Review of "The Impact of Ownership Structure of Television Stations' News and Public Affairs Programming" by Daniel Shiman.

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As the title of the paper makes clear, the study by Shiman focuses on the impact of ownership structure on the amount of news and public affairs programming provided by television stations. Ownership structure of a television station is a vague term, but in this case it specifically refers to whether there are other stations with the same owner in the same market, whether the station is owned by one of the four major networks (ABC, CBS, NBC or Fox), and whether the owner of the station also owns a newspaper or radio station. The main goal of the study is to measure the impact of changes in these ownership variables on the quantity of news and public affairs programming on that station.

<u>Data</u>

The analysis is performed on a panel dataset covering 6,703 stations over 4 years in numerous (geographic) markets across the entire U.S. The data come from multiple sources in order to provide information on station programming, station ownership variables, and local demographics. The paper provides a clear description of the data (including the sources) and sensible summary statistics.

Several aspects of the data are noteworthy strengths: there are a large number of observations, the panel structure (enabling the use of various fixed effects to control for other factors that affect programming), and the high level of detail on programming and ownership.

The variable for cross-ownership with a newspaper in the same city is discussed on page 13, but it was not clear how it applies to non-local newspapers. For example, if a station is owned and operated by a network that is jointly owned with a nationally available newspaper, does this imply the newspaper cross-ownership variable equals one? Or is the definition limited to cross-ownership with local newspapers?

There are a few important limitations to the data. First, only stations are included that are *full power analog over-the-air broadcasters*. Hence, the study precludes cable channels (including cable news channels). Shiman briefly discusses this point on page 25, nevertheless, this presents a significant limitation of the study.

Second, the data includes no information on the number of viewers for each station (or each television program). Consequently, each station is weighted equally in the analysis. Since we ultimately care about the impact on consumers, and some stations are more important to consumers than others, this presents a limitation of the data.

A third limitation is that all news and public affairs is treated equally. For example, no distinction is made between local and national news, and there are no measures of program quality. Shiman also discusses this limitation on pages 25 and 26.

Despite these limitations the data are valuable and should be taken seriously— these aspects do not undermine the analysis, but they do lead me to question the broader relevance of the findings.

Methodology and Assumptions

The results are all based on OLS regressions in which the dependent variable is the number of minutes of news or public affairs programming, and the explanatory variables include the various measures concerning ownership structure. In Shiman's preferred specification, the control variables include dummies (ie. fixed effects) for each year, each market, and each major network.

The use of fixed effects that exploit the panel nature of the data is a sensible choice. The method controls for some of the obvious potential sources of bias, and Shiman clearly explains how the inclusion of fixed effects (of one kind of another) changes the source of identification for the key coefficients. Presenting the results from multiple specifications is also a strength of the analysis.

A generic weakness of this methodology is the absence of any particular source of exogenous variation in ownership structure. However, it will be rare to find a dataset with truly exogenous variation in ownership structure, so this is a reasonable approach.

There are three aspects of the analysis that could be improved.

First, it would strengthen the analysis to estimate a specification that includes market-time fixed effects (ie. a dummy for each combination of market and time period). This would relax the assumption that time period effects are equal across all markets, while allowing within-market variation to identify the coefficients of interest. In many applications I would be inclined to suggest this is unlikely to make a difference, but in this study several of the key coefficients appear to be very sensitive to the choice of fixed effects.

Second, standard errors should be adjusted to allow for clustering in the data. In particular there is almost certainly clustering at the market level, in addition to serial correlation. This would increase the standard errors.

Third, it is unclear whether it is more meaningful to examine the effects on news and public affairs in terms of the absolute or relative effects. It would be

desirable to check if the results of robust to defining the dependent variable as the log of news (or public affairs) minutes.

Conclusions

The main news-related conclusions of the study are:

a) Cross-ownership of a TV station with a newspaper increases news.
b) Ownership by a major network increases news.
c) Ownership of multiple stations in the same market increases news.
d) Ownership by a larger station group decreases news.
e) Local ownership decreases news.
f) Cross-ownership with a radio station has no significant effect on news.

These findings are all evident from the specification with market, time and network fixed effects. Conclusions (a), (b), (d), and (e) are reasonably robust across alternative specifications (varying fixed effects). Conclusions (c) and (f) are not robust to alternative specifications. For example, the effect from ownership of multiple stations in the same market is either 338, 586 or -220 (and highly statistically significant in each case) depending on which specification is used.

It is hard to rationalize conclusions (b) and (d) which are seemingly at odds with each other since they both relate to scale economies in news programming.

The public affairs related conclusions are:

a) Cross-ownership with a radio station increases public affairs programming.
b) Higher parent revenues reduces public affairs programming.
c) Most other ownership variables have no effect.

Again, these conclusions are based on the preferred specification with market, time and network fixed effects. The results are not reported for alternative specifications, so robustness is unclear.

It is hard to rationalize the different effects of newspaper and radio cross-ownership on news and public affairs programming. More generally, it is puzzling why the findings about news programming tend to differ so much from the findings about public affairs programming.

Overall, the conclusions of the paper are substantiated by the analysis. However, the findings are puzzling in some respects, and the magnitudes of several of the estimates are sensitive to alternative specifications.