

September 18, 2007

Background and Qualifications

1. I am a Research Economist in the Antitrust Division at the US Department of Justice.* I was previously an Assistant Professor of Economics at Rutgers University, in New Brunswick, NJ. I earned my Ph.D. in Economics from Duke University in 1989.
2. My research specialties are econometrics and applied microeconomics. I have published 11 academic papers in these areas, and have received one National Science Foundation grant in support of my research.

Conclusions

1. I have been asked by the FCC to review three submissions by Professor Jerry Hausman. Two of the submissions are themselves reviews of two other submissions. His reviews were submitted on January 16, 2007. The first submission reviews, *Newspaper/Television Cross-Ownership and Local News and Public Affairs Programming on Television Stations: An Empirical Analysis* by Professor Michael Yan, which was submitted to the FCC by the Donald McGannon Communications Research Center on October 23, 2006. The second submission reviews, *Consolidation and Conglomeration Diminish Viewpoint Diversity and Do Not Promote the Public Interest: New Evidence (Study 16)*, by Mark Cooper and S. Derek Turner. This was also submitted on October 23, 2006. The third submission by Professor Hausman is Exhibit 2, in *Comments of Clear Channel Communications, Inc.* Submitted on October 23, 2006.

*These reviews were done in my personal capacity and the views expressed are my own professional judgements and are not purported to reflect those of the United States Department of Justice.

The Yan and Cooper and Turner submissions

2. The Yan and Cooper and Turner submissions focus on newspaper/television cross-ownership.

Professor Hausman limits attention in his reviews to the econometric analysis in the Yan and Cooper and Turner submissions, so I will do likewise. Moreover, given that I have been tasked to review reviews, I will focus mainly on Professor Hausman's comments, but I do find it necessary to also reference the original studies.

3. I have come to the following conclusions regarding these submissions:

Comments on Professor Hausman's Review of the Yan Study

- I agree with Professor Hausman's three main points regarding the Yan submission: the paper lacks a sufficient description of the data, the main outcomes models he estimates contain an identification error, and Professor Yan's results in fact show the opposite of what he concludes.
- The only additional conclusions that I have reached, are ones that I feel are missing from Professor Hausman's comments. Professor Hausman discusses the econometric results, but does not discuss the economic mechanisms underlying them. I make two points.
- My first point has to do with the implications of the cross ownership coefficient in the selection model in Table 4 of the Yan paper. This coefficient is large and highly statistically significant and indicates that the provision of news programming is much higher among cross-owned stations. Professor Hausman points this out in part by noting that even if minutes of local news broadcasting are equal across cross-owned and non cross-owned stations, total minutes of news programming, which is the product minutes

and the probability that a station broadcasts local news is greater among cross-owned stations. That is,

$$TMIN_{CO} = P_{CO} * m \gg P_{NCO} * m = TMIN_{NCO}$$

where $TMIN_{CO}$ is the total minutes of local news broadcast by a cross-owned station, P_{CO} is the probability that a cross-owned station broadcasts local news, $TMIN_{NCO}$ and P_{NCO} are similarly defined for non cross-owned stations. Minutes of news broadcasting, m , is assumed to be common across cross-owned and non cross-owned stations. Professor Yan's results indicate that $P_{CO} \gg P_{NCO}$. Hence, even if m is equal across cross-ownership types $TMIN_{CO} \gg TMIN_{NCO}$.

The economic point to be emphasized is that $P_{CO} \gg P_{NCO}$ suggests that synergies from cross-ownership impact local news broadcasting mainly through the provision decision. Being able to draw on a staff of local news reporters likely lower costs of providing news and therefore increases the probability it gets provided.

- My second point relates to the cross-ownership coefficients in the local news and public affairs programming outcome regressions in Tables 4 and 5. As Professor Hausman points out, Professor Yan's results suggest that minutes of local news broadcasting and minutes of public affairs programming may actually be higher for cross-owned stations.¹ This in turn suggests that synergies may operate through the length of local news and public affairs programming decisions as well as through the provision decision. This will be true if being able to draw on a local reportorial staff lowers the costs of these types of

¹Professor Yan estimates the cross-ownership coefficient to be positive but statistically insignificant in both his local news and public affairs minutes regressions. However, problems in his econometric work up, a censoring issue in the data, and small sample sizes may be causing these estimates to be insignificant.

programming relative to others and thereby increases the profit maximizing quantities of both local news and public affairs programming.

