Off The Dial:
Female and Minority Radio Station Ownership in the United States

How FCC Policy and Media Consolidation Diminished Diversity on the Public Airwaves

Review of Current Status and Comparative Statistical Analysis

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Executive Summary

Just three years after the Third U.S. Circuit Court of Appeals rejected sweeping policy changes that would have dramatically altered our nation's media landscape, the Federal Communications Commission is once again considering eliminating longstanding limits on media ownership. These changes could have a tremendous negative impact, especially on broadcast outlets owned by women and minorities.

In its landmark *Prometheus v. FCC* decision, the Third Circuit chastised the FCC for ignoring the issue of female and minority ownership. But since then, the FCC has done very little to address the issue. The FCC has abdicated its responsibility to monitor and foster increased minority and female broadcast ownership. In fact, the Commission cannot even account for the current state of female and minority ownership in this country.

This study provides the first complete assessment and analysis of female and minority ownership of full-power commercial broadcast radio stations operating in the United States. It follows a similar analysis of female and minority broadcast television ownership, *Out of the Picture*, published last fall.

Because this study represents the first ever complete assessment of all licensed commercial radio stations, it cannot and should not be compared with previous reports from the National Telecommunications and Information Administration (NTIA) or summaries produced by the FCC. All previous efforts by these agencies left out significant numbers of minority owners (and female owners, in the FCC's case). No conclusions about changes over time can be drawn from this report. Likewise, previous academic and other studies using these flawed data are inaccurate or incomplete.

The study shows that media consolidation is one of the key factors keeping female and minority station ownership at low levels. As consolidation cuts back the already limited number of stations available, women and people of color have fewer chances to become media owners and promote diverse programming.

The information contained in *Off the Dial* will enable policymakers at the FCC and in Congress to make informed conclusions about the state of the broadcast marketplace and the impact of media consolidation on female and minority radio station ownership. Taken together, the findings of this study should raise serious concern.

The Dismal State of Female and Minority Ownership

The results of this study reveal a dismally low level of female and minority ownership of radio stations in America that has left two-thirds of the U.S. population with few stations representing their communities or serving their needs.

- Women own just 6 percent of all full-power commercial broadcast radio stations, even though they comprise 51 percent of the U.S. population.
- Racial or ethnic minorities own just 7.7 percent of all full-power commercial broadcast radio stations, though they account for 33 percent of the U.S. population.
    - Latinos own just 2.9 percent of all U.S. full-power commercial broadcast radio stations, but they comprise 15 percent of the U.S. population and are the nation's largest ethnic minority group.

- African-Americans own only 3.4 percent of this country's full-power commercial broadcast radio stations, but account for 13 percent of the entire U.S. population.
- People of Asian descent own less than 1 percent of full-power commercial broadcast radio stations, though they make up 4 percent of the U.S. population.
- Non-Hispanic white owners control 87.2 percent of the full-power commercial broadcast radio stations operating in the United States.

Radio Station Ownership Lags Behind Other Economic Sectors

Our previous study, *Out of the Picture*, found that female and minority ownership of broadcast television stations was similarly anemic. Women own 5 percent of broadcast TV stations, while people of color own just 3.3 percent of stations.

These groups' level of radio station ownership is only slightly higher, despite the fact that the cost of operating a radio station is dramatically lower than a TV station. Moreover, radio station ownership is very low compared to the levels seen in other commercial industry sectors:

- According to the most recent figures available, women own 28 percent of all non-farm businesses.
- Racial and ethnic minorities owned 18 percent of all non-farm businesses, according to the most recent data.
- In sectors such as transportation and health care, people of color own businesses at levels near their proportion of the general population. But in the commercial radio broadcast sector the level of minority ownership is over four times below their proportion of the general population. That's lower than every sector of the economy tracked by the Census Bureau except for mining and enterprise management.

No Diversity at the Top of Station Management

Not only are few stations owned by women and people of color, but commercial stations have very few women and minorities at the top — in the positions of CEO, president or general manager.

- Just 4.7 percent of all full-power commercial broadcast radio stations are owned by an entity with a female CEO or president.
    - Only 1 percent of the stations not owned by women are controlled by an entity with a female CEO or president.
- Just 8 percent of all full-power commercial broadcast radio stations are owned by an entity with a CEO or president who is a racial or ethnic minority.
    - Less than 1 percent of stations not owned by people of color are controlled by an entity with a minority CEO or president.

However, minority-owned stations are significantly more likely to be run by a female CEO or president than non-minority-owned stations, and female-owned stations are significantly more likely to be run by a minority CEO or president than non-female-owned stations. And both female-owned and minority-owned stations are significantly more likely to employ a woman as general manager.

Female and Minority Owners Control Fewer Stations per Owner

Female and minority owners are more likely to own fewer stations per owner than their white male and corporate counterparts. They are also more likely to own just a single station.

- Of all the unique minority owners, 67.8 percent own just a single station. However, only 49.6 percent of the unique non-minority owners are single-station owners.
- 60.8 percent of the unique female owners are single-station owners, versus just 50.4 percent of the unique non-female station owners.
- Only 24.4 percent of the unique minority station owners are group owners -- owning stations in multiple markets, or more than three stations in a single market -- compared to 29.5 percent of non-minority owners.
- Just 16.9 percent of female owners are group owners, versus 30.4 percent of non-female owners.
- Overall, racial and ethnic minorities own 2.6 stations per unique owner compared to 3.9 stations owned per unique white, non-Hispanic owner.
- Women own 2.1 stations per unique owner compared to 4.1 stations owned per unique male owner.

Female- and minority-owned stations differ from non-female- and non-minority-owned stations in other ways as well. For example, women and people of color are more likely to own less valuable AM stations and their stations are more likely to be found in larger, more populated markets.

Female- and Minority-Owned Stations Are More Local, More Often

Localism is supposed to be one of the FCC's key considerations in crafting media ownership regulations. Local owners, in theory, are more connected to the communities they serve and thus in a better position to respond to public needs than absentee owners who reside hundreds or thousands of miles away.

Our study found that female owners are significantly more likely to be local station owners.

- 64.4 percent of all female-owned stations are locally owned, versus just 41.6 percent of non-female-owned stations.

For minority-owned stations, the relationship is somewhat more complex because the minority population is more concentrated in certain areas. Minority-owned stations are more likely to be locally owned than non-minority-owned stations in larger markets, which have bigger minority populations.

- Among all radio stations, 43 percent of minority-owned stations are locally owned, the same level as non-minority-owned stations.
    - But in Arbitron radio markets (where four out of every five minority-owned stations are located, and which have significantly higher minority populations), 38.3 percent of minority-owned stations are locally owned, versus 29.4 percent of non-minority-owned stations.

- In unrated markets (which have significantly lower minority populations), 56 percent of minority-owned stations are locally owned, compared to 62.9 percent of non-minority-owned stations.

Female- and Minority-Owned Stations Thrive in Less-Concentrated Markets

Our analysis suggests that both female- and minority-owned stations thrive in markets that are less concentrated. Markets with female and minority owners have fewer stations per owner on average than markets without them.

- The level of market concentration is significantly lower in markets with female and minority owners.
- The probability that a particular station will be female- or minority-owned is *significantly lower* in more concentrated markets.
- The probability that a particular market will contain a female- or minority-owned station is *significantly lower* in more concentrated markets.
- Female- and minority-owned stations are more likely to be found in each other's markets.

Allowing further industry consolidation will unquestionably diminish the number of female- and minority-owned stations. The FCC should seriously consider these consequences before enacting any policies that could further concentration.

Female and Minority Ownership Is Low, Even When They're in the Majority

The study shows that women and people of color everywhere – regardless of their proportion of the population in a given market – have very few owners representing them on the radio dial.

- The average radio market has 16 white male-owned stations for every one female-owned and every two minority-owned stations.

Minority-owned stations are far more likely to be found in markets with higher minority populations. But even in these markets, the level of minority ownership is still low.

- Minority-owned stations are found in about half of all Arbitron radio markets.
- In 288 of the 298 U.S. Arbitron radio markets, the percentage of minorities living in the market is greater than the percentage of radio stations owned by minorities.
- 23 of the 298 U.S. Arbitron radio markets have "majority-minority" populations. But in these markets, too, the percentage of radio stations owned by people of color is far below the percentage of minority population.
    - In two of these "majority-minority" markets (Stockton, Calif. and Las Cruces, N.M.), people of color own no stations.
- Minorities own more than one-third of a market's stations in just seven of the nation's 298 radio markets. Minorities own more 25 percent of a market's stations in just 24 of the nation's 298 radio markets.

Despite making up half the population in every market, the level of female-station ownership is still extremely low across the board.

- Female-owned stations are found in about 40 percent of all Arbitron radio markets.
- The Stamford-Norwalk, Conn. market is the only market in the United States where women own more than half of the stations.
- Women own more than one-third of a market's stations in just six of the nation's 298 radio markets. Women own more than 25 percent of a market's stations in just 18 of the nation's 298 radio markets.

Format Diversity, Market Revenue and Audience Share

Minority owners are more likely to air formats that appeal to minority audiences, even though other formats are more lucrative. Choosing these different formats has a practical impact on the market status of minority-owned stations, as measured by audience ratings and share of market revenues.

- Among the 20 general station format categories, minority-owned stations were significantly more likely to air "Spanish," "religion," "urban," and "ethnic" formats. The Spanish and religion formats alone account for nearly half of all minority-owned stations.
- Primarily because the Spanish, religion and ethnic formats attract smaller segments of the market, the average audience ratings share and share of market revenue held by minority-owned stations is significantly lower than the ratings and revenue shares of non-minority-owned stations.

Ownership and Programming Diversity: A Case Study of Talk Radio

Though the focus of this study was on structural ownership, recent controversy surrounding remarks by two prominent talk radio hosts —Rush Limbaugh and Don Imus — spurred an examination talk radio programming on minority- and female-owned stations. We found:

- No minority-owned stations aired "Imus in the Morning" at the time of its cancellation.
- All minority-owned stations and minority-owned talk and news format stations were significantly less likely to air "The Rush Limbaugh Show," as were female-owned stations.
- Having a minority- or female-owned station in a market was significantly correlated with a market airing both conservative and progressive programming.
- Overall, markets that aired both progressive and conservative hosts were significantly less concentrated that markets that aired just one type of programming.

These results suggest that diversity in ownership leads to diversity in programming content. This result may seem obvious. But policymakers may have forgotten the reason behind ownership rules and limits on consolidation: Increasing diversity and localism in ownership will produce *more* diverse speech, *more* choice for listeners, and *more* owners who are responsive to their local communities.

Bottom Line: Consolidation Keeps Women and Minorities Off the Dial

The results of this study — like *Out of the Picture* — indicate a perilous state of under-representation of women and minorities in the ownership of broadcast media. The results also point to massive consolidation and market concentration as one of the key structural factors keeping women and minorities from accessing the public airwaves.

Before the FCC moves to further increase local market concentration by abandoning longstanding ownership rules, it should carefully consider the potential harms this shift in policy will bring to the underrepresented communities of this country. It is not sound policymaking to assert that diversity, localism and female/minority ownership are important goals, then to ignore the effects that rule changes would have on those goals.

In the short term, Congress should act to expand the low-power FM radio service and order the FCC to make available thousands of new licenses. The interference problems cited to curtail community radio in the past have been disproved, and opening these slots on the dial would undoubtedly help promote minority ownership. This is not a long-term fix, but it is certainly a step in the right direction.

Even if Congress or the FCC were to enact other measures aimed at increasing female and minority participation in full-power broadcast ownership – from tax credits to digital channel leasing -- these efforts will likely be futile in an atmosphere of increased consolidation. The best way to ensure a diversity of owners on the public airwaves is to roll back media consolidation.

Introduction

In 2003, the Federal Communications Commission approved a series of sweeping policy changes that promised to completely alter the mass media marketplace.[1] But when formulating the rules, the FCC — then under the leadership of Chairman Michael Powell — acted with little regard for public input or reasoned social-scientific policy analysis. Consequently, Powell's rule changes were met with an unprecedented public outcry and congressional backlash[2], before ultimately being overturned by the courts.[3]

Three years later, the FCC is poised to once again force rule changes upon an unwilling public. However, the public outcry in 2003 and the court's rejection of the 2003 rule changes have forced the current chairman, Kevin Martin, to act more cautiously this time around. In July 2006, the FCC issued a *Further Notice of Proposed Rulemaking*, soliciting public comment on the issues raised on remand by the Third U.S. Circuit Court of Appeals in its *Prometheus v. FCC* decision.[4] As a part of this review, Chairman Martin has promised to hold six hearings across the country to seek public input into the rulemaking process and commissioned a series of still unfinished studies on the issue.[5]

A key issue before the Commission is how the rule changes will impact female and minority ownership of broadcast radio and television outlets. This report provides the first complete and accurate assessment and analysis of female and minority full-power commercial broadcast television ownership. The purpose of this study is to provide the public, Congress and the FCC with a complete understanding of the state of minority and female radio ownership, as well as the potential effects of proposed rule changes on female and minority ownership.

Because this study represents the first ever complete assessment of all licensed commercial radio stations, these results should not be compared with previous reports on minority ownership. No conclusions about changes over time can be drawn from this report. Previous studies by National Telecommunications and Information Administration (NTIA) and the ownership summaries produced by the FCC were structured in a way that led to the exclusion of significant amounts of minority owners (and female owners, in the case of the FCC). Likewise, academic and other studies based on this flawed data are incomplete or inaccurate.

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[1] *Report and Order and Notice of Proposed Rulemaking in the Matter of 2002 Biennial Regulatory Review – Review of the Commission's Broadcast Ownership Rules and Other Rules Adopted Pursuant to Section 202 of the Telecommunications Act of 1996; Cross-Ownership of Broadcast Stations and Newspapers; Rules and Policies Concerning Multiple Ownership of Radio Broadcast Stations in Local Markets; Definition of Radio Markets; Definition of Radio Markets for Areas Not Located in an Arbitron Survey*, MB Docket Nos. 02-277. 01-235, 01-317, 00-244, 03-130, FCC 03-127 (2003). Herein referred to as "*2003 Order*."

[2] Ben Scott, "The Politics and Policy of Media Ownership," *American University Law Review*, Vol. 53, 3, February 2004.

[3] *Prometheus Radio Project, et al. v. F.C.C.*, 373 F.3d 372 (2004) (herein referred to as "*Prometheus*"), stay modified on rehearing, No. 03-3388 (3d Cir. Sept. 3, 2004), cert. denied, 73 U.S.L.W. 3466 (U.S. June 13, 2005).

[4] *Further Notice of Proposed Rulemaking, in the Matter of 2006 Quadrennial Regulatory Review – Review of the Commission's Broadcast Ownership Rules and Other Rules Adopted Pursuant to Section 202 of the Telecommunications Act of 1996; 2002 Biennial Regulatory Review – Review of the Commission's Broadcast Ownership Rules and Other Rules Adopted Pursuant to Section 202 of the Telecommunications Act of 1996; Cross-Ownership of Broadcast Stations and Newspapers; Rules and Policies Concerning Multiple Ownership of Radio Broadcast Stations in Local Markets; Definition of Radio Markets*, MB Docket Nos. 06-121; 02-277 ; 01-235; 01-317; 00-244, FCC-06-93 (2006); Herein referred to as *"Further Notice."*

[5] Hearings have been held in Los Angeles, Nashville, Harrisburg, Pa.; and Tampa Fla. See http://www.stopbigmedia.com/=hearings for information about these hearings, including detailed ownership summaries for these markets.

Minority and Female Radio Ownership: A Sorry History

Historically, women and racial and ethnic minorities have been under-represented in broadcast ownership due to a host of factors -- including the fact that some of these licenses were originally awarded decades ago when the nation lived under segregation. The FCC, beginning with its 1978 *Statement of Policy on Minority Ownership of Broadcasting Facilities*, repeatedly has pledged to remedy this sorry history.[6]

Congress also has recognized the poor state of female and minority ownership. The Telecommunications Act of 1996 ("The Act") contains specific language aimed at increasing female and minority ownership of broadcast licenses and other important communications media.[7] The Act requires the FCC to eliminate "market entry barriers for entrepreneurs and other small businesses" and to do so by "favoring diversity of media voices."[8] The Act also directs the Commission when awarding licenses to avoid "excessive concentration of licenses" by "disseminating licenses among a wide variety of applicants, including small businesses, rural telephone companies, and businesses owned by members of minority groups and women."[9]

The FCC initially appeared to take this mandate seriously. In 1997, the Commission completed a proceeding, as required by the Act, which identified barriers to entry for small businesses (and has been interpreted to include minority- and female-owned entities) and set forth the agency's plan for eliminating these barriers.[10] Unfortunately, subsequent triennial reports have lacked substance.[11]

In 1998, the Commission further demonstrated its seriousness by taking a crucial first step to determine the actual state of female and minority ownership of broadcast radio and television stations. That year, the FCC began requiring all licensees of full-power commercial stations to report the gender and race/ethnicity of all owners with an attributable interest in the license.[12] In the *Form 323 Report and Order*, the Commission stated:

> Our revised Annual Ownership Report form will provide us with annual information on the state and progress of minority and female ownership and enable both Congress and the Commission to assess the need for, and success of, programs to foster opportunities for minorities and females to own broadcast facilities.[13]

Other than this monitoring effort, the FCC has done very little to promote female and minority broadcast ownership (and the follow-up on this monitoring has been abysmal). In its 1999 Order that allowed television duopolies, the Commission paid lip-service to concerns about the policy change's

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[6] *Statement of Policy on Minority Ownership of Broadcasting Facilities*, 68 FCC 2d, 979, 980 n. 8 (1978).
[7] 47 U.S.C.§257, §309(j)
[8] Section 257 is contained within Title II of the Communications Act and thus does not directly encompass broadcast services. However, the Commission has interpreted some aspects of the language of §257 to apply to broadcast licensing. In 1998, the Commission stated: "While telecommunications and information services are not defined by the 1996 Act to encompass broadcasting, Section 257(b) directs the Commission to 'promote the policies and purposes of this Act favoring diversity of media voices' in carrying out its responsibilities under Section 257 and, in its Policy Statement implementing Section 257, the Commission discussed market entry barriers in the mass media services." See FCC 98-281, *Report and Order: In the Matter of 1998 Biennial Regulatory Review -- Streamlining of Mass Media Applications Rules, and Processes -- Policies and Rules Regarding Minority and Female Ownership of Mass Media Facilities,* MM Docket No. 98-43, November 25, 1998, herein after referred to as *the Form 323 Report and Order.*
[9] 47 U.S.C.§309(j)
[10] "In the Matter of Section 257 Proceeding to Identify and Eliminate Market Entry Barriers for Small Businesses," *Report*, GN Docket No. 96-113, 12 FCC Rcd 16802 (1997).
[11] In his dissenting statement on the 2004 Section 257 report, Commissioner Michael Copps described the report as a "a slapdash cataloging of miscellaneous Commission actions over the past three years that fails to comply with the requirements of Section 257."
[12] 47 C.F.R. 73.3615
[13] *Report and Order, In the Matter of 1998 Biennial Regulatory Review Streamlining of Mass Media Applications, Rules, and Processes Policies and Rules Regarding Minority and Female Ownership of Mass Media Facilities*, MM Docket Nos. 98-43; 94-149, FCC 98-281 (1998).

effect on minority and female ownership, but still went forward with rule changes that allowed increased market concentration.[14] In 2004, the Commission sought input into how it could better implement Section 257 of the Act. But this proceeding remains open, and the current chairman has shown no signs of interest in completing this important matter.[15]

In the 2003 Order implementing Powell's rule changes, the FCC assured the public that ownership diversity was a key policy goal underlying its approach to ownership regulation.[16] However, the Third Circuit found otherwise, stating that "repealing its only regulatory provision that promoted minority television station ownership without considering the repeal's effect on minority ownership is also inconsistent with the Commission's obligation to make the broadcast spectrum available to all people 'without discrimination on the basis of race.' "[17]

The FCC Shows No Concern for Tracking Minority and Female Ownership

Before considering the potential effects of policy changes on female and minority ownership, we must first know the *current* state of ownership and evaluate the effects of previous policy changes. No one should be in a better position to answer these questions than the FCC itself. The Commission possesses gender and race/ethnicity information on every single broadcast entity and knows exactly when licenses changed hands.

However, the FCC has *no* accurate picture of the current state of female and minority ownership, and shows no sign of taking the matter seriously. Though the Commission has gathered gender and race/ethnicity data for the past seven years, it has shown little interest in the responsible dissemination of the information contained within the Form 323 filings.

This lack of interest or concern is made evident by the FCC's own Form 323 summary reports. Station owners began reporting gender/race/ethnicity information in 1999, and the FCC released its first "summary report" in January 2003 (for reporting in 2001).[18] A second summary followed in 2004 (for reporting in 2003).[19] The most recent report was issued in June 2006 (for the 2004-2005 period).[20] However, calling these publications "summary reports" is somewhat misleading, as they are merely a listing of each minority- or female-owned station's Form 323 response and not aggregated in any manner. No information on the stations not owned by women or minorities is given.

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[14] *Report and Order, In the Matter of Review of the Commission's Regulations Governing Television Broadcasting Television Satellite Stations Review of Policy and Rules*, MM Docket Nos. 87-8. 91-221, FCC 99-209 (1999).
[15] MB Docket No. 04-228, "Media Bureau Seeks Comment on Ways to Further Section 257 Mandate and to Build on Earlier Studies" DA 04-1690, June 15, 2004.
[16] See *2003 Order*, "Encouraging minority and female ownership historically has been an important Commission objective, and we reaffirm that goal here."
[17] See *Prometheus*, note 58.
[18] Though this data summary is not directly displayed on the FCC's ownership data page (http://www.fcc.gov/ownership/data.html), it can be downloaded at http://www.fcc.gov/ownership/ownminor.pdf and http://www.fcc.gov/ownership/ownfemal.pdf
[19] Though this data summary is not directly displayed on the FCC's ownership data page (http://www.fcc.gov/ownership/data.html), it can be downloaded at http://www.fcc.gov/ownership/owner_minor_2003.pdf and http://www.fcc.gov/ownership/owner_female_2003.pdf
[20] http://www.fcc.gov/ownership/owner_minor_2004-2005.pdf and http://www.fcc.gov/ownership/owner_female_2004-2005.pdf

Closer examination of these summary reports reveals significant problems. For starters, on the FCC Web site where the most recent summary files are provided for download, there is a paragraph that explains the purpose of the data and provides a brief summary of the tally.[21] This Web site lists the total number of stations that filed Form 323 or Form 323-E in the 2004-2005 calendar year, and then lists the total number of stations that the FCC determined are owned by women or people of color. All commercial stations are required to report the race/ethnicity and gender of station owners on Form 323. Form 323-E requires all non-commercial educational stations to report the identity of station owners, but does not require the disclosure of the race/ethnicity or gender information.

However, since stations that file Form 323-E *don't report gender or race/ethnicity* information, it is perplexing why the FCC Web site reports the total number of stations that filed *either* form. This ambiguous reporting has led to some observers using these summaries to erroneously report the wrong percentage of stations owned.[22]

Other problems exist in these summaries. Some station owners listed in the 2003 summary are missing from the 2004 report but reappear in the 2006 summary, despite the fact that ownership had not changed during the interim period. Certain stations have ownership interests that add up to more than 100 percent. In some instances, the type of station facility (AM, FM or TV) is not specified.

But the most alarming problems are ones of omission. Not a single station owned by Radio One is listed by the FCC, even though the company is the largest minority-owned radio broadcaster in the United States. Stations owned by Granite Broadcasting, the largest minority-owned television broadcaster, are also missing from the summary reports. However, examination of the individual Form 323 filings for these stations shows that they are indeed minority-owned. Why aren't they in the FCC's summary?

The answer likely lies in how the larger-group stations report ownership information, and how the FCC harvests the information for their summary reports. Most of the licenses of those stations missed by the FCC are "owned" by intermediate entities, which are -- in some cases -- many degrees separated from the "actual" owner. Some stations file more than 20 separate Form 323 forms (one for each holding entity), with the true owners listed on only one form. And in many cases, the actual ownership information is attached as an exhibit and not listed on the actual form. Thus the FCC, which tabulates the information for its summaries by harvesting these electronic forms via an automated process, misses stations that file in this convoluted and confusing manner.

