it is also important to underscore that this component of Vavreck, Jackman, and Lewis's study is among the most innovative efforts to test market structure effects on candidate recognition that I have yet come across. Most previous efforts of this sort have been limited to studying the effects of geographic incongruence between

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[5] e.g., Local News Archive Lear Center, "Local TV News Coverage of the 2002 General Election," (Beverly Hills, CA: Lear Center Local News Archive, 2003), ———, "Local News Coverage of the 2004 Campaigns: An Analysis of Nightly Broadcasts in 11 Markets," (Los Angeles, CA: USC Annenberg School for Communication, 2005), see also Althaus and Trautman, "The Impact of Television Market Size on Voter Turnout in American Elections.", Phyllis Kaniss, *Making Local News* (Chicago: University of Chicago Press, 1991), C. Danielle Vinson, *Local Media Coverage of Congress and Its Members: Through Local Eyes* (Cresskill, NJ: Hampton Press, 2003).

congressional districts and media markets.[6] Typically, these studies show that highly incongruent media markets are associated with lower levels of respondent knowledge about congressional candidates and higher rates of incumbent re-election.

Stronger evidence for the "no effects" conclusion in Project B would probably require conducting a content analysis of local news coverage given to congressional races within the nine markets. Such a content analysis would be required to confirm whether photographic images of the major party candidates for the U.S. Congress were routinely conveyed through local newspapers or television stations. If such confirmation were obtained, then this would place the authors' interpretation of their findings on a stronger evidentiary basis than is currently the case.

Conclusions

Vavreck, Jackman, and Lewis draw the following conclusions from their analysis:

> *From Project A:* After controlling for individual-level variables, market-level ownership variables appear to have no "substantively important or in fact measurable effect" on levels of civic engagement, voter turnout, or political knowledge.

> *From Project B:* The only market-level variable that predicts the ability of individuals to correctly identify the faces of their major-party candidates for U.S. Congress is the amount of television advertising purchased by the candidates.

> *Summary from Both Projects*: "While there is a pattern to the civic and political engagement in media markets across the country we are unable to explain this pattern with market-ownership indicators like TV and radio voices, and multi- and cross-ownership" (p. 77).

I concur that the analysis finds no consistent or compelling evidence of market-level effects. However, I disagree with the authors' claim that this pattern of null findings constitutes good evidence for the absence of market-level effects. I conclude to the contrary that:

1. None of the "off the shelf" datasets that the authors could have analyzed for this study is designed to test for the effects of market-level diversity and localism in public affairs information flows. The available datasets are primarily sensitive to the effects of national rather than local information flows.
2. The methodology of the Vavreck, Jackman, and Lewis study is reasonable, technically correct, and consistent with accepted empirical practices. However, the key dependent and independent variables used in the study have considerable limitations in their ability to shed light on the relationships that the study was commissioned to examine.

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[6] e.g., J. E. Campbell, J. R. Alford, and K. Henry, "Television Markets and Congressional Elections," *Legislative Studies Quarterly* 9 (1984), D. Levy and Peverill Squire, "Television Markets and the Competitiveness of U.S. House Elections," *Legislative Studies Quarterly* 25 (2000), C. Stewart and M. Reynolds, "Television Markets and U.S. Senate Elections," *Legislative Studies Quarterly* 15 (1990).

- The dependent variables for civic engagement and political knowledge in Project A are insensitive to the kinds of information flows that originate within local media markets, because variation in these dependent variables primarily reflects variance in exposure to national rather than local public affairs information.
- The dependent variable for voter turnout in Project A is a high-quality measure that should be sensitive to both local and national information flows. One of the author's analyses shows that market-level variables more than double the variance in voter turnout that can be explained from individual-level variables alone. This suggests a potentially important role for market-level factors, but other analyses by the authors find no significant or substantively important effects.
- The dependent variable for political knowledge in Project B is a high-quality measure that should be sensitive to visual information flows originating from local television stations. However, since local television stations rarely cover any of the congressional races within their markets, this variable offers a limited test of the effects of market-level ownership structures.
- Because most of the market-level ownership variables supplied by the FCC are highly correlated with one another, the significance levels of their individual coefficients are unreliable indicators of possible effects when these variables are entered simultaneously into a regression model. Future efforts to estimate individual-level effects from these market-level variables will probably require (1) transforming these variables in ways that reduce their collinearity (e.g., using proportions rather than counts), (2) creating indices or using other data reduction methods to model the effects of market-level ownership characteristics with a smaller number of statistically orthogonal measures, or (3) analyze the effects of these market-level variables one at a time rather than simultaneously.

