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TESTING MINORITY PREFERENCES IN BROADCASTING

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## Abstract

The United States government has several policies and programs designed to increase the number of broadcasting stations owned by racial minorities. Increasing the number of minority-owned broadcasting stations, the government claims, will diversify the content of broadcast programs by increasing the amount of minority-oriented programming. Minority owners will program their stations differently than white owners, the government claims. In this paper we present the first econometric test of these propositions about minority ownership of broadcasting stations as well as a number of other related propositions. We conclude that increasing the number of minority-owned broadcasting stations increases the amount of minority-oriented programming. We also conclude that increasing the number of female-owned stations—a policy that has been ruled unconstitutional—would be just as effective at increasing minority-oriented programming.

# TESTING MINORITY PREFERENCES IN BROADCASTING\*

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## 1 Introduction

The United States government has several policies and programs designed to increase the number of broadcasting stations owned by racial minorities. Increasing the number of minority-owned broadcasting stations, the government claims, will diversify the content of broadcast programs by increasing the amount of minority-oriented programming. Minority owners will program their stations differently than white owners, the government claims.

In this paper we present the first econometric test of these propositions about minority ownership of broadcasting stations as well as a number of other related propositions. We conclude that increasing the number of minority-owned broadcasting stations increases the amount of minority-oriented programming. We also conclude that increasing the number of female-owned stations—a policy that has been ruled unconstitutional—would be just as effective at increasing minority-oriented programming.

Section II will present the legal background. Section III presents the testable hypotheses and their justifications, while section IV explains our data analysis. Section V describes the implications of our work.

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## 1.1 Legal Background—Licensing

The Federal Communications Commission licenses all broadcasters in the United States. There are two ways to obtain broadcasting licenses: direct grant from the FCC or purchase from a license holder. The FCC grants licenses through two different administrative processes—comparative hearing and lottery.

If more than one qualified applicant applies for a license the FCC may hold a comparative hearing. In such a hearing the applicants' characteristics are compared, ranked, and then combined into a choice of the applicant that will best serve the "public interest."<sup>1</sup> According to the FCC two of the most important criteria are diversification of control of the mass media and integration of ownership with management.<sup>2</sup> The diversification of control criterion is supposed to favor applicants with no other ownership interests in broadcasting or other media, and has all of the traditional industrial organization justifications and shortcomings. Integration of ownership with management, on the other hand, is much more peculiar. This criterion is supposed to favor applications in which the owner promises to work at the broadcasting station and, as such, runs counter to the basic approach of most capitalist economies in the world today. Where all of the world's stock markets allow those with capital to hire talented managers to run corporate activities, the FCC favors forcing those who wish to place large amounts of capital into broadcasting to also spend time attending to the humdrum, day-to-day running of the station. Why do this? The FCC claims that integrating broadcasting owners into the management of the stations will produce two valuable effects. First, the FCC has many rules, both substantive and procedural, violation of which may result in penalties against the licensee. If the owner is running the station, claims the FCC,<sup>3</sup> he or she will be more likely to ensure that the rules are followed than would a mere manager. Second, the FCC has long required broadcasters to serve the "needs and interests" of the station's community of license.<sup>4</sup> If the owner of a broadcast facility lives in the community—something which is also favored<sup>5</sup>—he will be attuned to the needs and interests of the community and be more likely to provide programming aimed at serving those needs and interests.<sup>6</sup> In short, integration of ownership with management is supposed to affect programming content.

The FCC also grants broadcasting licenses—almost exclusively low power television licenses—through a lottery. The lottery gives chances to competing applicants and then

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<sup>1</sup>See Spitzer, "Multicriteria Choice Processes: An Application of Public Choice Theory to Bakke, the FCC, and the Courts," 88 *Yale Law Journal* 717 (1979), for a social choice theoretic analysis of such processes. For an introduction to the basic legal processes see D. Ginsburg, M. Botein & M. Director, *Regulation of Electronic Mass Media*, 83-148 (2d ed. 1991).

<sup>2</sup>See 1965 Policy Statement, 1 F.C.C.2d 393, 394-95 (1965) [hereinafter 1965 Policy Statement].

<sup>3</sup>1965 Policy Statement, supra note 3, at 395-96.

<sup>4</sup>See Ginsburg, et al., supra note 2, at 157.

<sup>5</sup>1965 Policy Statement, supra note 3, at 395-96.

<sup>6</sup>Id.

chooses a winner through a random process similar to the ping-pong ball blower used by the California State Lottery.

Broadcasters can also obtain licenses by purchasing one from an existing license holder. The Federal Communications Act in effect requires the FCC to approve most purchases by preventing the FCC from considering any potential broadcaster other than the buyer. If the buyer is at least minimally acceptable the FCC must approve the purchase.<sup>7</sup>

## 1.2 Minority Ownership Preference Policies

The FCC has four policies designed to increase the ownership of broadcasting licenses by racial and ethnic minorities.<sup>8</sup> Two of these policies apply to direct grants by the FCC and two policies are designed to stimulate purchases by minorities.

**Lottery Preferences:** Section 309(i) of the Federal Communications Act allows the FCC to grant broadcast licenses through a lottery, and orders the FCC to “establish rules and procedures to ensure that, in the administration of any system of random selection under this subsection, groups or organizations, or members of groups or organizations, which are under represented in the ownership of telecommunications facilities or properties will be granted significant preferences.”<sup>9</sup> Under this section “Blacks, Hispanics, American Indians, Alaskan Natives, Asians, and Pacific Islanders”<sup>10</sup> get extra chances in the lottery.<sup>11</sup>

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<sup>7</sup>47 U.S.C. sec. 310(d)(1988).

<sup>8</sup>Moreover, the FCC has adopted an additional preference policy allowing radio companies to buy noncontrolling stakes in three additional AM and three additional FM stations (beyond the new limit of eighteen of each), if the new stations are minority-owned. See 7 F.C.C. rcd 6387 (1992).

<sup>9</sup>Omnibus Budget Reconciliation Act of 1981, Public Law No. 97-35, sec. 1242, 95 Stat. 736, 736-37 (1981) (concerning television and radio broadcasting).

<sup>10</sup>47 U.S.C. sec. 309(i)(3)(C)(ii)(1988).

<sup>11</sup>The lottery preference was at first resisted by the FCC. Congress first amended section 309(i) of the Federal Communications Act in 1981, and the Conference Report accompanying the bill stated in part: [I]t is the firm intention of the conferees that ownership by minorities, such as Blacks and Hispanics, as well as by women, and ownership by other under-represented groups, such as labor unions and community organizations, is to be encouraged through the award of significant preferences in any such random selection proceeding. These are groups which are inadequately represented in terms of nationwide telecommunications ownership, and it is the intention of the conferees in establishing a random selection process that the objective of increasing the number of media outlets owned by such persons or groups be met. H. R. Rep. No. 208, 97th Cong. 1st Sess. 897 (1981). The FCC refused to implement the scheme, claiming the statute was too vague. Congress responded by amending the act the following year to define minority group to include “Blacks, Hispanics, American Indians, Alaska Natives, Asians, and Pacific Islanders.”

**Comparative Hearing Preferences:** The FCC “enhances”<sup>12</sup> applications of minorities who apply for licenses and who are compared with other applicants in hearings. The FCC accomplishes this enhancement through modification of the “integration of ownership” criterion. First the FCC grants a “quantitative” integration credit which describes the extent to which an applicant proposes to work in a broadcast station.<sup>13</sup> The FCC then “enhances” the quantitative integration credit with qualitative factors, including the race and ethnicity of the applicant.<sup>14</sup> The enhancement is supposed to increase minority applicants’ chances of victory in comparative hearings.

The FCC at first resisted granting enhancements for race and ethnicity,<sup>15</sup> claiming that the Federal Communications Act is colorblind, but the Court of Appeals reversed the FCC and ordered the FCC to grant the enhancements for race. In response the FCC began utilizing a comparative hearing preference for minority applicants and then, in 1978, adopted three more policies. First, the FCC extended a comparative hearing preference—albeit a less important one—to women.<sup>16</sup> This preference was struck down as unconstitutional in *Lamprecht v. FCC*,<sup>17</sup> discussed in detail below.<sup>18</sup> In addition, the FCC adopted two policies designed to spur the purchase of broadcasting stations by minorities. These policies were the tax certificate and the distress sale rules, and both were justified on the ground that “[f]ull minority participation in the ownership and management of broadcast facilities results in a more diverse selection of programming.”<sup>19</sup>

**Distress Sales:** When there are serious allegations that a licensee has done something that renders the licensee unqualified to hold the license the FCC will schedule a hearing. Before the start of that hearing the licensee may arrange to sell the license to a minority purchaser for not more than 75% of fair market value. Under the distress sale policy the minority purchaser may take the license free of the problems that produced the hearing in the first place.<sup>20</sup> White women may not utilize the distress sale policy. As of 1989 the FCC claimed that the distress sale policy had been used fewer than forty times.<sup>21</sup> In

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<sup>12</sup>The FCC sometimes uses the term enhancement, *West Michigan Broadcasting Co. v. FCC*, 735 F.2d 601 (D.C. Cir. 1984), cert. denied, 470 U.S. 1027 (1985), and sometimes uses “merit,” *Central Fla. Enters. v. FCC*, 598 F.2d 37 (D.C. Cir. 1978), cert. dismissed, 441 U.S. 957 (1979).

<sup>13</sup>Thus, if a sole owner proposed to work four days per week, eight hours per day, at the station, he might get 80% quantitative integration credit.

<sup>14</sup>1965 Policy Statement, *supra* note 3, at 396-99, construed in *TV 9 v. FCC*, 495 F.2d 929 (D.C. Cir. 1973), cert denied, 419 U.S. 986 (1974). See also *Metro Broadcasting v. FCC*, 110 S. Ct. 2997 (1990), discussed in text at notes 38-41, *infra*.

<sup>15</sup>See *Mid-Florida Television Corp.*, 33 F.C.C.2d 1 (Rev. Bd.), review denied, 37 F.C.C.2d 559 (1972).

<sup>16</sup>*Mid-Florida Television Corp.*, 69 F.C.C.2d 607 (1978); *Mid-Florida Television Corp.*, 70 F.C.C.2d 281, 326 (Rev. Bd. 1978).

<sup>17</sup>958 F.2d 382 (D.C. Cir. 1992).

<sup>18</sup>See text at notes 42-57, *infra*.

<sup>19</sup>Statement of Policy on Minority Ownership of Broadcasting Facilities, 68 F.C.C.2d 979, 981 (1978) [hereinafter *Minority Ownership Policy*].

<sup>20</sup>*Minority Ownership Policy*, *supra* note 20, at 983.