The Commission's lack of understanding of its own Form 323 data became even more apparent when the Media Bureau released previously unpublished internal studies that attempted to ascertain the true state of female and minority broadcast ownership.[23] A draft dated November 14, 2005, reports that there were, as of 2003, 60 television stations and 692 radio stations owned by women; and 15 television stations and 335 radio stations owned by minorities.[24] However, *Out of the Picture* showed that by the fall of 2006 there were 44 minority-owned stations, and this was not the result of a massive

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[21] http://www.fcc.gov/ownership/data.html

[22] For example, Howard University Professor Carolyn M. Byerly in an October 2006 report writes: "FCC data indicate that in 2005, women owned only 3.4% and minorities owned only 3.6% of the 12,844 stations filing reports." This report was based on the flawed FCC summaries of Form 323 data (see "Questioning Media Access: Analysis of FCC Women and Minority Ownership Data," Benton Foundation and Social Science Research Council, October 2006). Also, in his book *Fighting For Air*, New York University Professor Eric Klinenberg writes that "by 2005, the FCC reported that only 3.6 percent of all broadcast radio and television stations were minority-owned, while a mere 3.4 percent were owned by women" (page 28). These are the exact but inaccurate percentages obtained from the information on the FCC 323 summary Web site. They were calculated by dividing the number of reported stations by the total number of stations that filed Form 323 or Form 323-E (438/12,844 = 3.4 percent women-owned; 460/12,844 = 3.6 percent minority-owned).

[23] See http://www.fcc.gov/ownership/additional.html for documents released in December of 2006.

[24] http://www.fcc.gov/ownership/materials/newly-released/minorityfemale011405.pdf

increase in minority ownership. Indeed, the same FCC draft report indicated just a single African-American-owned television station in the 2003 sample period. However, a review of Granite Broadcasting's (an African-American-owned company) Form 323 filing in 2003 showed that they alone held nine full-power television station licenses.[25] This internal summary is deeply troubling in its inaccuracy and raises questions about the data analysis ability of Commission staff, and the commitment of the Commission to accurately monitor female and minority ownership.

This obvious lack of concern is truly troubling given the Commission's legal obligation to foster improved female and minority broadcast ownership. The FCC has both the raw data and the resources to adequately address the issues raised by the Third Circuit regarding minority ownership but chooses instead to ignore this issue and rely on public commenters to do its job.

We hope that recent comments by all five FCC Commissioners indicate that the Commission now recognizes the importance of addressing this issue. As Chairman Martin recently said, "To ensure that the American people have the benefit of a competitive and diverse media marketplace, we need to create more opportunities for different, new and independent voices to be heard."[26]

[25] Furthermore, FCC data also indicates that during the timeframe of the FCC analysis, there were at least three more African-American-owned stations (WJYS, KNIN-TV and KWCV), bringing the number of African-American-owned stations to 12. The FCC document reported two American Indian-owned stations; but at the time of this draft study, FCC records indicate at least four American Indian-owned stations (KHCV, KOTV, KWTV, and WNYB). The FCC document reported four Asian-owned stations; but at the time of this draft study, FCC records indicate at least seven Asian-owned stations (KBFD, WMBC, KBEO, KWKB, KCFG, KEJB and KKJB).

[26] "Remarks of FCC Chairman Kevin J. Martin, 2007 AWRT Annual Leadership Summit Business Conference, March 9, 2007, Available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-271371A1.pdf. At the same event, Commissioner Robert McDowell stated that the data on female and minority ownership was "extremely troubling" to him, and that he wanted to find out "why that number is lower than in other industries." See http://www.broadcastingcable.com/article/CA6423119.html?title=Article&spacedesc=news.

Methodology

The universe of licensed full-power commercial radio stations and owners was determined using BIA Media Access Pro and the FCC's CDBS Public Access Database.[27] BIA Media Access Pro data reflects ownership status as of February 14, 2007 and includes station sale deals that were announced as of that date. FCC Form 323 ownership filings were then reviewed, with ownership information assigned using the most recent filings.[28] In some cases where deals had been announced but not consummated, FCC Form 315 filings were reviewed to determine the distribution of voting interest, which in many cases could then be cross-referenced with Form 323 filings to determine the gender and race or ethnicity of owners. "Ownership" was defined as the gender or race of owners with voting interest that exceeded 50 percent alone or in the aggregate. If no single gender or race met these criteria, then stations were assigned "no controlling interest status." This status most often was assigned to publicly traded corporations where listed entities did not form a majority of the voting interest. The "no controlling interest" status for gender was also conferred upon entities where a man and a woman each controlled 50 percent of the voting interest. For each station-owning entity, the gender and race/ethnicity of the CEO, president or managing member was noted using Form 323 filings.

A significant number of stations are not required to file Form 323 because they are owned by sole proprietorships. Where possible, ownership information for these stations was assigned using publicly available information. In total, there were 279 stations where race and ethnicity remained unknown, and 168 stations where gender remained unknown. To more accurately estimate the true level of minority and female ownership, a stratification of the distribution of ownership by number of stations owned was performed. Based on these distributions, the true level of ownership was estimated for the unknown stations.

For stations that were located within an Arbitron-rated radio market, a station was considered locally owned if the owning entity's main contact address (as listed in BIA Media Access Pro) was within the same Arbitron market. For stations that were not in rated markets, a station was considered locally owned if the owner's main contact address was within the same Arbitron Total Survey Area (TSA) as the station[29] or if a station's main contact address was within two counties adjacent to the station's county of license.

Demographic data in BIA Media Access Pro was augmented with Census data to determine the total minority population in each market.[30] Information about the gender of station general managers was determined using names in BIA Media Access Pro and other print information. Affiliate information for radio talk show hosts was gathered from program Web sites on May 8-9, 2007 and not independently verified.

Statistical analysis methods such as t-tests, OLS, Probit maximum likelihood models, and Heckmen maximum likelihood selection probability models were used to examine the statistical significance of station and market-level ownership and station and market-level demographics, as well as differences in ownership concentration and the airing of talk show programming. Significance levels are highlighted in each figure where appropriate, and Appendix B details the more complex modeling.

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[27] Stations listed by the FCC as "licensed" were the only stations included in the data set. Stations that had "construction permit-off-air," "licensed and silent," or "licensed cancelled" status were excluded from the analysis. Also, stations not listed by BIA as noncommercial but which filed Form 323-E (ownership forms for non-commercial educational stations) were excluded from the data set. Stations in the Puerto Rico Arbitron radio market were not included in the analysis.

[28] In most cases, the most recent filings were from 2005-2007.

[29] As defined by Arbitron's spring 2007 survey.

[30] BIA does not tabulate non-white Hispanic percentages; nor do they tabulate information for Native Hawaiian/Pacific Islanders or American Indian/Alaska Natives.

The State of Female and Minority Radio Ownership in the United States

As of February 2007, there were 10,506 licensed full-power commercial radio stations in the United States. Women own 609 stations, leaving 168 stations where the gender of the owner(s) could not be determined. After accounting for these unknown gender stations, we estimated that women own 629 stations, or 5.99 percent of all stations.

We determined that 776 of the 10,506 stations are minority-owned. After accounting for the 279 stations where the race/ethnicity of the owner could not be determined, we estimated that minorities own 812 stations, or 7.76 percent of all stations.

We estimated that of these stations, 362 have black or African-American owners, accounting for 3.45 percent of all stations. Hispanic or Latino owners controlled an estimated 305 stations, or 2.90 percent of the total. Asian owners control an estimated 92 stations, or 0.88 percent. American Indian or Alaska Native owners control an estimated 32 stations, or 0.30 percent. There is one Native Hawaiian or Pacific Islander owner who controls 21 stations[31], or 0.20 percent of all licensed full-power commercial U.S. radio stations (see Figure 1).

Figure 1: Full-Power Commercial Radio Station Ownership By Gender and Race/Ethnicity

Category	Owner	Number of Stations	Percent of All Commercial Full-Power Radio Stations	Estimated Actual Percent of All Commercial Full-Power Radio Stations*
Gender	Female	609	5.80	5.99
	Male	8,533	81.24	82.44
	No Controlling Interest	1,196	11.37	11.57
	Unknown	168	1.59	
Race/Ethnicity	Amer.Indian/AK Native	30	0.29	0.30
	Asian	90	0.86	0.88
	Black or African American	346	3.29	3.45
	Hispanic or Latino	289	2.75	2.90
	Nat.Hawaiian/Pac.Isl.	21	0.20	0.20
	All Minority	776	7.39	7.73
	Non-Hispanic White	8,921	84.92	87.21
	No Controlling Interest	530	5.04	5.06
	Unknown	279	2.65	
	Total	10,506		

Source: FCC Form 323 filings; Free Press Research
** Estimates are based on known owners and estimates of the ownership of stations where ownership gender and/or race could not be determined*

By comparison, non-Hispanic white owners control an estimated 9,162 stations, or 87.21 percent of the total stations. The remaining stations are owned by entities with no single race/ethnicity accounting for more than 50 percent of the voting interest. In most cases, the stations designated as having "no controlling interest" are owned by large publicly traded corporations such as Cumulus Broadcasting, whose voting stock is disbursed among a wide population of shareholders.

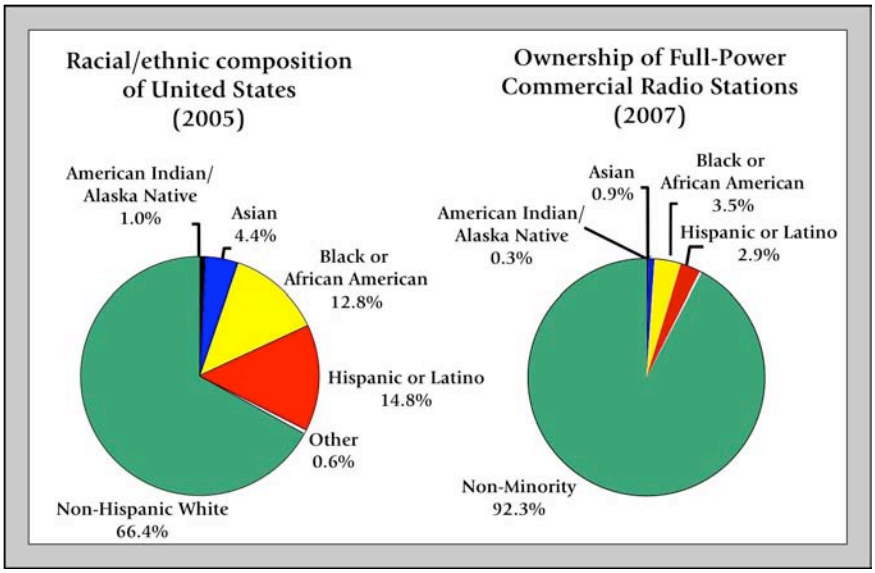
[31] Roy E. Henderson

An estimated 1,216 stations are owned by entities where no single gender accounts for more than 50 percent of the voting interest. In over half of the stations with "no controlling interest" gender status, the stations are owned by an entity that consists of a man and a woman (usually husband and wife), with each having 50 percent of the voting interest.

Radio Station Ownership Doesn't Reflect General Population, Lags Behind Other Economic Sectors

Women make up half of the U.S. population, yet own approximately one-twentieth of full-power commercial radio stations. Minorities account for nearly 33 percent of the U.S. population but own less than 8 percent of the radio stations (see Figure 2).

Figure 2: U.S. Racial/Ethnic Composition and Ownership of Full-Power Commercial Radio Stations

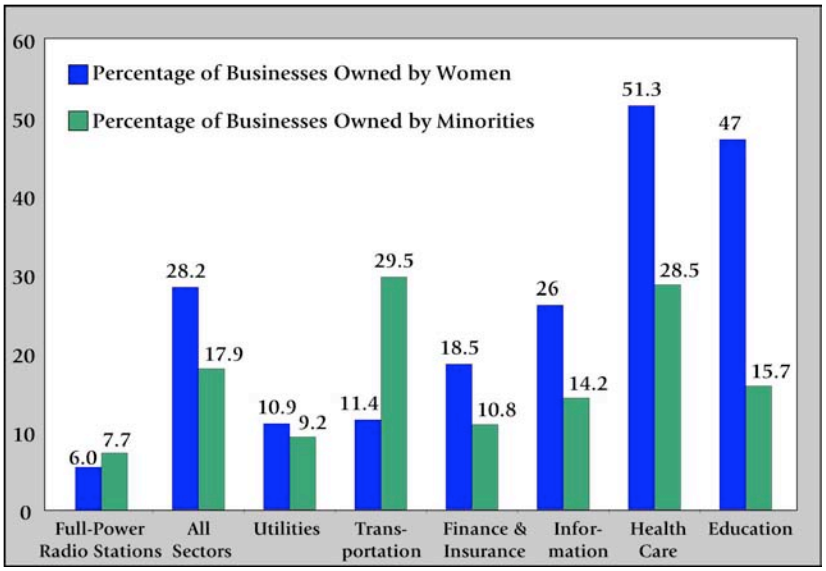


Source: FCC Form 323 filings; U.S. Census Bureau; Free Press Research

Given the long history of prejudice and economic discrimination against women and minorities, it is not too surprising that broadcast ownership doesn't reflect these groups' respective proportions of the general population. However, the level of female and minority broadcast radio ownership is also very low when compared to other sectors of the economy and even the information sector as a whole. In industries like transportation and health care, female and minority ownership is some four to eight times higher than in the broadcast radio industry (see Figure 3).[32]

[32] 2005 U.S. Census Bureau Economic Census, data collected in 2002.

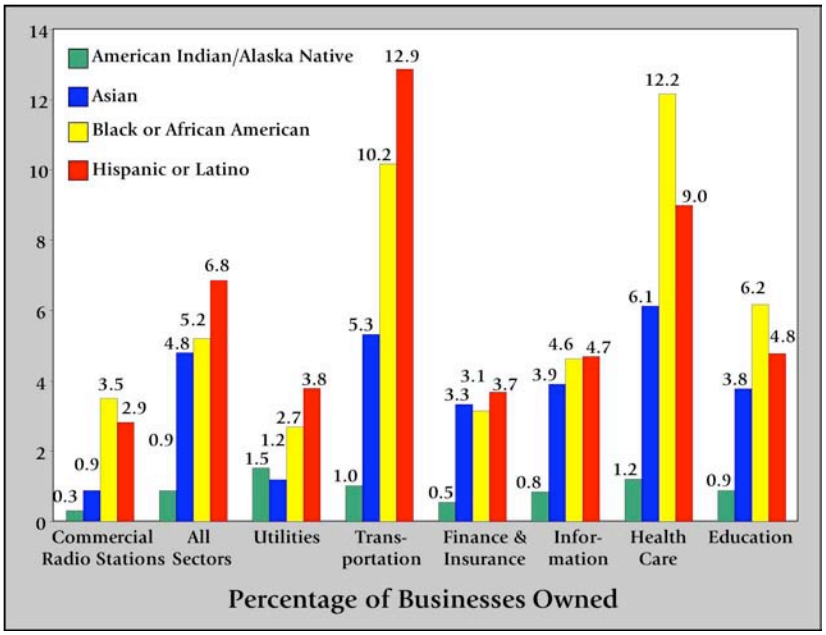
Figure 3: Female and Minority Business Ownership By Sector



Source: FCC Form 323 filings; U.S. Census Bureau; Free Press Research

This disparity is even more telling when considering individual race and ethnic groups. In sectors such as transportation and health care, all minority groups own businesses at or near their proportion of the general population. But in the radio broadcast sector, the two largest groups — African-Americans and Latinos — barely own 3 percent of stations (see Figure 4).

Figure 4: Minority Business Ownership By Race/Ethnicity and Sector



Source: FCC Form 323 filings; U.S. Census Bureau; Free Press Research

Notably, the level of female and minority broadcast radio ownership is not very different from respective levels of ownership of broadcast television stations. *Out of the Picture* found that women own approximately 5 percent of commercial TV stations, while people of color control about 3 percent.[33] Given that radio outlets are generally much less expensive to own, the relatively low level of radio ownership by women and people of color indicates there are more factors at play than just lack of adequate access to capital and equity.

No Diversity at the Top of Station Management

Approximately 530 stations, or about 5 percent of all stations, are owned by an entity where no controlling interest is held by a single race or ethnicity. These are often publicly traded corporations where the voting interest is widely dispersed amongst shareholders, rendering assignment of ownership ethnicity or race impossible.[34] However, the companies that own these stations suffer from the same lack of diversity seen in other stations. Only seven of the 530 stations with "no controlling interest" race/ethnicity status have a minority CEO or president (see Figure 5).

Figure 5: Stations with 'No Controlling Interest' by Race/Ethnicity

Race/Ethnicity of CEO or President	Gender of CEO or President								Percent of Total Stations With No Controling Interest for Race	Percent of All Stations
	Female		Male		No Controlling Interest for Gender		Total			
	# of Unique Owners	Total # of Stations	# of Unique Owners	Total # of Stations	# of Unique Owners	Total # of Stations	# of Unique Owners	Total # of Stations		
American Indian/AK Native	0	0	1	1	0	0	1	1	0.2	0.0
Asian	1	2	0	0	0	0	1	2	0.4	0.0
Black or African American	0	0	1	1	0	0	1	1	0.2	0.0
Hispanic or Latino	0	0	2	3	0	0	2	3	0.6	0.0
No Controlling Interest for Race/Ethnicity	0	0	0	0	1	1	1	1	0.2	0.0
White, Non-Hispanic	1	13	15	509	0	0	16	522	98.5	5.0
Total	2	15	19	514	1	1	22	530	100	5.0
All Minorities	1	2	4	5	0	0	5	7	1.3	0.1
Percent of Total Stations With No Controling Interest for Race	2.8		97.0		0.2		100			
Percent of All Stations	0.1		4.9		0.0		5.0			

Source: FCC Form 323 filings; Free Press Research

[33] S. Derek Turner and Mark N. Cooper, *Out of the Picture: Minority and and Female TV Station Ownership in the United States*Free Press, October 2006.

[34] Form 323 only requires disclosure of persons who control 5 percent or more of the voting interest in a particular station. For the "no controlling interest" race/ethnicity stations, the level of reported voting interest is often well below 50 percent.

There were 1,196 stations with "no controlling interest" by gender, or 11.37 percent of all stations. As indicated above, more than half of these stations are owned by husband-wife entities, where ownership interest is shared equally. However, the male owners lead the overwhelming majority of these arrangements. In total -- of the 1,196 stations assigned the status of "no controlling interest" for gender -- only 55 have a female CEO or president (see Figure 6).

Figure 6: Stations with "No Controlling Interest" by Gender

Race/Ethnicity of CEO or President	Gender of CEO or President										Percent of Total Stations With No Controling Interest for Gender	Percent of All Stations
	Female		Male		No Controlling Interest for Gender		Unknown Gender		Total			
	# of Unique Owners	Total # of Stations	# of Unique Owners	Total # of Stations	# of Unique Owners	Total # of Stations	# of Unique Owners	Total # of Stations	# of Unique Owners	Total # of Stations		
American Indian/AK Native	0	0	1	1	0	0	0	0	1	1	0.1	0.0
Asian	1	2	2	3	0	0	0	0	3	5	0.4	0.0
Black or African American	0	0	7	11	1	5	0	0	8	16	1.3	0.2
Hispanic or Latino	1	1	11	18	2	2	0	0	14	21	1.8	0.2
No Controlling Interest for Race/Ethnicity	0	0	0	0	2	11	0	0	2	11	0.9	0.1
Unknown Race/Ethnicity	1	1	2	2	1	1	3	3	7	7	0.6	0.1
White, Non-Hispanic	23	51	239	1031	29	52	1	1	292	1135	95.0	10.8
Total	26	55	262	1066	35	71	4	4	327	1196	100	11.4
Percent of Total Stations With No Controling Interest for Gender	4.6		89.2		5.9		0.3		100			
Percent of All Stations	0.5		10.1		0.7		0.0		11.4			

Source: FCC Form 323 filings; Free Press Research

This lack of diversity at the top is also seen among the stations where ownership gender and race/ethnicity could be determined. Just 4.7 percent of all full-power commercial broadcast radio stations are owned by an entity with a female CEO or president, while only 8 percent of stations are owned by an entity with a CEO or president who is a racial or ethnic minority (see Figure 7).

Figure 7: Who is at The Top?
Race/Ethnicity and Gender of Radio Station CEO/Presidents

Race/Ethnicity of CEO or President	Gender of CEO or President										Percent of All Stations	Percent of All Unique Owners
	Female		Male		No Controlling Interest for Gender		Unknown		Total			
	# of Unique Owners	Total # of Stations	# of Unique Owners	Total # of Stations	# of Unique Owners	Total # of Stations	# of Unique Owners	Total # of Stations	# of Unique Owners	Total # of Stations		
American Indian/AK Native	0	0	14	32	0	0	0	0	14	32	0.3	0.5
Asian	7	23	17	67	0	0	0	0	24	90	0.9	0.8
Black or African American	14	16	117	327	1	5	0	0	132	348	3.3	4.6
Hispanic or Latino	21	23	103	323	4	4	0	0	128	350	3.3	4.5
Native Hawaiian or Pacific Islander	0	0	1	21	0	0	0	0	1	21	0.2	0.0
White, Non-Hispanic	222	419	2,064	8,903	29	52	1	1	2,316	9,375	89.2	81.4
No Controlling Interest for Race/Ethnicity	0	0	0	0	2	11	0	0	2	11	0.1	0.1
Unknown Race/Ethnicity	14	14	83	100	1	1	130	164	228	279	2.7	8.0
Total	278	495	2,399	9,773	37	73	131	165	2,845	10,506	100	100
All Minorities	42	62	252	770	5	9	0	0	299	841	8.0	10.5
Percent of All Stations	4.7		93.0		0.7		1.6		100			
Percent of All Unique Owners	9.8		84.3		1.3		4.6		100			

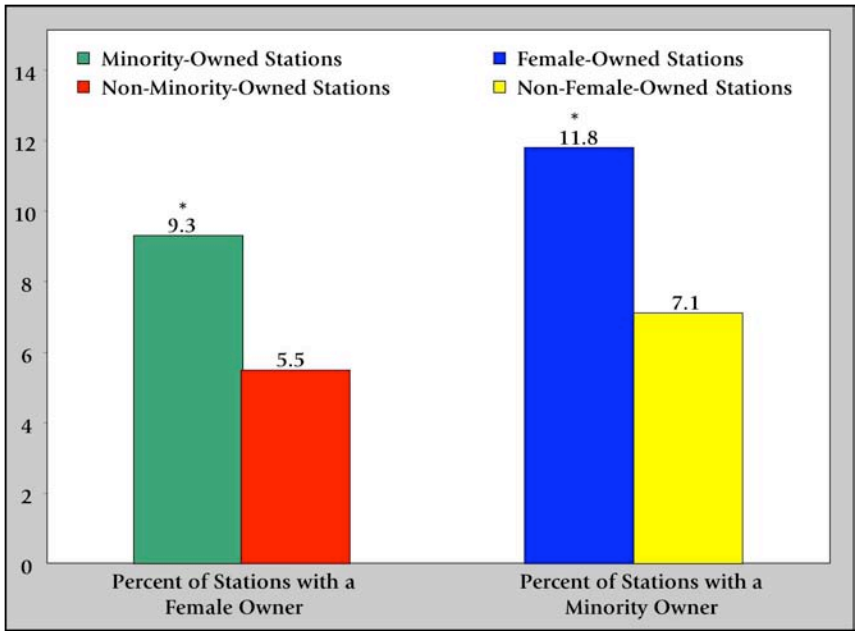
Source: FCC Form 323 filings; Free Press Research

There is also a troubling lack of CEO diversity within the companies that are not female or minority owned. Only 1 percent of the non-female-owned radio stations are owned by an entity with a female CEO or president, while just 0.9 percent of the non-minority-owned radio stations are owned by an entity with a minority CEO or president. By contrast, 34.5 percent of the female-owned stations had a male CEO or president. Among minority-owned stations, the leadership largely reflected the race/ethnicity of the owner, as was the case among non-minority-owned stations. Only 1.03 percent of minority-owned stations had a white CEO or president.

We also found that while women own just 5.5 percent of the non-minority-owned stations, they own 9.3 percent of the nearly 800 minority-owned radio stations. And while minorities own just 7 percent of the non-female-owned stations, they control almost 12 percent of the more than 600 female-owned stations (see Figure 8).