In addition, the evidence of null findings in the Vavreck, Jackman, and Lewis study run contrary to a growing body of evidence from other recent studies that media market characteristics have significant and varied effects on individual voters:

- Media market structures determine which types of local public affairs information are likely to be covered within markets.[7]
- Media markets structure levels of citizen knowledge about state and local politics.[8]
- Market size and the number of television stations serving a market are significant predictors of voter turnout.[9]

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[7] e.g., R. Douglas Arnold, *Congress, the Press, and Political Accountability* (Princeton: Princeton University Press, 2004), James T. Hamilton, *All the News That's Fit to Sell: How the Market Transforms Information into News* (Princeton, N.J.: Princeton University Press, 2004), Kaniss, *Making Local News*, Stephen Lacy, Frederick Fico, and Todd Simon, "Relationships among Economic, Newsroom, and Content Variables: A Path Model," *Journal of Media Economics* 2, no. 2 (1989), James M. Snyder and David Strömberg, "Press Coverage and Political Accountability," *The Journal of Political Economy* 118, no. 2 (2010), Vinson, *Local Media Coverage of Congress and Its Members: Through Local Eyes.*

[8] e.g., Michael Delli Carpini, Scott Keeter, and David Kennamer, "Effects of the News Media Environment on Citizen Knowledge of State Politics and Government," *Journalism Quarterly* 71 (1994), Snyder and Strömberg, "Press Coverage and Political Accountability."

[9] e.g., Althaus and Trautman, "The Impact of Television Market Size on Voter Turnout in American Elections.", Felix Oberholzer-Gee and Joel Waldfogel, "Media Markets and Localism: Does Local News En Español Boost

- The size of a market and the number of radio and television stations in a market are strong and significant predictors of individual-level exposure to local (but not national) news sources.[10] The effect of these market-level characteristics on individual decisions to read local newspapers, watch local television news, and listen to local radio news is so great that these consumption choices appear to be driven more by market-level factors than by individual-level factors.

Since market size is highly correlated with nearly all of the other market-level ownership variables (at least, in the form these variables are supplied by the FCC), these recent studies suggest that the likelihood of finding other kinds of significant market-level effects is also high.

In short, although the Vavreck, Jackman, and Lewis study is an important exploratory effort to assess market structure effects using "off the shelf" survey data sets, the study's findings of null effects are at odds with the conclusions of several other studies that have examined the effects of media market structures on civic engagement. The absence of evidence for such effects in the Vavreck, Jackman, and Lewis study is consistent with at least two conclusions: there are either no effects to be found, or the data sets used in this study are insensitive to effects of this sort. Based on the limited amount of available evidence from this and related studies, I conclude that the latter possibility is more likely than the former.

Recommendations

Although the project aims to study how the FCC's localism and diversity goals are reflected in patterns of civic engagement within media markets, it succeeds only somewhat better at testing localism (in Project B) than diversity (in Project A). This is largely because the goals of studying localism and diversity are not well matched to most of the key dependent and independent variables used by the authors in this study.

The FCC should give serious consideration to commissioning new survey datasets that are designed to test the effects of market-level factors on the civic engagement of citizens. Such an effort would benefit greatly from theoretically valid measures of political knowledge that should reflect exposure to information flows originating within local media markets. Measures of national-level political knowledge are insensitive to local information flows, while measures of local-level knowledge are of limited validity because so few aspects of local-level politics are consistently deemed newsworthy by local news outlets.[11] This leaves measures of state-level political knowledge as a relatively more promising approach to assessing market-level effects on civic engagement. Appropriate measures include identifying the current governor or other state officers, identifying the state's U.S. senators, and measures of correct knowledge

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Hispanic Voter Turnout?," (National Bureau of Economic Research, Cambridge MA, 2006), Prior, *Post-Broadcast Democracy: How Media Choice Increases Inequality in Political Involvement and Polarizes Elections*.

