Regulation of Broadcast Station Ownership: Evidence and Theory

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I. INTRODUCTION

Seeking to increase program diversity and to prevent undue economic concentration, the Federal Communications Commission has imposed a number of restrictions on the ownership of broadcasting stations. Among these are (a) the group ownership rule, which prohibits a single entity from owning more than seven stations nationwide in the same service (AM, FM, or TV) with no more than five of the seven television stations being VHF, (b) the regional concentration rule, which prohibits common ownership of three commercial AM, FM, or television stations where any two are located within 100 miles of the third, and where the primary service contours of any of the stations overlap, (c) the duopoly rule, which prohibits ownership of more than one station in the same service in a market, (d) the one-to-a market rule, which prohibits the acquisition of more than one station in any service in a market (although AM-FM combinations are allowed and UHF television-radio combinations are permitted on a case-by-case basis), and (e) the television station-cable cross ownership rule, which prohibits common ownership of a television station and a cable system in the same market.[2]

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[2] Additional rules prohibit new television broadcasting-newspaper combinations in the same market, ownership of cable systems by national television networks, ownership by a single entity of more than one television broadcast network, and cross ownership between telephone companies and cable systems in the same market. The television-newspaper cross ownership rule is extensively analyzed in Baer (1974).

Whatever justifications may have existed when these rules were adopted, striking changes occurring in the electronic mass media highlight the need for their reassessment. Indeed, at this writing the FCC has a proceeding underway to determine whether the group ownership rule should be amended or abolished (FCC, 1983, 1984) and recently has eliminated the regional concentration rule. Our purpose in this paper is to examine the empirical evidence on the effect of joint ownership--drawn from a body of literature that, unfortunately, is severely limited--and to supplement this evidence with additional economic analysis. We are concerned with how changes in ownership might affect (a) the prospects for anti-competitive behavior, (b) economic efficiency, including economies in program production and marketing of advertising, and (c) diversity in the range of viewpoints available to the American public.

We conclude that, over a wide range, changes in these ownership rules are likely to have little effect. For example, either continuation of the group ownership rule or its abolition is unlikely to affect economic efficiency, anti-competitive behavior, or diversity, at least in the larger markets. A better case can be made for retaining the duopoly and one-to-a-market rules, but even these rules might be relaxed in markets that are unconcentrated. Moreover, our conclusions are drawn largely from empirical evidence that does not take into account the growing availability of competing media such as cable, multipoint distribution services, and direct broadcast satellites. Continuing development of services using these technologies will only reinforce these conclusions.

II. GROUP OWNERSHIP

Broadcast groups may be able to provide services to their stations, including production and acquisition of programs and selling of advertising, at a lower cost than the combined costs of each of the stations operated independently. To the extent that current limitations on group size prevent these economies from being fully realized, costs are higher than necessary. Of course, whether singly-owned stations have higher costs depends on their ability to purchase services from

networks, program syndicators, and spot advertising representatives at prices similar to the costs at which these services are provided by groups to their members.

Group ownership also raises issues of anti-competitive behavior. One possibility involves "leveraging"--the threat by a group owner to deny access by advertisers or program suppliers to some of its stations in order to obtain more favorable terms than those obtained by its singly owned rivals.

The leverage argument is asserted most clearly by Coffey (1979, pp. 322-323):

> Independent stations compete with each other to purchase 'off-network' syndicated programs... Those independents which are part of a group have a distinct competitive advantage over single-owned independent stations in the same market by virtue of their buying power. The leverage may be illustrated by the hypothetical top fifty group owner with independent stations in markets one, two and eight. Such an owner is in a position to tie his purchase of a syndicator's programs in markets one and two to the supplier's promise to sell the same program to him in the less lucrative market eight. A single station owned independent station in market eight is thereby at a competitive disadvantage.

Another possible form of anti-competitive behavior involves collusion among groups. If groups expand in size, the number of separate station owners could fall sufficiently below the number of stations within relevant markets for advertising and programming, to facilitate collusive agreements.

Finally, there is the issue of diversity. In enacting the group ownership rules, the goals of the Commission were "to maximize diversification of program and service viewpoints as well as to prevent any undue economic concentration contrary to the public interest." (FCC, 1983, p. 32) Thus, the Commission is concerned not only with the economic effects of concentrated ownership but also with its effects on the range of views available to the public.

In this section, we assess the available empirical evidence on the effects of group ownership on anti-competitive behavior, economic efficiency, and diversity. As we show, this evidence is severely limited. But the pattern of evidence, and our own analysis, suggest

that either keeping or eliminating the group ownership rule would have little effect except, perhaps, in small markets.

A. Anti-Competitive Behavior

If groups collude, we would expect advertising rates to rise, and program prices to fall as a function of the market shares of groups in the markets under investigation. If an individual group applies leverage or exercise market power against advertisers and program suppliers, we would expect the group's advertising rates to rise and the prices it pays for programs to fall relative to those of other stations in the same markets.

1. What does the evidence show?[3]

With respect to the issue of collusion, two studies are notable. One, by Peterman (1971), takes as the dependent variable the discounted 20-second national spot advertising prime time rate. After controlling for homes reached and market income in a 97-market sample, Peterman finds no evidence of collusion, since neither the percentage nor the number of group-owned stations in a market is significant in explaining advertising rates.