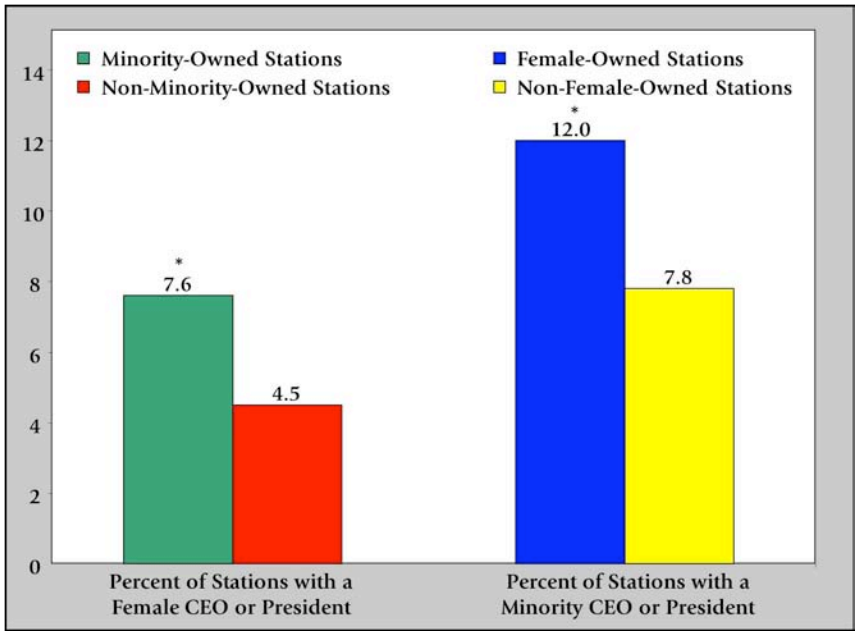
Minority-owned stations are also significantly more likely to be run by a female CEO or president than are stations not owned by people of color. Nearly 8 percent of minority-owned stations have a woman at the top in the position of CEO, president or managing member, versus just 4.5 percent of the other stations. Likewise, female-owned stations are significantly more likely to be run by a minority CEO or president than stations not owned by women: 12 percent of female-owned stations have a minority CEO or president, versus just 7.8 percent of other stations (see Figure 9).

Figure 8: Female and Minority Radio Ownership: Overlap in Ownership Categories



Source: FCC Form 323 filings; Free Press Research
** difference is statistically significant at $p < 0.001$*

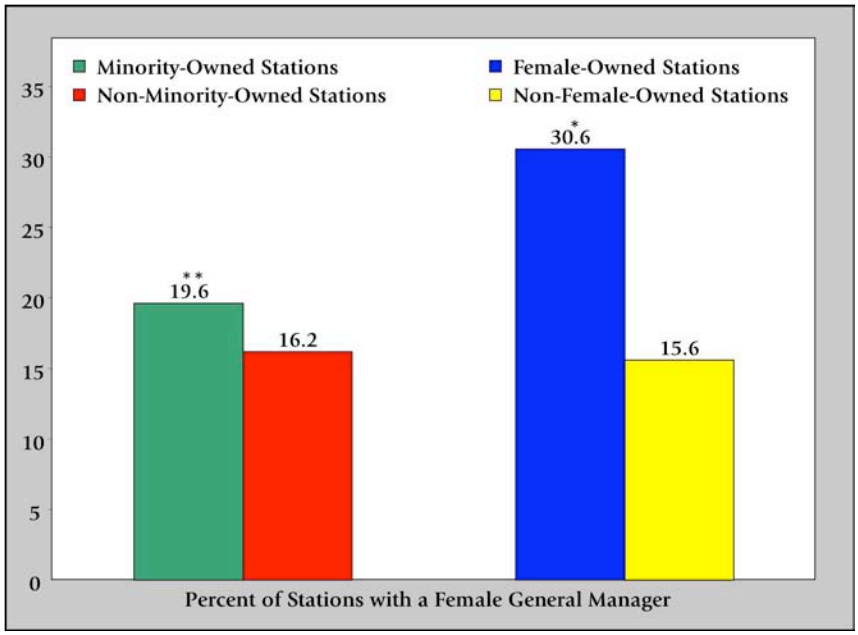
Figure 9: Female and Minority Radio Station CEO/Presidents: Overlap in Ownership Categories



Source: FCC Form 323 filings; Free Press Research
** difference is statistically significant at $p < 0.001$*

This apparent complementary nature of female and minority ownership is also seen in the gender of station's general managers. Nearly 20 percent of the minority-owned stations have a female general manager, versus 16.2 percent of the stations not owned by people of color. Not surprisingly, female-owned stations were twice as likely as stations not owned by women to employ a female general manager (see Figure 10). These differences are important, as station management may be a path to station ownership.

Figure 10: Female General Station Managers By Gender/Race Ethnicity

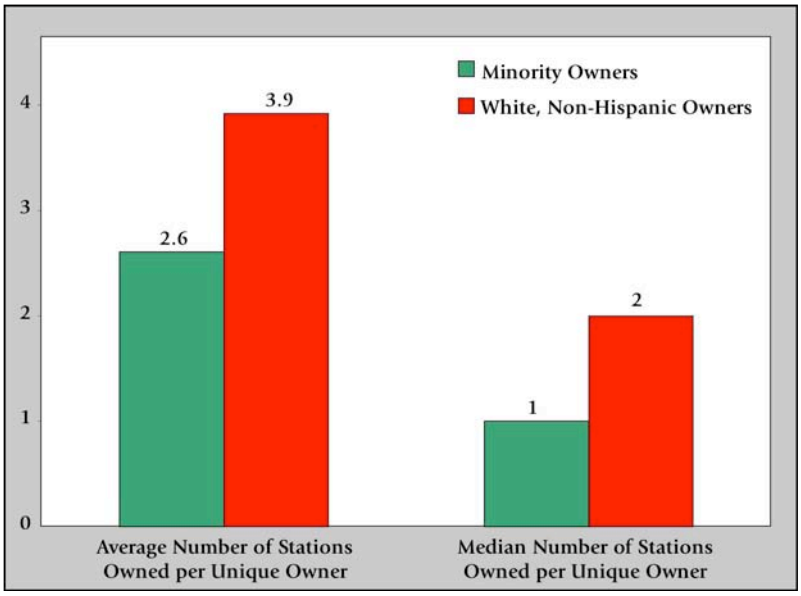


Source: FCC Form 323 filings; BIA Financial; Free Press Research
** difference is statistically significant at $p < 0.001$; ** difference is statistically significant at $p < 0.05$*

Female and Minority Owners Control Fewer Stations per Owner

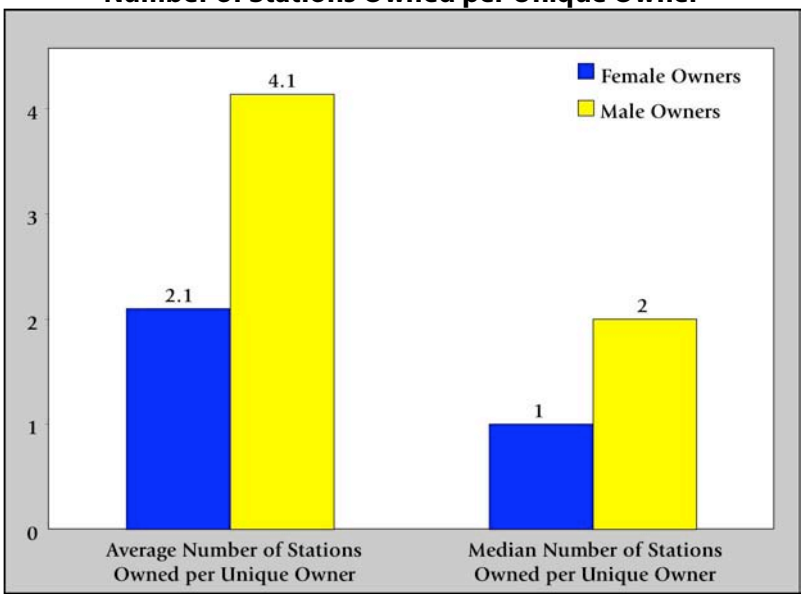
White male and large corporate station owners tend to own more stations than their minority and female counterparts. The average number of stations owned per unique white, non-Hispanic owner is 3.9, and male owners controlled an average of 4.1 stations each. The average number of stations owned per unique owner is 2.6 for minorities and 2.1 for women (see Figure 11 and Figure 12).

Figure 11: Ownership Concentration and Race/Ethnicity
Number of Stations Owned per Unique Owner



Source: FCC Form 323 filings; Free Press Research

Figure 12: Ownership Concentration and Gender
Number of Stations Owned per Unique Owner



Source: FCC Form 323 filings; Free Press Research

While the average number of stations owned by a unique minority owner is 2.6, for Latinos it is even lower (see Figure 13). This reflects the fact that the largest Latino owner (Border Media Partners) controls just 27 stations, compared to 69 for the largest African-American owner (Radio One), and 43 for the largest Asian owner (Multicultural Radio Broadcasting Inc.). These numbers pale in comparison to the largest non-minority owner, Clear Channel, which controlled nearly 1,100 stations at the time of this study.

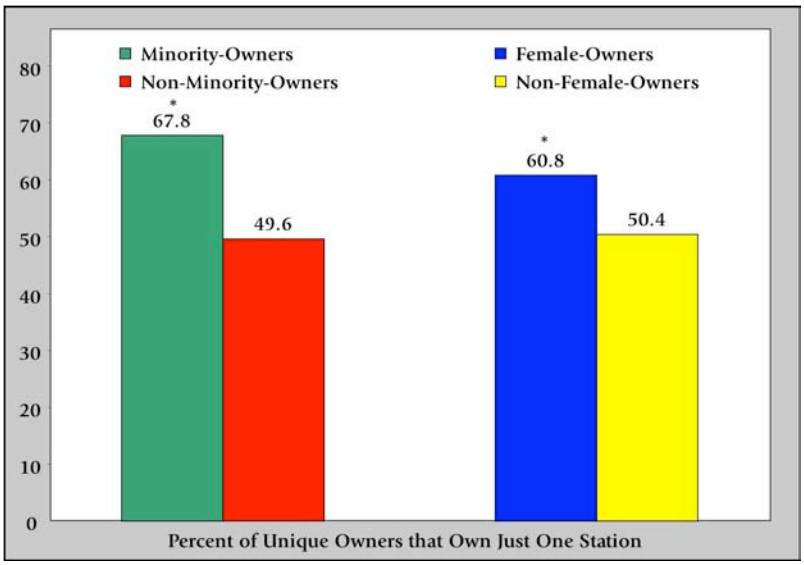
Figure 13: Ownership Concentration and Race/Ethnicity: Number of Stations Owned per Unique Owner

Owner	Average Number of Stations Owned per Unique Owner	Median Number of Stations Owned per Unique Owner
Amer.Indian/AK Native	2.5	2
Asian	3.8	1
Black or African American	2.7	1
Hispanic or Latino	2.3	1
Nat.Haw./ Pac.Isl.	21	21
All Minorities	2.6	1
White, Non-Hispanic	3.9	2
Male	4.1	2
Female	2.1	1
White Male	4.4	2

Source: FCC Form 323 filings; Free Press Research

Female and minority radio station owners are also significantly more likely to be single-station owners than their non-female and non-minority counterparts. Over 60 percent of female owners control just a single station, compared to half of all non-female owners. Two-thirds of the unique minority owners control just one station, compared to half of all unique non-minority owners (see Figure 14).

Figure 14: Single-Station Owners By Gender/Race Ethnicity



Source: FCC Form 323 filings; Free Press Research
** difference is statistically significant at $p < 0.001$*

African-American and Latino owners drive the high level of minority single-station ownership. And while the overall level of single-station ownership by minorities is high, it is even higher among minority women. Nearly 91 percent of Latino female station owners and 80 percent of African-American female owners are single-station proprietors (see Figure 15).

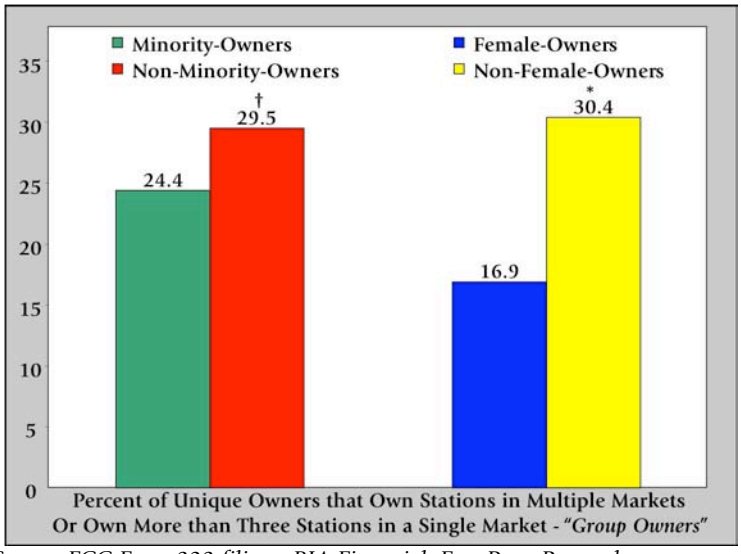
Figure 15: Ownership Concentration
Unique Owners Controlling Multiple Stations by Race/Ethnicity

Race/Ethnicity	Gender	Number of Unique Owners Owning Just One Station	Percentage of Unique Owners Owning Just One Station	Number of Unique Owners Owning Multiple Stations	Percentage of Unique Owners Owning Multiple Stations
Amer.Ind/AK Native	Male	2	20	8	80.0
	Female	0	0	1	100.0
	All	3	25	9	75.0
Asian	Male	8	57.1	6	42.9
	Female	5	62.5	3	37.5
	All	14	58	10	41.7
Black or African American	Male	73	70.2	31	29.8
	Female	12	80	3	20.0
	All	93	72	37	28.5
Hispanic or Latino	Male	59	67.0	29	33.0
	Female	20	90.9	2	9.1
	All	90	70	38	29.7
Native Hawaiian/Pacific Islander	Male	0	0	1	100
	Female	0	0	0	0.0
	All	0	0	1	100
All Minorities	Male	142	65	75	34.6
	Female	37	80.4	9	19.6
	All	200	68	95	32.2
White, Non-Hispanic	Male	803	45.0	983	55.0
	Female	130	55.1	106	44.9
	All	1,065	46	1,235	53.7
All	Male	1,017	48.8	1,069	51.2
	Female	180	60.8	116	39.2
	All	1,465	51	1,380	48.5

Source: FCC Form 323 filings; Free Press Research

Female and minority owners are also less likely to be "group owners," those entities that control stations in multiple markets or more than three stations in a single market (see Figure 16).

Figure 16: Group Station Owners
By Gender/Race Ethnicity



Source: FCC Form 323 filings; BIA Financial; Free Press Research
** difference is statistically significant at $p < 0.001$; † difference is statistically significant at $p < 0.10$*

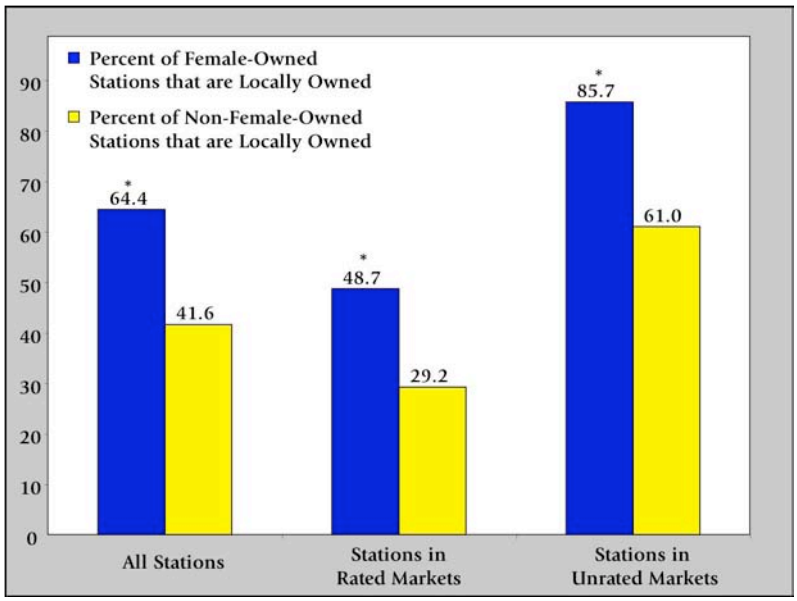
Female- and Minority-Owned Stations: More Local, More Often

The FCC states that localism is one of its key criteria as it reviews regulations governing broadcast media ownership. Since broadcasting by its nature is a local medium, increasing the amount of local ownership should be a paramount policy goal. In theory, local owners should be more connected to the communities they serve, and thus in a better position to serve the public interest than owners who reside hundreds or thousands of miles away.

To examine the relationship between the gender and race/ethnicity of station owners and the degree of local ownership, we first constructed a definition of "local ownership." The definition is more expansive than just the physical location of the license and the owners, reflecting the fact that most radio stations serve areas that are larger than just a single city or county. We chose a market-based definition, deeming a station to be locally owned if the owner's physical headquarters were in the same Arbitron radio market a station serves. For the 40 percent of stations not in an Arbitron market, we defined stations as locally owned if the owner's headquarters and the station were both in counties in the same Arbitron Total Survey Area[35] or were located within two counties adjacent to each other.

Using this definition, we found that stations owned by women are significantly more likely to be locally owned. Among all stations, 64.4 percent of the female-owned stations are locally owned versus 41.6 percent of the non-female-owned stations. For the stations in Arbitron-rated markets, 48.7 percent of the female-owned stations are local, versus just 29.2 percent of the non-female-owned stations. Among the stations in unrated markets, a whopping 85.7 percent of female-owned stations are locally owned, versus 61 percent of the stations not owned by women (see Figure 17).

Figure 17: Local Station Ownership by Gender



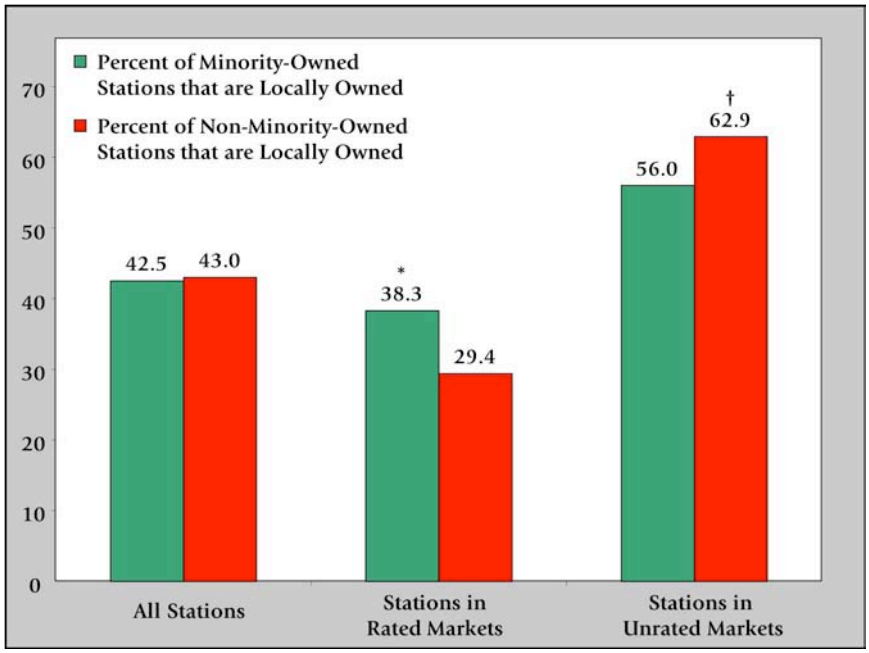
Source: FCC Form 323 filings; BIA Financial; Free Press Research
** difference is statistically significant at $p < 0.001$*

[35] Each Arbitron radio market is made of up to two geographic areas that are each surveyed to determine ratings information. The "Metro Survey Area" (Metro) includes the counties that actually make up the Arbitron market and is surveyed four times each year. The "Total Survey Area" (TSA) includes all of the counties in the Metro as well as one or more non-Metro counties contiguous to the Metro area. TSAs are surveyed twice a year and, in general, are areas that are not in the Arbitron market but where listeners may be able to hear the radio stations that serve the nearby rated market.

For minority owners, the situation is more complex because the minority population is not evenly distributed throughout all regions of the country. Among all stations, 42.5 percent of the minority-owned stations are locally owned, essentially the same level observed among stations not owned by minorities.

However, for the stations in Arbitron-rated markets, 38.3 percent of the minority-owned stations are locally owned, versus just 29.4 percent of the non-minority-owned stations. But the situation is reversed in the unrated markets, which have lower minority populations.[36] Among the stations in unrated markets, the level of local ownership by minority owners is over 56 percent. But the local ownership level of stations not owned by minorities is 62.9 percent (see Figure 18).

Figure 18: Local Station Ownership by Race/Ethnicity



Source: FCC Form 323 filings; BIA Financial; Free Press Research
** difference is statistically significant at p < 0.001; † difference is statistically significant at p < 0.10*

Local ownership is also strongly associated with the numbers of stations controlled per owner. Not surprisingly, local ownership is very high among single-station owners. Over 83 percent of single stations are locally owned, versus just 36 percent of the stations owned by multiple station owners.[37] Among the stations controlled by group owners (those with stations in multiple markets or three or more stations in a single market), only 28 percent of their stations are locally owned, versus 85 percent of the stations of non-group owners.[38]

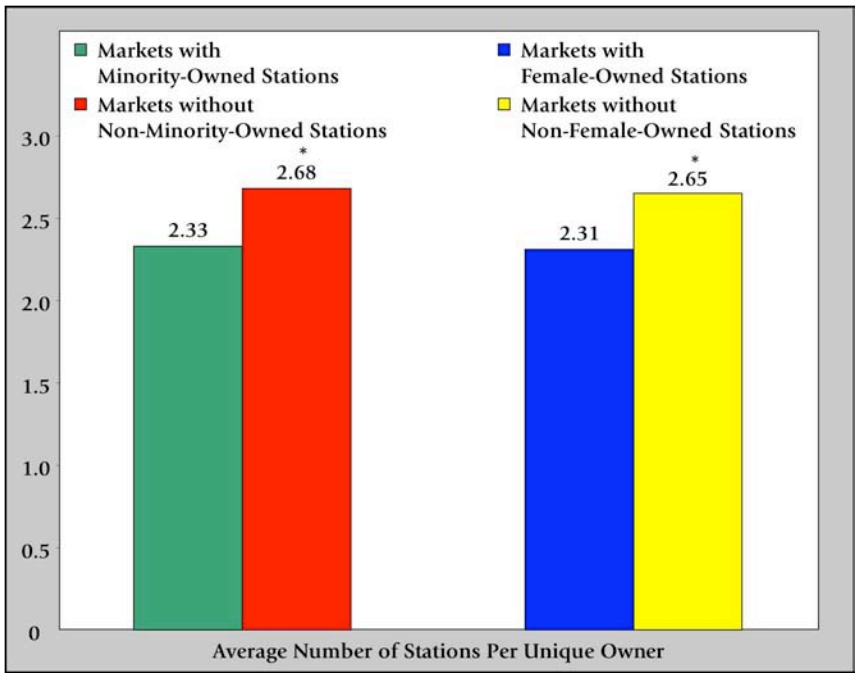
[36] The average minority population in Arbitron markets is 26.6 percent. The average minority population in the counties of unrated market stations is 18.5 percent.
[37] Difference is statistically significant at p < 0.0001.
[38] Difference is statistically significant at p < 0.0001.

Female- and Minority-Owned Stations Thrive In Less Concentrated Markets

Minority- and female-owned stations tend to be, on average, in the larger (by both number of stations and population) Arbitron markets (see Figure 32 below). Given that the larger markets tend to be less concentrated[39], we expected to find minority- and female-owned stations are in less concentrated markets than those without these stations. And this is indeed the case.

In the markets that contained at least one minority-owned station, the average number of stations held per unique owner was 2.33, far less than the ratio of 2.68 stations per unique owner observed in the markets that had no minority owners. Similarly, in markets with female owners the average number of stations per owner was 2.31, significantly lower than the 2.65 stations per owner in the markets without female-owned stations (see Figure 19).

