ABSTRACT

To test whether the revocation of the Federal Communications Commission's "Anti-Trafficking" rule (requiring television station owners to keep a station for three years before transferring its license to another party) impacted station owner behavior, a study compared the behavior of television station "traffickers" (owners seeking quick turnovers of their stations) with those who held onto their stations for longer periods. Specifically, the study examined the results of trafficking behavior on station prices. The study analyzed 26 cases where stations were traded at least twice (involving periods of ownership of three years or less) during the period of 1973-1986, and for which full information on the original purchase price and the later sale price was available. Other measures considered the influence of various factors, including network affiliation, and whether the current owner or purchaser owned other media properties at the time of sale. The influence of competing stations and cable penetration were measured by the change in number of competing stations and the change in cable penetration levels from the time the station was originally purchased to the time at which it was sold. Results indicated that no statistically significant difference existed in the station price growth rates of "traffickers" and other owners. In fact, controlling for the influence of other factors, "traffickers" appeared to achieve marginally lower growth rates than other owners. (Two tables of data are included.) (MM)
DEREGULATION AND STATION TRAFFICKING

by

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In the early 1960s, the FCC instituted the "Anti-trafficking" rule which required station owners, except under some limited conditions, to hold on to a station for at least three years before they could transfer that station's license to another party. At the time, the FCC was concerned that frequent trading might impact on the licensee's qualifications, experience, and knowledge of community needs and interests. A further argument was that if owners could seek a quick turnover, they were more likely to operate so to maximize their short term economic benefit, rather than in the public interest (Cherington, Hirsch, & Brandwein, 1971). In 1982, the FCC, as part of their general deregulatory thrust, revoked that rule, removing virtually all restrictions on the length of station ownership (Bensman, 1985).

The general argument behind deregulation was that there was now enough competition in the broadcasting industry, and between broadcasters and other media outlets, that competitive forces would force owners to act in the public interest, and that there was therefore no need for the FCC to oversee that behavior (Krasnow & Stern, 1984). In the case of the dropping of the "Anti-trafficking" rule, the argument could be stated as implying that competition would force all owners to behave in a similar manner, regardless of their intents with regard to selling their stations. Some critics, on the other hand, argued that owners seeking quick turnovers of stations would act to maximize short-term profitability, in order to obtain a higher price for their station.

While it is quite difficult to address the issue of intent and the reason for behavior on the part of station owners, it is possible to examine the results of that behavior on station prices. The broadcasting industry is one where the value of the firm is determined more by the ability to earn profits than by the value of physical assets. Station prices are often expressed in terms of multiples of revenues or profits, and Blau, Johnson, and Ksobeich (1976) demonstrated that station prices are largely a function of annual net revenues or profits. If "traffickers" did act to maximize short term profitability, they should be able to generate higher station prices, and higher rates of return on their investment upon resale than would other owners. One recent study of the impact of deregulation (Bates, 1988) does suggest that the overall impact of the recision of the "Anti-Trafficking" rule on station prices was negligible, once other factors were controlled for. That study, however, focussed on prices rather than rates of growth in station values, and did not specifically consider whether stations which were rapidly turned over were able to generate higher prices.
This paper seeks to test whether station owners who have "trafficked" (by selling their stations within three years of their original purchase) operate their stations differently than others who have held onto stations for more than three years before selling them, by considering the relative growth rates in station prices for station owners who have acquired and then resold station in recent years.

Theory

The basis for the original "Anti-Trafficking" rule, and indeed for much of the FCC’s regulatory efforts, is the assumption that normal profit-maximizing behavior is not likely to also maximize public benefits or welfare, and thus that profit-maximizers, left to their own devices, are not likely to serve the public interest. This assumption itself rests on the presumptions that the public interest is best served by the provision of "public interest programming," and that such programming is by definition unprofitable. The FCC’s "Carroll Doctrine" gave recognition to the concept that the provision of public interest programming was linked to the profitability of stations, although there is conflicting evidence as to a link between profitability and the provision of public service programming (compare Litman, 1979, and Prisuta, 1977). Still, there seems to be little question that at least some behavior considered to be in the public interest is costly to broadcasters, and might be foregone in the search for maximum profits and returns.

If "traffickers" seek to maximize short term profits, or their returns, they should obtain a higher increase in station value than other owners who do not choose to forego costly public interest behavior. That is, the annual rate of increase in the value of the station, after correcting for the effects of inflation, should be higher for "traffickers" than for other owners. This can be illustrated by the basic equation

$$Y = X(1 + R_1 T + R_2 Z T)$$  \hspace{1cm} (1)

where

- $Y$ = Adjusted price for the station when sold,
- $X$ = Adjusted price for the station when bought,
- $T$ = Number of years the station was held,
- $R_1$ = Basic annual growth rate of station value,
- $R_2$ = Additional rate returned to "traffickers,"

and

- $Z = 1$ if "trafficker," 0 otherwise.