Although Peterman's analysis is the most useful we have seen with respect to the issue of collusion and advertising rates, it is subject to an important caveat. Like other investigators, Peterman implicitly defines the relevant geographic market as a single city or metropolitan area. Thus, his tests may fail to detect collusion if relevant markets for advertising are larger than the city or metropolitan area.

To demonstrate, consider four cities, each containing group owners drawn from the set A, B, C, D, E, F, G, H, I. These groups are distributed as follows:

City:	1	2	3	4
Groups:	A,B,C	A,B,C	D,E,F	G,H,I

[3] For a more detailed critique of the studies of the effects of group ownership see Besen and Johnson (1984).

Suppose that cities 1 and 2 form one market for selling advertising while cities 3 and 4 form another. Looking at each city separately, one would conclude that groups are equally represented, with three stations in each city. However, the market consisting of 1 and 2 contains only three separate owners while the market containing 3 and 4 contains six. Thus, the former market is more concentrated. Even if these differences in ownership produce higher rates in the advertising market containing 1 and 2, there will be no correlation between group ownership and advertising rates, since all of the stations are group owned. Thus, Peterman's tests would not be able to explain why rates are higher in cities 1 and 2.

A second study, by Fournier and Martin (1983), tests whether the presence of a network-owned station in a market affects spot advertising rates. They find no significant difference in advertising rates, suggesting that the networks do not collude in setting local advertising rates. This finding is notable because the major networks with their owned stations face each other in several major metropolitan markets such as New York, Chicago, and Los Angeles. If these cities together constitute a sufficiently distinct advertising market to permit broadcasters there to collectively exercise market power against advertisers, the networks would be in a particularly good position to exploit this opportunity. If they do so, rates in markets with network-owned stations would be higher (again with everything else held constant) than the rates elsewhere.

A study by Wildman (1978) also bears on the question of the effect of network station ownership on advertising rates. After controlling for a number of other factors, Wildman tests whether a station that is network-owned or competes with a network-owned station has higher spot advertising rates. He finds that network-owned stations have significantly higher rates, other things equal, but that stations with which they compete have rates that are not significantly different from those of other affiliates.

However, Wildman does not attribute the higher rates of network-owned stations to collusion among the networks. Instead, he hypothesizes that, since network-owned stations will "clear" (carry) a

larger proportion of the network lineup than other affiliates, other things equal, there will be fewer spot advertisements to be sold where such stations are in the market. The result will be higher spot rates. In Wildman's view, therefore, higher rates result not from coordinated behavior among the networks but from differences between the behavior of network-owned stations and affiliates. He does not attempt to explain why other stations in the market fail to benefit from the restricted supply of spots on network-owned stations.

A larger number of studies address the issue of leveraging. The earliest, by Cherington et al (1971), involves comparisons of advertising rates between group-owned and singly-owned stations. The authors conclude that "there was no difference in the overall averages [of prime 20-second spot rates] for the group-owned stations vs. the single-owner stations ($3.27 and $3.28, respectively, in 1965)...For market group 101-150, group-owned station averages were slightly, but not significantly, higher, while for the market group with the smallest audiences the single-owner stations showed higher cost-per-thousand figures" (p.54).

Although this evidence suggests that groups do not exert leverage against advertisers, the study has a number of weaknesses. It reports averages of rates for group-owned and singly-owned stations within particular ranges of market size (like markets 51-100) rather than differences within specific markets. Large differences could exist in some markets without much affecting the average for the category. Moreover, the study fails to assess the statistical significance of the observed differences in rates. Nor does it control for other variables, such as the age of stations, family incomes, and differences in market competition.

In another study, Levin (1980) estimates a number of regressions that explain a station's 20 second spot rate. The large number of equations and the wide variety of specifications makes it difficult to briefly summarize Levin's findings. In one set of results, group ownership has no significant effect on advertising rates, in another the effects are mixed, and in others, group ownership significantly raises advertising rates. In all cases, ownership by a network significantly raises a station's rates. It is impossible to identify why the effect

of group ownership varies from equation to equation, since Levin's equations are complex and he does not conduct explicit sensitivity tests.

The FCC's Network Inquiry Special Staff (1980, pp. 641-50) tested the hypothesis that group-owned stations are able to obtain more favorable terms than singly owned stations from program suppliers, by analyzing the determinants of the prices paid by stations per viewer-minute for syndicated off-network programs. Controlling for the amount of competition for programs, the Staff found that the price per viewer minute is significantly *higher* when the purchaser was owned by a large group or by a network. These results fail to support the hypothesis that group owners are able to take advantage of their position to acquire programs at lower prices than those of their singly owned rivals.

The finding that groups pay more for programs is, however, a puzzle. One possible explanation stems from the linear relationship assumed between program prices and the number of viewers. If this relationship is non-linear, and if group owned stations tend to be in larger markets and thus command larger audiences than the average station, a variable representing group ownership will show a positive effect on price per viewer.

Leverage by groups could also be manifested in compensation paid to network affiliates. The Barrow Report (U.S. Congress, 1958, p. 565), in particular, asserted that network-affiliated stations owned by large groups are able to obtain greater compensation from the networks than their singly-owned rivals.

The Network Inquiry Special Staff examined this assertion. After controlling for (a) the audience delivered by the affiliate, (b) the strength of the network with which it is affiliated, and (c) the presence and strength of independent stations that might compete for the affiliation, the Staff found no significant difference between compensation received by stations that are members of the 10 largest stations groups and all other stations (pp. 259-60, 269-83). This result, like that for syndicated program prices, further weakens the case for the proposition that group-owned stations exercise leverage to the disadvantage of their singly-owned rivals.