Figure 19: Market Concentration: Average Number of Stations per Unique Owner By Gender/Race Ethnicity



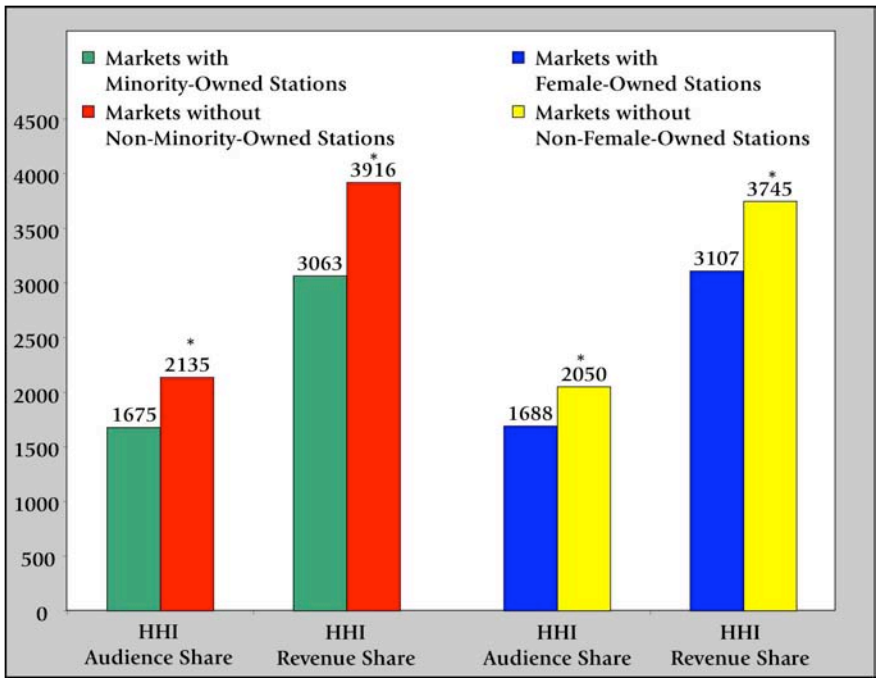
Source: FCC Form 323 filings; Free Press Research
** difference is statistically significant at p < 0.001*

[39] The number of stations owned per unique owner is positively correlated with market rank (i.e., as a market decreases in size, the concentration of station ownership tends to increase). This pairwise correlation has a Pearson's r of 0.23 at a $p < 0.0001$. This result is repeated in the case of market audience share HHI (see below for definition), where the $r = 0.55$ at $p < 0.0001$; and in the case of market revenue HHI (see below for definition), where the $r = 0.39$ at $p < 0.0001$.

The Arbitron markets that had female and minority owners were also significantly less concentrated than the markets without these owners in terms of the concentration of market revenue and audience share, as measured by the Herfindahl-Hirschman Index (HHI).[40]

The average audience share HHI in markets with minority owners was 1,675 -- far below the value seen in markets without minority owners, which stood at 2,135. A nearly identical result was observed in the case of markets with female owners, where the audience share HHI was 1,688 -- far below the 2,050 HHI seen in the markets without female-owned stations. This pattern was repeated in the examination of market revenue HHIs, where the average market with a minority had an HHI of 3,063, significantly less than the revenue HHI of 3,916 observed in the markets with no minority owners. Finally, the revenue HHI for female owner markets was 3,107, far less than the 3,745 value observed in markets that had no female owners present (see Figure 20).

Figure 20: Market Concentration: HHI's for Audience and Revenue Shares By Gender/Race Ethnicity



Source: FCC Form 323 filings; BIA Financial; Free Press Research
** difference is statistically significant at $p < 0.001$*

[40] The Herfindahl-Hirschman Index (HHI) is calculated as:

$$H = \sum_{i=1}^{n} S_i^2 \times 10{,}000$$

where
n = the number of firms
S_i = the share of the ith firm.

Thus a market with 10 firms that had equal market shares (0.1 each) would have an HHI of 1,000. A higher HHI means a market is more concentrated. HHIs above 1,800 indicate a market is "highly concentrated". Market revenue share HHI calculations were based only on the universe of commercial stations. For market audience share calculations, all commercial and non-commercial stations were included. Share is reported by BIA (using Arbitron data) as the percent of all those listening to the radio at a given time that are tuned in to the particular station. However, because audience share information is not reported for noncommercial stations, these stations and the commercial stations that had no reported share were assigned an estimated value, calculated by summing the total reported shares, subtracting from 100, and dividing the remainder among these stations.

It could be argued these results are due to population differences at the market level, not the result of lower concentration leading to higher levels of diverse ownership. This argument is only relevant in the case of minority owners, as minorities tend to make up larger percentages of the population in the higher-ranked Arbitron markets.[41]

However, even if the size of the market and the level of minority population in the market are held constant, markets with minority owners are *significantly* less concentrated than markets without minority owners.[42] And a similar examination of female ownership show that markets with a female-owned station are also *significantly* less concentrated than markets without such stations.[43]

Another way of examining this issue is to look at the probability that an individual station will be minority-owned, given the particular characteristics of each market or station. Under this analytical frame, we still find that as a market becomes more concentrated, a station is *significantly* less likely to be minority-owned — even when holding market and station characteristics constant.[44] A similar examination of the probability of female station ownership also reveals a strong negative association with market concentration, even after accounting for market- and station-level characteristics.[45]

These findings are extremely important, for they imply that minority and female owners thrive in more competitive markets, regardless of market or station characteristics. They also have tremendous implications for the current ownership proceeding at the FCC. One unambiguous consequence of further industry consolidation and concentration will be to diminish both the number of minority-owned stations and the number of female-owned stations. The FCC should seriously consider the effects on women and minority owners and their listeners before it moves to enact policies that will lead to increased market concentration.

Indeed, though we did not examine historical trends in female and minority radio station ownership in this study, *Out of the Picture* found that previous pro-consolidation policies enacted by the FCC in the late 1990s had a significant impact on minority TV station ownership, indirectly or directly contributing to a loss of 40 percent of the TV stations that were minority owned as of 1998. The FCC's *2003 State of the Radio Industry* report found that from 1996 to 2003, the number of unique radio station owners had decreased by 35 percent, even as the overall number of stations increased by 6 percent.[46] (Notably, this study wasn't made public until last fall when a copy was leaked to California Sen. Barbara Boxer). These trends certainly can be attributed to the policies contained within the 1996 Telecommunications Act and subsequent FCC decisions that facilitated massive industry consolidation.

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[41] The pairwise correlation between market rank and percentage minority population shows a negative relationship, with a Pearson's r of -0.32 at $p < 0.0001$ (i.e. the percentage of a market's population that is made up of racial and ethnic minorities tends to decrease as the market size decreases).

[42] See Appendix B for details. These results hold when station-owner ratio and audience share HHI are examined in separate equations.

[43] See Appendix B for details. These results hold when station-owner ratio, audience share HHI, and market revenue HHI are examined in separate equations.

[44] See Appendix B for details. Control variables include total market population, the percent minority population in the station's market, the percent female population in the station's market, and whether or not the station is AM. These results hold when station-owner ratio and audience share HHI are examined in separate equations.

[45] See Appendix B for details. Control variables are the same as indicated above. These results hold when station-owner ratio and audience share HHI are examined in separate equations.

[46] *Review of the Radio Industry, 2003*, Federal Communications Commission, Media Bureau, Industry Analysis Division, September 2003.

Minority Ownership of Radio Stations is Low Even in Markets with Large Minority Populations

Because broadcast radio stations are geographically limited in their market reach, information about female and minority ownership at the local level is more telling than the national aggregate. The traditional geographic boundary used for analysis of radio markets at the local level is the Arbitron market. These markets encompass over 80 percent of the entire U.S. population. But unlike Nielsen's Designated Market Areas (DMAs), Arbitron markets do not cover the entire country, nor do they capture all of the licensed radio stations. Thus our analysis at the market level excludes the 40 percent of radio stations that lie outside of Arbitron markets.

Like ownership at the national level, minorities are vastly underrepresented at the Arbitron market level, even in areas where minorities are the majority. The same is true for women, even though nationwide they comprise a majority of the population.

Minority-owned stations are present in 154 of the nation's 298 Arbitron radio markets. Examination of individual racial and ethnic groups shows only modest overlap between different minority groups, mostly in the larger markets that have higher proportions of minority populations. Of the 154 markets with a minority owner, over two-thirds have just a single minority group represented (see Figure 21). Only the Houston, Texas and Washington, DC markets have four of the five minority groups represented. No market has all five.

Figure 21: Arbitron Radio Markets and Ownership Diversity: Number of Unique Minority Groups in Market

Number of Unique Minoirty Race/Ethnic Groups In Market (Among Stations Owners)	Number of Markets	Percent of All Markets	Average Percent of Minorities in These Markets
None	144	48.3	14.5
One	103	34.6	31.6
Two	35	11.7	34.7
Three	14	4.7	39.7
Four	2	0.7	48.9
All Five	0	0	N/A

Source: FCC Form 323 filings; BIA Financial; Free Press Research

Black- or African-American owned stations are in 100 of the 298 markets, while Hispanic- or Latino-owned stations are present in 81 markets. Asian-owned stations are present in 32 markets, while stations owned by Native Hawaiian or Pacific Islanders are located in four markets. American Indian- or Alaska Native-owned stations are in six of the 298 Arbitron markets. Non-minority-owned stations are present in every single Arbitron market.

In 23 of the 298 U.S. Arbitron radio markets, minorities comprise a majority of the population. However, even in these markets the percentage of radio stations owned by minorities is still relatively low. In two of these 23 markets (Stockton, Calif. and Las Cruces, N.M.) minorities own no stations. Minorities own a majority of stations in only one of these markets, Laredo, Texas (see Figure 22).

Figure 22: Arbitron Radio Markets with 'Majority-Minority' Populations

Market Rank	Market	Percent Minority Population in Market	Percent of Radio Stations in Market Owned by Minorities
205	Laredo, TX	95.1	62.5
58	McAllen-Brownsville-Harlingen, TX	88.1	45.5
76	El Paso, TX	83.0	10.5
64	Honolulu, HI	80.0	9.7
227	Las Cruces, NM	67.5	0.0
2	Los Angeles, CA	64.3	26.8
12	Miami-Ft. Lauderdale-Hollywood, FL	63.7	33.3
136	Corpus Christi, TX	60.9	21.4
66	Fresno, CA	60.3	10.3
29	San Antonio, TX	59.3	24.4
100	Visalia-Tulare-Hanford, CA	58.2	28.6
180	Merced, CA	56.0	20.0
126	Victor Valley, CA	56.0	23.3
35	San Jose, CA	55.8	18.8
129	Fayetteville, NC	53.7	10.5
270	Albany, GA	53.7	6.3
25	Riverside-San Bernardino, CA	52.7	23.1
81	Stockton, CA	52.6	0.0
70	Albuquerque, NM	52.3	5.6
6	Houston-Galveston, TX	51.5	30.9
78	Bakersfield, CA	50.5	9.4
4	San Francisco, CA	50.0	13.6
236	Santa Fe, NM	50.0	27.3

Source: FCC Form 323 filings; BIA Financial; Free Press Research

Overall, in 288 of the 298 U.S. Arbitron radio markets, the percentage of minorities living in the market is greater than the percentage of radio stations owned by people of color. In total, people of color own more than 25 percent of a market's stations in just 24 of the nation's 298 radio markets; they own more than one-third of the stations in just seven markets.

Hispanics or Latinos form a plurality or majority of the population in 11 Arbitron markets.[47] In one of these markets (Las Cruces, N.M.), there are no Latino or any minority owners. Latinos own a majority of the stations in just one of the seven markets where Latinos comprise a majority of the population (Laredo, Texas). There are Latino owners present in 22 of the 25 top markets by Latino population. However, even in these markets, the level of Hispanic or Latino ownership is up to eight times below the proportion of the Latino population living there (see Figure 23). In 277 of the 298 radio markets, the percentage of Latinos living in the market is greater than the percentage of local radio stations owned by Latinos.

Figure 23: Top 25 Arbitron Radio Markets by Hispanic or Latino Population

Market Rank	Market	Percent Hispanic or Latino Population in Market	Percent of Radio Stations in Market Owned by Hispanics or Latinos
205	Laredo, TX	95.4	62.5
58	McAllen-Brownsville-Harlingen, TX	88.3	45.5
76	El Paso, TX	82.3	10.5
227	Las Cruces, NM	65.5	0.0
136	Corpus Christi, TX	58.1	21.4
29	San Antonio, TX	52.8	22.0
100	Visalia-Tulare-Hanford, CA	52.7	28.6
180	Merced, CA	48.0	13.3
66	Fresno, CA	46.8	7.7
236	Santa Fe, NM	45.1	27.3
12	Miami-Ft. Lauderdale-Hollywood, FL	44.6	20.0
126	Victor Valley, CA	43.9	23.3
2	Los Angeles, CA	43.7	12.7
70	Albuquerque, NM	43.5	5.6
78	Bakersfield, CA	42.7	9.4
80	Monterey-Salinas-Santa Cruz, CA	42.2	27.3
25	Riverside-San Bernardino, CA	41.7	15.4
187	Odessa-Midland, TX	40.1	10.0
137	Palm Springs, CA	40.1	0.0
253	Pueblo, CO	39.8	50.0
200	Yakima, WA	39.3	0.0
108	Modesto, CA	37.6	16.7
207	Santa Maria-Lompoc, CA	36.9	21.4
211	Santa Barbara, CA	36.9	7.1
120	Oxnard-Ventura, CA	36.0	25.0

Source: FCC Form 323 filings; BIA Financial; Free Press Research

[47] Latinos form a majority in the following markets: Laredo, Texas; McAllen-Brownsville-Harlingen, Texas; El Paso, Texas; Las Cruces, N.M.; Corpus Christi, Texas; San Antonio, Texas; and Visalia-Tulare-Hanford, Calif.. In addition, Latinos form a plurality in Merced, Calif.; Fresno, Calif; Miami-Ft. Lauderdale, Fla.; and Los Angeles.

While there is only one Arbitron radio market where African-Americans constitute a majority of the population (Albany, Ga.), the African-American proportion of the population is at or above the nationwide level in all 298 rated markets. However, black-owned stations are present in just a third of these markets. Figure 40 shows the 25 markets with the highest percentages of African-Americans living within each market. Three of these markets have no African-American-owned stations (Meridian, Miss.; Monroe, La.; and Jackson, Tenn.), even though more than a third of the population is African-American.

In the 22 remaining markets, the level of African-American-ownership is up to 12 times below the black proportion of the total population (see Figure 24). In 282 of the 298 radio markets, the percentage of African-Americans living in the market is greater than the percentage of local radio stations owned by African-Americans.

Figure 24: Top 25 Arbitron Radio Markets by Black or African-American Population

Market Rank	Market	Percent Black or African American Population in Market	Percent of Radio Stations in Market Owned by Blacks or African Americans
270	Albany, GA	51.6	6.3
118	Jackson, MS	46.7	28.6
49	Memphis, TN	45.0	4.8
273	Columbus-Starkville-West Point, MS	44.1	28.6
202	Rocky Mount-Wilson, NC	42.5	37.5
186	Columbus, GA	41.9	33.3
216	Florence, SC	41.4	4.5
151	Montgomery, AL	40.5	10.5
297	Meridian, MS	40.2	0.0
132	Shreveport, LA	38.2	33.3
57	New Orleans, LA	38.1	3.1
155	Macon, GA	37.7	7.7
257	Monroe, LA	34.4	0.0
109	Augusta, GA	34.2	20.0
91	Columbia, SC	34.0	32.0
158	Savannah, GA	33.8	16.7
219	Hilton Head, SC	33.7	20.0
290	Jackson, TN	33.7	0.0
129	Fayetteville, NC	33.6	5.3
77	Baton Rouge, LA	32.4	5.6
269	Valdosta, GA	32.0	13.3
88	Charleston, SC	31.7	10.3
41	Norfolk-VA Beach-Newport News	31.2	8.3
55	Richmond, VA	30.7	19.4
234	Tuscaloosa, AL	30.2	14.3

Source: FCC Form 323 filings; BIA Financial; Free Press Research

Honolulu is the only Arbitron market where Asians constitute a majority of the population, and Asian owners control three of the 31 commercial radio stations there. There are no Asian owners present in 15 of the 34 markets where the Asian proportion of the population is at or above their nationwide level. In 281 of the 298 radio markets, the percentage of Asians living in the market is greater than the percentage of local radio stations owned by Asians.

Figure 25: Top 25 Arbitron Radio Markets by Asian Population

Market Rank	Market	Percent Asian Population in Market	Percent of Radio Stations in Market Owned by Asians
64	Honolulu, HI	55.1	9.7
35	San Jose, CA	29.4	6.3
4	San Francisco, CA	21.5	6.8
2	Los Angeles, CA	13.3	11.3
81	Stockton, CA	13.0	0.0
39	Middlesex-Somerset-Union, NJ	11.7	20.0
27	Sacramento, CA	10.2	5.7
17	San Diego, CA	9.7	3.8
284	Ithaca, NY	9.5	0.0
14	Seattle-Tacoma, WA	9.4	5.5
1	New York, NY	8.8	10.2
8	Washington, DC	8.3	13.6
66	Fresno, CA	8.2	2.6
147	Ann Arbor, MI	7.9	0.0
222	Champaign, IL	7.8	0.0
112	Morristown, NJ	7.3	0.0
171	Anchorage, AK	6.9	0.0
141	Trenton, NJ	6.8	22.2
120	Oxnard-Ventura, CA	5.9	0.0
32	Las Vegas, NV	5.8	0.0
180	Merced, CA	5.7	6.7
11	Boston, MA	5.6	3.2
245	Lafayette, IN	5.6	0.0
6	Houston-Galveston, TX	5.5	3.6
80	Monterey-Salinas-Santa Cruz, CA	5.4	0.0

Source: FCC Form 323 filings; BIA Financial; Free Press Research

There are no American Indian or Native Alaskan owners present in 59 of the 61 markets where the American Indian or Native Alaskan proportion of the population is at or above their nationwide level. In 294 of the 298 radio markets, the percentage of American Indian or Native Alaskans living in the market is greater than the percentage of local radio stations owned by this minority group.

There are no Native Hawaiian or Pacific Islander owners present in all 10 of markets where the Native Hawaiian or Pacific Islander proportion of the population is at or above their nationwide level. There are no Native Hawaiian or Pacific Islander-owned stations in the Honolulu Arbitron market.

Stations owned by women are present in just 126 of the 298 U.S. Arbitron radio markets. Women make up the majority of the population in 253 of the 298 U.S. Arbitron radio markets, and are above 46 percent of the population in the remaining 45 markets. However, in there are no women owners in 144 of the 253 markets where women comprise a majority of the population.

The Stamford-Norwalk, Conn. market is the only market in the U.S. where women own more than half of the stations, and the only market where the percentage of stations owned by women exceeds the percentage of women living in the market. (Cox Enterprises owns four of the six commercial stations in Stamford-Norwalk, Conn.) In total, women own more than 25 percent of a market's stations in just 18 of the nation's 298 radio markets; they own more than one-third of a market's stations in just six markets.

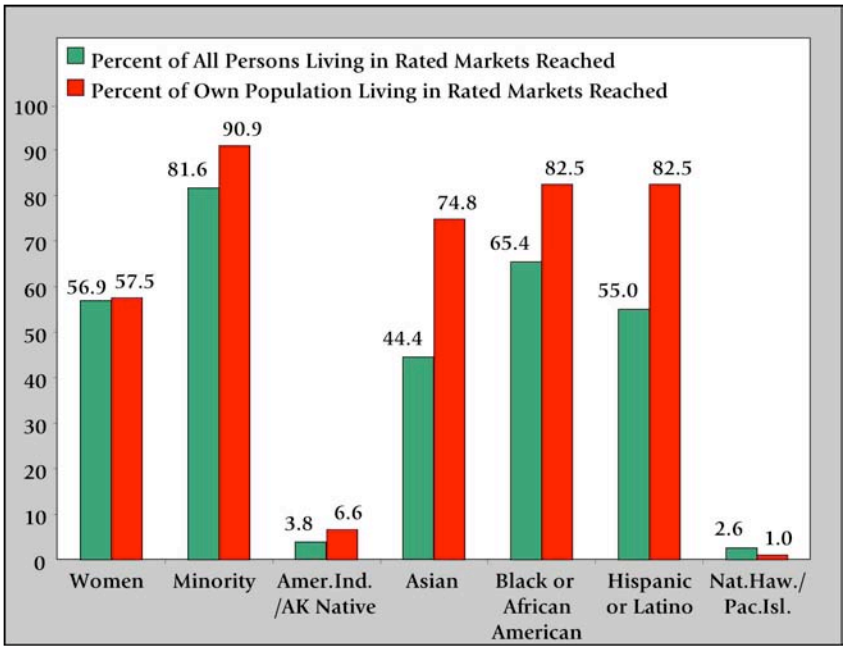
The National Reach of Female and Minority-Owned Radio Stations

Unlike the TV market, the average minority listener is reasonably likely to live in an area that is served by at least one minority-owned radio station. But there are still many minorities who live in markets that are not served by a minority owner. And far more women live in markets that aren't served by a female-owned station.

Female-owned stations reach 57 percent of all women and 57 percent of all people living in Arbitron-rated markets (see Figure 26). However, the average radio market has 18 male-owned stations but only one station owned by a woman.

Minority-owned stations reach 90.9 percent of all minorities living in Arbitron-rated markets, and reach 81.6 percent of all people living in these markets (see Figure 26). However, the average radio market has 18 white-owned stations but just two minority-owned stations.

Figure 26: Population Reach of Female- and Minority-Owned Stations in Arbitron Radio Markets



Source: FCC Form 323 filings; BIA Financial; U.S. Census Bureau; Free Press Research

Female- and Minority-Owned Stations Are More Likely to Be AM Stations in Larger Radio Markets

Of the 10,506 total full-power commercial broadcast radio stations, 4,393 are AM stations and 6,113 are FM stations. FM stations are considered to be more valuable properties than AM stations, because FM stations on average have larger listening audiences and demographics coveted by advertisers, which translates into higher station revenues.[48] This is due in part to the fact that the FM format allows for higher quality music broadcasting.

The already low level of female and minority broadcast radio ownership is even lower in the more valuable FM market. Women own an estimated 5.54 percent of all FM stations and 6.63 percent of all AM stations. Minorities own an estimated 5.61 percent of all FM stations and 10.65 percent of all AM stations.

Breaking the numbers down further, African-Americans own an estimated 2.80 percent of all FM stations and 4.35 percent of AM stations. Latinos control 2 percent of FM stations and 4.15 percent of AM stations. American Indian/Alaska Natives own 0.27 percent of the FM stations and 1.73 percent of the AM stations, while Asians control 0.27 percent of the FM stations and 0.33 percent of AM stations (see Figure 27 and Figure 28).

Figure 27: Ownership of Full-Power Commercial AM Radio Stations By Gender and Race/Ethnicity

Category	Owner	AM Stations		
		Number of AM Stations	Percent of All Commercial Full-Power AM Radio Stations	Estimated Actual Percent of All Commercial Full-Power AM Radio Stations*
Gender	Female	280	6.37	6.63
	Male	3,501	79.74	81.32
	No Controlling Interest	519	11.79	12.06
	Unknown	93	2.09	
Race/Ethnicity	Amer.Indian/AK Native	74	1.68	1.73
	Asian	14	0.32	0.33
	Black or African American	179	4.07	4.35
	Hispanic or Latino	171	3.89	4.15
	Nat.Hawaiian/Pac.Isl.	4	0.09	0.09
	All Minority	442	10.06	10.65
	Non-Hispanic White	3,615	82.31	85.20
	No Controlling Interest	181	4.12	4.14
	Unknown	155	3.51	
	Total	4,393		

Source: FCC Form 323 filings; Free Press Research
** Estimates are based on known owners and estimates of the ownership of stations where ownership gender and/or race could not be determined*

[48] In our sample, the average audience share for AM stations was 0.48, significantly lower than the 1.77 share for FM stations. The AM stations in our sample had an average annual station revenue of $649,000 per station, significantly lower than the average for FM stations, which was approximately $1.8 million per station.