[10] Scott L. Althaus, Anne M. Cizmar, and James G. Gimpel, "Media Supply, Audience Demand, and the Geography of News Media Consumption in the United States," *Political Communication* 26, no. 3 (2009).

[11] e.g., Kaniss, *Making Local News*, Phillip J. Tichenor, George A. Donohue, and Clarice N. Olien, *Community Conflict and the Press* (Beverly Hills, CA: Sage, 1980).

about state-level politics.[12] Because the importance of state-level politics should tend to be fairly consistent across different media markets serving citizens of a state, and because few states are served by single media markets, state-level political knowledge provides a relatively more sensitive and valid measure of exposure to information flows originating within local media markets than either local or national political knowledge. However, so far as I am aware, none of the "off the shelf" data sets suitable for a comprehensive, cross-sectional analysis of market-level effects contain such measures for a wide range of states.

The effects of local media are difficult to detect without explicitly measuring exposure to local media. Among the available datasets, the National Annenberg Election Study probably has the most extensive battery of media exposure questions suitable for this purpose. Future work should incorporate such measures as likely moderators of market-level effects. The few studies to have done so reveal the differential impact of exposure to local television and newspaper coverage.[13] Ideally, researchers could attempt to identify which local media (if any) each survey respondent relies on. However, the challenges of relying on self-reports of which media outlets an individual relies on may be difficult to overcome: it is not clear whether people are able to accurately report the specific sources of local information on which they actually depend.[14]

Commissioning appropriate survey data is one avenue forward; commissioning appropriate content analysis research on local information flows is another. The study of diversity and localism goals may be best served by the collection of content analysis data that can be used to assess whether ownership structure tends to produce the type of information that is entailed in these goals. Looking for the effects of such information on registered voters is an important step, but only after a clear sense of how ownership structure influences the content of local information environments.

For the FCC's purposes, an ideal study would incorporate both survey data and content analysis data. Content analysis does not speak to effects on individuals, while effects on individuals probably require analyzing the contents of the information flows that reach them through exposure to local media.

Whether through measures of local media exposure, state-level political knowledge, or content analysis of local public affairs information, a theoretically valid test of market localism and diversity would also do something that no study has yet done: determine the ownership structures that shape the information flows reaching particular individuals, so that the analyst

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[12] Delli Carpini, Keeter, and Kennamer, "Effects of the News Media Environment on Citizen Knowledge of State Politics and Government.", Michael X. Delli Carpini and Scott Keeter, *What Americans Know About Politics and Why It Matters* (New Haven, Conn.: Yale University Press, 1996).
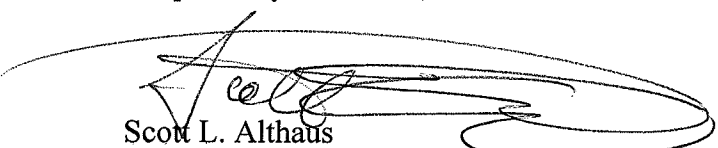[13] e.g., Scott L. Althaus, Brittany Bramlett, and James G. Gimpel, "When War Hits Home: The Geography of Military Losses and Support for War in Time and Space," *Journal of Conflict Resolution* (Forthcoming), James N. Druckman and Michael Parkin, "The Impact of Media Bias: How Editorial Slant Affects Voters," *Journal of Politics* 67, no. 4 (2005), Diana C. Mutz and Joe Soss, "Reading Public Opinion: The Influence of News Coverage on Perceptions of Public Sentiment," *Public Opinion Quarterly* 61, no. 3 (1997).
[14] e.g., Markus Prior, "Improving Media Effects Research through Better Measurement of News Exposure," *Journal of Politics* 71, no. 3 (2009).

could compare civic engagement levels of Person X who relies on media outlets owned by Owner A to civic engagement levels of Person Y who relies on outlets owned by Owner B.

This type of data, to my knowledge, does not yet exist. The authors cannot be faulted for its absence. Instead, the FCC or some other body would do well to commission an effort to match self-reported news sources to ownership characteristics in order to ascertain any ownership-related effects.

Respectfully submitted,

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