The exercise of bargaining power by station groups might also be manifested in their ability to obtain better network affiliations than their singly-owned rivals. Again, the Barrow Report asserts that group owners have this advantage. However, the Cherington study challenges this claim. Presumably, if groups were able to exert such influence, they would tend to be affiliated with the stronger networks--NBC and CBS at that time (1971) rather than ABC. Yet, in the top 50 markets ABC "had the same proportion (33%) of stations affiliated with it for both group and single owners"(p. 46). Moreover, for both the top 50 markets used and for all markets, the percentage of network affiliated group stations was not much greater than the percentage for non-group stations--79 percent vs. 73 percent in the top 50, and 93 percent vs. 86 percent in all markets.

Differences in profit margins is another way that the exercise of market power by groups (as well as group economic efficiencies) would be manifested. The Cherington study (pp. 60-65) concludes, however, that, except for the smallest markets, no substantial differences arise in profit margins between group-owned and singly owned stations. Using the FCC's data for 1964, the study shows consistently higher profit margins for group-owned stations for all size markets. But the differences are small except for markets below 150 where group-owned stations showed a profit ratio of 15.1 percent as against a loss of 1.7 percent for singly owned stations. Among network affiliated stations classified by net weekly circulation, singly owned stations outperform group-owned stations in markets with more than 500,000 net weekly circulation while group-owned stations show an advantage in the smaller markets.

As in its inquiry into advertising rates, the Cherington study failed to assess the statistical significance of the differences in profit margins reported, or to control for other factors. Moreover, the quality of the underlying data is subject to substantial question (Park et al., 1976). Nevertheless, this pattern of results is intuitively plausible. If groups bargain unfairly or collude, they would likely do so in smaller, less competitive markets.

Levin (1980) also examines whether the presence of group owned stations in a market significantly increases station profitability. His results are generally negative. He reports, for example, that "group ownership [has] only weakly significant effects...on the market averages of income..." (p. 150). Moreover, when the effect of public television is taken into account, he finds no effect of group ownership (p. 255). However, Levin's results are consistent either with the hypothesis that group owned stations do not have higher profits than singly owned ones or with the hypothesis that group ownership redistributes profits among the stations in a market without affecting the amount to be divided among them.

2. Is There Reason to Expect Anti-competitive Behavior?

On theoretical grounds the leverage hypothesis is an implausible one. Suppose that a hypothetical group owner is willing to pay more for a program than his rivals in markets 1 and 2, but that the rivals are willing to pay more for the program in market 3. We show in our earlier study (Besen and Johnson, 1984) that the group owner, rival stations, and the program supplier can each be made better off if a rival obtains the program in market 3 than if the group owner, using leverage, threatens to withhold purchasing in markets 1 and 2 in order to obtain the program in market 3.

However, might not the group owner find it in his long-term interest to accept a short-term loss in order to deny programming to the non-group owner in market 3 and, possibly, drive him out of business? Such behavior by the group owner seems implausible because of the stringent conditions that must be met for the group's short-term losses to be more than offset by the increase in long-term profits. First, either the market must contain few or no other stations, or these stations must be able to collude in order to share the costs of exclusionary behavior. Second, the elasticity of program supply must be low--a a condition particularly hard to meet in small markets where all commercial stations are network affiliates and where the amount of syndicated programming available per station is greater than in large markets. Third, the barriers to reentering the market must be large enough to permit the predator to more than cover his earlier losses

before his victim can return. Finally, since the program supplier would, in the long run, also be disadvantaged if the group owner were to exclude his rival, program suppliers must fail to anticipate the effects of predatory behavior and not enter into long-term contracts with threatened stations.[4]

With respect to collusion, a number of conditions must be met for it to be facilitated by group ownership. First, the geographic areas in question must be a single (relevant) market in which prices for advertising or programs are related. Second, the number of station owners in the relevant market must be significantly smaller than the number of stations in the market. Finally, overlapping group ownership must reduce the number of owners *sufficiently* below the number of stations to render collusion a feasible option. If the relevant geographic market is large, ownership by some entities of more than a single station may not pose a threat of collusion because of the presence of many other competing stations.

Where, then, would we expect group station ownership to facilitate collusion? A likely candidate would be a collection of cities in relatively close geographic proximity to one another, where several owners operate in more than one city and where the total number of stations (and other media outlets) is small. Of particular relevance, therefore, is the Commission's regional ownership concentration rule discussed in Sec. III.

B. Economic Efficiency

If group ownership confers efficiencies, we would expect profit margins to be higher for groups than for others, regardless of whether groups engage in anti-competitive behavior. However, both the Levin (1980) and Cherington studies find that these margins do not differ significantly between group owned and other stations, suggesting that the cost advantages of group ownership are low.

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[4] See Easterbrook (1981, pp. 270-71). The predation argument does not require that the predator be a group owner. Conceivably, even the owner of a single station could bid more for a program than it is worth to him in order to deny it to his rivals in the hope that they will be driven out of business.

