

DATE: July 15, 2011

TO: Jonathan Levy, Deputy Chief Economist, Federal Communications Commission

FROM: David F. Layton, Professor, Daniel J. Evans School of Public Affairs, University of Washington.

Subject: Review of Consumer Valuation of Media As A Function of Local Market Structure, by Professors Scott Savage and Donald Waldman of the University of Colorado

Per your request I have reviewed “Consumer Valuation of Media As A Function of Local Market Structure”, by Professors Scott Savage and Donald Waldman of the University of Colorado. As requested, in conducting my review I have focused on “whether: (1) the methodology and assumptions 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 analysis; and (4) whether the conclusion, if any, follow from the analysis.” Further as requested I do not offer any advice on policy or evaluate the policy implications of the study. Before proceeding, I state that I do not believe that I have any conflict of interest in reviewing this study.

“Consumer Valuation of Media As A Function of Local Market Structure” collects and analyzes original data to estimate models that provide willingness to pay (WTP) estimates of the value that consumers place on a number of features of their local media environment. WTP is a theoretically driven and justified approach that economists use to measure value. The study focuses on the “Diversity of Opinion”, the local “Community News” component, amount or quality of the media content focused on “Multiculturalism” (related to ethnic, gender, or minority issues), and the amount of “Advertising”.

The data collection approach is survey based. It uses an established methodology that has come to be called a “Stated Preference” or “Choice Experiment” approach. This approach has been frequently used (and published in peer-review literature) in a number of fields of economics including (but not limited to) environmental and health economics as well as in market research in addition to the media/telecommunications context here. In reviewing the study, I find that they used good and accepted professional practices in designing their survey. Alternatives are constructed based on the local media factors above plus costs. They take appropriate care in eliciting and designing the variables. They used an established choice experiment regime – choose an alternative media package “A” versus alternative media package “B”, and then based on that choose their current real media package or their preferred of “A” or “B”. In designing their survey, they employed good and established pre-testing procedures. Their experimental design is

well considered and is based on a well known and peer-reviewed published approach. The survey administration and sampling is conducted by a well known and established firm – Knowledge Networks. The sample size is quite large compared to most studies that use these techniques. In summary, I believe that the data used are reasonable and of sufficient quality for purposes of analysis.

The econometrics has two basic pieces. The first is a discrete choice model (a form of bivariate probit model) which ultimately provides the WTP or value associated with altering a consumer's local media environment. This model is well explained and follows from standard theory and practice in the area. The second part is an ordered probit model (also a form of discrete choice model) which is used to understand and later to predict under potential mergers how consumers might perceive the new levels of "Diversity of Opinion", the local "Community News" component, amount or quality of the media content focused on "Multiculturalism" (related to ethnic, gender, or minority issues), and the amount of "Advertising". In conducting their analysis, the authors provide alternative models as robustness checks. In summary, I believe that methodological approach and assumptions are consistent with accepted theory and econometric practices.

In order to draw conclusions regarding how mergers might affect the overall economic welfare of consumers as measured by WTP, the researchers combine their discrete choice model and order-probit model to conduct a prediction of what WTP would be if the number of television stations reduced by one in each market. This component is well-explained and flows from their econometric analysis.

There are a few place where I believe that further discussion, modeling, or information might be useful to the FCC. These do not change my overall assessment of the study. These are:

- 1) It may be helpful to some users of the study to see in its own individual table the final post-stratification weights as used in the econometric modeling.
- 2) It may be helpful to note that some users of these types of models may interpret equation (3) in expectations form and consider all the WTP's to be "expected or average" WTP's.
- 3) A number of different discrete choice WTP models are estimated and discussed – a baseline, demographic based models, and the non-linear model in Table 19 used to provide the estimates in table 22. First, I wonder whether it is useful to the FCC to have a model like the non-linear one in table 19 reported with demographics? Second, would it be helpful to the FCC to have the authors identify which WTP estimates from the various models should be used for which analytical/policy purposes?

In summary, I conclude that overall, the methodology and assumptions are appropriate and consistent with economic and econometric theory and practice. Their estimate of the economic welfare changes associated with potential mergers follows from their economic and econometric modeling.

Sincerely,

David F. Layton