Comments on Professor Hausman's Review of the of the Cooper and Turner Study

- I agree with Professor Hausman's main conclusion that "CT's results provide evidence that cross-ownership leads to more minutes of both local news and local public affairs." To Professor Hausman's conclusions, I add one technical conclusion. I disagree with CT's use of a Tobit model in estimating the regression for minutes of Public Affairs programming. Tobit models are employed when the dependent variable for regression is censored for a subset of sample observations. Censoring typically occurs when a survey instrument or a policy bounds a variable above or below a specific point: wage rates being censored at the minimum wage is a leading example. CT use a Tobit model because many of the stations in their dataset produce zero minutes of public affairs programming. But treating public affairs minutes as censored at zero implies both that negative minutes of programming are possible and that stations desire to air a negative quantity of Public Affairs minutes. If a market existed where one station could buy the minutes that another station uses for Public Affairs programming and put it to a different use, then this could be considered as airing negative minutes. Since this market does not exist, CT's Tobit based results, which Professor Hausman assesses as providing evidence that cross-ownership leads to more minutes of public affairs programming, are unreliable at best.

Comments on Statement of Professor Jerry A. Hausman, Exhibit 2 in Clear Channel submission entitled *Comments of Clear Channel Communications, Inc.*

1. Professor Hausman discusses three topics in this submission: consolidation and format diversity, consolidation and advertising prices, and the volatility of radio station market shares. He presents new empirical results for the first and third topics and limits study of the second topic to a discussion of the *DOJ/FTC Merger Guidelines* and two published papers. Given this, I will limit my comments to a discussion of his econometric analysis of topics one and three.

2. Consolidation and Format Diversity: To assess the impact of ownership consolidation resulting from the 1996 Telecom Act on format diversity Professor Hausman uses an approach developed by Steven Berry and Joel Waldfogel² and extends their work by incorporating additional years of data that have accrued since the Berry and Waldfogel paper was published in 2001. The model Professor Hausman estimates uses number of formats in each local market as the dependent variable, and number of owners, population and market and time fixed effects as independent variables. His sample contains data from 243 Arbitron markets in each of four years: 1993, 1997, 2001, and 2006. He follows Berry and Waldfogel in controlling for endogeneity by instrumenting for number of owners using a variable based on the policy bands created by the 1996 Telecom Act. Professor Hausman's results show that a decrease in the number of owners has increased the number of formats. He cites this as evidence that format variety has increased with ownership concentration. I have reached the following conclusions regarding this result.

- The method employed by Professor Hausman is sound and the result is consistent with a similar result using only 1993 and 1997 data presented by Berry and Waldfogel.

²*Do Mergers Increase Product Variety? Evidence from Radio Broadcasting*, Quarterly Journal of Economics, (2001), V. 116(3), 1009-1025.

However, there are caveats to be noted.

- First, Professor Hausman presents results from only a single regression. Berry and Waldfoegel presented results that examined the impact of ownership concentration on the number of formats, the number of stations, and the number of formats/station. These regressions might tell different stories about the impact of ownership concentration. Second, Berry and Waldfoegel, were concerned that their policy band variable might not be a valid instrument and so they conducted robustness checks using different regression formulations and different instrument sets. Third, as is stated in the Clear Channel submission, the number of radio stations has increased from 12,140 in 1996 to more than 13,700 today, an increase of 12.8 percent.³ Hence, it is possible that in markets with high station growth, the number of formats may have increased even if ownership consolidation reduces format variety. To the extent that population variables and fixed effects do not serve as adequate proxies for the growth in the number of stations, this effect is uncontrolled for in Professor Hausman's regression and may bias the ownership effect. In particular, if station growth was highest in markets that consolidated most, this effect would become stronger. Showing that Professor Hausman's result holds in a regression using formats/station as the dependent variable would alleviate this concern.