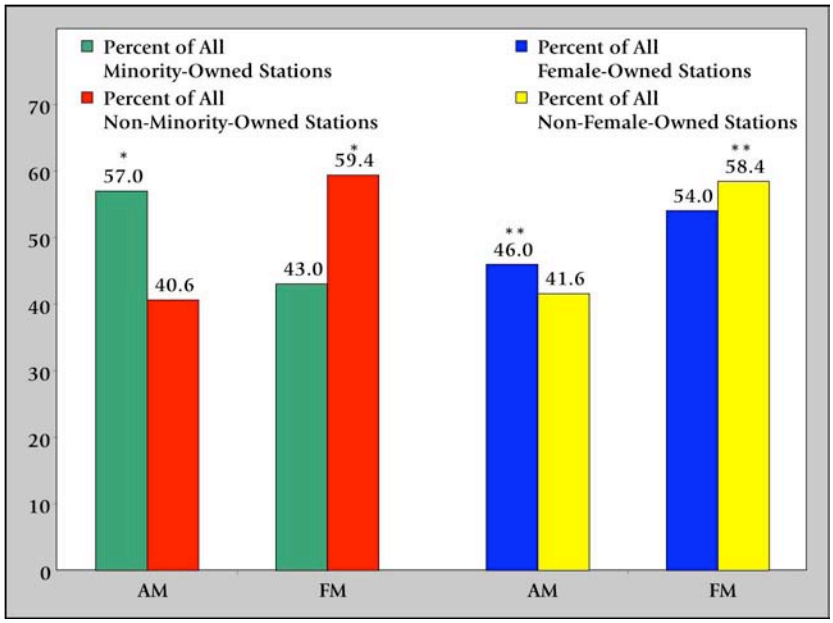
Figure 28: Ownership of Full-Power Commercial FM Radio Stations By Gender and Race/Ethnicity

Category	Owner	FM Stations		
		Number of FM Stations	Percent of All Commercial Full-Power FM Radio Stations	Estimated Actual Percent of All Commercial Full-Power FM Radio Stations*
Gender	Female	329	5.38	5.54
	Male	5,032	82.32	83.24
	No Controlling Interest	677	11.07	11.23
	Unknown	75	1.23	
Race/Ethnicity	Amer.Indian/AK Native	16	0.26	0.27
	Asian	16	0.26	0.27
	Black or African American	167	2.73	2.80
	Hispanic or Latino	118	1.93	2.00
	Nat.Hawaiian/Pac.Isl.	17	0.28	0.28
	All Minority	334	5.46	5.61
	Non-Hispanic White	5,306	86.80	88.66
	No Controlling Interest	349	5.71	5.72
	Unknown	124	2.03	
	Total	6,113		

Source: FCC Form 323 filings; Free Press Research
** Estimates are based on known owners and estimates of the ownership of stations where owners' gender and/or race could not be determined*

Nearly six out of every 10 minority-owned radio stations are on the AM dial. This is in contrast to stations not owned by minorities, where six out of every 10 are FM stations. While slightly more than half of all female-owned stations are FM, this is still a significantly lower level than non-female owners, where FM stations account for nearly six out of every 10 stations (see Figure 29).

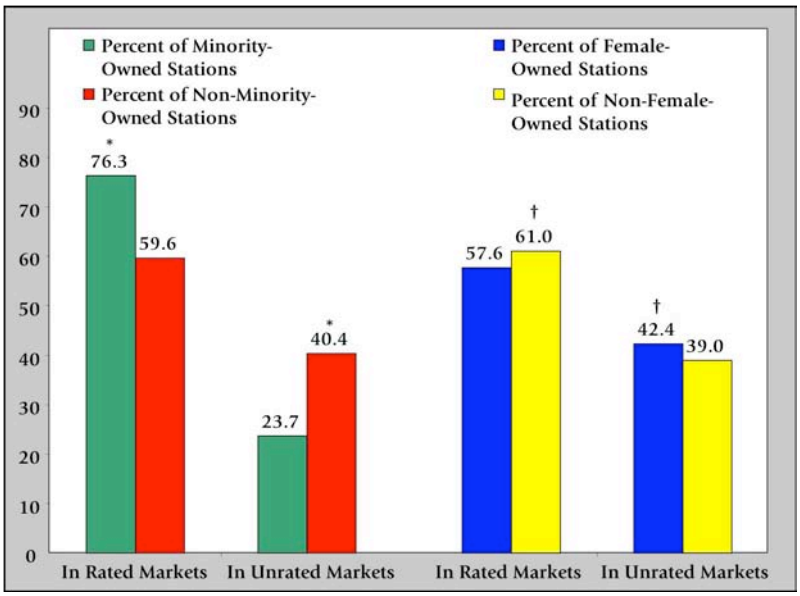
Figure 29: Ownership of AM and FM Radio Stations By Gender/Race Ethnicity



Source: FCC Form 323 filings; Free Press Research
** difference is statistically significant at $p < 0.001$; ** difference is statistically significant at $p < 0.05$*

Women also own a disproportionately high level of stations that are not in Arbitron-rated radio markets. While 39 percent of stations not owned by women are located in unrated markets, 42.4 percent of female-owned stations are located in these smaller, less lucrative areas (see Figure 30).

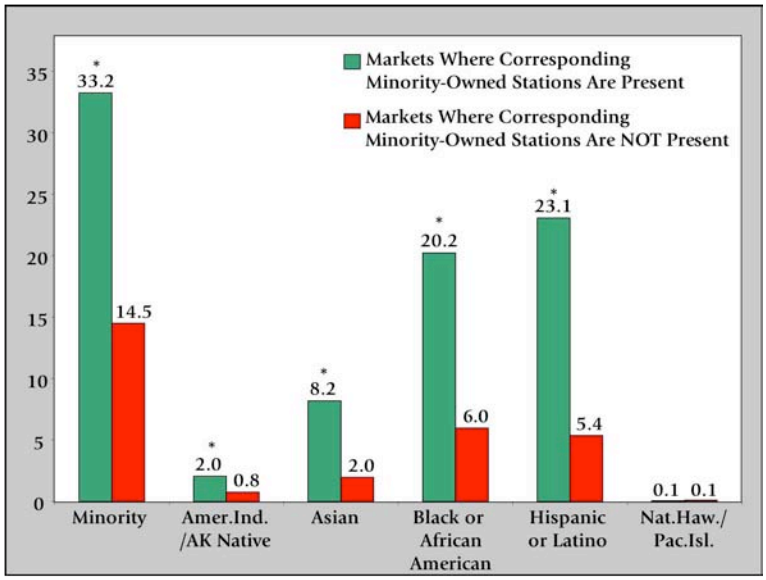
Figure 30: Ownership of Radio Stations in Arbitron-Rated Markets By Gender/Race Ethnicity



Source: FCC Form 323 filings; BIA Financial; Free Press Research
** difference is statistically significant at $p < 0.001$; † difference is statistically significant at $p < 0.10$*

For minority owners the opposite is true. Nearly eight out of every 10 minority-owned stations are in Arbitron-rated markets. For non-minority owners, six out of every 10 stations are located in rated markets. This is in part driven by demographics: Minorities tend to own stations where the minority population is higher. This tends to be the case in the larger radio markets (see Figure 31).

Figure 31: Minority Population in Markets with Minority-Owned Full-Power Commercial Radio Stations

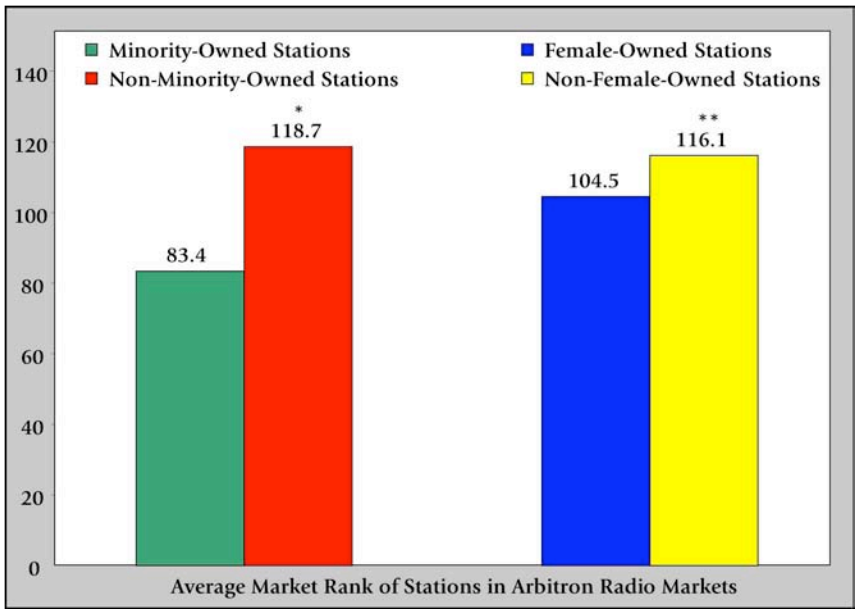


Source: FCC Form 323 filings; BIA Financial; Free Press Research
** difference is statistically significant at $p < 0.001$*

Though a disproportionately high level of women-owned radio stations are in unrated markets, the female-owned stations that are in Arbitron markets tend to be in the larger markets. The average market rank for female-owned station in Arbitron markets is 104.5, significantly higher than rank of the average non-female-owned stations, which is 116.1. (The largest market, New York, is ranked No. 1; the smallest Arbitron market, Casper, Wyo., is ranked No. 299.)

The same pattern is also seen for the minority-owned radio stations in Arbitron markets. The average market rank for these stations is 83.4, a significantly higher rank than non-minority-owned stations, which average just under 119 (see Figure 32).[49]

Figure 32: Average Market Rank
By Gender/Race Ethnicity



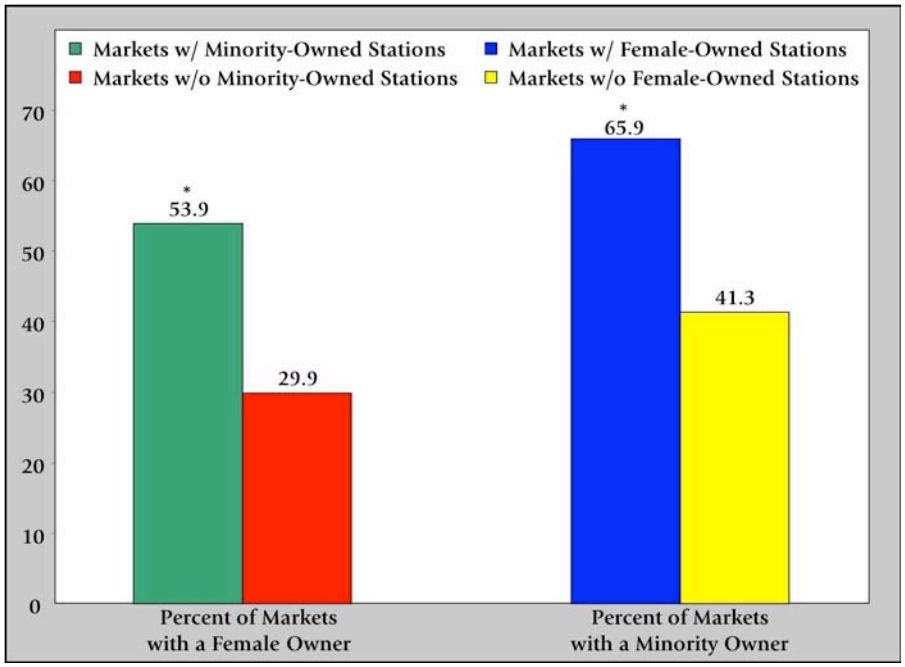
Source: FCC Form 323 filings; BIA Financial; Free Press Research
** difference is statistically significant at $p < 0.001$; ** difference is statistically significant at $p < 0.05$*

[49] These results are the exact opposite of those reported by Byerly using the flawed FCC summary reports of Form 323 data. Byerly concluded: "Data show that both women and minority broadcasters serve mainly small-town and rural areas." This error is attributable to both the fact that the Form 323 summaries missed a substantial amount of stations (mostly those owned by larger group owners) and that Byerly used the community of license as the assessment of markets served by women and minority owners, even though the site of the tower is a poor measure of the actual media market. Furthermore, the use of the Form 323 summaries did not enable comparisons with non-minority and non-female stations. (See "Questioning Media Access: Analysis of FCC Women and Minority Ownership Data," Benton Foundation and Social Science Research Council, October 2006.)

Female and Minority Ownership Is Complementary

One of the recurring themes exhibited in the data generated by this study is that female and minority radio station ownership is complementary on a number of levels. For example, female-owned stations are present in 53.9 percent of the Arbitron markets that have a minority-owned station; by comparison, female-owned stations are only found in 29.9 percent of the markets that do not have minority-owned stations. And the reverse is true as well: Minority-owned stations are found in 65.9 percent of the Arbitron markets that have a female owner, versus just 41.3 percent of the markets that do not have a female owner present (see Figure 33).

Figure 33: Female and Minority Radio Ownership: Markets Where Female or Minority Owners are Present



Source: FCC Form 323 filings; Free Press Research
** difference is statistically significant at p < 0.001*

We also found that the percentage of a station's ownership voting interest held by women is significantly higher at minority-owned stations than it is at non-minority-owned stations. Among the minority-owned stations, the average percentage of votes held by women was over 20 percent, compared to 13.5 percent at stations not owned by people of color.[50] The level of female voting interest control at non-female-owned stations was quite low, just under 9 percent.[51]

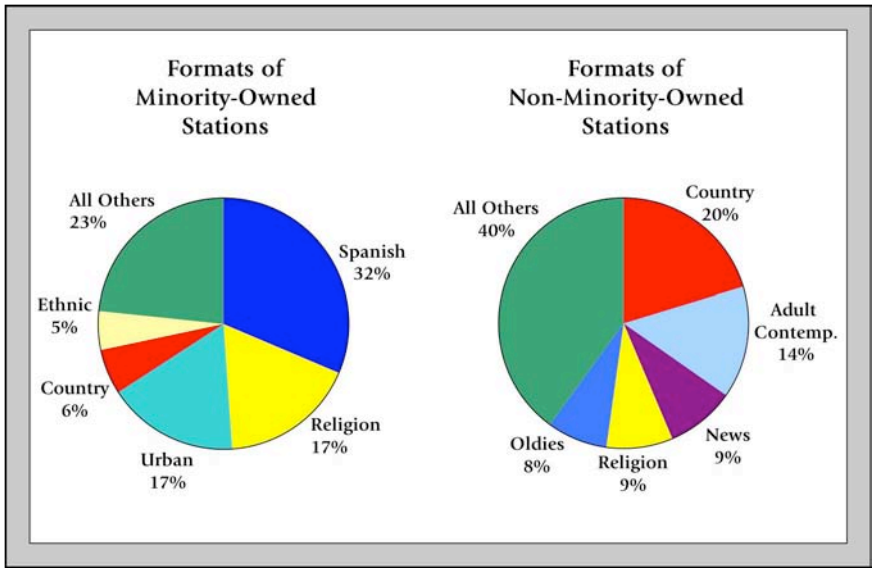
[50] Difference is statistically significant at p < 0.001
[51] The level of female voting interest control at female-owned stations is 82.9 percent. This difference is statistically significant at p < 0.001.

Female- and Minority-Owned Stations: Format Diversity, Market Revenue and Audience Share

Our data indicate there are significant differences in the formats aired by minority and non-minority owners, but not generally among female and non-female owners. This explained by the fact that minority owners are more likely to choose formats that appeal to minority audiences. But these differences have a practical impact on the market status of minority-owned stations, as measured by audience ratings and share of market revenues.

The largest format category aired by minority owners is the Spanish format, accounting for nearly one-third of all minority-owned stations.[52] The second and third largest formats at minority-owned stations are the Religion and Urban formats, which respectively account for 17.4 percent and 16.8 percent of minority-owned stations. In total, these three formats are aired on two-thirds of all minority-owned stations but only 15 percent of stations not owned by minorities. The largest format at non-minority-owned stations is the country format, which is aired at a fifth of these stations (see Figure 34).

Figure 34: Top Station Format Categories By Race/Ethnicity



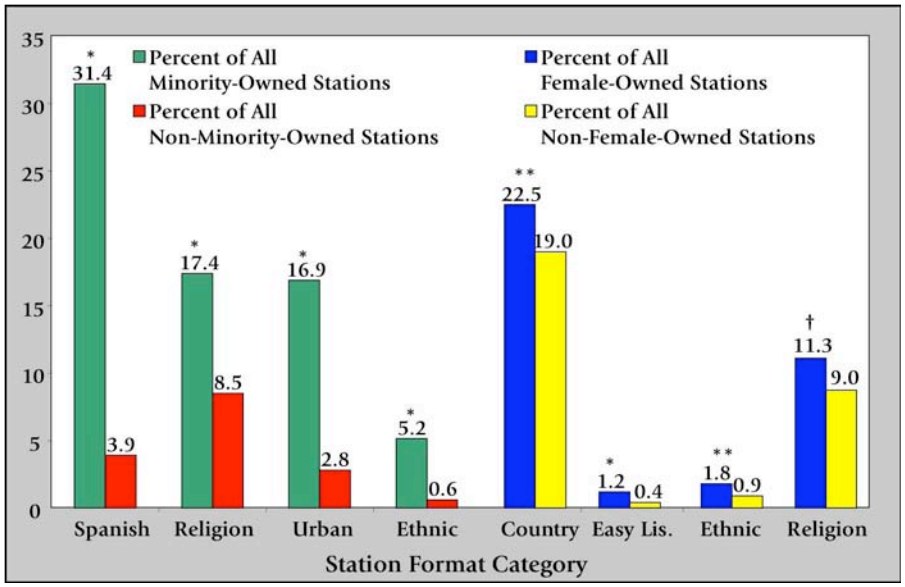
Source: FCC Form 323 filings; BIA Financial; Free Press Research

There is relatively little difference in the formats aired by female-owned stations versus those not owned by women. Both groups have the same top five formats (Country, Adult Contemporary, Religion, News, and Oldies), which account for approximately 60 percent of each group's respective stations (see Appendix A, Figure A-3).

[52] BIA Media Access Pro lists 20 format categories: Adult Contemporary, Album Oriented Rock/Classic Rock, Classical, Contemporary Hits/Top 40, Country, Easy Listening/Beautiful Music, Ethnic, Jazz/New Age, Middle of the Road, Miscellaneous, News, Nostalgia/Big Band, Oldies, Public/Educational, Religion, Rock, Spanish, Sports, Talk, and Urban. Within each format category, stations can be assigned numerous formats. For example, the "Spanish" format category contains formats such as Mexican, Ranchera, Reggaeton, Spanish, Spanish Adult Contemporary, Tejano, and Tropical.

The difference in formats aired on minority-owned stations is quite stark from those aired on other stations. Among the 20 general station format categories, minority-owned stations were significantly more likely to air Spanish, Religion, Urban, and Ethnic formats (see Figure 35). And these owners were significantly less likely to air many of the remaining formats, including four out of the five top formats by audience share.[53]

Figure 35: Formats That Air on a Significantly Higher Proportion of Female and Minority-Owned Stations



Source: FCC Form 323 filings; BIA Financial; Free Press Research
** difference is statistically significant at $p < 0.001$; ** difference is statistically significant at $p < 0.05$*
† difference is statistically significant at $p < 0.10$

These differences suggest that the race and ethnicity of the owner has a strong effect on the type of formats put on the air. The Spanish, Urban and Ethnic formats are general format categories that cater to racial and ethnic minorities, a smaller demographic than targeted by formats like Top 40 and Rock. Furthermore, the high propensity for minority owners to air religious programming could reflect the fact that people of color, especially African-Americans, attend church far more regularly than non-Hispanic whites.[54]

[53] The following formats aired on a significantly lower percentage of minority-owned stations as compared to stations not owned by people of color: Adult Contemporary, Album Oriented Rock/Classic Rock, Contemporary Hits/Top 40, Country, News, Nostalgia, Oldies, Rock, Sports(all at $p < 0.001$); Talk (at $p < 0.05$); and Middle of the Road (at $p < 0.10$).
[54] See The Association of Religion Data Archives, "General Social Survey 2004". Available at http://www.thearda.com/Archive/Files/Descriptions/GSS2004.asp. This survey indicated that 18.5 percent of whites reported never attending church, while only 8.5 percent of African-Americans and 14.1 percent of "other" races reported never attending church.

The decision on what format to air has important financial implications for license holders. To advertisers, it not only matters how many people are listening to a particular station. It matters *who* is listening to these stations. Radio advertisers, depending on the product they are selling, want to reach the coveted 18-34 year olds or 25-54 year olds, who they perceive as more responsive to their ads and more likely to spend money on non-discretionary items. For example, the Urban format stations had the highest audience share among all formats for the 2006 calendar year. However, these station's average share of local market revenue (2004-2005 average) is ranked sixth, 40 percent below the Album Oriented/Classic Rock format, which only ranked fourth in audience share (see Figure 36).

Figure 36: Station Formats by Average Audience and Market Revenue Shares

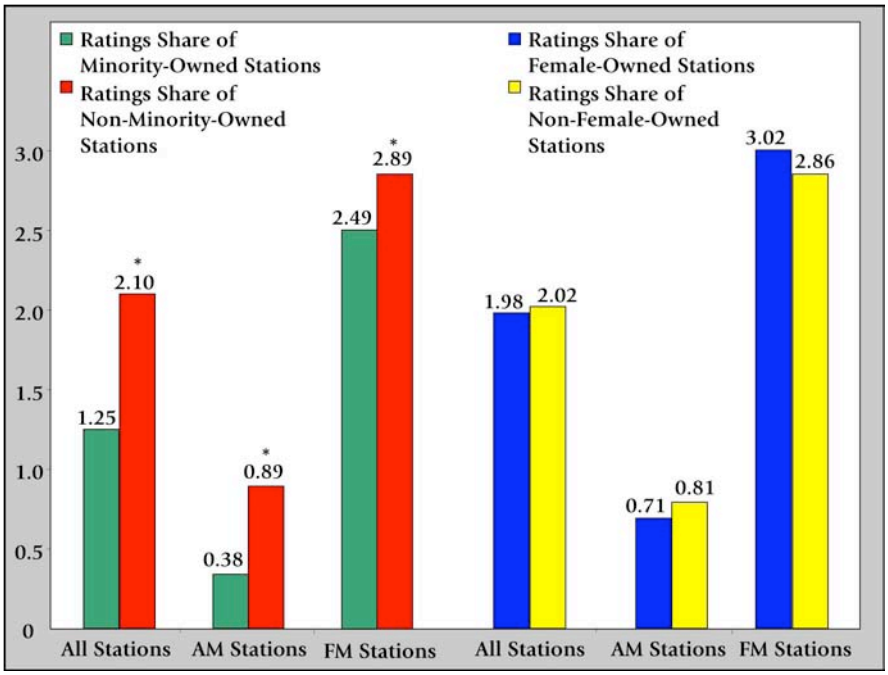
Format	Average Share of Market Revenue	Format	Average Audience Share
Album Oriented/Classic Rock	8.0	Urban	3.5
Country	7.9	Contemporary Hits	3.3
Contemporary Hits	7.4	Country	3.1
Adult Contemporary	7.1	Album Oriented/Classic Rock	2.8
Rock	5.6	Adult Contemporary	2.7
Urban	4.8	Rock	2.3
Middle of the Road	4.8	Jazz/New Age	2.1
News	4.0	Easy Listening	2.1
Oldies	4.0	Middle of the Road	1.9
Easy Listening	3.3	News	1.8
Jazz/New Age	3.0	Classical	1.8
Talk	2.0	Oldies	1.7
Spanish	2.0	Spanish	1.2
Classical	1.6	Talk	1.0
Sports	1.6	Nostalgia/Big Band	1.0
Nostalgia/Big Band	1.5	Sports	0.7
Miscellaneous	1.1	Religion	0.6
Religion	1.0	Miscellaneous	0.5
Ethnic	0.7	Ethnic	0.3

Source: FCC Form 323 filings; BIA Financial; Free Press Research

In part because the Spanish, Religion and Ethnic formats target smaller segments of the market, the average shares of audience and market revenue held by minority-owned stations is significantly lower than the audience and revenue shares of non-minority-owned stations. (This result is also due in part to the fact that minority-owned stations are more likely to be in the larger markets with more stations and competition).

The average audience share for a minority-owned station is 1.25, significantly lower than the 2.1 share earned by non-minority-owned stations. Minority-owned AM stations had an average audience share of 0.38, while non-minority-owned AM stations garnered a 0.89 share (see Figure 37).