<sup>21</sup>FCC Press Release (March 9, 1989).

contrast, the FCC claimed that the tax certificate policy had been used 178 times.<sup>22</sup>

**Tax Certificates:** If a broadcasting station is sold to a party “with a significant minority interest,”<sup>23</sup> the FCC issues a special certificate that allows the seller to defer any capital gain tax that would have been generated by the sale. Depending on the size of the tax, the deferral may be quite valuable and give the seller a great incentive to seek out a minority purchaser and give that purchaser a lower price. Just as with the distress sale policy, white female sellers may not utilize the tax certificate program.

### 1.3 Court Challenges and the FCC Questionnaire

Although the minority preference policies have been attacked, defended and evaluated in a number of court proceedings,<sup>24</sup> for our purposes the most important events are the FCC’s questionnaire, *Metro Broadcasting v. FCC*,<sup>25</sup> and *Lamprecht v. FCC*.<sup>26</sup>

### 1.4 Congressional Research Service Report

While in the middle of a lawsuit attacking the constitutionality of the female preference in comparative hearings,<sup>27</sup> the FCC mailed to licensees questionnaires which were to be returned to the FCC by April 30, 1987. These questionnaires requested data on the licensees’ characteristics, including sex and race, and the station’s programming practices, including its choice of programming to targeted audiences.<sup>28</sup> Approximately seventy-nine percent of the licensees responded, but the FCC was not allowed to analyze the data. Congress ordered the FCC to use the minority preferences and to stop any inquiry aimed at reconsidering the preferences.<sup>29</sup> The data were turned over to the

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<sup>22</sup>Id.

<sup>23</sup>Minority Ownership Policy, *supra* note 20, at 983.

<sup>24</sup>See, e.g., *Pappas v. FCC*, 807 F.2d 1019 (D.C. Cir. 1986); *West Michigan Broadcasting Co. v. FCC*, 735 F.2d 601 (D.C. Cir. 1984), cert denied, 470 U.S. 1027 (1985); *Garrett v. FCC*, 513 F.2d 1056 (D.C. Cir. 1975); *TV 9 v. FCC*, 495 F.2 929 (D.C. Cir. 1973), cert denied, 419 U.S. 986 (1974).

<sup>25</sup>110 S. Ct. 2997 (1990).

<sup>26</sup>958 F.2d 382 (D.C. Cir. 1992).

<sup>27</sup>*Steele v. FCC*, 770 F.2d 1192 (D.C. Cir. 1985).

<sup>28</sup>See *In re Reexamination of the Commission’s Comparative Licensing, Distress Sales and Tax Certificate Policies Premised on Racial, Ethnic or Gender Classifications*, 1 F.C.C.R. 1315 (1986); *Reexamination of the Commission’s Comparative Licensing, Distress Sales and Tax Certificate Policies Premised on Racial, Ethnic or Gender Classifications*, 52 Fed. Reg. 596 (FCC 1987) (notice of inquiry).

<sup>29</sup>Congress passed House Joint Resolution 395, which contains the following language: [N]one of the funds appropriated by the Act shall be used to repeal, to retroactively apply changes in, or to continue a reexamination of, the policies of the Federal Communications Commission with respect to comparative licensing, distress sales and tax certificates . . . to expand minority and women ownership of broadcasting licenses. H.R.J. Res. 395, 100th Cong., 2d. Sess, 102 Stat. 2,216 (1987).

Congressional Research Service, which "analyzed" the data and issued a report in 1987. Because this report represents the only previous extensive empirical examination of the connection between race and sex of station owners and programming content, we will describe the report in some detail.<sup>30</sup>

The Congressional Research Service ("CRS") Report presents many charts and tables relating owners' racial, ethnic and sexual characteristics and the programming content of the owned broadcasting stations. The FCC survey instrument, reproduced in Appendix C, generated responses about programming targeted at Blacks, Hispanics, Asian/Pacific Islanders, and Indian/Alaskan natives, on both a primary or special basis. In addition, the survey asked radio stations for their formats.<sup>31</sup>

Based on simple cross-tabulations of ownership percentage and the percentage of programming for various target groups, the CRS tentatively reached several conclusions:

1. station ownership, in part or in whole, by a particular type of minority, tended to increase the amount of programming targeted at that minority;<sup>32</sup>
2. station ownership by a particular type of minority, such as Black, also tended to increase the amount of programming targeted at other minorities, such as Hispanic;<sup>33</sup>
3. station ownership by women produces a small increase in programming for women when compared to the increase in programming that minority owners provide to minorities.<sup>34</sup> The CRS equivocated on the question of whether women owners programmed for minority audiences at a higher rate than do males.<sup>35</sup>

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<sup>30</sup>There are some studies of quite limited scope on the issue. See Spitzer, "Justifying Minority Preferences in Broadcasting," 64 S. CAL. L. REV. 293, 334-36 (1991) [hereinafter "Justifying Minority Preferences"] (reviewing the studies). There are also some data testing the basic theory of programmer choice. See *id.* at 318-19. None of these studies includes demographic data from the broadcasting markets and data on owners' race and sex.

<sup>31</sup>A typical CRS Report chart, found in CRS Report, page 21, Figure 12, is reproduced in Appendix A.

<sup>32</sup>"Nevertheless, these data indicate that certain conditions in ownership and in programming exist which suggest a positive relationship between minority broadcast station ownership and minority programming. That is, where minority ownership was found to exist among stations, that group of stations programmed proportionately more to their own minority audiences as well as to other minority audiences than did those stations with no minority owners." CRS Report at 42.

<sup>33</sup>*Id.* See also CRS Report at 22, second paragraph.

<sup>34</sup>"Stations with women owners program to female audiences, but not to the degree that stations with minority owners program to their own minority audience groups." CRS Report at 44.

<sup>35</sup>"While stations with women owners lag slightly behind those with minority owners in programming for minorities generally, a substantial percentage programs for Blacks and Hispanic audiences. In the group of stations with women owners, there may also be a mix of minority male and female owners." CRS Report at 44.

The CRS did not include any variables to control for market characteristics. First, the FCC survey instrument failed to ask the broadcasters for demographic data about their broadcast area. Second, the CRS concluded that it was impossible, within the time constraints placed on them, to add demographic data to the survey data. The FCC survey instrument asked the broadcaster to state its county, rather than its FIPS code. There were, the CRS claimed, more than 1,000 responses with misspelled or abbreviated names that did not match the county names in the Census data sets.<sup>36</sup> Hence, merging census data could not be done. An effort to utilize data on the Arbitron market area (“Area of Dominant Influence” or “ADI”) in which each station operates foundered on two problems. Almost half of the survey responses contained no ADI code, and the CRS had no source of demographic data for the ADI’s. For all of these reasons, the CRS decided to present the data in charts such as the one reproduced in Appendix A.<sup>37</sup>

In addition, for reasons not addressed in the CRS Report, the CRS failed to analyze any models of broadcasting markets. As a consequence the CRS did not test hypotheses, derived from models, about the variables in the survey. Our analysis below corrects for this deficiency.

## 1.5 Metro Broadcasting

In 1990 the Supreme Court issued its Metro Broadcasting decision, upholding the minority preference in comparative hearings and the distress sale policies against the claim that they violated equal protection under the fifth amendment to the United States Constitution. Justice Brennan, writing for the majority, held that federal regulations including “benign” racial classifications would pass equal protection analysis if the regu-

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<sup>36</sup>As we show below, only 310 responses were problematic.

<sup>37</sup>The CRS attempted to make up for this failure by examining five large markets (New York, NY; Dallas, TX; Los Angeles, CA; Chicago, IL; and Atlanta, GA) and five small markets (Flagstaff, AZ; Elmira, NY; Meridian, MI; Butte, MT; and LaCrosse, WI). For each station within each market the CRS used the station market contour maps published in the *TV and Cable Factbook* to determine the area of coverage. Because the CRS’s description of just what it did next is a bit ambiguous, we quote it in full at this point: In this publication [*TV and Cable Factbook*], markets are defined by home market areas plus any surrounding counties, whether located in the same State or in adjoining States, in which the stations have a circulation of 50 percent or more. Data from the FCC survey on minority ownership and minority programming for all the counties in each sample, in which the 50 percent circulation existed, were then arrayed into two sets of matrices (one for each group) and the results, aggregated for all centers in each sample, were compared for differences between degrees of ownership of these stations and minority programming carried on by these same stations in these two groups. Then, the aggregate minority population rate (the minority percentage of the total population) for each minority programming target group in the two selections was overlaid on the minority programming percentages to determine whether the programming was more than, less than, or the same as the minority population proportions of the market. CRS Report at 3. This methodology appears to try to separate large and small markets, but suffers from having so few data points that it has no statistical power or meaning. Our approach, described in text below, greatly improves on the CRS approach.

lations “serve important governmental objectives within the power of Congress and are substantially related to achievement of those objectives.”<sup>38</sup> Applying this test, Justice Brennan first found that “programming diversity” is an important governmental interest potentially sufficient to satisfy the first part of the test.<sup>39</sup> Next, Justice Brennan proceeded to give Congress and the FCC every possible benefit of the doubt in order to find a “substantial relationship” between programming diversity and minority ownership.<sup>40</sup> The Court refused to examine the facts behind FCC policies, refused to question Congressional findings, and characterized legislative history in a very deferential fashion.<sup>41</sup> In such a setting the FCC’s data set that was analyzed in the CRS report was mentioned, but did not take center stage. In contrast, the CRS report is the focus of the most recent court decision.

## 1.6 Lamprecht v. Federal Communications Commission

In *Lamprecht v. FCC*<sup>42</sup> the District of Columbia Circuit Court of Appeals struck down the comparative hearing preference for women, holding that the preference was insufficiently effective at producing diversity of programming. Judge Clarence Thomas, writing for the District Court in his last opinion before being elevated to the Supreme Court, reviewed the evidence contained in the CRS Report and concluded that female ownership altered programming content very little.

Jerome Lamprecht, Barbara Marmet, and two other applicants had all applied for the same radio broadcasting license.<sup>43</sup> The FCC ultimately awarded the station to Marmet, in no small part because of her sex, and Lamprecht appealed, claiming that the female preference in comparative hearings violated the equal protection clause of the Fifth

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<sup>38</sup>*Metro Broadcasting v. FCC*, 110 S. Ct. 2997, 3009 (1990).

<sup>39</sup>*Id.* at 3,010. Justice Brennan linked his conclusion to “scarcity” analysis in broadcasting. Traditional scarcity analysis runs something like the following: unlike other modes of communication, radio spectrum is plagued by scarcity—the tendency to interference. In order to prevent chaos of the airwaves (where all broadcast and none can be received) the government must license only a few. But the few licensees must hold their licenses as trustees for the general public. Because the public is diverse and has diverse needs and interests, broadcasters may be regulated in such a way as to produce diverse programming.

Scarcity analysis has by now fallen into disrepute with almost everyone except the Supreme Court. See generally Spitzer, “The Constitutionality of Licensing Broadcasting,” 64 N.Y.U. L. Rev. 990 (1989). In addition, the Court could have concluded that diversity of programming was an important governmental interest without relying on scarcity. See Spitzer, “Justifying Minority Preferences,” *supra* note 31, at 159.