We would also expect advertising rates to be reduced if there are efficiencies in group marketing. However, this proposition can be tested only by comparing rates in group-only markets either with rates in markets containing both groups and singly owned stations (mixed markets), or with rates in markets containing only singly owned stations. Comparisons *within* mixed markets would be inappropriate because since advertisers are concerned with cost per viewer reached, rates for all stations would tend to be identical.[5] These rates would be just high enough to cover the cost of the singly owned stations (which are the "marginal" stations) while group owners would enjoy higher profit margins because of their lower costs. Unfortunately, the studies of advertising rates discussed earlier include mostly or only mixed markets and, therefore, do not shed light on group efficiencies.

We would also expect group efficiencies (as well as anti-competitive behavior) to show up in larger audiences. A study by Parkman (1982) suggests that local news programs produced by group-owned stations do tend to attract larger audiences. He uses a multiple regression analysis in which the dependent variable is audience rating and the independent variables include joint ownership with other television stations. The ratings data, for the years 1965 and 1975, are drawn from local television news programs in the top 100 markets. Parkman finds that, for 1965, group ownership has a positive but statistically insignificant effect on local television news ratings. However, for 1975 there is a positive and statistically significant effect. Indeed, the coefficient of the group ownership variable is the largest of the three ownership variables and is the only statistically significant one. In 1975 the group ownership coefficients are of substantial size, showing that group ownership increases ratings by 2.65 and 1.99 for the early and late news programs respectively, compared with average market ratings of 12.02 and 9.97.

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[5] However, if advertisers are willing to pay higher rates per viewer to stations with larger audiences, group-owned stations will have higher rates if their greater efficiency produces larger audiences.

Parkman's study covers only local news which is produced by the station, rather than including also syndicated programming where any effects of leveraging or collusion would more likely show up. But the study is useful in suggesting that groups do enjoy cost advantages, at least for local news production.[6]

The findings by Levin and Wildman, discussed earlier, that network-owned stations have higher advertising rates than do their rivals may also constitute evidence of group efficiencies. Differences in rates would arise if economies permit the group-owned station to provide programs that attract larger audiences, and if advertising rates rise faster than audience, i.e., the relationship is non-linear.

Trends in group ownership also provide useful evidence about the advantages of group ownership. If there were large efficiences, or opportunities for anti-competitive behavior, we would expect strong incentives for groups to purchase singly-owned stations. If so, we probably would have seen rapid growth of groups after the FCC's 1954 decision increasing the ownership limit to 7 stations, with many or most groups up to the limit. Yet, according to Howard (1983, p. 6), by the end of 1982, only 9 of the 174 television station groups owned 7 stations. Only two had the full complement of 7 television, 7 AM radio and 7 FM radio stations. A total of 23 groups held the limit of 5 VHF stations, at the same time that 20 percent of the nation's 518 VHF remained singly owned (FCC, 1983, p. 25).

The growth of group-owned stations has proceeded at a steady, but not strikingly rapid pace. During the 26-year period from 1956 to 1982, the percentage of group-owned television stations grew from 45 percent to 72 percent, with a substantial number of stations--219 out of 790--remaining in the hands of individual owners.

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[6] One might suppose that group efficiencies (as well as anti-competitive behavior) would show up in station selling prices, which would be higher when a station is purchased by a group than by a non-group. Indeed, both the Levin (1970, 1980) and the Cherington studies extensively analyze station selling prices by type of buyer and seller in order to test this proposition. However, this evidence is irrelevant to the question. Even if groups have advantages over non-groups, they would not pay higher prices when purchasing stations. If groups have advantages, they would tend to outbid others and, thus, buy more stations than would non-groups.

Overall, the evidence suggests that while group efficiencies may exist, they do not seem to be large except possibly in the production of local news programs.[7]

C. Diversity

The final category of evidence about the effects of group ownership concerns program diversity. Again, the Cherington study is one of the few that shed light on this issue. The analysis involved (a) sending questionnaires to all of the 532 commercial stations in the country, of which 15.2 percent were returned, and (b) conducting 35 interviews "with a representative cross-section of station managements, a majority of which had not answered the questionnaire" (p. 82).

The authors conclude that group ownership has little effect on opinion molding or on editorializing. Responses from both group-owned and singly owned stations disclosed that the station manager and news director have "moderate" to "great" influence on editorial positions. For group-owned stations "headquarters" and the "owner" played "very little" role while, for single-owner stations, in contrast, the "owner" played a "moderate role" (p. 93). For both types of stations, the national wire services network news organizations, and station reporting staff were of "moderate or great importance"; while group news organizations for the group-owned stations was of "very little" importance (p. 87). The interviews also disclosed a high degree of autonomy by station managers in the selection of programming.

If there were significant group efficiencies, one would expect them to arise in part from the economies of centralized management, news collection and presentation. However, if station managers operate as autonomously as is described in the Cherington study, and if they rely so little on headquarters for news content, the economies of group ownership are likely to be small.[8]

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[7] For this reason, we do not believe that group owners are more likely to be *de novo* entrants than are others.

[8] It is possible, of course, that station managers claim more autonomy than they actually have.

The Cherington study is subject to the obvious criticism that the low response rate of 15.2 percent to the questionnaire could have introduced a self-selection bias. And the evidence is based on self-reporting by station respondents rather than on data about how stations actually behave. A content analysis of programs carried by group and singly-owned stations, while tedious and costly to perform, would provide a far better measure of differences in programming.