Taking the natural logarithm of both sides, this equation can be rewritten as

$$\ln(Y) = (1 + R_1 T + R_2 Z T) \times \ln(X)$$  \hspace{1cm} (2)
In turn, this can be rewritten as
\[
\frac{\ln(Y)}{\ln(X)} = 1 + R_1 \cdot T + R_2 \cdot Z \cdot T \quad (3)
\]
or
\[
\frac{\ln(Y)}{\ln(X)} - 1 = R_1 \cdot T + R_2 \cdot Z \cdot T \quad (4)
\]
which is of a form that allows \( R_1 \) and \( R_2 \) to be estimated by linear regression procedures. If "traffickers" do behave to maximize short term return, and are successful in that behavior, then \( R_2 \) should be positive.

There are, however, other factors which have been identified by various studies as influencing station prices, and through them, the rates of return. Virtually all previous studies (Bates, 1988; Blau et al., 1976; Cherington et al., 1971; Levin, 1971, 1975, 1980) have found that network affiliation and audience size has influenced the price of television stations, although the audience size measures were largely used as indicators for revenue and profit potential. Research has also identified the type of ownership (Bates, 1988; Cherington et al., 1971; Levin, 1980), the number of competing stations in the market (Blau et al., 1976; Levin, 1971, 1975, 1980), operation on the UHF band (Bates, 1988; Blau et al., 1976), and market cable penetration levels (Bates, 1988) to influence the price of television stations.

If one assumes that the impact of these factors is not constant, but rather proportional to the value of the station, then one can rewrite equation (1) as
\[
Y = X(1 + R_1 \cdot T + R_2 \cdot Z \cdot T + F_i) \quad (5)
\]
where \( F_i \) = impact of various factors.

Following the transformations listed above, this equation can be rewritten as
\[
\frac{\ln(Y)}{\ln(X)} - 1 = R_1 \cdot T + R_2 \cdot Z \cdot T + F_i \quad (6)
\]
which is estimable through basic least squares regression procedures.

Thus, the basic hypothesis to be tested in this paper is that "traffickers" will generate higher rates of return than will other station owners. As demonstrated by the above model, this can also be expressed as
\[
H_1: R_2 > 0.
\]

This paper will proceed to identify those other factors which might influence the sales price for a TV station, and then test this hypothesis in both the basic model (Equation 1) and the corrected model (Equation 5).

**Data**

Estimation of the above equations requires information on both the price paid by an owner for a station and the price that owner was able to sell it to another for. The data for this study includes all cases where stations were traded at least twice during the period 1973-
1986 and for which full information on both the original purchase price and the later sale price was available. This information, along with associated station and market data, was gathered from Broadcasting magazine, the Broadcasting Yearbook, and the Television-Cable Factbook, resulting in a total of 70 cases. A total of 26 of these cases involved periods of ownership of three years or less, and were classified as examples of "trafficking."

In addition to information on prices, measures were obtained to consider the possible influence of other factors identified by earlier studies on station prices. Indicator variables were created to measure network affiliation, operation on the UHF band, and whether the current owner or purchaser owned other media properties at the time of the sale. As it was assumed that the influence of competing stations and cable penetration on station price would be consistent, it was decided to consider their impact in terms of changes in the level of competition or penetration over the time in which the station was held. That is, the influence of competing stations and cable penetration were measured, respectively, by the change in the number of competing stations and the change in cable penetration levels from the time the station was originally purchased to the time at which it was sold. Similarly, the market growth rate over the ownership period was calculated from measures of ADI television households. There were a few cases where these additional measures were not obtainable, which reduced the applicable sample size for some models.

Station prices were adjusted by the Consumer Price Index to correct for general inflation, and then transformed in order to estimate the following regression equation:

\[ Y' = b_1 T + b_2 Z' + b_i M_i \]  

where

\[ Y' = \ln(Y)/\ln(X) - 1 \]

\[ Z' = Z * T \]

\[ M_i = \text{other impact measures} \]

and

\[ b_i = \text{estimated coefficients} \]

This basic equation was examined in several versions, with various impact measures included, using the least squares regression procedure of the STATA statistical package on a personal computer.

Results and Analysis

The results for the uncorrected model are given, for the purpose of providing a basis for comparison, in Table 1. The fitted model proved to be statistically significant (F(2,68) = 16.31, p < .0001), although it was able to explain only about 30% of the total variation in the dependent variable. The estimate for coefficient \( b_1 \) also proved to be statistically significant (t(68) = 5.164, p < .0001), and indicated that station prices increased...
an average of about 1.8% per year, after inflation. The estimated value for \( b_2 \), while not statistically different from zero (\( t(68) = 1.112, p < .270 \)), did indicate that "traffickers" were able to increase the value of their stations an average of an additional 1.5% per year, after inflation. That is, the fitted basic model indicated that "traffickers" were able to increase station value at an average annual rate of approximately 3.3% after inflation, while owners who held their stations more than three years averaged only a 1.8% annual growth rate, after inflation.

These results, however, do not take into consideration the possible effect of other factors on the rate of growth of television station prices. A series of models were fit to the data in order to identify, and control for, any significant effects due to other factors. Table 2 contains the results for two of these models, the initial model containing all factors, and the final model, containing only those additional factors which were found to significantly contribute to the explanation of the growth of television station values at a standard \( p < .05 \) level. Perhaps the most significant result of that first corrected model was that, while the model itself was statistically significant (\( F(9, 46) = 7.76, p < .0001 \)), only two of the additional factors were statistically significant at the \( p < .05 \) level.