<sup>40</sup>See Spitzer, “Justifying Minority Preferences,” *supra* note 31, at 350-52.

<sup>41</sup>*Id.* at 350-54. The dissent disagreed on virtually every aspect of the majority opinion, but would not have spent much time examining the facts, either. The dissent was very skeptical of any racial classification. *Id.* at 354-57.

<sup>42</sup>958 F.2d 382 (D.C. Cir. 1992).

<sup>43</sup>The station is to operate out of Middletown, Maryland. *Id.* at 386.

Amendment.<sup>44</sup>

Judge Thomas applied intermediate scrutiny to the female preference policies: “benign race-conscious measures mandated by Congress’ do not violate the Fifth Amendment if ‘they serve important governmental objectives within the power of Congress and are substantially related to achievement of those objectives.’”<sup>45</sup> Because all parties agreed *Metro Broadcasting* established that the promotion of diverse programming on the radio qualifies as an important governmental objective within the power of Congress,<sup>46</sup> the only remaining issue was whether the female preference policy was “substantially related” to establishing diversity of programming.

Judge Thomas explained that the Supreme Court has repeatedly required strong empirical support for regulations claimed to substantially advance governmental interests.<sup>47</sup> “Any ‘predictive judgments’ concerning group behavior and the differences in behavior among different groups must at the very least be sustained by meaningful evidence.”<sup>48</sup> Hence, Judge Thomas proceeded to evaluate the evidence supporting the contention that selecting station owners on the basis of sex substantially increases diversity of programming. In particular, Judge Thomas asked if female station owners are more likely to broadcast “women’s programming” than are white male station owners.<sup>49</sup>

The CRS Report represented the only study, in Judge Thomas’ eyes, that had the potential of resolving the pivotal issue.<sup>50</sup> Judge Thomas created ten tables from the material contained in the CRS Report, and used the ten tables to show that female ownership of broadcasting stations is insufficiently effective at producing diverse programming.<sup>51</sup>

Based on these tables Judge Thomas found that, of stations owned primarily by women, approximately 35% reported broadcasting women’s programming, while 28% of the stations owned by men reported doing so. In contrast, 79% of Black-owned stations reported programming for Blacks, as opposed to only 20% of stations owned by non-Blacks doing so. And similar statistics showed increases of 10% to 74% for Hispanic owners, of 3% to 25% for Asian/Pacific Islander owners, and 4% to 46% for Indian or

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<sup>44</sup>The court refused to consider independent arguments raised by one of the other applicants who had intervened in the *Lamprecht* case because the filings were late. *Id.* at 389.

<sup>45</sup>*Id.* at 391, quoting from *Metro Broadcasting*.

<sup>46</sup>Although not explicitly mentioned in the opinion, everyone seemed to agree that the female preference policy was “benign.”

<sup>47</sup>*Id.* at 392.

<sup>48</sup>*Id.* at 393 (relying on *Metro Broadcasting*).

<sup>49</sup>Judge Thomas refused to address two prior issues: (1) is there such a thing as “women’s programming”? and (2) is women’s programming underrepresented? Judge Thomas believed that the Supreme Court’s opinion in *Metro Broadcasting* had answered the first question “yes.” As to the second question, Judge Thomas believed it unnecessary to address it in light of the disposition of the issue discussed in text. See *id.* at 395.

<sup>50</sup>*Id.* at 395-96.

<sup>51</sup>*Id.* at 399-402; these tables are reproduced in their entirety in Appendix B.

Alaskan owners. The percentage increase of targeted programming was only 25% for women  $(28\%)(1.25) = 35\%$ , while for the other groups it was far higher.

Judge Thomas also emphasized other evidence in the CRS Report, including the observation that stations in which women have a minority (1% to 50%) interest are just as likely to broadcast women's programming as are stations with a majority female ownership, while increasing ownership shares seems to produce increasing targeted programming for Indian or Alaskan owners;<sup>52</sup> in five large cities (New York, Los Angeles, Chicago, Dallas and Atlanta) stations with any racial or ethnic minority ownership were more likely to program women's programming than were stations with female owners;<sup>53</sup> female owners tended to use the same formats as non-minority owners;<sup>54</sup> and female station owners were not much more likely to program for minority audiences than were male owners.<sup>55</sup>

While the evidence for the minority preferences was strong enough to support their constitutionality, the evidence for the female comparative hearing preference was too weak. The nature of equal protection analysis requires judges to draw lines, Judge Thomas noted, and intermediate scrutiny requires judges to draw lines between policies with moderately strong and moderately weak support. The female preference policy fell on the weak side of the line<sup>56</sup> and was struck down as unconstitutional.

Judge Buckley, concurring with Judge Thomas, agreed that the CRS Report provided the most probative factual evidence on the relationship between female ownership and diversity of programming, and that the evidence was insufficient to support the female comparative hearing preference.<sup>57</sup>

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<sup>52</sup>Id. at 397.

<sup>53</sup>Id.

<sup>54</sup>Id.

<sup>55</sup>Id. at 397-98.

<sup>56</sup>Id. at 398, note 9.

<sup>57</sup>Judge Buckley also discussed, at length, the leak of a draft of the opinions in the case to *The Legal Times*. Judge Buckley presumed that one of the law clerks leaked a draft copy of the opinions, and called for a formal investigation to find the source of the leaks. Id. at 403-04. Judge Mikva, dissenting, disagreed with virtually every aspect of the majority opinion. Starting from the highly debatable jurisprudential proposition that "as appellate judges, our duty is to follow Supreme Court precedents, not to anticipate them," id. at 404, Mikva thoroughly reviewed the import of the *Metro Broadcasting* case. Mikva characterized (quite correctly, in our opinion) the Metro majority opinion as extremely deferential to Congressional "factual" claims supporting the minority preference policies. If the Circuit Court had afforded Congress the same degree of deference in *Lamprecht* as the Supreme Court accorded Congress in *Metro Broadcasting*, the female preferences would probably have been upheld.

We will not discuss the Mikva opinion in detail, in part because it was a dissent, and in part because it renders factual evidence as marginally irrelevant.

## 2 Market-Oriented Hypotheses

There are, to our knowledge, no models of program choice by competitive broadcasters that incorporate the race of the owner into the model. There are, however, a significant number of models of competitive broadcasters—models that utilize the standard assumption of profit-maximizing behavior by owners.<sup>58</sup> One of us has reviewed these models at length elsewhere,<sup>59</sup> and no good purpose would be served by reviewing them again here. Instead, we will point out that they can be modified to include the race of broadcasting owners, and when this is done we get the following testable hypotheses:

*Hypothesis 1:* We should observe more minority-oriented programming in markets with larger minority audiences.

*Hypothesis 2:* We should observe more minority-oriented programming in markets with large numbers of radio stations.

*Hypothesis 3:* Minority owners will be more likely to broadcast minority-oriented material.

*Hypothesis 3.1:* Hispanic owners will be more likely to program in Spanish.

*Hypothesis 3.2:* Black station owners will be more likely to program for the Black audience.

*Hypothesis 3.3:* Asian/Pacific Islander owners will be more likely to program for Asians/Pacific Islanders.

*Hypothesis 3.4:* Female owners will be more likely to program for the female audience.

*Hypothesis 4(a):* Minority or female owners will be less likely to provide minority-oriented programming if such programming is offered by others in the market.

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<sup>58</sup>See Steiner, “Program Patterns and Preferences and the Workability of Competition in Radio Broadcasting,” 66 *Quarterly Journal of Economics*, 194 (1952); Spence & Owen, “Television Programming, Monopolistic Competition, and Welfare,” 91 *Quarterly Journal of Economics*, 103 (1977); Rothenberg, “Consumer Sovereignty and the Economics of TV Programming,” 4 *Stud. Pub. Comm.*, 45 (1962); Wiles, “Pilkington and the Theory of Value,” 73 *Economics Journal*, 183 (1963); Beebe, “Institutional Structure and Program Choices in Television Markets,” *Quarterly Journal of Economics*, 15 (1977); Wildman & Owen, “Program Competition, Diversity, and Multichannel Bundling in the New Video Industry,” in *Video Media Competition: Regulation, Economics, and Technology* 244 (E. Noam ed., 1985); Noam, “A Public and Private-Choice Model of Broadcasting,” 55 *Publishers Choice*, 163 (1987); Garber, “The Economics and Political Economy of Broadcasting: Challenges in Developing an Analytic Foundation,” 55 *Publishers Choice*, 189 (1987). See also B. Owen & S. Wildman, *Video Economics*, 101-50 (1992).

<sup>59</sup>See “Justifying Minority Preferences,” *supra* note 31, at 304-18.

*Hypothesis 4(b)*: Minority or female owners will be more likely to provide minority-oriented programming if such programming is offered by others in the market.

*Hypothesis 5*: The more minority owners of broadcasting stations are integrated into the management of the stations, the more minority-oriented programming will be offered.

*Hypothesis 6*: The stations acquired through the minority preference policies (distress sale, comparative hearing preference, tax certificate) will program in the same way that other stations program.

*Hypothesis 7*: Increasing the number of stations owned by a particular minority in a market will increase the total amount of programming for that minority in the market.

Hypothesis 1 follows directly from any rudimentary theory of demand, while Hypothesis 2 follows from observing that increasing the number of broadcasting stations in any market fractionates the audience, and allows stations to “do well” with a smaller percentage of the market audience—“minority-oriented programming.” Hypothesis 3 and its subhypotheses can be explained in either of two ways. Women and minorities might consume by broadcasting to their own groups, even at the expense of profit. Alternatively, women and minorities might have production cost advantages at broadcasting to their own groups. Minorities might have special knowledge about the demand for broadcasting in their own markets that is unavailable to outsiders. Ethnicity provides many barriers of language and custom that mainstream, white owners would have to work hard to overcome in order to monitor and understand the station’s performance. We would expect these barriers to be strongest for non-English broadcasts, but significant for Black community broadcasting. Women, on the other hand, would likely have smaller cost advantages over men than minorities have over whites. Women are dispersed throughout society, are found in virtually all social settings, speak the same languages that men speak, and so forth. In addition, it is not clear exactly what constitutes women’s programming. For the purposes of Hypothesis 3.5, we presume that there is something in the set of “women’s programming,”<sup>60</sup> and that women have some advantage at programming it.