More recently, Levin reports (1980, pp. 170-171) that

> a reduction in group ownership would have no impact on diversity, however measured, so long as network affiliations remained unchanged....Loss of a group tie would have deprived viewers of no more than 3.5 minutes of news daily, and of 5.5 minutes of non-network shows, whereas public affairs, fine arts, and local programming would each have remained unaffected....[9]

He also concludes that "the loss of group ties...has no significant programming effect, nor any even approaching significance" (p. 205).

D. Conclusions

Our review of the empirical evidence does not leave us with much confidence that the effects of group ownership are well understood, since many of the studies have important shortcomings. The best that can be said is that the studies are consistent with the view that the economies of joint station operation are small and that, as suggested by theory, group ownership does not create market power. Only Parkman's study demonstrates that costs are significantly lower for group-owned stations, although the Levin and Wildman findings are consistent with the presence of group efficiencies. Nor is there evidence that groups, other than those controlled by the networks, significantly raise advertising rates. In the case of network-owned stations, the evidence is mixed, with the Wildman and Levin studies suggesting that they charge higher rates than do other stations in their markets, the Fournier and Martin study indicating that rates are no higher in *markets* with network-

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[9] Obviously, program minutes is not the only possible measure of diversity.

owned stations, and the Wildman study concluding that rates are no higher for *other stations* in markets containing network-owned stations.

In view of the limited utility of the evidence, one must place more weight on *a priori* analysis than is perhaps desirable. Our analysis, which is broadly consistent with the empirical evidence, indicates that group ownership is unlikely either to enhance efficiency or create market power. The issue of collusion, which may be a problem if group ownership becomes regionally concentrated, with overlapping group ownership occurring within relevant markets--especially small ones--for advertising and programming, is still an open one, however. Thus, it is important to examine the Commission's regional concentration rule, a subject to which we now turn.

III. THE REGIONAL CONCENTRATION RULE

Group ownership increases the likelihood of collusion if (a) the stations are in the same relevant market, e.g., advertisers regard purchases on the two stations as substitutes, (b) the relevant market is concentrated, and (c) the existence of a station group substantially increases concentration in the market. Therefore, a combination of stations in adjacent cities, each of which contains a relatively small number of stations, is more likely to create market power than a combination in widely separated cities or in cities that contain many other stations. The Commission's regional concentration rule was important to the extent that it assured that stations under common ownership were not in the same market.

Even if the rule had been retained, a group would probably not have been seriously handicapped since it could have purchased stations in other "regions." Perhaps the most serious loss would have been those economic efficiencies that result when groups are regionally concentrated. Unfortunately, no empirical studies shed light on this issue.

On the other hand, little is likely to be lost as a result of the abolition of the rule, as long as relevant advertising and program markets are no larger than the markets defined in the Commission's one-to-a-market rule, discussed below. If this is the case, elimination of the regional concentration rule will have no effect on the ease with

which groups can collude. And even if relevant markets are larger, no market power will be created if those markets have many stations and other competing media.

A major difficulty with the regional concentration rule is that it accorded no recognition to the extent of media concentration in the markets in question. Whether these markets had only one, or many, stations was of no consequence to the rule's enforcement. Thus, the rule probably prevented some combinations where the relevant market would have remained unconcentrated even if the combination were permitted.

With the elimination of the rule, a reasonable substitute would be reliance on a case-by-case approach based on guidelines similar to those adopted by the Department of Justice for evaluating proposed mergers.[10] Use of these guidelines would avoid the arbitrary nature of the previous regional concentration rule, by emphasizing the need to define the relevant market and to examine the level of concentration in that market.

While recognizing its arbitrariness, the Commission initially adopted the regional concentration rule to avoid the extensive showings and determinations typically involved in a case-by-case approach. Yet, we believe that the Commission could substitute the more flexible case-by-case approach for the regional concentration rule without the difficulties that it faced prior to adoption of the rule in 1975.

Our proposed approach would have several key features. First, when station acquisitions are contemplated, the applicant would, of course, notify the Commission. Second, the Commission staff would be required, within a limited period of time, to determine whether or not to challenge the acquisition. If it did not, this would be prima facie evidence that the transaction was acceptable so that outside challengers would face a heavy burden in opposing it. Third, rejection by the staff would either produce a hearing, if the applicant chose to proceed, or to the withdrawal of the application. Over time, as the outlines of the Commission's policy became clear, applicants would be able to determine the likelihood that a particular application would be approved. Fourth,

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[10] The guidelines appear in Department of Justice (1982). For a useful commentary, see Werden (1983).

no one would be foreclosed from defending a combination before the staff or the Commission if it felt that the particular circumstances warranted. Fifth, the Commission would be free to issue guidelines for combinations in order to inform parties in advance about the kinds of combinations likely to be permitted. These guidelines would be based on analyses taking into account what is known about concentration and its effects in broadcasting, and they would be periodically revised as new knowledge became available.

IV. THE DUOPOLY AND ONE-TO-A-MARKET RULES

In the case of multiple ownership--where Commission rules have limited, but not prevented, the formation of broadcast groups--one can compare the behavior of group-owned and singly-owned stations. But one cannot examine the behavior of jointly owned stations in the same service in a market because they do not exist. The FCC has always prohibited joint ownership of television stations in the same market. A similar prohibition applies to FM radio and, since 1941, to AM radio when the FCC adopted its chain broadcasting rules.[11]

However, a limited basis exists for examining the effects of common ownership of stations in *different* services within a market. Some combinations of television and AM radio stations, which are now prohibited, were grandfathered when the Commission adopted its one-to-a-market rule. Moreover, the one-to-a-market rule permits AM-FM combinations and allows combinations of UHF television stations and FM radio stations on a case-by-case basis. Thus, routinely permitted and grandfathered combinations are potential sources of information about the effect of concentrated ownership within a local market.