Although numerous intermediate models, containing various subsets of the factors, were examined, the final corrected model contained only those two factors, operation on the UHF band, and the number of new stations added to the market during the station owner's tenure, proved to significantly contribute to the explanation of the dependent variable. And, as can be seen in Table 2, the addition of these factors also affected the estimated rate coefficients. The estimated annual growth rate, \( b_1 \), was only marginally significant (\( t(60) = 1.907, p < .061 \)), indicating only an average growth rate of 0.66% beyond inflation. More importantly for the purpose of this study was the fact that the estimated value for the coefficient \( b_2 \) was now negative (although not significant), indicating that "traffickers" actually had lower annual growth rates than owners who held on to their stations for more than three years.

The estimated coefficients for the UHF indicator variable and the measure of changes in the number of competing stations were both positive and statistically significant at the \( p < .05 \) level. This indicated that UHF stations posted greater increases in value over time, a result that is in line with earlier research (Bates, 1987) indicating that UHF stations have generally become more competitive over time. As for the factor of increased competition, the estimated coefficient was also positive, indicating that the addition of another station helped to increase the price of existing stations in the market. While this result seems
counter-intuitive, it could be argued that growth in the number of stations in a market is indicative of a strong local economy and growing revenue base in the market. And improved economic conditions are likely to increase the value of existing stations.

Conclusions

The goal of this study was to test whether the behavior of station "traffickers" was different from those who held onto their stations for longer periods, at least to the extent that such behavior could be adduced from its effect on station prices. One argument had suggested that the desire to maximize station resale value would lead "traffickers" to act in their own short term economic interest rather than in the public interest. And that such behavior would result in higher growth rates in station prices for "traffickers." From this argument, a specific model of station price growth rates was developed and a specific hypothesis formulated which would allow a test of whether "traffickers" were achieving higher rates of growth in station prices than other owners.

From an analysis of stations bought and then later resold during the period 1973-1986, this study found that there was no statistically significant difference in the station price growth rates of "traffickers" and other owners. In fact, controlling for the influence of other factors, "traffickers" appeared to actually achieve marginally lower growth rates than other owners. From this, one can conclude that either "traffickers" did not behave differently from other owners or that their efforts to achieve higher station prices were unsuccessful. While this does not rule out the possibility that station "traffickers" act in order to maximize short term economic gain, rather than in the public interest (it may be that all broadcasters act in that manner), it does suggest that the revocation of the "Anti-Trafficking" rule has not significantly impacted on station owner behavior, or at least the results of that behavior. Thus, the FCC's assumption that nonregulatory forces would be sufficient to control station owner behavior would appear to be correct, at least in this regard.
Table 1
**Estimated Coefficients for the Basic Model**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coef.</th>
<th>Std Error</th>
<th>Signif.</th>
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<tr>
<td>T</td>
<td>.0174</td>
<td>.0034</td>
<td>.000</td>
</tr>
<tr>
<td>Z'</td>
<td>.0154</td>
<td>.0139</td>
<td>.270</td>
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</tbody>
</table>

Adj. $R^2 = 0.304$

$F(2, 68) = 16.31$ (p < .0001)

$N = 70$

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Table 2
**Estimated Coefficients for Corrected Model (Equation 7)**

<table>
<thead>
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<tr>
<td>T</td>
<td>.0077</td>
<td>.0081</td>
<td>.346</td>
<td>.0066</td>
<td>.0035</td>
<td>.061</td>
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<tr>
<td>Z'</td>
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<td>.0156</td>
<td>.432</td>
<td>-.0111</td>
<td>.0105</td>
<td>.295</td>
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<td>UHF</td>
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<td>.0316</td>
<td>.050</td>
<td>.0823</td>
<td>.0233</td>
<td>.001</td>
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<td>New Stns</td>
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<td>.0105</td>
<td>.049</td>
<td>.0235</td>
<td>.0097</td>
<td>.018</td>
</tr>
<tr>
<td>Media Owners Buyer</td>
<td>.0011</td>
<td>.0341</td>
<td>.973</td>
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<tr>
<td>Media Owners Seller</td>
<td>.0355</td>
<td>.0351</td>
<td>.317</td>
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<tr>
<td>Media Owners Net Aff.</td>
<td>.0199</td>
<td>.0404</td>
<td>.625</td>
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<tr>
<td>Media Owners Mkt Growth Rate</td>
<td>.0615</td>
<td>.5324</td>
<td>.909</td>
<td></td>
<td></td>
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<tr>
<td>Media Owners Cable Pen.</td>
<td>-.0015</td>
<td>.0020</td>
<td>.454</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

- Adj $R^2 = .523$
  - $F(9, 46) = 7.76$
  - $N = 55$

- Adj $R^2 = .521$
  - $F(4, 60) = 16.41$
  - $N = 64$

Note: Both regressions were statistically significant at a level of p < .0001.
Bibliography