Hypotheses 4(a) and 4(b) represent the conflicting role that provision of minority-

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<sup>60</sup>See *id.* at 330-31 (including “programs geared to the special biological concerns of women,” “special social and economic concerns of women,” and [s]ome entertainment programming” in women’s programming). Judge Buckley and Judge Mikva sparred over the question of whether there might be a special female “point of view.” If this were true, female owners might program the same types of material, but with a different slant, than would men. Judge Buckley conceded that this might be true, but that there was no evidence to support it. Buckley concurrence at page 403. Mikva disagreed. For the purposes of our article we will presume that female owners regarded programming the same type of program (e.g., news), but with a distinctly female point of view as programming for women and reported it as such on the questionnaire. To the extent that this is not true, the questionnaire failed to elicit some relevant data which in turn should produce smaller coefficients for the “PRIFEM” variable discussed below.

oriented programming by other stations in the market plays in the analysis. On the one hand (Hypothesis 4(a)), if a first station is already providing a particular type of minority programming, then an additional station providing that type of minority programming would have to split the minority audience with the first station. On the other hand (Hypothesis 4(b)), if a first station is already providing a particular type of minority programming, then an additional station could regard that as a signal that the market contains significant numbers of listeners or viewers interested in that type of programming.

Hypothesis 5 reflects the FCC's theory that integration of ownership and management affects content, while Hypothesis 6 represents the standard economic presumption of the irrelevance of sunk costs.

Hypothesis 7 stems from the question whether minority-oriented programming from an additional minority owner will replace or supplement existing minority-oriented programming from other owners in that market. In other words, if a new minority owner begins broadcasting minority-oriented programming, will another station in that market stop broadcasting minority-oriented programming, or will the new source of minority-oriented programming increase the total in the market?

## **3 Our Data Analysis**

This section provides the first systematic, statistical test of the hypotheses about the relationship between broadcasting stations, market characteristics, and owners' characteristics. We added demographic data about broadcasting markets to the data in the FCC survey and then conducted regressions and tests of significance. A detailed description of the data and our results follows.

### **3.1 The Data**

Data from the minority ownership survey arrived in nine informix files. Several programs were written to extract the information from these files, to handle the coding of missing data, and so forth. The combined processed file contained 8,720 observations for 91 separate variables. Of the 8,720 observations 1,227 cases were eliminated because they were responses for TV rather than radio stations. This left a total of 7,493 cases. By far, the most difficult data processing step was the matching of social economic data to the minority ownership survey file. For each observation of the minority ownership survey, a county and state was recorded by the respondent. We used the county and city data file from the U.S. Census in an attempt to match county and city data to the survey. Of the 7,493 observations, 310 observations could not be matched because the recorded

state and county information in the minority ownership survey did not correspond to a valid state/county pair in the census bureau data. These 310 cases did not match the U.S. Census data because of miscoding and misspellings of the county information. In some cases respondents entered the city rather than a county, and in other cases the county information or county was misspelled. We selected these 310 cases for further examination. We were able to map the misspellings or cities into correctly spelled county information in almost all cases.<sup>61</sup> Of the 7,493 potential cases, 31 in the end could not be matched due to insufficient state and county information. And, lacking the relevant hard copies of the survey, it was impossible to assign state and county information to these cases. Therefore, there are 7,462 radio stations for which it is possible to merge city and county information, and these 7,462 complete cases remain as the basis for our analysis.

We have included in Appendix C the full text of the minority ownership survey in the format in which it was given to respondents. Using responses to the survey we have created a number of variables to test the hypotheses summarized above. These variables can be grouped into six categories. The first category represents ownership percentages by distinct minority groups. The second category represents the presence or absence of special circumstances that applied when the respondents acquired their licenses. The third category contains the social economic information merged from the county and city data source. The fourth category contains some characterizations of the market which we were able to construct by looking across all radio stations within a given county. The fifth category contains the descriptors for whether the owner/manager of a given radio station was of a particular minority group. And the last category contains our coding for the dependent variables of the analysis, which are the format and audience characterizations.

In Table 1 we present the variable mnemonics, descriptions and source information—usually responses to a specific question in the FCC survey reproduced in Appendix C. Starting with the ownership variables, we have constructed variables for Black ownership between ten and 20 percent, 20 and 50 percent, and 50 percent or above. Similarly, we have constructed variables for the other minority groups—Hispanic, American-Indian/Alaskan and Asian/Pacific Islander. In each of these cases we used 10% ownership as a threshold for significant ownership. We used a 20% ownership break because FCC rules allow a limited partnership with a minority general partner with more than 20% equity to count as a “minority” owner.<sup>62</sup> We used a 50% figure because that is where the minority owners gain legal control. For female ownership we refrained from breaking the data at 20% because there is no rule for limited partnerships with female general partners that is analogous to the rule for minorities.

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<sup>61</sup>In cases where the respondent answered with a city/state pair rather than a county/state pair, we were able to assign the correct county using the *Township Atlas of the United States*, Andriot Associates, McLean, Virginia, 1979; compiled and edited by John L. Andriot.”

<sup>62</sup>See *In re Commission Policy Regarding the Advancement of Minority Ownership in Broadcasting*, 92 F.C.C.2d 849, 855 (1982).

We also used continuous variables representing any minority or female ownership. Thus OWNB indicates the percent of Black ownership.

In the second group of variables we created indicators for licenses that were acquired as distress sales (DIS), with comparative hearing preferences (PRE), or with tax certificates (TAX). The variable NCOM indicates the class of service for the radio station; i.e., whether commercial or non-commercial.

The next group of variables, PERBLK, PERSPA, and PERASI, measure the percentage of the resident population which respectively are Black, speak Spanish, or are Asian/Pacific Islander. This is the data matched from the U.S. Census at the county level. We also have created a set of variables to describe the scope of the market, including RSTA, which is the number of radio stations in the county, and PRSTABLK, PRSTASPA, and PRSTAASI. These are, respectively, the percentage of stations, excluding that of the respondent, which have a Black, Spanish or Asian programming format, as indicated by question G on the survey. PERSTABLK, PRSTASPA, and PRSTAASI are defined to net out the contribution from the respondent's actual choice. These variables thus measure the percentage of other stations that broadcast to a certain minority group, and are appropriate for characterizing the market conditions before the respondent's programming choice in a way which is exogenous to the choice made by the respondent. We have also created five indicator variables, BLAOM, SPAOM, ASIOM, FOM, and OM to represent Black owner-managers, Hispanic owner-managers, Asian owner-managers, female owner-managers, and all owner-managers. We defined a minority owner-manager as being a manager who falls into a specific minority group, who works at least half time (20 to 39 hours per week) and who owns at least ten percent of the radio station.

For the dependent variables we used information from questions G and H. Question G allows us to identify stations that program a specific format. In particular, we define variables BLKFOR, SPAFOR, and ASIFOR to identify which radio stations have Black format, Spanish format, and Asian format,<sup>63</sup> respectively. Using question H, we are also able to identify which respondents thought that their primary audience targeted by the programming was Black, Spanish, or Asian. We identified these variables as PRIBLA, PRISPA, and PRIASI, respectively. We also used question H to identify those stations which have primarily female (PRIFEM) or American Indian (PRIAMI) programming.<sup>64</sup>

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<sup>63</sup>Use of the survey response for other foreign language as Asian format is questionable. There are some stations, particularly in New York and Chicago, that broadcast in languages that are not English, Spanish or any Asian language. However, we suspect that there are relatively few such stations. In addition, we get some positive results between Asian ownership and this variable. See discussion in text, below.

<sup>64</sup>To check the plausibility of the survey responses in regard to the self-assessed measures of minority programming we analyzed another measure of audience composition. First, we identified the Arbitron market for individual FCC survey responses and selected the responses from all 51 Arbitron markets for which we had comparative data. (These 51 Arbitron markets tend to be among the largest, and include all of the top 20 markets.) Then, for the 51 Arbitron markets, we calculated (using FCC survey

The descriptive statistics for these variables are presented in Table 2. In this table we separate the discrete indicator variables from the continuous variables and simply record the number of radio stations for which the indicator is true for the discrete variables, and provide the range and average values for the continuous variables.

Table 2 shows that 308 stations have some significant Black ownership, 129 have some significant Spanish ownership, 53 have some significant American Indian ownership, and 29 have some significant Asian ownership. 1,740 stations have between ten and 50 percent female ownership and an additional 920 have over 50 percent female ownership. Taken together, 2,660 of the 7,462 radio stations have some significant female ownership. Licenses were acquired by 51 stations based on distress sales, 72 stations acquired licenses based on preference hearings and 63 acquired licenses based on tax certificates. Of the 7,462 radio stations, 2,412 were noncommercial. 91 stations had Black owner-managers, while 49 stations had Hispanic owner-managers, 643 had female owner-managers and only 2 stations had Asian owner-managers. In total, 3,113 had some type of owner-manager. With respect to the distribution of the format and audience variables, 810 stations had formats for Blacks, 482 had formats for Spanish, and 316 had formats for Asians.

In terms of primary audience, 905 stations view themselves as having primarily Black audiences, 426 Spanish audiences, 85 primarily Asian audiences, 1,369 primarily female audiences, and 123 primarily American Indian audiences.

The continuous variables show that the percentage of Blacks in the counties range from as low as 0 to as high 84 percent, with a county-wide average of 13.6 percent Blacks, 8.53 percent Spanish, and 2.78 percent Asian.<sup>65</sup> Counties contain from 1 to 74 radio stations, with an average of 10.4 radio stations per county. Ten percent of the radio stations (excluding that of the respondent) have a Black format, 6 percent a Spanish format, and 4 percent an Asian format.

For the format and primary audience variables we have not used the information con-  
response data) the percentage of stations that programmed primarily for Blacks or Hispanics within each Arbitron market. Then we took information from Arbitron Ratings: Radio Ethnic Composition Report (Summer 1986) for the identical 51 Arbitron markets. The Ethnic Composition Report reports on the percentage of Black or Hispanic listeners for radio stations in any market having at least 10% Black or Hispanic population. Using the definition that when a station's audience was over 50 percent Black or Hispanic, we classified radio stations into primary Black or primary Hispanic stations. For the 51 markets in which we could make the comparison, we found that the Arbitron data show that 12.7 percent of radio stations have a Black format. The corresponding data from the FCC survey shows that 11.6 percent of the stations primarily target Black listeners. The Arbitron data shows that 7.1 percent of the stations have a predominantly Hispanic audience, while the FCC survey shows that 7.8 percent of the stations target Hispanics. In neither case is the paired comparison of means significantly different from one another. This comparison indicates that the survey responses are likely to be unbiased measures of audience composition.

<sup>65</sup>Table 2 presents the non county-wide percentages for Blacks, Spanish, and Asian of 9.83 percent, 3.89 percent, and 1.15 percent, respectively.

tained in the survey indicating whether the number of hours of programming exceeded 20 rather than being between 1 and 19. Instead we simply record the information discretely that a radio station has a Black format or has a primary audience which is Black, regardless of the number of hours. For example, if a respondent in Question G checked 17 (Spanish) in either the 20+ Hours category or in the 1-19 Hours category, we regarded that as a Spanish format. Had the gradations in the number of hours of programming been finer it may have been appropriate to attempt to explain the number of hours of a particular type of programming conducted by the station.