In addition, even in markets without such combinations, relationships between ownership concentration and economic behavior may shed light on the likely effect of common ownership of stations in the same service. For example, if markets with 20 AM radio stations behave as competitively as those with 10 AM stations, one may infer that some combinations in the former markets would not substantially lessen competition.

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[11] Prior to the adoption of the Chain Broadcasting rules by the Commission in 1941, NBC owned two AM radio stations in each of four markets. (Network Inquiry Special Staff (1980) Vol. II at 35.)

A. Advertising Rates

Peterman (1971) addresses the question of whether joint ownership of radio and television raises advertising rates. For each market he assumes that "the proportion of the total number of radio stations jointly owned by TV firms...represents the degree of control over radio by TV stations." (p. 78) He relates the average discounted advertising rates summed over all TV stations for each of 204 markets to the number of homes, family income, and the percent of radio stations owned by TV stations in these markets. The analysis shows that homes and incomes are both positively and statistically significantly related to advertising rates, but that there is no effect of cross-ownership between radio and television stations. Peterman obtains essentially the same result when he limits the analysis to markets with exactly three television stations, and to the 51 markets containing only a single station (where cross ownership is measured by a dummy variable equal to one when the lone TV station also operates a radio station).

Unfortunately, Peterman's price data are from station rate cards and thus do not necessarily reflect transaction prices. Moreover, his model considers only a limited number of factors besides radio-television cross ownership. For example, the analysis of all 204 markets does not control for the number of television stations in each.

Fournier and Martin (1983), using actual transactions price data, examine the effect of market concentration on the (logarithm of the) price of 30-second television spot advertisements. Controlling for a number of other variables, they use various measures of concentration including entropy--the sum over all stations of market share times the logarithm of (1/market share); the Herfindahl index--the sum of the squared market shares of all stations; and the two-firm concentration ratio.

The results are either not significant or suggest that rates *fall* with an increase in concentration. The only significant measure is entropy, indicating that advertising rates are *higher* the *less* concentrated is the market. The two-firm concentration ratio, which approaches statistical significance, similarly indicates that the more concentrated is the market the lower are advertising rates. However,

when the equations were re-estimated treating the two-firm concentration ratio, the Herfindahl index, and the entropy measure as endogenous, none was significantly related to advertising rates. These findings suggest that, at least for the observed levels of market concentration, little or no adverse effect on advertising rates would occur if combinations of television stations were permitted in the *same* market.

Wirth and Bloch (1984) present statistical evidence relating the highest 30 second spot rate for a sample of CBS affiliates to, among other variables, the number of households in the station's market, the station's audience share when it caries MASH, and a Herfindahl index for the market based on average daily viewing. They find that market concentration, as measured by the Herfindahl index, is significantly and positively related to advertising rates and conclude, as a result, that television markets are oligopolistic.

Wirth and Bloch also find that audience share is *not* significantly related to advertising rates, a result that is very surprising. A possible explanation for this result, and of the correlation between rates and market concentration, is that a station will have a larger share the more concentrated is its market, i.e., share and the Herfindahl index are correlated. We conjecture that this multicollinearity is affecting their results and are, therefore, somewhat skeptical about the finding linking market concentration and advertising rates.

Wildman (1978) relates the spot television advertising rates of network affiliates and network-owned stations to a number of variables including those that measure whether there are more than three VHF stations or more than three stations of any type in the markets of the stations he analyzes. The purpose of including these variables was "to provide a measure of the effect of competition from independent stations on the price of spot time sold by affiliated stations." (p. 339)

Rather than finding the expected negative coefficients for these variables, they are generally positive, although rarely significant, in the different equations Wildman estimates. He interprets these results as evidence that in markets with more than three stations the networks are able to get their affiliates to behave like network-owned stations because the stations fear the loss of their affiliations. Thus, for the

same reason that he argues that the spot advertising rates will be higher for network-owned stations than for similarly situated affiliates, he contends that rates will be higher for affiliates faced with the possibility that they will be displaced on the network. This reasoning suggests that advertising rates would decline if the number of stations in a market is reduced.

Levin (1980) also finds that rates are higher if there are 4 or more stations in a market, even after controlling for station audience. One possible explanation is that this variable, as well as network-ownership, are picking up the effect of a mis-specified audience variable. If advertising revenues are related to audiences non-linearly, with rates rising faster than audience, a linear equation will impart a spurious positive coefficient to variables that are present only in the larger markets. This possibility applies to the Wildman study as well.

Although they are concerned primarily with the effects of newspaper-television station cross ownership, Wirth and Allen (1980) report findings relevant to our purposes. Using 1973 data for 534 commercial stations, they regress separately television list-price advertising rates and total television station advertising revenues (both per thousand viewers) against a number of explanatory variables including whether the station is owned by a newspaper in the same market, the number of households in the station's market, and whether the television station owns a radio station in the same market.