Figure 37: Average Audience Ratings Share By Gender/Race Ethnicity

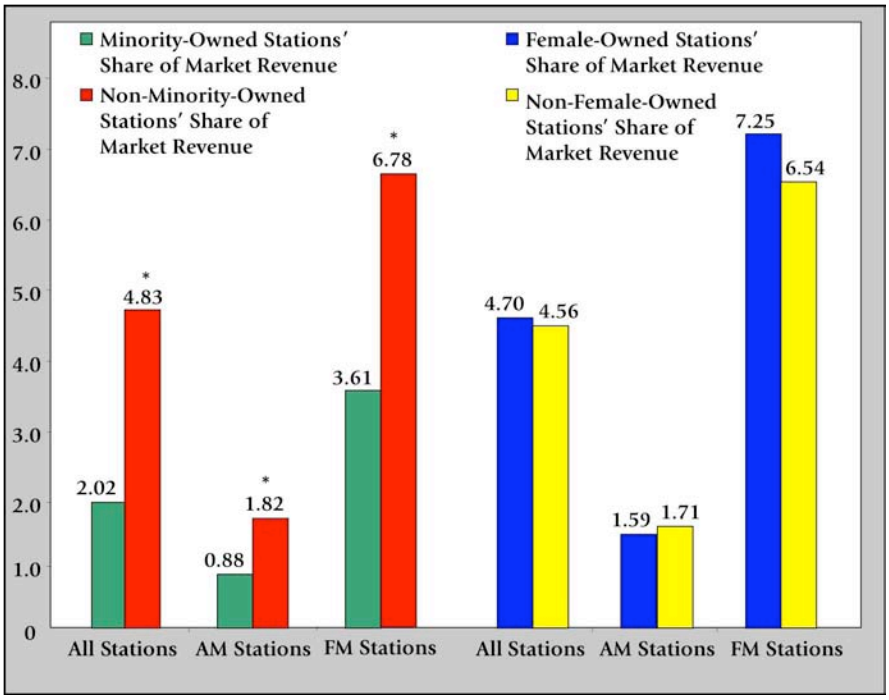


Source: FCC Form 323 filings; BIA Financial; Free Press Research
** difference is statistically significant at p < 0.001*

Among all stations, those owned by minorities captured 2.02 percent of a local market's revenue on average, while non-minority-owned stations more than doubled this, controlling 4.83 percent of a local market's revenue on average (see Figure 38). These results hold even when market size is taken into account.[55]

[55] These results hold even when controlling for market size. In a Tobit regression (censored at share = 0) of audience share (or revenue share) on: minority-owned station, female-owned station, AM station (all dummy variables), number of stations in market, and market population; a minority-owned station has an audience share 0.59 units less than a non-minority-owned station ($p < 0.0001$); and a revenue share of 1.72 units less than a non-minority-owned station ($p < 0.0001$). When format is then controlled for, the difference for minority-owned stations remains significant (audience share difference of -0.54 at $p < 0.0001$; revenue share difference of -1.04 at $p < 0.0001$). However, when the size of the station owner is added to the model (dummy variable for group owner and total number of stations owned) the magnitude of the difference between minority and non-minority-owned stations decreases (audience share difference of -0.19 at $p < 0.10$; revenue share difference of -0.46 at $p < 0.10$). Interestingly, in this full model the difference between female and non-female-owned stations becomes significant and positive (audience share difference of +0.40 at $p < 0.001$; revenue share difference of +1.08 at $p < 0.001$).

Figure 38: Share of a Market's Revenue
By Gender/Race Ethnicity



Source: Form 323 filings; BIA Financial; Free Press Research
** difference is statistically significant at p<0.001*

Interestingly, a significantly higher proportion of female-owned stations had a zero share than did non-female-owned stations.[56] Despite this, we see among all stations that those owned by women have nearly identical audience and revenue shares as those not owned by women. Furthermore, though the differences are not statistically significant, among the stations with more than zero share, those owned by women have higher audience and revenue share than those that are not.[57]

[56] Among stations in Arbitron markets, 25.6 percent of those owned by women had a zero audience share average for 2006, as compared to 20.2 percent of the stations not owned by women ($p = 0.0139$). For minority-owned stations in Arbitron markets, 34.1 percent had a zero share versus 19.1 percent of the non-minority-owned stations ($p < 0.0001$). The latter result again reflects the differences in formats aired. Nearly 75 percent of the Ethnic format stations in Arbitron markets earned a zero share, while 45 percent of Religion format stations had a zero share.

[57] Among the stations with a non-zero audience share, the female-owned stations had an average audience share of 2.66 versus a 2.53 share for the non-female-owned stations ($p = 0.33$). Also, among this group, the female-owned stations had on average 6.15 percent of local market revenue, versus a 5.58 percent revenue share for the non-female-owned stations ($p = 0.16$).

Ownership and Programming Diversity: A Case Study of Talk Radio Programming

Though the focus of this study was on structural ownership and not content, recent controversy surrounding remarks by two prominent talk radio hosts prompted an examination of the airing of talk radio programming on minority- and female-owned radio stations.

On the April 4, 2007, broadcast of "Imus in the Morning," host Don Imus referred to the Rutgers University women's basketball team as "nappy-headed hos." This comment followed a remark by the show's producer Bernard McGuirk, who called the women on the team "hard-core hos." McGuirk also characterized the game between Rutgers and Tennessee as "the Jigaboos versus the Wannabees," in a reference to Spike Lee's 1989 movie *School Daze*.[58]

A little over a week later, as the controversy surrounding Imus' comments intensified, Rush Limbaugh said on the April 12, 2007, broadcast of his show, referring to Rev. Jessie Jackson and Rev. Al Sharpton, "They're members of the minority. Don't ever forget that this is the case. Minorities, victims, members of groups, are allowed to do anything to address their grievances and to get noticed, because, they're just, they're so oppressed." Limbaugh added: "The Reverend Jackson will climb all over everybody who violates his boundaries and his rules -- but he has no boundaries. He has no rules. He never has to apologize. Like I told you, minorities never do anything for which they have to apologize."

These comments followed Limbaugh's performance on the March 19, 2007, broadcast of his show, when the host referred to Sen. Barack Obama (D-Ill.) as a "magic negro" 27 times, picking up on a phrase in a *Los Angeles Times* article, and sung the phrase to the tune of "Puff the Magic Dragon."[59] In subsequent broadcasts, the show aired a pre-produced song, "Barack the Magic Negro," sung by a white comedian impersonating Rev. Sharpton, who is portrayed as jealous of Obama in the song.[60]

These comments raised the question: Do stations owned by minorities air these two shows less than those owned by non-minorities? After compiling a list of all affiliates that air both shows, we found that *no* minority-owned stations aired "Imus in the Morning" at the time of its cancellation. Minority-owned stations were also significantly less likely to air "The Rush Limbaugh Show" than non-minority-owned stations.

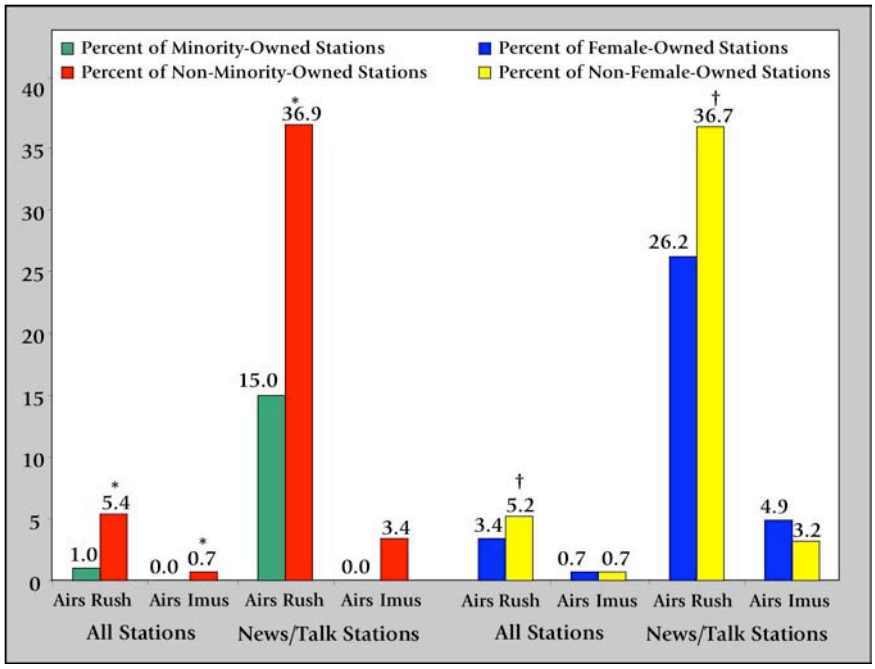
These results could be due to the fact that minorities own a disproportionately low level of news or talk format stations, and these formats accounted for 86 percent of the stations that broadcast these two shows. But minority-owned talk and news format stations were also less likely to air "The Rush Limbaugh Show" than other talk and news format stations — and no minority-owned talk or news stations aired Imus (see Figure 39). Stations owned by women were also less likely to air Limbaugh than stations not owned by women -- a result that holds when restricted to just news and talk stations.

[58] "Imus called women's basketball team 'nappy-headed hos'", Media Matters for America, April 4 2007. Available at http://mediamatters.org/items/200704040011

[59] "Latching onto *LA Times* op-ed Limbaugh Sings 'Barack the Magic Negro'", Media Matters for America, March 20, 2007. Available at http://mediamatters.org/items/200703200012

[60] "Limbaugh's Snipe Targets Obama, Musical Parody Called Offensive to Candidate", Christi Parsons, *Chicago Times*, May 6 2007.

Figure 39: Stations that Air 'Imus in the Morning' or 'The Rush Limbaugh Show' By Gender/Race Ethnicity



Source: FCC Form 323 filings; BIA Financial; Host websites; Free Press Research
** difference is statistically significant at $p < 0.001$; † difference is statistically significant at $p < 0.10$*

These results were stark enough to raise further questions. Do women and minorities generally air conservative programming at lower levels than their counterparts? Are they more likely to air progressive programming?

There is prior evidence that may guide the hypotheses. Minorities tend to vote for Democratic candidates and report relatively high levels of Democratic Party identification. White males tend to vote for Republican candidates and have a higher Republican Party affiliation identification. For women, the lines are not so clearly drawn, with a near even split between the Democratic and Republican candidates in the 2004 presidential election.[61]

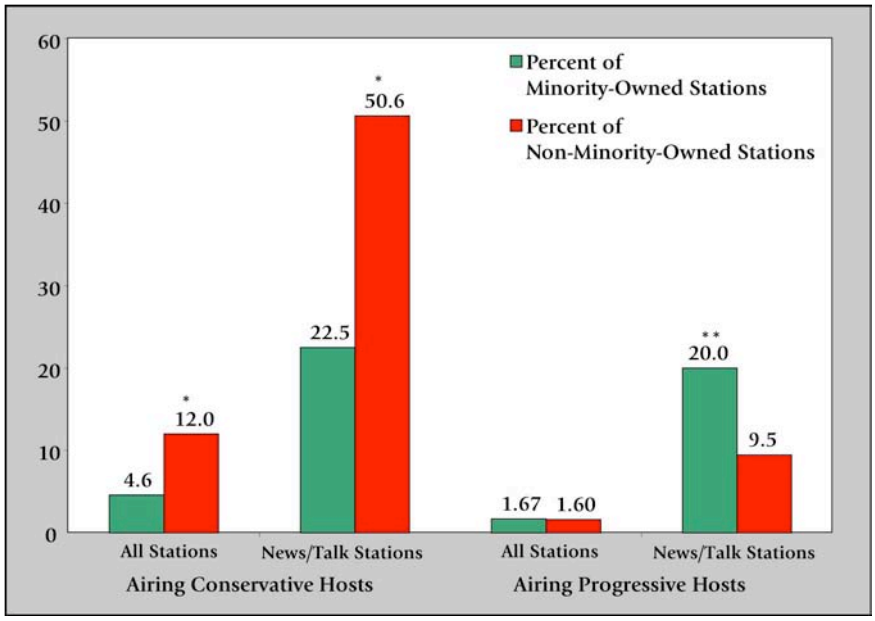
Given that minority-owned stations are more likely to be located in areas with high minority populations (see Figure 31), we might expect these owners to air talk radio programming that appeals more to a minority audience. Since the stations owned by women are less concentrated in specific geographic areas, and since the political preferences of women are not very polarized, we might expect to see no difference in the types of programming aired by female station owners.

[61] In the 2004 national exit poll, 88 percent African-Americans reported voting for the Democratic presidential candidate, John Kerry; 53 percent of Latinos said they voted for Kerry; 56 percent of Asians reported a Kerry vote. However, Kerry's support among white, non-Hispanic voters was much lower, gaining just 41 percent of this demographic. Only 44 percent of all men and 37 percent of all white, non-Hispanic men reported voting for Kerry. Kerry earned 67 percent of the non-white male vote. Women were nearly split, with 51 percent of all women voting for Kerry, including 44 percent of white, non-Hispanic women. Kerry had large support from non-white women, earning 75 percent of this demographic's votes. See http://www.cnn.com/ELECTION/2004/pages/results/states/US/P/00/epolls.0.html for details. According to Pew, Democratic Party identification among whites was 27 percent in 2003, versus a GOP party identification of 35 percent; African-American's were overwhelmingly Democratic, 64 percent versus just 7 percent identifying themselves as Republicans. Latinos reported a Democratic identification of 36 percent, versus 22 percent for GOP. Women reported a 36 percent Democratic Party identification, versus 29 percent for the GOP. See "The 2004 Political Landscape: Evenly Divided and Increasingly Polarized," The Pew Research Center for the People and the Press, Nov. 5, 2003; available at http://people-press.org/reports/display.php3?PageID=750.

To investigate these hypotheses, we compiled a list of every affiliate of a selection of top-rated conservative and progressive hosts and examined differences in the airing of these programs by minority- and women-owned stations. For conservative hosts, we chose Rush Limbaugh, Laura Ingraham, Dr. Laura Schlesinger, Glen Beck and Bill Bennett. For progressive hosts we chose Stephanie Miller, Ed Schultz, Alan Colmes, Randi Rhodes, The Young Turks and Al Franken.[62] Simple two-way comparative results are presented below, and Appendix C details a more complex statistical treatment, which accounts for the variability in owners' selection whether or not to air any of the 11 hosts in our sample.

Our data indicate that minority-owned stations are less likely than non-minority-owned stations to air the conservative programming in our sample (4.6 percent of minority-owned stations, versus 12 percent of the non-minority-owned stations aired at least one of the five conservative hosts). Among talk and news format stations, 22.5 percent of minority-owned stations aired conservative programming, versus 50.6 percent of the non-minority-owned news and talk stations (see Figure 40). Though there was no difference for progressive programming between all minority and non-minority-owned stations, one-fifth of minority-owned news or talk stations aired progressive programming, versus just one-tenth of the non-minority-owned news and talk stations.

Figure 40: Conservative vs. Progressive Hosts By Minority-Owned Stations

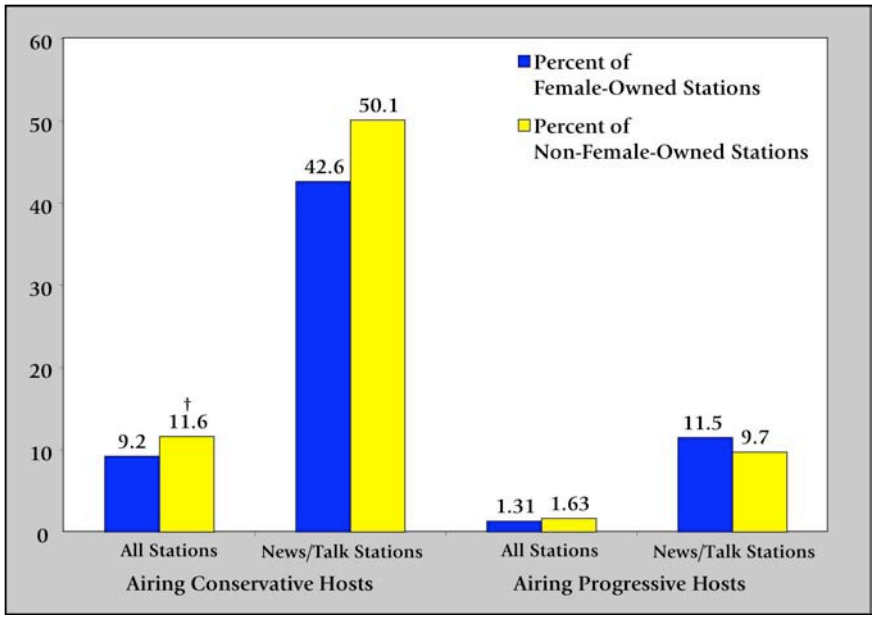


Source: FCC Form 323 filings; BIA Financial; Host websites; Free Press Research
** difference is statistically significant at $p < 0.001$; ** difference is statistically significant at $p < 0.05$*

[62] Syndicators for Sean Hannity and Michael Savage refused to provide a list of affiliates. Al Franken's show is no longer on the air. Information on all hosts was obtained on May 8-9, 2007 from host or synidcator Web sites, and was not verified for accuracy. These results are merely suggestive, and further study with a larger sample of hosts would provide further clarity. In addition, detailed accounting of voting and party identification behavior at the county level would provide a granular metric of community preferences.

Stations owned by women were less likely than those not owned by women to air the conservative hosts in our sample, though the magnitude of the difference was not as large as was observed in the case of minority owners (9.2 percent of female-owned stations aired the conservative programming, versus 11.6 percent of the non-female-owned stations). Among news and talk format stations, 42.6 percent of women-owned stations aired conservative programming, versus 50.1 percent of the non-female-owned stations, though this difference is not statistically significant. The progressive programming did air at a slightly higher level on female-owned news and talk stations (11.5 percent versus 9.7 percent of the non-female-owned news and talk format stations), but again this difference was not statistically significant (see Figure 41).

Figure 41: Conservative vs. Progressive Hosts By Female-Owned Stations

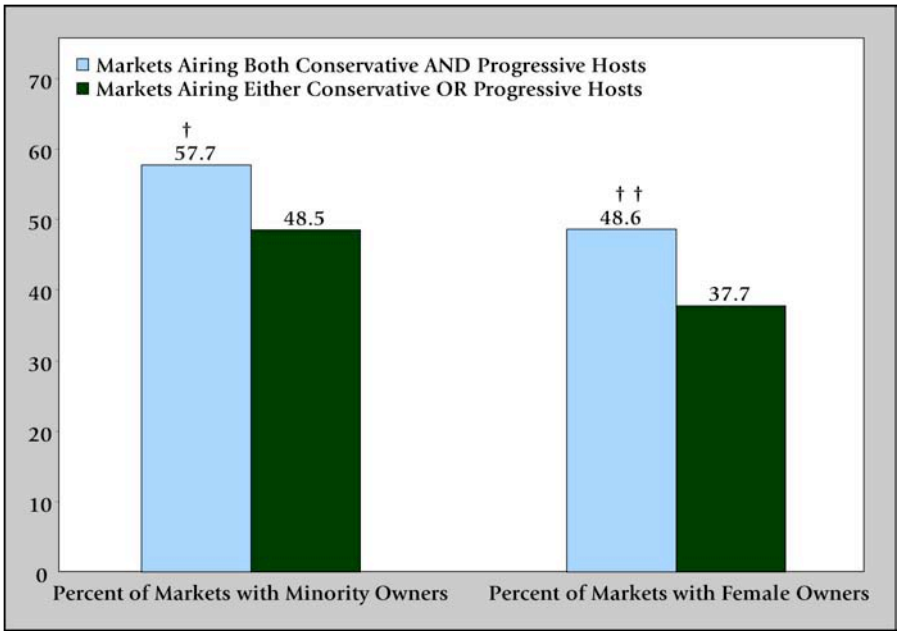


Source: FCC Form 323 filings; BIA Financial; Host Web sites; Free Press Research
† difference is statistically significant at $p < 0.10$

Interestingly, the presence of a minority-owned station in a market was significantly correlated with availability of both conservative and progressive programming. Minority-owned stations were present in 57.7 percent of markets that aired both types of programming but only in 48.5 percent of markets that aired only one type. A similar result was observed for women, though the result is not quite statistically significant. Female-owned stations were present in 48.6 percent of markets that aired both types of programming, but only in 37.7 percent of markets that aired only one type (see Figure 42).

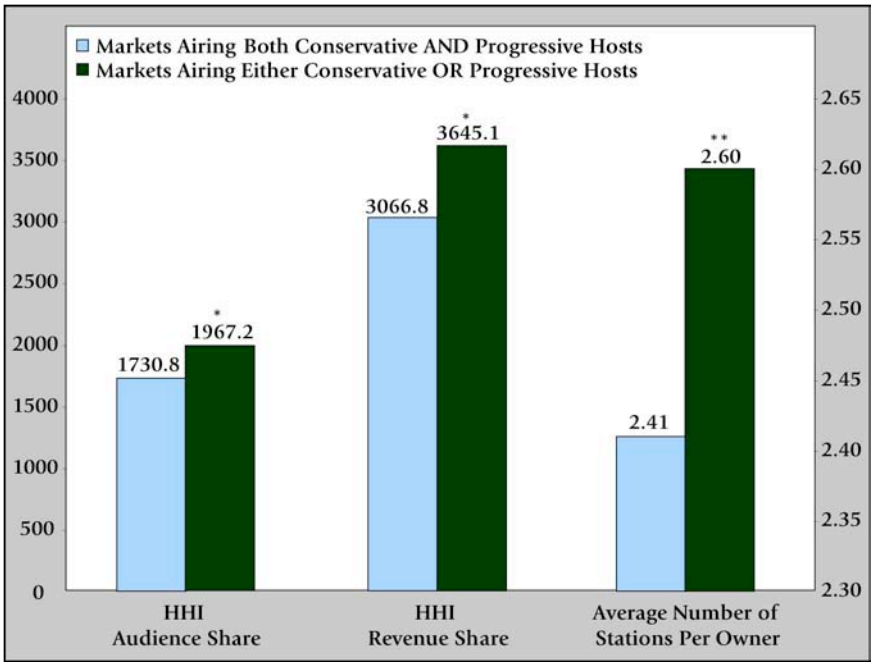
In addition, markets that aired both progressive and conservative hosts were significantly less concentrated that markets that aired just one type of programming (see Figure 43). This result, along with the other findings in this study, seems to indicate that having greater diversity of ownership -- both in terms of race and gender, as well as market power -- leads to greater diversity in programming.

Figure 42: Programming Diversity and Market Diversity
Markets with Conservative and Progressive Hosts



Source: FCC Form 323 filings; BIA Financial; Host Web sites; Free Press Research
† difference is statistically significant at $p < 0.10$; †† difference at $p < 0.135$

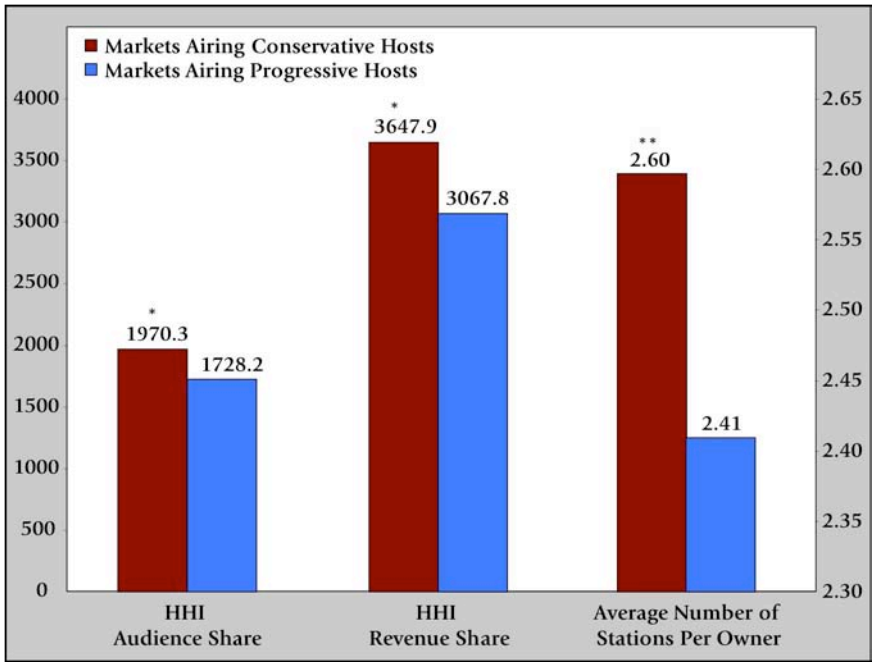
Figure 43: Market Concentration and Programming
Markets with Conservative and Progressive Hosts



Source: FCC Form 323 filings; BIA Financial; Host Web sites; Free Press Research
** difference is statistically significant at $p < 0.001$; ** difference is statistically significant at $p < 0.05$*

Overall, the markets that aired conservative programming were more concentrated than the markets that aired progressive programming (see Figure 44), a result that holds for all three measures of concentration used in this study.