The survey did not elicit very precise information on the number of hours of programming and, therefore, we chose to model simply the discrete choice by the station of its programming formats and primary audience. Since these latter variables are discrete, taking on the values 0 and 1 to represent the presence of a certain kind of format or its absence by a radio station, we use a binary logit model to estimate the probability that a station chooses to provide a given type of format.<sup>66</sup>

## 3.2 Results

In Table 4 we specify the logistic probability model for format and primary audience programming as a function of the variables described. In particular, we present a series of similar specifications across the programming choices, wherein we relate the choice by a radio station to provide a given type of minority format or primary audience programming to the ownership compositions, the presence or absence of special programs by which the license had been acquired, the commercial status, the presence of minority owner-managers, and number and percentage of radio stations present in the market who also programmed a particular format. Each specification contains the identical set of explanatory variables so that we can examine the effect of Black ownership on Black programming, the effect of Hispanic ownership on Spanish programming, as well as the effect of Black ownership on Spanish programming. Therefore, we do not rule out a priori patterns of correlation in the choices and the patterns of significance wherein minority ownership can lead to lower probability of programming for another minority group. In table 4 we report the coefficient and indicate which coefficients were significant at the 5 percent significance level. These are shown with double asterisks. Where coefficients were significant at the 10 percent significance level we use one asterisk. The 8 columns of the table are, respectively, Black format, primary Black audience, Spanish format, primary Spanish audience, Asian format, primary Asian audience, primary female, and primary American Indian audience.

We are primarily interested in the pattern of effects of the variables in these ta-

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<sup>66</sup>See, e.g., McFadden, "Conditional Logit Analysis of Qualitative Choice Behavior," in *Frontiers in Econometrics*, 105 (P. Zarembka ed., 1973), for examples of the multinomial logit model.

bles. Starting with the ownership percentage, we find that Black formatting and Black programming are significantly affected by Black ownership. OWNB, the variable that represents any significant degree of Black ownership significantly affects the format and primary target audience of the radio station. Black ownership also significantly increases the likelihood of programming in Spanish and of targeting females. Spanish ownership at any significant level has a significant impact on Spanish programming. The variable which represents Asian ownership, OWNA, significantly affects only the tendency of stations to use an Asian format, and not the tendency to target Asian listeners.<sup>67</sup> Interestingly, female ownership has a significant impact on Black programming, on Spanish programming,<sup>68</sup> on targeting Asian listeners,<sup>69</sup> on targeting female listeners, and a significant impact on American Indian programming. Therefore, the pattern of results in these tables suggests that, while Black, Spanish and American Indian ownership significantly affect the programming for those minority groups, *a higher degree of female ownership leads to a significantly more diverse set of programming for minorities, generally.*

It would be reasonable to conclude that the hypothesis that minority ownership affects minority programming (Hypothesis 3) is generally accepted. More particularly, Hypotheses 3.1 (Hispanic), 3.2 (Black) and 3.4 (female) are all confirmed—Hispanic owners are more likely to program Spanish formats and target Hispanic listeners; Black owners are more likely to program Black formats and target Black listeners; and female owners are more likely to program women’s formats and target women. Only Hypothesis 3.3—that Asian/Pacific Islander owners will be more likely to program for Asian/Pacific Islanders—is left in uncertain status. It is important to remember that we have controlled in these regressions for the audience composition and that the audience composition itself significantly and sensibly influences the format and programming types. For example, as the percentage of Black population represented in the radio station’s home county increases, the probability that either the format of the radio station will be Black or the targeted audience is primarily Black increases significantly. As the percentage of Hispanic population increases, the likelihood both of Spanish programming and of targeting Hispanic listeners increases. Also, as the percentage of Asian population in the county increases, we find both more Asian format programming and more targeting of Asian listeners. In some cases, there are cross effects as well. For example, as the percentage of Blacks in the county increases, a broadcaster tends to provide more programming for Blacks and less programming for all other types. Similarly, as the percentage of Hispanics increases, less programming is provided for Blacks and females. Taken together these results show that the composition of the audience causes a direct form of competition for format and subject matter during airplay, thereby confirming Hypothesis 1.

To test Hypothesis 7—that increasing minority ownership will lead to increases in minority programming in the market—we examined whether increases in minority ownership

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<sup>67</sup>Asian owners also tend to target Hispanics and to program in Spanish.

<sup>68</sup>OWNF has no significant effect on targeting Spanish listeners, however.

<sup>69</sup>OWNF has no significant effect on asian formatting, however.

result in net increases in the amount of minority programming in the market, or whether minority-owned stations increase their likelihood of minority programming at the expense of other stations. We aggregated the FCC and census data to the county/state level and constructed, for Blacks and Hispanics, aggregate measures for the percentage of minorities in the population, the percentage of noncommercial stations in the market, and the percentage of minority-owned stations. We ran tobit estimations, with aggregate percentage of minority format radio stations as the dependent variable. As the results from table 5 show, increasing the percentage of minority-owned stations in a market significantly (at 10%) increases the percentage of minority format radio stations in the market. Thus, Hypothesis 7 seems to be confirmed.

Ownership characteristics can increase the likelihood that a broadcaster will provide a specific type of minority format beyond that which we would expect from audience demands, but minority owners are not less likely to provide programming for other minority groups. Therefore, we tentatively conclude that even after controlling for the composition of the market, a policy which stimulates and encourages minority ownership of broadcasting stations produces additional programming for minority groups. Further, such a policy does not seem to reduce the amount of programming for any particular minority group below that which is called for in the marketplace; i.e., as demanded by the composition of minorities in the market.

The pattern of effects for the number of stations is mixed. Taken together it would be difficult to conclude that markets with more radio stations or fewer radio stations lead to a certain type of minority programming; consequently, Hypothesis 2 cannot be confirmed. What is clear, however, is that a percentage of other stations broadcasting a certain minority type of programming significantly influences additional programming of that minority type. We find, through the variables PRSTABLK, PRSTASPA, and PRSTAASI, that a higher percentage of stations (excluding the respondent) choosing, for example, a Black format, makes it more likely that the respondent's station also engages in Black programming. This is true for Spanish and Asian programming as well. Thus, Hypothesis 4(b) is accepted, while Hypothesis 4(a) is rejected.<sup>70</sup>

Looking now at the effects of owner-managers of a given minority-type on programming (BLKOM, SPAOM, ASIOM, FOM, OM), we find no discernable effects across the columns, even for the owner-managers variable; OM significantly reduces the targeting of

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<sup>70</sup>This result is somewhat at odds with the predictions from the basic economic theory of programming choice. According to the basic theory, marginal programmers should be less likely to program a given format if there are more stations already programming that format. See "Justifying Minority Preferences," supra note 31. Our empirical results likely stem from one of three sources. First, our survey analysis centers on inframarginal decisions, not just marginal ones. Hence, our results may tend to reflect average, rather than marginal tendencies. Second, the existence of a successful minority format programmer in a market may signal the possibility of earning a profit with that format in that market, resolving uncertainty for other radio stations. Third, existing radio stations may shape listeners' preferences with their programming, rendering "copycat" programming more profitable.

Asian listeners, but increases Black programming and the targeting of female listeners. These results reveal no pattern. Further, minority owner-managers clearly have no significant effect. Table 4 shows that Black owner-managers are no more likely to program for Blacks, Hispanic owner-managers are no more likely to program in Spanish, and so forth. The ownership variables may produce key effects on the programming formats, but *integrating minority owners into management has no effect on programming*; Hypothesis 5 is therefore rejected.<sup>71</sup>

Regarding the other indicator variables, noncommercial stations universally programmed more for minority groups across all of the models. Also, the fact that a station license was acquired through a distress sale, a preference hearing, or a tax certificate does not seem to have a particularly significant effect on the programming format, which seems to confirm Hypothesis 6. While some of the coefficients for the tax variables are significant, the effects are not present in a sufficiently consistent manner across the specification to lead us to conclude that these indicators have a significant effect on the programming format.

To sum up the test of our hypotheses,<sup>72</sup> then, we have seen that minority ownership has a distinct and significant impact on minority programming. This is true even after we control for the composition of minorities in the marketplace. Programming also responds to composition of minorities in the marketplace. The magnitude of the coefficients for Black ownership on Black programming and Spanish ownership on Spanish programming are significantly larger than the coefficient for female ownership on female programming. We also see, however, that a greater degree of female ownership leads to increases in programming targeted to several other minority groups. Stations with female ownership are more likely to program primarily for females, but are also likely to increase programming for Blacks, Hispanics, Asians and American Indians. The combined effects are similar in magnitude to those for the minority group owners taken separately. Thus, an increase in female ownership will have an overall impact on minority programming of a magnitude similar to what one would expect to get from, for example, a larger degree of Black ownership on Black programming. To increase Black programming it may be more effective to increase the number of Black owners. To increase minority programming overall it would be at least as effective to increase the number of female owners. We did not find

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<sup>71</sup>It is possible that some difference in the way owner-managers and hired managers filled out the FCC survey masked some underlying true differences in programming. For example, if female owner-managers tended to program more for minority audiences than did female owners who did not manage their stations, but female owner-managers reported their programming honestly, while female owners hired managers who over reported the degree to which the stations programmed for minorities, then it would be possible that the survey data would show no effect, despite the truth to the contrary. We regard the difference in reporting hypothesis as possible, but unlikely. At this stage the burden of proof must shift to those who would defend the integration of ownership with management policies at the FCC to demonstrate a real effect.

<sup>72</sup>We get similar results from the logit utilizing the ownership variables clustering from 10% to 20%, from 20% to 50%, and greater than 50%. These can be found in Table 3.

that increasing the number of radio stations in a market increased the amount of minority programming, but we did find that radio stations may be using the presence of other stations in the market which program for minorities as a signal to guide the stations in their programming choices. As the percentage of other stations programming for a given minority group increases, the likelihood that the respondent's station will program for that minority group increases, as well. Finally, we found no effects from the integration of ownership and management.

## 4 Implications

There are at least three important implications of the results in section IV. First, one can make a strong argument that the minority preference policies are an effective method of producing some types of diversity in programming. Numerous problems inherent in the FCC survey prevent us from being as certain about this conclusion as we might be. The FCC survey failed to include any definition of minority programming, relying on respondents to make what they wished of crucial survey terminology. In addition responses were never cross-checked against underlying facts, so it is possible that the responses reflected nothing more than differing rates of perception between respondents with minority owners and respondents with no minority owners. However, our own comparison of aggregate results from the FCC survey data and from Arbitron data tends to confirm the reliability of the FCC survey.<sup>73</sup> All things considered, we believe that the results probably contain a significant amount of validity.