Wirth and Allen obtain a generally positive and occasionally significant relationship between a television station's advertising rate and its joint ownership with a radio station in the market. Wirth and Allen interpret this finding as evidence that radio-television combinations create market power. However, their finding is also consistent with the hypothesis that ownership generates economies that produce larger audiences, and that the relationship between rates and audiences in non-linear. A test of the market power hypothesis would require examining whether rates are higher for stations that compete with radio-television combinations. Unfortunately, Wirth and Allen do not carry out this test.[12]

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[12] In examining the effect of combinations of newspapers and

They also include in their analysis a variable measuring the number of AM radio stations in a market, expecting that "an increase in the number of [radio] competitors in a market leads to lower prices." (p. 32) They find, however, that advertising rates are always *positively* and usually significantly related to the number of radio stations in the market.[13]

In an earlier study (1979) Wirth and Allen analyze market data in order to determine the effect of local market concentration on advertising rates. They employ 1973 FCC advertising revenue data for 124 markets divided by the market's prime time audience to obtain a measure of the "price" of advertising. Among their explanatory variables are the number of television stations and the number of AM radio stations in the market. They conduct separate analyses for different sources of revenues--network, national-regional, and local--and for the top 50 and all other markets as well as for all 124 markets combined.

Although the number of television stations usually has the expected (negative) sign, the coefficient is only occasionally significant. The variable for the number of radio stations is negative in only slightly more than half the regressions and significant only when it is *positive*. The results do not, therefore, indicate any strong relationship between market concentration and advertising rates.[14]

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television stations, Wirth and Allen do include a variable indicating whether a television station competes with such combinations.

[13] They do not include the number of television stations, presumably because that variable has already been employed to estimate the share of total market advertising revenues captured by a particular station. Therefore, they do not test the hypothesis that an increase in the number of competing television stations lowers advertising rates.

[14] Wirth and Allen do not really examine advertising rates but rather revenues per thousand viewers. In doing so they fail to note that these revenues are sensitive to the numbers and types of stations in the market, quite apart from any effect of market structure on competition. Thus, markets with independent television stations will generate different spot advertising revenues than ones with only network affiliates because much of the time of affiliates is occupied by network programming. This will, to be sure, be reflected in differences in network revenues but the offset will be incomplete because the networks bear the costs of network programming. Precisely how this affects th authors' results is unclear, but it suggests that their findings should be regarded with skepticism.

B. Syndicated Program Prices

The Network Inquiry Special Staff (1980, pp. 643-650) analyzed the effect of the structure of local broadcast markets on the prices paid by stations for off-network syndicated programming. In one set of equations, which measured competition for syndicated program by the presence or absence of an independent station and whether the independent was "comparable" to the weakest affiliate, the study found that "the price paid per viewer is significantly lower [where there is not a 'technically comparable' independent] than where at least one independent is technically comparable." (p. 647) In another set of equations, which also took into account the numbers of various types of independents, "the results clearly indicate that the larger is the number of independent VHF stations in a market, the higher is the price paid per viewer [for syndicated programs.] The effect of the number of independent UHF stations is mixed, however. In three of the equations, the number of UHF stations in a market is positively and significantly related to the price per viewer. In the other equation, while the measured effect is positive, it is not significant." (p. 650) These results show clearly that a reduction in the number of stations competing for syndicated programming would reduce the price per viewer obtained for these program. The effect on the price of the *program* of an increase in the number of competing stations is, however, ambiguous. While additional competition may raise the price per viewer, it may also reduce the number of viewers a program attracts.

C. Conclusions

As in the case of multiple station ownership, the empirical studies do not provide convincing evidence of adverse effects of local market concentration. The only evidence that joint ownership creates market power is Wirth and Allen's finding that television stations jointly owned with radio stations in the same market have higher advertising rates. However, this result is also consistent with the existence of economies of joint operation and, because the effect of these combinations or rivals' rates was not examined, the market power hypothesis has not been fully tested. Moreover, the various studies of

the effect of concentration of television station ownership on advertising rates indicate that there is no effect--or that rates are higher the *less* concentrated is the market. Finally, none of the studies demonstrates the existence of significant economies of joint operation.

Nonetheless, we would be reluctant to urge abandonment of the duopoly and one-to-a-market rules with nothing to take their place, because the analytic case for these rules is far stronger than that for the group ownership rule. This does not mean, however, that present restrictions are ideal. Rather, we believe that, as a substitute, the case-by-case approach we discussed with respect to group ownership would be appropriate here as well. The major difference is that more group acquisitions in separate markets would likely be approved than would new combinations in the same market. Here, establishing that proposed jointly owned stations are in the same market should be straightforward (although it might be argued in some cases that particular radio and television stations are in different markets). Consequently, no combinations of local stations would be approved on the grounds that they are in different markets. The effect of the combination on concentration would, therefore, have to be confronted in every case. Many local markets are sufficiently concentrated so that proposed combinations in them would be denied. But some markets are presently quite unconcentrated, so that even combinations of stations in the same service in these markets would probably not create market power. Therefore, the FCC might well approve a combination of two AM radio stations in the Los Angeles market, for example, under the case-by-case approach we suggest.

V. THE BROADCAST TELEVISION-CABLE CROSS OWNERSHIP RULE[15]

[15] Much of the analysis in this section can be applied to combinations of broadcast stations and multipoint distribution systems (MDS). The principal difference between MDS and cable is that, because of the latter's much larger channel capacity, subscribers are likely to obtain all of their television service over the cable, while households taking MDS will continue to view over-the-air signals.