3. Volatility of Market Shares: Referencing the *FTC/DOJ Merger Guidelines*, Professor Hausman articulates that for the purposes of evaluating the competitive significance of mergers, market shares should represent future competitive significance. In the case of radio, he argues, that all firms have an equal likelihood of securing future sales and so radio firms should be assigned equal

³*Comments of Clear Channel Communications Inc.*, page 7.

market shares. To support this conclusion, he references a paper by DOJ economist Gregory Werden⁴ that argues for “one-over-n” markets occur in situations where the ability to compete is determined mainly by intangible assets. Professor Hausman argues that the FCC licences constitute the essential intangible asset that enables radio stations to compete. He then further supports his conclusion with a table of listener share changes over a one, two, and three year period that shows the share of listeners accruing to individual radio stations to be quite volatile over time. I have reached the following conclusions regarding Professor Hausman’s conclusion.

- I disagree with Professor Hausman’s conclusion that radio firms should be assigned equal market shares. I do not believe that radio firms are good candidates for being considered as one-over-n markets, and the table of listener share changes he reports misrepresents competition among radio firms.
- Gregory Werden argues that “Candidates for the assignment of 1/n shares include markets for technology or innovation and Schumpeterian industries, in which competition occurs largely through the introduction of new products or technologies and competition is apt to be more “for the market” than “in the market.”⁵ Radio stations do not easily fit this characterization. As Professor Hausman argues, FCC licences are essential assets for terrestrial radio stations, but not all FCC licences are alike. The power of the broadcast signal and the location of the broadcast tower differentiate the licences. In addition, radio competition does not only occur through the addition of new products. Stations do switch formats, and new formats do get introduced, but stations also retain the same formats for

⁴*Assessing Market Shares*, *Antitrust Law Journal*, (2002), V. 70, 67-104.

⁵*Ibid*, p. 86.

years. Examining radio station formats from 10 markets for the period 1988-1998, Charles Romeo and Andrew Dick⁶ found that 16.6 percent of stations changed their format category, while 13.3 percent more made within category format changes, and 70 percent of stations made no format changes.⁷ Finally, competition is likely to be “in the market” as opposed to “for the market.” Radio has the characteristics of a two-sided market. Stations produce listeners which they then sell to advertisers. To reach listeners in certain demographics, advertisers may place ads on multiple stations, some within the same format, others in very different formats thereby providing room for the multiple stations.

- Changes in station outcomes are attributable to both the power of their licences and the programming choices, and it is exactly in this sense that I argue that Professor Hausman’s table on listening share volatility misrepresents competition in the market. The three year changes in the table are meant to suggest that a station that begins with a high listening share is almost equally likely to end up with either a high or low share at the end of three years, and likewise for a station that begins with low share. Rather, tower location and the power of a station’s FCC licence are likely to keep stations within certain listening share ranges. High power stations that are centrally located in a market are more likely to remain among the top-tier in listening share, while low power stations or stations that only broadcast to a portion of the market are more likely to remain among the lower-tier. Moreover, even within low-tier and top-tier stations, changes in station outcomes are not

⁶ *The Effect of Format Changes and Ownership Consolidation on Radio Station Outcomes*, Review of Industrial Organization, (2005), V. 27, 351-386.

⁷ An example of a format category change would be a change from Country to Rock, while an example of a within category change would be Country to Classic Country.

entirely random. They are driven by observable factors. For example, Romeo and Dick⁸ explained nearly 53 percent of listening share variation through regression on observable factors readily available from Duncan's and BIA.

- Even staying within the context of culling information on market share volatility from simple share change tables, there are two additional sets of results that Professor Hausman could produce that would provide alternative views of the degree of volatility. First, I would argue for creating a second table with entrants and exits removed, as these are likely to be a substantial portion of the stations with the largest listening share growth and decline. Second, a table of listener share rank correlations over a three year period may produce a substantially different picture of the degree of volatility over this three year period.

⁸Ibid.