Does our analysis of the FCC survey data support normative arguments for the minority preference policies? The answer depends upon which arguments supporting the minority preferences one considers. To see this consider the various arguments for minority preferences. There are two basic types of arguments for the minority preference policies: reparations and freedom of speech. The reparations idea starts with a claim that the FCC discriminated against women and minorities when it distributed radio and television rights from 1927 (the inception of the Federal Radio Act) to (at least) the 1960's. To correct this injustice the argument runs, the FCC should do something to increase the number of broadcasting station owned by women and minorities.<sup>74</sup> The minority preference policies, which are supposed to produce such an increase, respond directly to the need for corrective justice. Such an argument, based on righting historical wrongs, would not use the evidence about the connection between the race or sex of a broadcaster and his or her choice of programming. Hence, if someone were to rely on a reparations argument to justify minority preferences in broadcasting, this article's data analysis would neither support nor undermine the normative argument for the minority preferences.

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<sup>73</sup>See discussion in note 71, *supra*.

<sup>74</sup>See "Justifying Minority Preferences," *supra* note 31.

Freedom of speech arguments can also be used to support the minority preference policies, and some of them draw strength from our data analysis. One version of freedom of speech centers on individual rights to communicate and exchange ideas, free of governmental control or manipulation.<sup>75</sup> This version of freedom of speech cannot easily be used to support minority preferences within a governmental scheme that allocates the right to broadcast administratively. Indeed, such a notion of freedom of speech might lead to a complete dismantling of governmental regulation of broadcasting.<sup>76</sup> An alternative version of freedom of speech maintains that we value the freedom for its utility to our society in general, and in particular to our democratic form of government. Freedom of speech helps us to separate truth from falsehoods, to choose useful and effective ideas from the welter of gibberish and nonsense, and to advance the course of science. Such freedoms also help us to communicate with our representatives in Congress and the White House, to inform them of our desires and hopes, and to warn them of impending defeat at the polls should they fail to listen. We can also communicate with other citizens, telling them of our beliefs about good social policy, and about misfeasance by those in office. This version of freedom of speech can be used to fashion a plausible argument for minority preferences. The supportive argument begins with the assertion that to fully participate in society, all segments of society must be adequately served by communication, particularly from the mass media. Next, the argument claims that minorities and women are under served, and that the lack of service provides an impediment to full participation by minorities and women in the society. Consequently, government should do something to increase the service in our communications industry, including broadcasting, to minorities and women. Minority and female owners will tend to program more for minority and female audiences than will white male owners. Hence, the minority preference policies, which are designed to increase the number of stations owned by minorities and women, will increase service to minorities and women, and reduce barriers to their full participation in society and democracy. Our data analysis could help to support such an argument

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<sup>75</sup>See generally Martin H. Redish, *Freedom of Expression: A Critical Analysis* (1984); Lee C. Bollinger, *Images of a Free Press* (1991); Frederick Schauer, *Free Speech: A Philosophical Enquiry* (1982); Steven H. Shiffrin, *The First Amendment, Democracy, and Romance* (1990); and C. Edwin Baker, *Human Liberty and Freedom of Speech* (1989).

<sup>76</sup>See Jonathan Emord, *Freedom, Technology, and the First Amendment* (1991). There is a version of the individual freedom argument, married to the reparations argument, that conceivably might support minority preferences argument. Such an argument would proceed as follows: For many years the FCC unfairly discriminated against minority and female applicants for broadcasting licenses. The resulting distribution unfairly restricted the freedom of minorities and women to communicate and express their ideas. To correct this imbalance the FCC should now make sure that substantial numbers of broadcasting licenses end up in the hands of minorities and women.

The problem with such an argument is that the freedom of speech occupying center stage in the argument is quintessentially individual in nature. One would have to find the people who were denied the licenses and give them licenses now. Many years have passed since the original unfairness, and most of those who were wronged are likely dead or in old-age homes.

The alternative arguments, focussing on social democracy, have much more appeal. See discussion in text.

for minority preference policies.<sup>77</sup>

We take no position on the various normative beliefs, implicit or explicit in such an argument for minority preference policies.<sup>78</sup> Hence, we neither affirm nor reject the policies as a normative matter.

Second, Judge Thomas' opinion in *Lamprecht v. FCC* seems to have been based on some very primitive data analysis. Judge Thomas claimed, based on tables like the ones in the Appendix to this article, that giving broadcast licenses to women was a comparatively ineffective method of producing diverse programming. Given Judge Thomas' training as a lawyer, and given the limited resources of the courts, that may have been the best that could be done. However, this Article provides a significant advance over Judge Thomas' analysis, and shows that his conclusions were probably wrong. We show that *once we control for the market, women program more for virtually all minority groups, as well as for women*. Giving licenses to women seems to be a very effective way of diversifying broadcasting content. It is possible that if Judge Thomas had these results at the time of decision, his legal opinion may well have been different.<sup>79</sup>

Third, the FCC's reliance on integration of ownership with management as a primary criterion for awarding broadcast licenses seems to be seriously misguided. We could find no effect from integration of ownership into management. This result was clearest for minority owners, but also seemed to be true for nonminority owners. Hence, integration of ownership with management is generally irrelevant to programming, at least in any way the FCC might find desirable. This leaves only the argument that integrated owners will be more attentive to FCC rules and regulations—a pretty thin argument for choosing one applicant over another. In short, the burden of proof should now shift to those who would argue in favor of retaining the integration criterion.

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<sup>77</sup>As we indicated at note 61, *supra*, it is possible that minorities or women could use the same formats as white males, but present the formats in somewhat different fashions. For example, a female owner might present the news with a female point of view, yet fail to report that she uses a distinctive format, or that she targets women listeners. Such a possibility means that there may be some potentially measurable data that could further support such an argument for minority preferences.

<sup>78</sup>In particular, using the race or sex of an individual to award valuable governmental rights and benefits, when that particular individual has not been shown to have been harmed by any prior governmental or private discrimination, is highly controversial. We take no position on this issue. In addition, there is the distinction between the quantity of programming offered and the amount actually viewed. Public access cable television, for example, could be justified on a similar argument to the one in text for minority programming. However, viewership of access channels is infinitesimal, rendering any argument for access programming on cable television highly problematic.

<sup>79</sup>It is the responsibility of litigants, not the judge, to provide complex and sophisticated data analyses to the court. Our comment on Judge Thomas' opinion should not be read so as to fault him in any way for having failed to produce the sort of data analysis contained in this Article.

## APPENDIX A

### Percent of Stations in Ownership Groups Programming for Target Groups 1% to 100% Ownership

#### Programming Target Groups

Owner Groups	Black	Hisp	Asian/Pac	Ind/Alask	Women	Child	Seniors
No Min.	20	10	3	4	18	18	23
Black	65	22	15	11	42	31	29
Hispanic	35	59	15	17	42	29	27
Asians/Pacific	25	28	16	9	30	17	19
Indian/Alask	29	8	6	32	50	51	46
Women	26	13	5	5	35	20	26

APPENDIX B

Table 1

Ownership Interests		Percentage That Broadcast Relevant Programming
Blacks	51 to 100%	79% Black programming
	0	20
Hispanics	51 to 100%	74% Hispanic
	0	10
Asians/Pacific	51 to 100%	25% Asians/Pacific
Islanders	0	3
Indians	51 to 100%	46% Indian/Alaskan
Alaskans	0	4
Women	51 to 100%	35% Women's
	0	28

(Source: Minority Programming figure 5A, at 14; figure 6A, at 15; figure 7A, at 16; figure 8A, at 17; figure 9A, at 18.)

Table 2

Ownership Interests		Percentage That Broadcast Relevant Programming
Blacks	51 to 100%	79% Black programming
	1 to 50%	60
Hispanics	51 to 100%	74% Hispanic
	1 to 50%	53
Asians/Pacific	51 to 100%	25% Asians/Pacific
Islanders	1 to 50%	14
Indians/	51 to 100%	46% Indian/Alaskan
Alaskans	1 to 50%	23
Women	51 to 100%	35% Women's
	1 to 50%	35

(Source: Minority Programming figure 5A, at 14; figure 6A, at 15; figure 7A, at 16; figure 8A, at 17; figure 9A, at 18.)

Table 3

**Five Large Cities:**

(New York, Los Angeles, Chicago, Dallas, Atlanta)

Ownership Interests (1 to 100%)    % That Broadcast Women's Programming

1. Hispanics	59%
2. Asians/Pacific Islanders	50
3. Indians/Alaskans	50
4. Blacks	42
5. Women	33
6. Non-minorities	27

(Source: Minority Programming at 65)

Table 4

**All Cities**

Ownership Interests (1 to 100%)    % That Broadcast Women's Programming

1. Indians/Alaskans	50%
2. Hispanics	42
3. Blacks	42
4. Women	35
5. Asians/Pacific Islanders	30
6. Non-women (Men)	28

(Source: Minority Programming figure 9A, at 18)

Table 5

**All Cities**

Ownership Interests (1 to 100%)    % That Broadcast Women's Programming

1. Indians/Alaskans	50%
2. Hispanics	49
3. Blacks	47
4. Asians/Pacific Islanders	35
5. Women	35
6. Non-women (Men)	28

(Source: Minority Programming figure 9A, at 18)

Table 6

**All Cities**

Ownership Interests (1 to 100%)    % That Broadcast Asian/Pacific Programming

1. Asian/Pacific Islanders	16%
2. Hispanics	49
3. Blacks	11
4. Indians/Alaskans	6
5. Women	5
6. Non-Asians/Pacific Islanders	3

(Source: Minority Programming figure 7A, at 16)

Table 7

**All Cities**

Ownership Interests (1 to 100%)	% That Broadcast Hispanic Programming
1. Hispanics	59%
2. Asians/Pacific Islanders	28
3. Blacks	22
4. Women	13
5. Non-Hispanics	10
6. Indians/Alaskans	8

(Source: Minority Programming figure 6A, at 15)

Table 8

**All Cities**

Ownership Interests (1 to 100%)	% That Broadcast Indian/Alaskan Programming
1. Asians/Pacific Islanders	32%
2. Hispanics	17
3. Blacks	9
4. Asians/Pacific Islanders	9
5. Women	5
6. Non-Indians/Alaskans	4

(Source: Minority Programming figure 8A, at 17.)

Table 9

**All Cities**

Ownership Interests (1 to 100%)    % That Broadcast Black Programming

1. Blacks	65%
2. Hispanics	35
3. Indians/Alaskans	29
4. Women	26
5. Asians/Pacific Islanders	25
6. Non-Blacks	20

(Source: Minority Programming figure 6A, at 15)

Table 10

**Ten Most Used Formats (of 22)**

Non-Minorities	Women
1. Religious	1. Religious
2. Adult Contemporary	2. Adult Contemporary
3. Country & Western	3. Country & Western
4. Talk	4. All News
5. Agriculture & Farm	5. Talk
6. All New	6. Agriculture & Farm
7. Golden Oldies	7. Golden Oldies
8. Other	8. Other
9. Education	9. Education
10. Middle of the Road	10. Jazz
Two Least Used Formats (of 22)	
1. Foreign Language	1. Foreign Language
2. American Indian	2. American Indian

(Source: Minority Programming table 3, at 38.)