Figure 44: Market Concentration and Programming
Conservative vs. Progressive Hosts

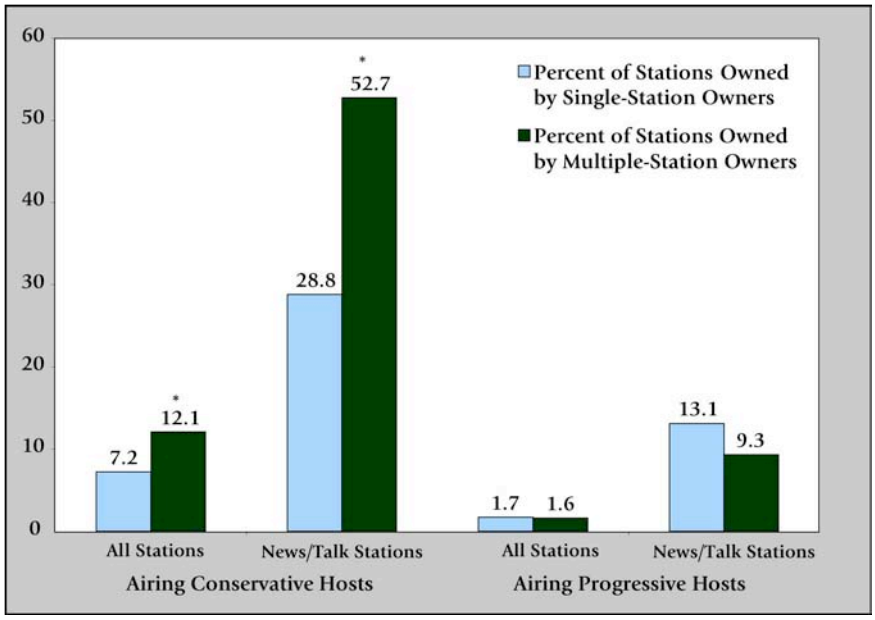


Source: FCC Form 323 filings; BIA Financial; Host Web sites; Free Press Research
** difference is statistically significant at p<0.001; ** difference is statistically significant at p<0.05*

There were similar differences in the airing of these programs depending on the size of the station owner and whether a station is locally owned. Single-station owners aired conservative programming on 7.2 percent of their stations, while those who owned more than one station aired this type of show on 12.1 percent of their stations. Among the news and talk format stations, 28.8 percent of the stations owned by single-station owners aired conservative programming, while multiple station owners aired this programming on 52.7 percent of their talk and news format stations. News and talk format stations owned by single-station owners did air progressive programming at a slightly higher level than multiple station owners, though the difference was not statistically significant (see Figure 45).

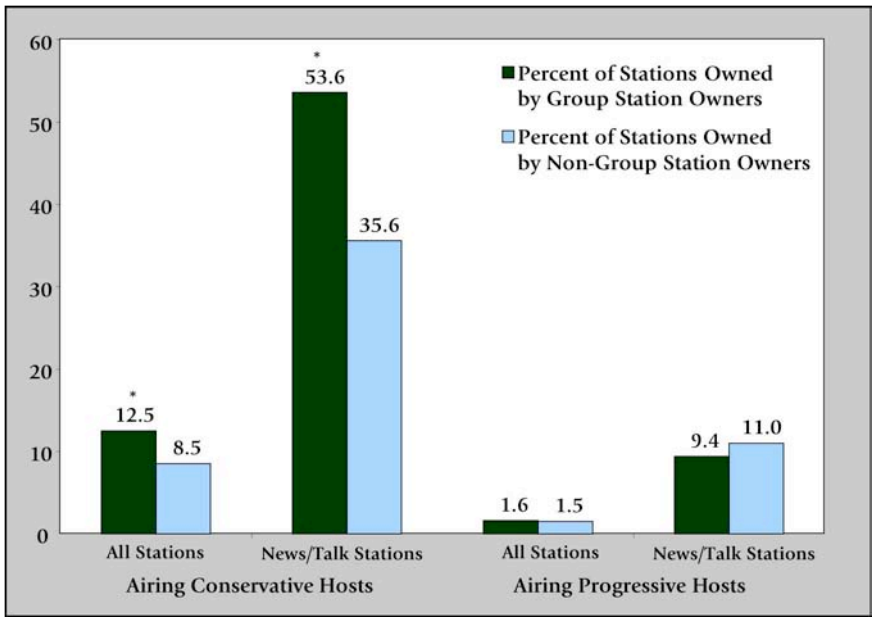
Group owners (those who control stations in multiple markets or more than three stations in a single market) aired significantly higher levels of conservative programming. Group owners aired conservative programming on 12.5 percent of their stations, versus just 8.5 percent of the non-group-owned stations. Among the news and talk format stations, 53.6 percent of the stations owned by group owners aired conservative programming, while multiple station owners aired this programming on 35.6 percent of their talk and news format stations (see Figure 46).

Figure 45: Conservative vs. Progressive Hosts By Single-Station Owners



Source: FCC Form 323 filings; BIA Financial; Host Web sites; Free Press Research
** difference is statistically significant at p < 0.001*

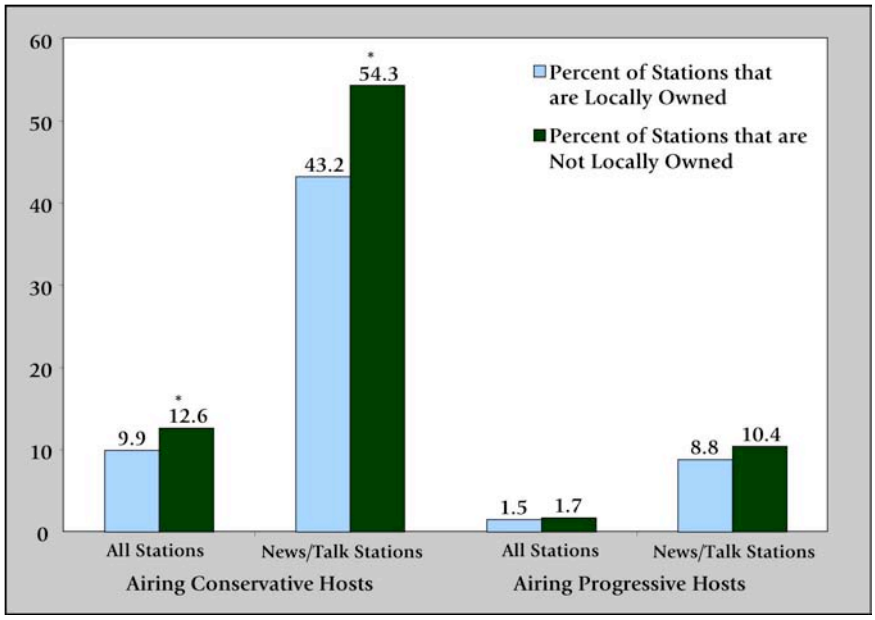
Figure 46: Conservative vs. Progressive Hosts By Group Station Owners



Source: Form 323 filings; BIA Financial; Host Web sites; Free Press Research
** difference is statistically significant at p < 0.001*

Finally, our study also found that local station owners aired significantly lower levels of conservative programming compared to non-local owners. Locally owned stations aired the conservative programming on 9.9 percent of their stations versus 12.6 percent of the non-locally owned stations. Among the news and talk format stations, 43.2 percent of the locally owned stations aired conservative programming, compared to 54.3 percent of the non-locally owned talk and news format stations (see Figure 47).

Figure 47: Conservative vs. Progressive Hosts By Locally Owned Stations



Source: FCC Form 323 filings; BIA Financial; Host Web sites; Free Press Research
** difference is statistically significant at $p < 0.001$*

Taken together, these data seem to indicate that potential one-sidedness on the radio dial in terms of political programming may have just as much to do with who the owners are as it does with the demands of market listeners. Where markets are less concentrated and have more diversity of ownership, we see more variety in programming. This result may seem obvious. But policymakers may have forgotten *the* reason behind ownership rules that mitigate media market concentration and consolidation: Increasing diversity and localism in ownership will produce *more* diverse speech, *more* choice for listeners, and *more* owners who are responsive to their local communities and serve the public interest.

Conclusions and Recommendations

As the FCC goes back to the drawing board to reconsider media ownership rules, it must pay close attention to the Third Circuit's strong language regarding the Commission's failure to adequately justify its rule changes in regards to female and minority ownership. It is not sound policymaking to assert that diversity, localism and female/minority ownership are important goals, but then ignore the effects that rule changes have on these goals. Furthermore, it is a failure of responsibility to gather valuable information on ownership but then do nothing with the data. And it is inexcusable to continue to release data summaries the Commission knows to be flawed.

The findings of this study, and those in *Out of the Picture*, are crucial first steps toward understanding the true state of female and minority broadcast ownership and the effects of FCC policy on these owners. But more work needs to be completed, such a longitudinal studies examining the changes produced by the 1996 Telecommunications Act. The Commission should conduct this work and pay close attention to the changes in ownership over time.

The results of our two studies on female and minority broadcast ownership demonstrate that *any* policy changes that allow for increased concentration in television and radio markets will certainly decrease the already low number of female- and minority-owned broadcast stations. Enacting regulations that lead to such outcomes directly contradicts the Commission's statutory and legal obligations under the 1996 Telecommunications Act. Instead, the Commission should consider pro-active policies that protect and promote female and minority ownership.

It is important to note that the effects of other policies aimed at increasing female and minority broadcast ownership — such as tax credits, relaxed equity/debt attribution rules, incubator programs, or digital channel leasing — will be negligible in an environment of increased market consolidation at the local level.

The Commission needs to think hard about the damages brought about by the misguided policies of the late 1990s, which radically increased market concentration. In the radio sector alone, it is hard for a new entrant to get into the business by purchasing a single station. The realities of the consolidated marketplace mean that owners must control multiple stations in multiple markets to realize the economies of scale that are needed to prosper. But these economies of scale are artificial creations based on poor public policy decisions. The FCC has a social responsibility to restore an environment that rewards localism and dedication to community service.

In addition, we recommend the Commission take the following actions:

- The FCC Media Bureau should conduct annual comprehensive studies of every licensed broadcast radio and television station to determine the true and evolving level of female and minority ownership.
    - The study should examine the level of ownership at both the national level and at the local DMA and Arbitron market levels.
    - The study should be longitudinal, examining the changes since 1999, when the Commission began gathering gender and race/ethnicity ownership information.
    - The study should focus on station format and content, particularly paying attention to local news production.
    - The study, as well as the raw data, should be made available to the public.

- The FCC should revise and simplify the public display of individual Form 323 station filings.
    - A citizen searching for the owner of a local station should easily be able to ascertain the true identity of a station owner, and the Commission should make it easier to find out the true identity of past owners.
    - The practice of station licenses being held by layers of wholly owned entities should be thoroughly examined by the Commission. While this practice may serve a purpose for the tax liability of license holders, it serves no purpose in the identification of the those controlling the public airwaves.
    - Broadcast licenses are awarded for temporary use of the public airwaves, and the identities of the owners should be clearly stated on a single form.

- The Commission should expand the universe of stations that are required to file Form 323.
    - Currently, no owners of Class-A, translator or low-power stations are required to file ownership information with the FCC. However, the Commission states that these classes of stations are important entry points for female and minority owners. To validate this hypothesis, the Commission should extend the obligation of filing Form 323 to these stations.
    - Currently all noncommercial educational broadcasters file Form 323-E, which does not solicit information about the gender, race, and ethnicities of station owners. The Commission should require their owners to disclose this information.

- The FCC should not take any action on media ownership rules until it has thoroughly studied the issue of female and minority ownership and analyzed the effects of past policies.
    - The FCC should also complete the open proceeding on how to better implement Section 257 of the 1996 Telecommunications Act before proceeding with any rulemaking.[63]

In addition, Congress should move to authorize the expansion of low-power FM (LPFM) radio licenses to 3rd adjacent channels on the dial. The interference problems cited to curtail community radio in the past have been disproved, and the distribution of new licenses is long overdue. This would open thousands of new local stations across the country and promote opportunities for diverse voices to use the public airwaves. The LPFM stations that have been licensed to date have been a tremendous success, exemplifying the goal of a more diverse media system. Expanding access to these localized, non-commercial licenses would not solve the problem of minority ownership. But LPFM represents the quickest way to bring minority owned stations online while the FCC works to solve the long-term structural problems that have perpetuated a legacy of under-representation.

[63] MB Docket No. 04-228, "Media Bureau Seeks Comment on Ways to Further Section 257 Mandate and to Build on Earlier Studies" DA 04-1690, June 15, 2004.

Appendix A - Additional Tables

Figure A1: Full Ownership Summary

Race/Ethnicity of Owner	Gender of Owner										Percent of All Stations	Percent of All Unique Owners
	Female		Male		No Controlling Interest for Gender		Unknown		Total			
	# of Unique Owners	Total # of Stations	# of Unique Owners	Total # of Stations	# of Unique Owners	Total # of Stations	# of Unique Owners	Total # of Stations	# of Unique Owners	Total # of Stations		
American Indian/AK Native	1	3	10	26	1	1	0	0	12	30	0.3	0.4
Asian	8	23	14	64	2	3	0	0	24	90	0.9	0.8
Black or African American	15	22	104	305	8	16	3	3	130	346	3.3	4.6
Hispanic or Latino	22	24	88	229	18	36	0	0	128	289	2.8	4.5
Native Hawaiian or Pacific Islander	0	0	1	21	0	0	0	0	1	21	0.2	0.0
White, Non-Hispanic	236	522	1,786	7,787	278	612	0	0	2300	8921	84.9	80.8
No Controlling Interest for Race/Ethnicity	0	0	8	9	14	521	0	0	22	530	5.0	0.8
Unknown Race/Ethnicity	14	15	75	92	7	7	132	165	228	279	2.7	8.0
Total	296	609	2,086	8,533	328	1196	135	168	2,845	10,506	100	100
All Minorities	46	72	217	645	29	56	3	3	295	776	7.4	10.4
Percent of All Stations	5.8		81.2		11.4		1.6		100			
Percent of All Unique Owners	10.4		73.3		11.5		4.7		100			

Source: FCC Form 323 filings; BIA Financial; Free Press Research

Figure A2: Full Ownership and Format Summary By Race/Ethnicity

American Indian /Alaska Native		Asian		Black or African American		Hispanic or Latino		Native Hawaiian/ Pacific Islander		White, Non-Hispanic		No Controlling Interest for Race		Unknown Race		All Minority-Owned Stations		Total	
Number of Stations		Number of Stations		Number of Stations		Number of Stations		Number of Stations		Number of Stations		Number of Stations		Number of Stations		Number of Stations		Number of Stations	
Percent of Format's Stations	Percent of Own Stations	Percent of Format's Stations	Percent of Own Stations	Percent of Format's Stations	Percent of Own Stations	Percent of Format's Stations	Percent of Own Stations	Percent of Format's Stations	Percent of Own Stations	Percent of Format's Stations	Percent of Own Stations	Percent of Format's Stations	Percent of Own Stations	Percent of Format's Stations	Percent of Own Stations	Percent of Format's Stations	Percent of Own Stations	Percent of Format's Stations	Percent of All Stations
3		5		7		5		5		1,317		60		23		25		1,425	
0.2	10.0	0.4	5.6	0.5	2.0	0.4	1.7	0.4	23.8	92.4	14.8	4.2	11.3	1.6	8.2	2	3.2	100	13.6
1		2		7		0		0		493		43		7		10		553	
0.2	3.3	0.4	2.2	1.3	2.0	0.0	0.0	0.0	0.0	89.2	5.5	7.8	8.1	1.3	2.5	2	1.3	100	5.3
0		0		0		0		0		28		1		1		0		30	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	93.3	0.3	3.3	0.2	3.3	0.4	0	0.0	100	0.3
0		1		6		5		0		388		43		3		12		446	
0.0	0.0	0.2	1.1	1.3	1.7	1.1	1.7	0.0	0.0	87.0	4.3	9.6	8.1	0.7	1.1	3	1.5	100	4.2
9		4		15		9		9		1,812		84		75		46		2,017	
0.4	30.0	0.2	4.4	0.7	4.3	0.4	3.1	0.4	42.9	89.8	20.3	4.2	15.8	3.7	26.9	2	5.9	100	19.2
0		1		2		2		2		20		0		2		7		29	
0.0	0.0	3.4	1.1	6.9	0.6	6.9	0.7	6.9	9.5	69.0	0.2	0.0	0.0	6.9	0.7	24	0.9	100	0.3
0		0		0		1		0		43		0		1		1		45	
0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.3	0.0	0.0	95.6	0.5	0.0	0.0	2.2	0.4	2	0.1	100	0.4
0		30		4		6		0		53		1		2		40		96	
0.0	0.0	31.3	33.3	4.2	1.2	6.3	2.1	0.0	0.0	55.2	0.6	1.0	0.2	2.1	0.7	42	5.2	100	0.9
0		0		6		1		0		51		4		0		7		62	
0.0	0.0	0.0	0.0	9.7	1.7	1.6	0.3	0.0	0.0	82.3	0.6	6.5	0.8	0.0	0.0	11	0.9	100	0.6
1		0		0		0		0		60		2		0		1		63	
1.6	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	95.2	0.7	3.2	0.4	0.0	0.0	2	0.1	100	0.6
0		4		2		4		0		98		45		4		10		157	
0.0	0.0	2.5	4.4	1.3	0.6	2.5	1.4	0.0	0.0	62.4	1.1	28.7	8.5	2.5	1.4	6	1.3	100	1.5
1		5		9		5		0		817		47		13		20		897	
0.1	3.3	0.6	5.6	1.0	2.6	0.6	1.7	0.0	0.0	91.1	9.2	5.2	8.9	1.4	4.7	2	2.6	100	8.5
1		0		2		4		1		285		11		10		8		314	
0.3	3.3	0.0	0.0	0.6	0.6	1.3	1.4	0.3	4.8	90.8	3.2	3.5	2.1	3.2	3.6	3	1.0	100	3.0
3		3		10		7		1		695		33		28		24		780	
0.4	10.0	0.4	3.3	1.3	2.9	0.9	2.4	0.1	4.8	89.1	7.8	4.2	6.2	3.6	10.0	3	3.1	100	7.4
0		0		0		0		0		4		0		0		0		4	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0	0.0	100	0.0
0		7		122		5		1		752		14		62		135		963	
0.0	0.0	0.7	7.8	12.7	35.3	0.5	1.7	0.1	4.8	78.1	8.4	1.5	2.6	6.4	22.2	14	17.4	100	9.2
3		1		7		3		1		612		39		11		15		677	
0.4	10.0	0.1	1.1	1.0	2.0	0.4	1.0	0.1	4.8	90.4	6.9	5.8	7.4	1.6	3.9	2	1.9	100	6.4
0		16		9		219		0		354		9		14		244		621	
0.0	0.0	2.6	17.8	1.4	2.6	35.3	75.8	0.0	0.0	57.0	4.0	1.4	1.7	2.3	5.0	39	31.4	100	5.9
5		3		6		5		1		435		43		10		20		508	
1.0	16.7	0.6	3.3	1.2	1.7	1.0	1.7	0.2	4.8	85.6	4.9	8.5	8.1	2.0	3.6	4	2.6	100	4.8
3		3		9		5		0		373		15		5		20		413	
0.7	10.0	0.7	3.3	2.2	2.6	1.2	1.7	0.0	0.0	90.3	4.2	3.6	2.8	1.2	1.8	5	2.6	100	3.9
0		5		123		3		0		231		36		8		131		406	
0.0	0.0	1.2	5.6	30.3	35.5	0.7	1.0	0.0	0.0	56.9	2.6	8.9	6.8	2.0	2.9	32	16.9	100	3.9
30		90		346		289		21		8921		530		279		776		10,506	
0.3	100	0.9	100	3.3	100	2.8	100	0.2	100	84.9	100	5.0	100	2.7	100	7.4	100	100	100

Source: FCC Form 323 filings; BIA Financial; Free Press Research

Figure A3: Full Ownership and Format Summary By Gender

Format Category	Female		Male		No Controlling Interest for Gender		Unknown Gender		Total	
	Number of Stations		Number of Stations		Number of Stations		Number of Stations		Number of Stations	
	Percent of Format's Stations	Percent of Own Stations	Percent of Format's Stations	Percent of Own Stations	Percent of Format's Stations	Percent of Own Stations	Percent of Format's Stations	Percent of Own Stations	Percent of Format's Stations	Percent of All Stations
Adult Contemporary	81		1,174		153		17		1,425	
	5.7	13.3	82.4	13.8	10.7	12.8	1.2	10.1	100	13.6
Album Oriented/ Classic Rock	28		455		68		2		553	
	5.1	4.6	82.3	5.3	12.3	5.7	0.4	1.2	100	5.3
Classical	2		26		2		0		30	
	6.7	0.3	86.7	0.3	6.7	0.2	0.0	0.0	100	0.3
Contemporary Hit Radio	15		374		55		2		446	
	3.4	2.5	83.9	4.4	12.3	4.6	0.4	1.2	100	4.2
Country	137		1,578		250		52		2,017	
	6.8	22.5	78.2	18.5	12.4	20.9	2.6	31.0	100	19.2
Dark - Not on air	2		21		4		2		29	
	6.9	0.3	72.4	0.2	13.8	0.3	6.9	1.2	100	0.3
Easy Listening	7		35		3		0		45	
	15.6	1.1	77.8	0.4	6.7	0.3	0.0	0.0	100	0.4
Ethnic	11		77		6		2		96	
	11.5	1.8	80.2	0.9	6.3	0.5	2.1	1.2	100	0.9
Jazz/New Age	5		48		9		0		62	
	8.1	0.8	77.4	0.6	14.5	0.8	0.0	0.0	100	0.6
Middle of the Road	4		52		7		0		63	
	6.3	0.7	82.5	0.6	11.1	0.6	0.0	0.0	100	0.6
Miscellaneous	6		95		54		2		157	
	3.8	1.0	60.5	1.1	34.4	4.5	1.3	1.2	100	1.5
News	43		745		102		7		897	
	4.8	7.1	83.1	8.7	11.4	8.5	0.8	4.2	100	8.5
Nostalgia/ Big Band	19		252		38		5		314	
	6.1	3.1	80.3	3.0	12.1	3.2	1.6	3.0	100	3.0
Oldies	49		621		95		15		780	
	6.3	8.0	79.6	7.3	12.2	7.9	1.9	8.9	100	7.4
Public/ Educational	0		4		0		0		4	
	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100	0.0
Religion	69		778		83		33		963	
	7.2	11.3	80.8	9.1	8.6	6.9	3.4	19.6	100	9.2
Rock	38		558		76		5		677	
	5.6	6.2	82.4	6.5	11.2	6.4	0.7	3.0	100	6.4
Spanish	30		535		45		11		621	
	4.8	4.9	86.2	6.3	7.2	3.8	1.8	6.5	100	5.9
Sports	20		417		66		5		508	
	3.9	3.3	82.1	4.9	13.0	5.5	1.0	3.0	100	4.8
Talk	18		357		36		2		413	
	4.4	3.0	86.4	4.2	8.7	3.0	0.5	1.2	100	3.9
Urban	25		331		44		6		406	
	6.2	4.1	81.5	3.9	10.8	3.7	1.5	3.6	100	3.9
Total	609		8533		1196		168		10,506	
	5.8	100	81.2	100	11.4	100	1.6	100	100	100

Source: FCC Form 323 filings; BIA Financial; Free Press Research

Figure A4: Top Formats
By Race/Ethnicity

Minority-Owned Stations				Non-Minority-Owned Stations			
Format	Number of Minority Stations	Percent of Minority Stations	Percent of All Stations	Format	Number of Non Minority Stations	Percent of Non Minority Stations	Percent of All Stations
Spanish	244	31.4	2.3	Country	1,971	20.3	18.8
Religion	135	17.4	1.3	Adult Contemporary	1,400	14.4	13.3
Urban	131	16.9	1.2	News	877	9.0	8.3
Country	46	5.9	0.4	Religion	828	8.5	7.9
Ethnic	40	5.2	0.4	Oldies	756	7.8	7.2
Adult Contemporary	25	3.2	0.2	Rock	662	6.8	6.3
Oldies	24	3.1	0.2	Album Oriented/Classic Rock	543	5.6	5.2
News	20	2.6	0.2	Sports	488	5.0	4.6
Sports	20	2.6	0.2	Contemporary Hits/Top 40	434	4.5	4.1
Talk	20	2.6	0.2	Talk	393	4.0	3.7
Rock	15	1.9	0.1	Spanish	377	3.9	3.6
Contemporary Hits/Top 40	12	1.5	0.1	Nostalgia/Big Band	306	3.1	2.9
Album Oriented/Classic Rock	10	1.3	0.1	Urban	275	2.8	2.6
Miscellaneous	10	1.3	0.1	Miscellaneous	147	1.5	1.4
Nostalgia/Big Band	8	1.0	0.1	Middle of the Road	62	0.6	0.6
Dark - Not on air	7	0.9	0.1	Ethnic	56	0.6	0.5
Jazz/New Age	7	0.9	0.1	Jazz/New Age	55	0.6	0.5
Easy Listening	1	0.1	0.0	Easy Listening	44	0.5	0.4
Middle of the Road	1	0.1	0.0	Classical	30	0.3	0.3
Classical	0	0.0	0.0	Dark - Not on air	22	0.2	0.2
Public/Educational	0	0.0	0.0	Public/Educational	4	0.0	0.0
Total	776	100	7.4	Total	9730	100	92.6

Source: FCC Form 323 filings; BIA Financial; Free Press Research

Figure A5: Top Formats
By Gender

Female-Owned Stations				Non-Female-Owned Stations			
Format	Number of Female Stations	Percent of Female Stations	Percent of All Stations	Format	Number of Non Female	Percent of Non Female	Percent of All Stations
Country	137	22.5	1.3	Country	1,880	19.0	17.9
Adult Contemporary	81	13.3	0.8	Adult Contemporary	1,344	13.6	12.8
Religion	69	11.3	0.7	Religion	894	9.0	8.5
Oldies	49	8.1	0.5	News	854	8.6	8.1
News	43	7.1	0.4	Oldies	731	7.4	7.0
Rock	38	6.2	0.4	Rock	639	6.5	6.1
Spanish	30	4.9	0.3	Spanish	591	6.0	5.6
Album Oriented/ Classic Rock	28	4.6	0.3	Album Oriented/ Classic Rock	525	5.3	5.0
Urban	25	4.1	0.2	Sports	488	4.9	4.6
Sports	20	3.3	0.2	Contemporary Hits /Top 40	431	4.4	4.1
Nostalgia/Big Band	19	3.1	0.2	Talk	395	4.0	3.8
Talk	18	3.0	0.2	Urban	381	3.9	3.6
Contemporary Hits/ Top 40	15	2.5	0.1	Nostalgia/Big Band	295	3.0	2.8
Ethnic	11	1.8	0.1	Miscellaneous	151	1.5	1.4
Easy Listening	7	1.2	0.1	Ethnic	85	0.9	0.8
Miscellaneous	6	1.0	0.1	Middle of the Road	59	0.6	0.6
Jazz/New Age	5	0.8	0.0	Jazz/New Age	57	0.6	0.5
Middle of the Road	4	0.7	0.0	Easy Listening	38	0.4	0.4
Classical	2	0.3	0.0	Classical	28	0.3	0.3
Dark - Not on air	2	0.3	0.0	Dark - Not on air	27	0.3	0.3
Public/Educational	0	0.0	0.0	Public/Educational	4	0.0	0.0
Total	609	100	5.8	Total	9897	100	94.2

Source: FCC Form 323 filings; BIA Financial; Free Press Research

Appendix B - Statistical Appendix I

Market Concentration and Female and Minority Radio Station Ownership

To examine the relationship between minority-ownership of full-power commercial radio stations and radio market concentration, several econometric models were constructed. We chose to treat minority or female station ownership as a *dependent* variable, and examine the *probability* that a given station (or market) will be minority- or female-owned (or contain a minority- or female-owned station) given the characteristics of a market, including the market concentration.