When the FCC banned combinations of television stations and cable systems in the same market in 1970, it feared that common ownership would be used by station owners to inhibit the growth of cable. Reduced cable signal quality, relatively high monthly rates to subscribers, and carriage of fewer or less popular distant signals, were among the possible strategies available to a station owner. Conversely, if the owner believed the opportunities for additional profits in cable to be higher than in broadcasting, he would have incentives to let his over-the-air service deteriorate in order to favor cable growth. As Barnett (1970, p. 299) expresses it,

> Either way, existence of the television-cable duopoly would tend to impair the television service available to the public. The public would be better served with two outlets striving competitively to maximize their respective audiences.

With the ban having been in effect for more than a decade, and few combinations grandfathered, no empirical studies have compared the behavior of cross-owned and independently owned outlets. Consequently, one can draw only on a priori analysis to assess the rule.

A. The Benefits of Joint Ownership

We see only very limited benefits to relaxing or abolishing the rule. Local broadcasters have no particular expertise in coping with the many facets of cable operation--negotiating with telephone companies for pole attachments; designing, building, and maintaining trunk and drop lines; marketing cable services; handling customer complaints, and dealing with local franchise authorities. Similarly, cable operators are not experienced in building and maintaining over-the-air transmitters or complying with FCC broadcasting regulations.

However in two areas--program origination and advertising--the same functions are carried out. A jointly owned system might enjoy economies by sharing studio space and equipment for broadcasting and cable program origination. To our knowledge, no studies have addressed the magnitude of the possible savings. Useful here would be analysis of the costs that cable systems incur in program origination; the extent to which

these costs would be reduced by using broadcast station facilities; the additional costs that the station would incur in taking on these cable functions; and the additional costs of linking the broadcast station to the cable headend.

For three reasons, we conjecture that the net savings of shared use would be low. First, cable program origination facilities, consisting largely of character generators, automated services, and relatively cheap cameras and other studio equipment, generally do not involve large costs. Second, a broadcast station would have to incur at least some of these costs if it took over these functions. Third, if potential cost savings were substantial, one would expect to see instances where separately owned cable systems and broadcasting stations have worked out shared-use or rental agreements to their mutual benefit. However, such arrangements apparently are rare.[16]

With the growing sales of advertising by cable operators, one might expect that economies would also flow from joint ownership.[17] However, the strategy of selling advertising for the small audiences that view advertiser-supported cable channels varies from that of selling for the entire audience within the service area of a broadcasting station. Moreover, media conglomerates with holdings in both cable and broadcasting may be able to exploit at least some economies, even though they cannot hold more than one such property in a single market.

B. The Losses from Joint Ownership

At the same time, we see little to be lost by relaxing or eliminating the rule, at least in large markets. The notion of a broadcaster inhibiting the growth of his cable system (or for a cable owner to similarly behave toward his broadcast station) strikes us as unlikely.[18] The benefits to the broadcaster from this strategy would be

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[16] The research department of the National Cable Television Association reports that, to its knowledge, only two or three instances have arisen of cooperative arrangements. No formal survey of such practices has ever been undertaken.

[17] The fact that most advertising sales on cable are made at the network level, i.e., by the providers of program services, limits these economies. The economies of joint marketing activities would be increased if there were a strong national spot market for advertising on cable.

[18] However, Thorpe (1984) finds a small but statistically

reduced to the extent that cable extends the broadcaster's signal to additional audiences, and they would be further reduced because they would be shared with competing broadcasters.[19]

But what about diversity? Would not common ownership reduce the number of "voices" in the market, contrary to the Commission's often stated goal? We think that this danger is exaggerated. With its multiple channels, cable surely brings many voices into the market. But, to what extent does cable ownership *itself* make a difference? Unless ownership by a broadcaster would lead to a more restricted menu--and our preceding argument suggests that such ownership would not--there is little to fear.

One would have more reason for concern if cable owners were editorializing and in other ways expressing their own views to any notable degree. In this case, common ownership with a station might mute this voice (or mute the voice of the station). But one is hard pressed to identify cases where cable operators are doing this, as against carrying the voices of others.

Of course, one might argue that as cable further develops, their owners will increasingly perform this function. But competing media will also develop so that in any event, diversity will likely continue to expand.

The problem posed by cross-ownership, if it exists, is most likely to occur in small markets. Here, the owner might reduce the quality of his broadcast signal, especially if he has the only station in the market. By transmitting a weaker signal than allowed by the FCC, and by carrying less attractive programming than would a separately owned station, he may gain more from increased cable penetration than would be lost from the smaller over-the-air audience. Moreover, the jointly owned system might be able to exercise greater market power against advertisers and program suppliers.

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significant effect of the presence of an STV station on the market power of a cable system.

[19] This assumes that cable carriage of all local signals will continue to be mandated by the Commission. Hence a broadcast-owned cable system could not be used to discriminate against other local broadcasters. Robert Pepper points out, however, that justifying the elimination of the must-carry rule would be easier if the ban on cross-ownership were retained.

Thus, while the FCC would be unwise to abandon the cross ownership rule in one-station markets, situations exist in which joint ownership may produce operating economies without creating market power. For example, a modified rule might stipulate that joint ownership would be permitted (a) if the market contains no fewer than a specified number of stations, or (b) if the jointly owned station has a market share no greater than a specified maximum, or (c) if the station is a UHF in a mixed market.

Even better, we believe, would be the case-by-case approach discussed earlier. This more flexible approach would facilitate accounting for the growing competition from other media and the additional diversity of viewpoints that they provide.

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