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**APPENDIX C**  
**MINORITY OWNERSHIP SURVEY**

In order to determine the effects of its minority and female ownership policies, the Federal Communications Commission needs information on the sex and race or ethnic background of broadcast station owners. Please answer the following questions and return this form by April 30, 1987 to Federal Communications Commission, Room 822, 1919 M Street N.W., Washington, DC 20554, Attention: Minority Ownership Study.

Station Call Letters  _____	Community of License  _____	Class of Service  ___ AM ___ FM ___ TV  ___ Commercial  ___ Non-commercial
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A. Do women or members of racial or ethnic minority groups hold ownership interests in this station? (If the answer is Yes, complete the rest of the form. If the answer is No, skip to question E.)

\_\_\_ Yes      \_\_\_ No

B. If members of racial or ethnic minority groups hold ownership interests in this station, give the percentage interest held by each group. See page 4 for definitions of minority groups.

MINORITY GROUP	PERCENTAGE INTEREST
1. Black, not of Hispanic origin	_____
2. Hispanic	_____
3. American Indian or Alaskan Native	_____
4. Asian or Pacific Islander	_____
5. MINORITY TOTAL	_____
	If this constitutes a controlling interest, check here. _____

C. If women hold ownership interests in this station, give the percentage interest held by women.

\_\_\_\_\_ If this constitutes a  
controlling interest,  
check here. \_\_\_\_\_

D. When this station was acquired by the current owners, were any of the following F.C.C. policies involved?

	Yes	No
1. Distress sale	_____	_____
2. Preference for women or minority group members in comparative hearings	_____	_____
3. Tax certificate	_____	_____

E. Do owners of this station hold management positions with the station?

Yes	No
_____	_____

F. For each owner who holds a management position with this station, give the title of the management position and the percentage share of ownership the person holds. Check the appropriate column for the number of hours worked per week. State the person's minority group membership, if any, and the person's sex. Check if the person has previous broadcast experience.

Job Title	% Ownership	Hours per Week			Minority Group	Sex	Previous Broadcast Experience
		1-19	20-39	40+			

G. Format (radio stations only). In Column I, check types of programming this station broadcasts for more than 20 hours per week. In Column II, check types of programming this station broadcasts, but for less than 20 hours per week. Check all that apply.

I.		II.		I.		II.	
20 +		1-19		20 +		1-19	
Hours		Hours		Hours		Hours	
1. _____	_____	_____	Adult Contemporary	12. _____	_____	_____	Golden Oldies
2. _____	_____	_____	Agriculture & Farm	13. _____	_____	_____	Jazz
3. _____	_____	_____	All News	14. _____	_____	_____	Middle of the Road
4. _____	_____	_____	American Indian	15. _____	_____	_____	Progressive
5. _____	_____	_____	Beautiful Music	16. _____	_____	_____	Religious
6. _____	_____	_____	Big Band	17. _____	_____	_____	Spanish
7. _____	_____	_____	Black	18. _____	_____	_____	Talk
8. _____	_____	_____	Classical	19. _____	_____	_____	Top 40
9. _____	_____	_____	Country & Western	20. _____	_____	_____	Urban Contemporary
10. _____	_____	_____	Educational	21. _____	_____	_____	Variety
11. _____	_____	_____	Foreign Language (other than Spanish)	22. _____	_____	_____	Other

H. Is the programming of this station directed primarily to any of the following groups? If not, does the station provide any special programming directed specifically to member of these groups? Check the number of programming hours applicable.

GROUP	PRIMARY AUDIENCE		SPECIAL PROGRAMMING	
	I.	II.	I.	II.
	20 + Hours	1-19 Hours	20 + Hours	1-19 Hours
1. Black	_____	_____	_____	_____
2. Hispanics	_____	_____	_____	_____
3. Asians or Pacific Islanders	_____	_____	_____	_____
4. American Indians or Alaskan Natives	_____	_____	_____	_____
5. Combinations of Minority Groups	_____	_____	_____	_____
6. Foreign Language Speakers (Non-Hispanic)	_____	_____	_____	_____
7. Women	_____	_____	_____	_____
8. Children	_____	_____	_____	_____
9. Senior Citizens	_____	_____	_____	_____

Table 2

## Descriptive Statistics

Variable	Number of Radio Stations Where Variable Indicates Presence
OWNB10	92
OWNB20	60
OWNB50	156
OWNS10	27
OWNS20	27
OWNS50	75
OWNI10	9
OWNI20	12
OWNI50	32
OWNA10	9
OWNA20	10
OWNA50	10
OWNF10	1740
OWNF50	920
DIS	51
PRE	72
TAX	63
NCOM	1019
BLKOM	91
SPAOM	49
ASIOM	2
FOM	643
OM	3113
BLKFOR	810
PRIBLK	905
SPAFOR	482
PRISPA	426
ASIFOR	316
PRIASI	85
PRIFEM	1369
PRIAMI	123
Number of Observations	7462

VARIABLE	MIN	MAX	MEAN	STDDEV
PERBLK	0	84.2	9.83	12.8
PERSPA	0	82.7	3.89	8.61
PERASI	0	67.7	1.15	4.46
RSTA	1	74	10.41	12.55
PRSTABLK	0	100	10.18	18.35
PRSTASPA	0	100	5.96	13.23
PRSTAASI	0	100	4.03	11.13
OWNB	0	100	2.37	13.48
OWNS	0	100	1.03	8.8
OWNI	0	100	0.47	6.33
OWNA	0	100	0.19	3.38
OWNF	0	100	14.39	23.66

Table 3

VARIABLE	ASIFOR	PRIASI	PRIFEM	PRIAMI
cons	-4.179 ** (27.745)	-5.516 ** (18.498)	-1.703 ** (24.899)	-4.308 ** (18.424)
ownb10	0.032 (0.068)	-1.613 (1.550)	-0.744 ** (2.328)	-1.072 (1.511)
ownb20	0.055 (0.099)	-0.112 (0.172)	-0.128 (0.388)	-0.040 (0.052)
ownb50	0.280 (0.456)	-2.703 (1.166)	-0.471 (1.399)	0.270 (0.264)
owns10	1.417 ** (2.319)	-9.403 (0.057)	0.999 ** (2.293)	2.210 ** (3.045)
owns20	0.819 (1.106)	-9.531 (0.066)	-0.617 (0.948)	1.250 (1.431)
owns50	1.017 * (1.862)	-0.133 (0.124)	-0.907 * (1.780)	1.150 (1.643)
owni10	-8.322 (0.081)	-10.701 (0.034)	1.858 ** (2.538)	2.226 ** (2.725)
owni20	-8.810 (0.108)	-9.060 (0.039)	-1.211 (1.133)	2.123 ** (1.975)
owni50	1.124 * (1.733)	-9.508 (0.064)	-0.082 (0.178)	3.748 ** (7.841)
owna10	1.174 (1.305)	-12.726 (0.050)	-8.784 (0.116)	-7.642 (0.060)
owna20	1.037 (1.183)	-12.192 (0.072)	-0.149 (0.182)	-9.038 (0.073)
owna50	3.011 ** (3.465)	0.535 (0.426)	-10.042 (0.116)	-7.838 (0.057)
ownf10	-0.047 (0.295)	0.777 ** (2.917)	0.214 ** (2.801)	0.628 ** (2.730)
ownf50	-0.365 (1.524)	1.028 ** (2.754)	0.422 ** (4.145)	0.688 ** (2.143)
dis	0.552 (0.909)	0.567 (0.469)	0.780 ** (2.382)	-7.421 (0.130)
pre	0.155 (0.239)	-13.568 (0.124)	-0.351 (1.022)	-0.742 (0.764)
tax	-1.539 (1.340)	2.113 ** (2.439)	1.441 ** (4.561)	1.486 ** (1.995)
ncom	1.054 ** (6.629)	2.032 ** (7.669)	0.596 ** (6.405)	1.579 ** (6.810)
perblk	-0.452 (0.745)	-1.193 (0.993)	-0.530 ** (1.987)	-8.809 ** (4.752)
perspa	-1.960 * (1.757)	-1.371 (0.751)	-0.729 (1.623)	-2.364 (1.542)
perasi	1.257 (1.389)	6.716 ** (7.978)	-4.673 ** (2.518)	-2.833 (0.552)
rsta	0.024 ** (6.809)	-0.016 (1.579)	-0.010 ** (3.230)	-0.028 ** (2.125)
prstabl	0.372 (1.042)	1.013 * (1.806)	0.419 ** (2.515)	1.108 ** (2.391)
prstaspa	0.489 (1.008)	2.028 ** (3.044)	0.136 (0.520)	0.645 (1.000)
prstaasi	4.734 ** (15.296)	2.430 ** (4.112)	-0.338 (1.141)	2.139 ** (4.461)
blkom	-1.515 (1.308)	3.359 (1.443)	-0.337 (0.782)	0.868 (0.617)
spaom	-0.389 (0.560)	-8.130 (0.070)	0.454 (0.812)	0.896 (0.906)
asiom	-0.116 (0.067)	11.089 (0.143)	13.212 (0.153)	2.877 (0.008)
fom	0.834 ** (3.187)	0.743 (1.155)	-0.019 (0.158)	0.337 (0.795)
om	0.168 (1.056)	-1.256 ** (2.887)	0.440 ** (6.210)	-0.440 (1.545)
log likelihood (initial)	-5172.300	-5172.300	-5172.300	-5172.300
log likelihood (at conv)	-1094.70	-365.07	-3450.00	-495.64
number of observations	7462	7462	7462	7462
percent correctly predicted	95.91	98.83	81.76	98.50