These probability models are generally specified as:

$$femownsta = \alpha + \beta_1(concentration)_i + \beta_2(mktpop)_i + \beta_3(pctminor)_i + \beta_4(pctfem)_i + \beta_5(AM)_i + \varepsilon_i$$

$$minownsta = \alpha + \beta_1(concentration)_i + \beta_2(mktpop)_i + \beta_3(pctminor)_i + \beta_4(pctfem)_i + \beta_5(AM)_i + \varepsilon_i$$

$$femownmkt = \alpha + \beta_1(concentration)_i + \beta_2(mktpop)_i + \beta_3(pctminor)_i + \beta_4(pctfem)_i + \beta_5(minownmkt)_i + \varepsilon_i$$

$$minownmkt = \alpha + \beta_1(concentration)_i + \beta_2(mktpop)_i + \beta_3(pctminor)_i + \beta_4(pctfem)_i + \beta_5(femownmkt)_i + \varepsilon_i$$

Where

femownsta = dummy variable for a female-owned station.

minownsta = dummy variable for a minority-owned station.

femownmkt = dummy variable for a market with a female-owned station.

minownmkt = dummy variable for a market with a minority-owned station.

concentration = One of three variables, each measured in separate equations

- *HHIshare = the HHI for a particular market, based upon station audience share.*
- *HHIrev = the HHI for a particular market, based upon an owner's share of market revenue*
- *stationratio = the number of commercial stations in a market divided by the number of unique owners in that market*

mktpop = the total population living in the Arbitron market.

pctminor = the percentage of a market's population that is of minority racial or ethnic status.

pctfem = the percentage of a market's population that are women.

AM = dummy variable for an AM station

Each probability model was investigated using Probit models with robust standard errors.

The results are presented below in Figures B1-B12. These results generally suggest that the probability that a given radio station is minority-owned, or female-owned, is significantly lower in more concentrated markets, even if market and station characteristics are held constant. This result is also seen when examining the probability that a *market* will have a minority-owned radio station or a female-owned radio station. Furthermore, the presence of a minority-owned station in a market increases the probability that a particular market will also have a female-owned station.

Figure B1:

Dependent Variable = station owned by a minority (0 or 1)

	Probit Coefficient (sig w/ robust std. error)
Ratio of Number of Stations per Unique Owner in Market	-0.0851 (0.050)**
Total Market Population	5.26×10^{9} (0.507)
Percent Minority Population in Market	0.0224 (0.000)***
Percent Female Population in Market	0.0247 (0.371)
AM Station	0.3915 (0.000)***
constant	-3.2589 (0.021)**
N = 6381	pseudo-R^2 = 0.0097

* = significant at 10% level; ** = significant at 5% level; *** = significant at 1% level

Source: Form 323 filings; BIA Financial; Free Press Research

Figure B2:

Dependent Variable = station owned by a female (0 or 1)

	Probit Coefficient (sig w/ robust std. error)
Ratio of Number of Stations per Unique Owner in Market	-0.2302 (0.000)***
Total Market Population	-2.28×10^{8} (0.036)**
Percent Minority Population in Market	0.0029 (0.067)*
Percent Female Population in Market	0.019 (0.473)
AM Station	0.0569 (0.281)
constant	-2.0779 (0.123)
N = 6381	pseudo-R^2 = 0.0130

* = significant at 10% level; ** = significant at 5% level; *** = significant at 1% level

Source: Form 323 filings; BIA Financial; Free Press Research

Figure B3:

Dependent Variable = station owned by a minority (0 or 1)

	Probit Coefficient (sig w/ robust std. error)
HHI Audience Share	-0.000183 (0.000)***
Total Market Population	-9.75×10^{9} (0.282)
Percent Minority Population in Market	0.2248 (0.000)***
Percent Female Population in Market	0.0605 (0.045)**
AM Station	0.3915 (0.000)***
constant	-4.9643 (0.001)***
N = 6381	pseudo-R^2 = 0.1015

* = significant at 10% level; ** = significant at 5% level; *** = significant at 1% level

Source: Form 323 filings; BIA Financial; Free Press Research

Figure B4:

Dependent Variable = station owned by a female (0 or 1)

	Probit Coefficient (sig w/ robust std. error)
HHI Audience Share	-0.000189 (0.000)***
Total Market Population	-3.98×10^{8} (0.001)***
Percent Minority Population in Market	0.0036 (0.025)**
Percent Female Population in Market	0.0536 (0.066)*
AM Station	0.07 (0.179)
constant	-4.0759 (0.005)***
N = 6381	pseudo-R^2 = 0.0076

* = significant at 10% level; ** = significant at 5% level; *** = significant at 1% level

Source: Form 323 filings; BIA Financial; Free Press Research

Figure B5:

Dependent Variable = station owned by a minority (0 or 1)

	Probit Coefficient (sig w/ robust std. error)
HHI Revenue Share	-0.000035 (0.159)
Total Market Population	1.32×10^{9} (0.879)
Percent Minority Population in Market	0.022 (0.000)***
Percent Female Population in Market	0.03 (0.292)
AM Station	0.4 (0.000)***
constant	-3.6172 (0.012)**
N = 6381	pseudo-R^2 = 0.0989

* = significant at 10% level; ** = significant at 5% level; *** = significant at 1% level

Source: Form 323 filings; BIA Financial; Free Press Research

Figure B6:

Dependent Variable = station owned by a female (0 or 1)

	Probit Coefficient (sig w/ robust std. error)
HHI Revenue Share	-0.00003 (0.239)
Total Market Population	-2.53×10^{8} (0.021)**
Percent Minority Population in Market	0.0034 (0.034)**
Percent Female Population in Market	0.0262 (0.338)
AM Station	0.0807 (0.122)
constant	-2.924 (0.034)**
N = 6381	pseudo-R^2 = 0.0037

* = significant at 10% level; ** = significant at 5% level; *** = significant at 1% level

Source: Form 323 filings; BIA Financial; Free Press Research

Figure B7:

Dependent Variable = market with a minority-owned station (0 or 1)

	Probit	Probit
	Coefficient (sig w/ robust std. error)	Coefficient (sig w/ robust std. error)
Ratio of Number of Stations per Unique Owner in Market	-0.2124 (0.100)*	-0.1847 (0.169)
Total Market Population	1.04×10^{6} (0.000)***	9.84×10^{7} (0.000)***
Percent Minority Population in Market	0.0569 (0.000)***	0.0564 (0.000)***
Percent Female Population in Market		-0.0082 (0.936)
Female Owner in Market		0.2434 (0.219)
constant	-1.296 (0.001)***	-1.0202 (0.219)
N = 298	pseudo-R^2 = 0.4021	pseudo-R^2 = 0.4061

* = significant at 10% level; ** = significant at 5% level; *** = significant at 1% level

Source: Form 323 filings; BIA Financial; Free Press Research

Figure B8:

Dependent Variable = market with a female-owned station (0 or 1)

	Probit	Probit
	Coefficient (sig w/ robust std. error)	Coefficient (sig w/ robust std. error)
Ratio of Number of Stations per Unique Owner in Market	-0.4545 (0.000)***	-0.3864 (0.001)***
Total Market Population	8.92×10^{8} (0.212)	5.45×10^{8} (0.406)
Percent Minority Population in Market		-0.0012 (0.828)
Percent Female Population in Market	0.0817 (0.312)	0.0874 (0.295)
Minority Owner in Market		0.4843 (0.013)**
constant	-3.3013 (0.422)	-3.9589 (0.352)
N = 298	pseudo-R^2 = 0.0581	pseudo-R^2 = 0.0786

* = significant at 10% level; ** = significant at 5% level; *** = significant at 1% level

Source: Form 323 filings; BIA Financial; Free Press Research

Figure B9:

Dependent Variable = market with a minority-owned station (0 or 1)

	Probit	Probit
	Coefficient (sig w/ robust std. error)	Coefficient (sig w/ robust std. error)
HHI Audience Share	-0.000276 (0.056)*	-0.000247 (0.092)*
Total Market Population	9.65×10^{7} (0.000)***	9.12×10^{7} (0.000)***
Percent Minority Population in Market	0.0572 (0.000)***	0.0567 (0.000)***
Percent Female Population in Market		0.012 (0.909)
Female Owner in Market		0.2459 (0.199)
constant	-1.2792 (0.001)***	-2.0123 (0.701)
N = 298	pseudo-R^2 = 0.4018	pseudo-R^2 = 0.4059

* = significant at 10% level; ** = significant at 5% level; *** = significant at 1% level

Source: Form 323 filings; BIA Financial; Free Press Research

Figure B10:

Dependent Variable = market with a female-owned station (0 or 1)

	Probit	Probit
	Coefficient (sig w/ robust std. error)	Coefficient (sig w/ robust std. error)
HHI Audience Share	-0.00055 (0.000)***	-0.000475 (0.001)***
Total Market Population	3.62×10^{8} (0.585)	7.98×10^{9} (0.896)
Percent Minority Population in Market		-0.0003 (0.958)
Percent Female Population in Market	0.151 (0.079)*	0.1488 (0.090)*
Minority Owner in Market		0.4548 (0.017)**
constant	-6.8886 (0.110)	-7.1217 (0.107)
N = 298	pseudo-R^2 = 0.0622	pseudo-R^2 = 0.0814

* = significant at 10% level; ** = significant at 5% level; *** = significant at 1% level

Source: Form 323 filings; BIA Financial; Free Press Research

Figure B11:

Dependent Variable = market with a minority-owned station (0 or 1)

	Probit	Probit
	Coefficient (sig w/ robust std. error)	Coefficient (sig w/ robust std. error)
HHI Revenue Share	-0.000062 (0.408)	-0.000052 (0.484)
Total Market Population	1.06×10^{6} (0.000)***	9.96×10^{7} (0.000)***
Percent Minority Population in Market	0.0566 (0.000)***	0.056 (0.000)***
Percent Female Population in Market		-0.0114 (0.912)
Female Owner in Market		0.2735 (0.156)
constant	-1.6063 (0.000)***	-1.1383 (0.829)
N = 298	pseudo-R^2 = 0.3975	pseudo-R^2 = 0.4026

* = significant at 10% level; ** = significant at 5% level; *** = significant at 1% level

Source: Form 323 filings; BIA Financial; Free Press Research

Figure B12:

Dependent Variable = market with a female-owned station (0 or 1)

	Probit	Probit
	Coefficient (sig w/ robust std. error)	Coefficient (sig w/ robust std. error)
HHI Revenue Share	-0.0002 (0.003)***	-0.00017 (0.007)***
Total Market Population	6.10×10^{8} (0.385)	3.05×10^{8} (0.628)
Percent Minority Population in Market		-0.0024 (0.674)
Percent Female Population in Market	0.0978 (0.231)	0.0991 (0.239)
Minority Owner in Market		0.5217 (0.007)***
constant	-4.5368 (0.274)	-4.899 (0.253)
N = 298	pseudo-R^2 = 0.0469	pseudo-R^2 = 0.0699

* = significant at 10% level; ** = significant at 5% level; *** = significant at 1% level

Source: Form 323 filings; BIA Financial; Free Press Research

Appendix C - Statistical Appendix II

Market Concentration and Progressive vs. Conservative Talk Show Hosts

To examine the relationship between conservative versus progressive talk show programming and radio market concentration, several econometric models were constructed. The first set of models examines the effect that the presence of conservative or progressive in a market has on market concentration. In order to control for market-specific effects, several control variables were used: market population, the percent of minority population within a given market, the presence of a minority-owned station within a given market, and the presence of a female-owned station within a given market. This approach is also used to examine the relationship between markets that aired both types of programming and market concentration.

These models are generally specified as:

$$HHIshare = \alpha + \beta_1(progmkt)_i + \beta_2(conmkt)_i + \beta_3(mktpop)_i + \beta_4(pctminor)_i + \beta_5(minownmkt)_i + \beta_5(femownmkt)_i + \varepsilon_i$$

$$HHIrev = \alpha + \beta_1(progmkt)_i + \beta_2(conmkt)_i + \beta_3(mktpop)_i + \beta_4(pctminor)_i + \beta_5(minownmkt)_i + \beta_5(femownmkt)_i + \varepsilon_i$$

$$stationratio = \alpha + \beta_1(progmkt)_i + \beta_2(conmkt)_i + \beta_3(mktpop)_i + \beta_4(pctminor)_i + \beta_5(minownmkt)_i + \beta_6(femownmkt)_i + \varepsilon_i$$

$$HHIshare = \alpha + \beta_1(bothmkt) + \beta_2(mktpop)_i + \beta_3(pctminor)_i + \beta_4(minownmkt)_i + \beta_5(femownmkt)_i + \varepsilon_i$$

$$HHIrev = \alpha + \beta_1(bothmkt) + \beta_2(mktpop)_i + \beta_3(pctminor)_i + \beta_4(minownmkt)_i + \beta_5(femownmkt)_i + \varepsilon_i$$

$$stationratio = \alpha + \beta_1(bothmkt) + \beta_2(mktpop)_i + \beta_3(pctminor)_i + \beta_4(minownmkt)_i + \beta_5(femownmkt)_i + \varepsilon_i$$

Where

HHIshare = the HHI for a particular market, based upon station audience share.

HHIrev = the HHI for a particular market, based upon an owner's share of market revenue

stationratio = the number of commercial stations in a market divided by the number of unique owners in that market

progmkt = dummy variable for a market that aired at least one of the six progressive hosts.

conmkt = dummy variable for a market that aired at least one of the five conservative hosts.

bothmkt = dummy variable for a market that aired both types of programming

mktpop = the total population living in the Arbitron market.

pctminor = the percentage of a market's population that is of minority racial or ethnic status.

femownmkt = dummy variable for a market with a female-owned station.

minownmkt = dummy variable for a market with a minority-owned station.

Each model was investigated as OLS models with robust standard errors.

The results are presented below in Figures C1-C3. These results generally suggest that markets that air conservative programming are more concentrated, and markets that air progressive programming are less concentrated. They also indicate that markets that air *both* types of programming are less concentrated than the market where just one type of programming is available.

Figure C1:

Dependent Variable = HHI Audience Share

	OLS	OLS
	Coefficient (sig w/ robust std. error)	Coefficient (sig w/ robust std. error)
Market airing a progressive host	-121.5 (0.088)*	
Market airing a conservative host	360.7 (0.000)***	
Total market population	-0.0001 (0.000)***	-0.0001 (0.000)***
Percent minority population in market	-0.025 (0.992)	0.067 (0.979)
Minority-owned station in market	-264.7 (0.000)***	-271.1 (0.000)***
Female-owned station in market	-182.6 (0.007)***	-179.1 (0.008)***
Market airing BOTH a conservative host and a progressive host		-118.8 (0.094)*
Constant	1865.2 (0.000)***	2222.4 (0.000)***
N = 280	R^2 = 0.2139	R^2 = 0.2119

* = significant at 10% level; ** = significant at 5% level; *** = significant at 1% level

Source: Form 323 filings; BIA Financial; Host websites; Free Press Research

Figure C2:

Dependent Variable = HHI Revenue Share

	OLS	OLS
	Coefficient (sig w/ robust std. error)	Coefficient (sig w/ robust std. error)
Market airing a progressive host	-361.8 (0.014)**	
Market airing a conservative host	92.5 (0.565)	
Total market population	-0.0002 (0.001)***	-0.0002 (0.001)***
Percent minority population in market	-9.13 (0.104)*	-9.04 (0.106)
Minority-owned station in market	-451.1 (0.020)**	-457.1 (0.018)**
Female-owned station in market	-457.0 (0.001)***	-453.6 (0.001)***
Market airing BOTH a conservative host and a progressive host		-359.3 (0.014)**
Constant	4247.6 (0.000)***	4336.9 (0.000)***
N = 280	R^2 = 0.2276	R^2 = 0.2272

* = significant at 10% level; ** = significant at 5% level; *** = significant at 1% level

Source: Form 323 filings; BIA Financial; Host websites; Free Press Research

Figure C3:

Dependent Variable = Number of Stations per Unique Owner

	OLS	OLS
	Coefficient (sig w/ robust std. error)	Coefficient (sig w/ robust std. error)
Market airing a progressive host	-0.133 (0.078)*	
Market airing a conservative host	0.580 (0.000)***	
Total market population	-0.0000 (0.641)	-0.0000 (0.657)
Percent minority population in market	-0.002 (0.518)	-0.002 (0.547)
Minority-owned station in market	-0.230 (0.020)**	-0.239 (0.015)**
Female-owned station in market	-0.219 (0.007)***	-0.214 (0.008)***
Market airing BOTH a conservative host and a progressive host		-0.129 (0.086)*
Constant	2.267 (0.000)***	2.842 (0.000)***
N = 280	R^2 = 0.0989	R^2 = 0.0952

* = significant at 10% level; ** = significant at 5% level; *** = significant at 1% level

Source: Form 323 filings; BIA Financial; Host websites; Free Press Research

We also wanted to investigate the relationship between station owner gender or race/ethnicity, and the propensity to air either type of programming. Because there are underlying reasons that dictate the choice of whether or not to air *any* of these 11 hosts, it is best to first model the probability that a station will choose to air any of the 11 shows (selection model), then based on that result, estimate the outcome - whether a station aired a conservative or progressive host (outcome models). This approach is desired when dealing with a "limited" variable such as this, where only 12.6 percent of all 10,506 stations aired any of the 11 hosts.

The selection models was specified as:

$$shows = \alpha + \beta_1(minownsta)_i + \beta_2(femownsta)_i + \beta_3(singleown)_i + \beta_4(localown)_i + \beta_5(mktpop)_i + \beta_6(pctminor)_i + \beta_7(starev)_i + \beta_8(newsform)_i + \beta_9(talkform)_I + \varepsilon_i$$

The outcome models were specified as:

$$consta = \alpha + \beta_1(minownsta)_i + \beta_2(femownsta)_i + \beta_3(singleown)_i + \beta_4(localown)_i + \beta_5(mktpop)_i + \beta_6(pctminor)_i + \beta_7(starev)_i + \varepsilon_i$$

$$progsta = \alpha + \beta_1(minownsta)_i + \beta_2(femownsta)_i + \beta_3(singleown)_i + \beta_4(localown)_i + \beta_5(mktpop)_i + \beta_6(pctminor)_i + \beta_7(starev)_i + \varepsilon_i$$

Where

shows = dummy variable for a station that aired any of the 11 shows

progsta = dummy variable for a station that aired at least one of the six progressive hosts.

conmkt = dummy variable for a station that aired at least one of the five conservative hosts.

femownsta = dummy variable for a female-owned station.

minownsta = dummy variable for a minority-owned station.

singleown = dummy variable for a station owned by a single station owner.

localown = dummy variable for a station that is locally owned.

mktpop = the total population living in the Arbitron market.

pctminor = the percentage of a market's population that is of minority racial or ethnic status.

starev = average station revenue for 2004-2005.

newsform = dummy variable for a news format station

talkform = dummy variable for a talk format station

Each model was investigated as a Heckman maximum likelihood model.

The results are presented below in Figures C4-C5. These results generally suggest that minority and single-station owners are less likely to air conservative programming, and more likely to air progressive programming. The coefficient for local ownership was not statistically significant in the outcome models.

Figure C4:

Dependent Variable = Station Airs a Conservative Host (0 or 1)

N = 10,506	Heckman Maximum Likelihood Estimation Probit	
	Selection Model (=1 if airs any progressive or conservative host)	Outcome Model (=1 if airs a conservative host)
	Coefficient (significance)	Coefficient (significance)
Minority-Owned Station	-0.195 (0.018)**	-0.446 (0.053)*
Female-Owned Station	-0.0310 (0.699)	-0.0048 (0.984)
Station owned by Single Station Owner	-0.175 (0.003)***	-0.421 (0.007)***
Locally Owned Station	-0.114 (0.003)***	0.112 (0.324)
Total Market Population	-2.66×10^{8} (0.028)**	-1.48 x 10-7 (0.000)***
Percent Minority Population in Station's Market	-0.001 (0.346)	0.0002 (0.953)
Station Revenue (2004-2005 average, in thousands $)	-3.46×10^{6} (0.523)	0.0002 (0.001)***
Format = News	1.726 (0.000)***	
Format = Talk	1.571 (0.000)***	
Constant	-1.389 (0.000)***	1.031 (0.000)***

* = significant at 10% level; ** = significant at 5% level; *** = significant at 1% level

Source: FCC Form 323 filings; BIA Financial; Host websites; Free Press Research

Figure C5:

Dependent Variable = Station Airs a Progressive Host (0 or 1)

N = 10,506	Heckman Maximum Likelihood Estimation Probit	
	Selection Model (=1 if airs any progressive or conservative host)	Outcome Model (=1 if airs a progressive host)
	Coefficient (significance)	Coefficient (significance)
Minority-Owned Station	-0.196 (0.017)**	0.552 (0.008)***
Female-Owned Station	-0.0310 (0.699)	-0.0160 (0.940)
Station owned by Single Station Owner	-0.175 (0.003)***	0.261 (0.068)*
Locally Owned Station	-0.114 (0.003)***	-0.011 (0.907)
Total Market Population	-2.69×10^{8} (0.027)**	-1.29 x 10-7 (0.000)***
Percent Minority Population in Station's Market	-0.001 (0.344)	0.0019 (0.483)
Station Revenue (2004-2005 average, in thousands $)	-3.38×10^{6} (0.532)	-0.0002 (0.000)***
Format = News	1.722 (0.000)***	
Format = Talk	1.581 (0.000)***	
Constant	-1.389 (0.000)***	-0.637 (0.000)***

* = significant at 10% level; ** = significant at 5% level; *** = significant at 1% level

Source: FCC Form 323 filings; BIA Financial; Host websites; Free Press Research