(t-statistics) are below the parameter estimates

\* denotes significance at the 90% level

\*\* denotes significance at the 95% level

Table 3

VARIABLE	BLKFOR	PRIBLK	SPAFOR	PRISPA
cons	-3.372 ** (33.555)	-3.314 ** (33.317)	-3.690 ** (30.009)	-3.983 ** (29.334)
ownb10	-0.122 (0.421)	0.024 (0.082)	0.677 ** (2.053)	-0.371 (0.833)
ownb20	0.869 ** (2.939)	0.615 ** (2.012)	0.565 (1.368)	0.107 (0.215)
ownb50	1.775 ** (6.237)	2.892 ** (9.407)	0.246 (0.492)	-0.119 (0.208)
owns10	0.402 (0.716)	0.263 (0.437)	0.787 (1.557)	1.854 ** (3.760)
owns20	1.390 ** (2.667)	0.497 (0.749)	1.963 ** (3.953)	1.900 ** (3.705)
owns50	-0.968 (1.267)	-0.432 (0.639)	3.053 ** (8.327)	3.499 ** (9.151)
owni10	1.254 (1.625)	-9.422 (0.095)	-8.699 (0.088)	0.750 (0.694)
owni20	-0.365 (0.407)	-1.180 (0.985)	-0.691 (0.600)	-9.461 (0.107)
owni50	0.513 (1.014)	-0.549 (0.739)	-0.640 (0.678)	-1.871 (1.520)
owna10	-0.181 (0.155)	-8.960 (0.103)	-8.817 (0.094)	-9.039 (0.081)
owna20	-0.398 (0.344)	-9.131 (0.098)	0.456 (0.483)	0.824 (0.841)
owna50	-7.737 (0.166)	1.148 (1.212)	1.359 (1.501)	1.917 ** (2.151)
ownf10	0.155 (1.503)	0.290 ** (2.891)	0.290 ** (2.273)	0.133 (0.946)
ownf50	0.285 ** (2.023)	0.364 ** (2.647)	0.444 ** (2.537)	0.162 (0.811)
dis	0.691 * (1.717)	0.371 (0.825)	-0.035 (0.051)	-0.631 (0.722)
pre	0.170 (0.464)	-0.029 (0.071)	0.455 (0.957)	0.548 (1.061)
tax	0.536 (1.538)	0.886 ** (2.224)	-0.150 (0.264)	0.417 (0.778)
ncom	1.518 ** (14.350)	1.238 ** (11.241)	0.885 ** (6.443)	1.177 ** (8.371)
perblk	3.360 ** (12.040)	5.059 ** (18.593)	-1.079 * (1.882)	-1.839 ** (2.772)
perspa	-0.691 (0.942)	-2.424 ** (2.660)	4.188 ** (9.726)	6.163 ** (13.132)
perasi	-0.982 (0.685)	-3.201 (1.376)	-0.346 (0.257)	-0.684 (0.445)
rsta	0.000 (0.035)	0.001 (0.147)	0.014 ** (4.283)	0.021 ** (6.555)
prstabl	1.839 ** (10.458)	0.748 ** (4.035)	-0.461 (1.236)	0.430 (1.165)
prstaspa	-0.268 (0.685)	-0.074 (0.183)	2.459 ** (8.680)	0.739 ** (2.009)
prstaasi	1.187 ** (3.729)	0.928 ** (2.746)	1.231 ** (3.208)	1.770 ** (4.597)
blkom	-0.050 (0.142)	0.462 (1.133)	-1.770 (1.593)	-0.203 (0.252)
spaom	-1.695 (1.543)	-1.721 (1.548)	0.104 (0.221)	0.380 (0.790)
asiom	0.578 (0.005)	-9.620 (0.047)	1.483 (0.816)	-10.749 (0.044)
fom	-0.077 (0.420)	-0.082 (0.477)	-0.532 ** (2.109)	-0.392 (1.348)
om	0.207 ** (2.034)	0.334 ** (3.448)	-0.020 (0.156)	-0.097 (0.660)
log likelihood (initial)	-5172.300	-5172.300	-5172.300	-5172.300
log likelihood (at conv)	-2148.50	-2206.00	-1441.60	-1242.00
number of observations	7462	7462	7462	7462
percent correctly predicted	89.19	88.93	93.80	94.81

(t-statistics) are below the parameter estimates

\* denotes significance at the 90% level

\*\* denotes significance at the 95% level

Table 4

VARIABLE	BLKFOR	PRIBLK	SPAFOR	PRISPA
cons	-3.382 ** (-34.238)	-3.283 ** (-33.828)	-3.700 ** (-30.538)	-3.994 ** (-29.705)
ownb	0.021 ** (6.792)	0.034 ** (9.648)	0.008 * (1.716)	0.001 (0.169)
owns	-0.003 (-0.432)	-0.004 (-0.586)	0.039 ** (8.833)	0.046 ** (9.341)
owni	0.007 (1.359)	-0.012 (-1.208)	-0.007 (-0.766)	-0.020 (-1.575)
owna	-0.018 (-0.809)	0.012 (1.046)	0.020 ** (2.045)	0.027 ** (2.705)
ownf	0.005 ** (2.695)	0.006 ** (3.243)	0.009 ** (3.818)	0.004 (1.605)
dis	0.737 * (1.875)	0.519 (1.198)	-0.195 (-0.281)	-0.801 (-0.865)
pre	0.165 (0.444)	-0.118 (-0.287)	0.424 (0.900)	0.388 (0.749)
tax	0.423 (1.214)	0.764 * (1.851)	-0.335 (-0.554)	0.364 (0.650)
ncom	1.531 ** (15.096)	1.175 ** (11.138)	0.980 ** (7.509)	1.197 ** (8.727)
perblk	3.375 ** (12.166)	5.024 ** (18.545)	-1.044 * (-1.830)	-1.929 ** (-2.905)
perspa	-0.433 (-0.612)	-2.206 ** (-2.473)	4.212 ** (9.769)	6.242 ** (13.302)
perasi	-0.940 (-0.674)	-3.704 (-1.617)	-0.784 (-0.588)	-1.161 (-0.762)
rsta	0.000 (-0.076)	0.000 (0.119)	0.014 ** (4.235)	0.021 ** (6.561)
prstabl	1.822 ** (10.394)	0.728 ** (3.929)	-0.507 (-1.365)	0.442 (1.197)
prstaspa	-0.296 (-0.766)	-0.129 (-0.320)	2.435 ** (8.568)	0.693 * (1.880)
prstaasi	1.202 ** (3.784)	0.953 ** (2.828)	1.249 ** (3.267)	1.759 ** (4.568)
blkom	-0.226 (-0.633)	0.203 (0.477)	-2.222 ** (-2.012)	-0.333 (-0.410)
spaom	-1.674 (-1.522)	-1.605 (-1.434)	0.193 (0.398)	0.481 (0.982)
asiom	-3.656 (-0.088)	-7.670 (-0.097)	0.948 (0.507)	-7.846 (-0.180)
fom	-0.136 (-0.732)	-0.137 (-0.779)	-0.571 ** (-2.275)	-0.395 (-1.368)
om	0.220 ** (2.161)	0.347 ** (3.579)	-0.004 (-0.027)	-0.082 (-0.554)
log likelihood (initial)	-5172.30	-5172.30	-5172.30	-5172.30
log likelihood (at conv)	-2154.10	-2205.30	-1437.50	-1235.50
number of observations	7462	7462	7462	7462
percent correctly predicted	89.12	88.97	93.78	94.84

(t-statistics) are below the parameter estimates

\* denotes significance at the 90% level

\*\* denotes significance at the 95% level

Table 4

VARIABLE	ASIFOR	PRIASI	PRIFEM	PRIAMI
cons	-4.174 ** (-28.424)	-5.373 ** (-19.041)	-1.696 ** (-25.400)	-4.193 ** (-18.841)
ownb	0.006 (0.987)	-0.017 (-1.069)	-0.006 * (-1.701)	-0.003 (-0.254)
owns	0.010 (1.590)	-0.003 (-0.209)	-0.003 (-0.643)	0.015 * (1.882)
owni	0.011 (1.648)	-0.185 (-0.562)	0.001 (0.149)	0.038 * (7.685)
owna	0.034 ** (3.275)	0.001 (0.075)	-0.025 (-1.373)	-0.021 (-0.379)
ownf	-0.002 (-0.639)	0.016 ** (3.285)	0.007 ** (4.680)	0.010 * (2.549)
dis	0.624 (1.073)	0.731 (0.646)	0.752 ** (2.313)	-7.535 (-0.141)
pre	0.004 (0.006)	-14.269 (-0.122)	-0.406 (-1.185)	-0.293 (-0.325)
tax	-1.754 (-1.446)	2.095 ** (2.420)	1.452 ** (4.595)	1.803 ** (2.524)
ncom	1.055 ** (6.852)	1.932 ** (7.412)	0.584 ** (6.483)	1.665 ** (7.385)
perblk	-0.532 (-0.879)	-1.280 (-1.067)	-0.570 ** (-2.145)	-8.879 ** (-4.854)
perspa	-1.711 (-1.581)	-1.746 (-0.941)	-0.748 * (-1.668)	-2.179 (-1.467)
perasi	1.442 * (1.714)	5.886 ** (7.035)	-4.794 ** (-2.606)	-2.532 (-0.606)
rsta	0.023 ** (6.670)	-0.015 (-1.443)	-0.010 ** (-3.077)	-0.029 ** (-2.247)
prstabl	0.363 (1.019)	0.967 * (1.728)	0.415 ** (2.498)	1.117 ** (2.451)
prstaspa	0.477 (1.000)	2.009 ** (3.039)	0.118 (0.453)	0.600 (0.942)
prstaasi	4.727 ** (15.356)	2.486 ** (4.257)	-0.334 (-1.131)	2.116 ** (4.421)
blkom	-1.757 (-1.523)	2.458 (1.380)	-0.217 (-0.495)	1.211 (0.825)
spaom	-0.145 (-0.209)	-8.197 (-0.067)	-0.107 (-0.212)	0.795 (0.809)
asiom	-0.508 (-0.278)	11.947 (0.144)	5.686 ** (2.284)	-3.279 (-0.010)
fom	0.697 ** (2.660)	0.610 (0.942)	-0.046 (-0.375)	0.355 (0.825)
om	0.166 (1.044)	-1.224 ** (-2.828)	0.451 ** (6.358)	-0.436 (-1.528)
log likelihood (initial)	-5172.30	-5172.30	-5172.30	-5172.30
log likelihood (at conv)	-1100.10	-372.46	-3460.50	-507.53
number of observations	7462	7462	7462	7462
percent correctly predicted	95.93	98.82	81.69	98.43

(t-statistics) are below the parameter estimates

\* denotes significance at the 90% level

\*\* denotes significance at the 95% level

**Table 5****TOBIT MODEL FOR AGGREGATE PERCENTAGE OF BLACK FORMAT RADIO STATIONS**

<b>VARIABLE</b>		
	constant	-0.26068 ** (7.201)
	Percentage Blacks in Population	0.92167 ** (5.280)
	Percentage Non-Noncommercial	0.32342 ** (3.594)
	Percentage Black Owned Stations	0.34753 ** (2.717)
	Sigma**2	0.16313 ** (9.972)
<b>auxiliary statistics</b>		
	log likelihood (initial)	-760.3
	log likelihood (at conv)	-327.24
	number of observations	611

**TOBIT MODEL FOR AGGREGATE PERCENTAGE OF HISPANIC FORMAT RADIO STATIONS**

	constant	-0.28109 ** (8.265)
	Percentage Hispanics in Population	1.67131 ** (6.783)
	Percentage Non-Noncommercial	-0.006 (0.066)
	Percentage Hispanic Owned Stations	0.51214 ** (2.182)
	Sigma**2	0.11879 ** (7.883)
<b>auxiliary statistics</b>		
	log likelihood (initial)	-239.22
	log likelihood (at conv)	-917.09
	number of observations	611

t-statistics are below the parameter estimates

\* denotes significance at the 90% level

\*\* denotes significance at the 95% level