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Evidence from the Postderegulation Radio Market**

THOMAS W. HAZLETT AND DAVID W. SOSA

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WAS THE FAIRNESS DOCTRINE A “CHILLING EFFECT”? EVIDENCE FROM THE POSTDEREGULATION RADIO MARKET

THOMAS W. HAZLETT AND DAVID W. SOSA*

ABSTRACT

The stated rationale for the Fairness Doctrine was to encourage more information to be aired by radio and TV stations, on the theory that private broadcasters would tend to underprovide a public good—news about important social issues. Yet, the danger has been seen, at the U.S. Supreme Court, the Federal Communications Commission, and elsewhere, that there exists a potentially unconstitutional “chilling effect”: the prospect of having to award equal (unpaid) time to dissenting points of view constitutes a tax on controversial speech. In that the Doctrine was abolished in 1987, the radio market now allows us to observe licensees’ unregulated choices in selecting the profit-maximizing quantity of informational programming. Industry data show a clear break in the trend around 1987, when informational formats began rising relative to others—evidence suggesting just the “chilling effect” feared by the Supreme Court.

I. INTRODUCTION

THE Fairness Doctrine (FD) is perhaps the most controversial content regulation that has ever been applied to broadcasters in the United States. Formally imposed by the Federal Communications Commission (FCC) in 1949,¹ it was abolished by the agency in August 1987² after a decades-long debate in the courts, law reviews, the Commission, and Congress. The Doctrine consisted of a two-pronged mandate which both radio and television

* Hazlett is Professor of Agricultural and Resource Economics and Director, Program on Telecommunications Policy, University of California, Davis; Sosa is Doctoral Student, Department of Agricultural & Resource Economics, University of California, Davis. A previous version of this paper was delivered at the Southern Economic Association meetings in New Orleans, November 1995. The authors thank session participants for their thoughtful suggestions. An anonymous referee provided helpful comments.

¹ Editorializing by Broadcast Licensees, 13 F.C.C. 1246 (1949).

² Syracuse Peace Council: Memorandum Opinion and Order, 2 F.C.C. Rcd 5043 (1987). See also Robert D. Hershey, Jr., F.C.C. Votes Down Fairness Doctrine in a 4–0 Decision, N.Y. Times, August 5, 1987, at A1.

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stations would have to meet in order to gain a license or license renewal.³ First, licensees had an *affirmative obligation* to provide coverage of “vitaly important controversial issues of interest in the community served by the broadcaster.” Second, an *equal access* mandate required licensees to “provide a reasonable opportunity for the presentation of contrasting viewpoints on such issues.”⁴ Justification for the FD stemmed from a widespread belief that informational programming (especially controversial material) might be undersupplied in an unregulated market. The Commission regularly asserted until the early 1980s that the two prongs of the FD, taken together, would increase both the coverage of controversial public issues and the presentation of diverse viewpoints on such issues, thereby remedying a market failure.⁵

The FD, however, involves the government in regulating broadcast content, a function that appears to come dangerously close to compromising the First Amendment. In the 1964 *Fairness Doctrine Primer*, which was intended to “advise broadcast licensees and members of the public of the rights, obligations, and responsibilities of [broadcasters] under the Commission’s ‘fairness doctrine,’”⁶ the FCC stated: “In passing on any [Fairness Doctrine] complaint . . . the Commission’s role is not to substitute its judgment for that of the licensee as to any . . . programming decisions, but rather to determine whether the licensee can be said to have acted reasonably and in good faith.”⁷ As ultimate arbiter over the “fair and balanced presentation of all public issues,”⁸ the FCC assumed tremendous power over licensees’ programming choices. Opponents of the FD argued that this power lent itself to abuse by regulators pressured by political factions. Self-censorship would result in a “chilling effect” on the flow of controversial speech.

Nevertheless, the Supreme Court accepted the FCC’s assertion that the

³ The Commission assigns radio and television licenses by an administrative review process. Originally licenses had to be renewed every 3 years. In 1981 the license period was extended to 5 years for television, 7 for radio. The Telecommunications Act of 1996 extends the license period to 8 years for both radio and television.

⁴ The General Fairness Doctrine Obligations of Broadcast Licensees, 102 F.C.C. 2d 145, 146 (1985). The original *equal access* directive did not specify under what conditions the licensee was to grant respondents airtime. In 1963, the FCC expanded the FD by instituting what became known as the Cullman doctrine (Cullman Broadcasting, 40 F.C.C. 576 (1963)), which required that if one side of a controversial issue was presented, the other side must also be presented, even if no one would pay for airtime.

⁵ Tim Brennan, The Fairness Doctrine and Public Policy, 33 J. Broadcasting & Electronic Media 419 (1989).

⁶ Fairness Doctrine Primer, 40 F.C.C. 598 (1964).

⁷ *Id.* at 599.

⁸ 13 F.C.C. 1251.

FD was beneficial to broadcast audiences by increasing the supply of informational programming. In the landmark 1969 decision, *Red Lion*,⁹ the Supreme Court ruled that the FD was constitutional, contingent on the validity of the Commission's assertion that the net effect of the rule on the flow of controversial speech was positive.

Because the Doctrine was abolished in 1987, we now have data with which to gauge whether a "chilling effect" was in evidence under the FD.¹⁰ The popular press, in fact, has repeatedly provided commentary that the elimination of the FD has instrumentally affected the sort of programming offered by radio and television stations. This is the first study to rigorously test for a "chilling effect." Following a brief history of the FD, we develop a partial equilibrium model that illustrates the effects of the Doctrine's incentives on broadcasters' programming decisions. Finally, we examine the effects of changes in broadcast regulation on informational programming on AM radio between 1975 and 1995. Specifically, we consider the impact of the elimination of certain content regulation in 1981, the dropping of the FD in August 1987, and the issuance of a large quantity of new licenses (particularly for FM stations) by the Commission over the period in question.

II. A BRIEF HISTORY OF THE FAIRNESS DOCTRINE

The Federal Communications Commission was created in 1934 to manage access to the airwaves according to "public interest, convenience and necessity."¹¹ In addition to developing a federal licensing system for broadcasters, the FCC identified certain types of speech as essential to upholding the public interest standard. In particular, news and public affairs program-

⁹ *Red Lion Broadcasting Co. v. FCC*, 395 U.S. 367 (1969).

¹⁰ Despite the repeal of the FD, the existence of a "chilling effect" is not simply of historical interest. Rather, it is of front-burner significance in ongoing public policy analysis. First, the prevailing regulatory structure, complete with FCC licensing in the public interest and continuing content controls including requirements for children's educational programming, depends on the empirical absence of a "chilling effect." Second, the FD could be reinstated by Congress or the FCC at any time; indeed, several efforts to codify the Doctrine arose in Congress between 1987 and 1993. Finally, the regulatory structure for new electronic media, particularly private computer networks connected via the Internet, is being crafted by Congress, the FCC, and the courts. The legality of content controls, and more generally the existence of a "chilling effect" from forced access rules such as the FD (rules promoting nonprovider speakers "free" time or mandated network participation), is likely a determinative issue.

¹¹ The FCC took over the task of licensing users of the electromagnetic spectrum, a function originally assigned the Department of Commerce and Labor in the Radio Act of 1912 and then the Federal Radio Commission in the Radio Act of 1927. See Ronald Coase, *The Federal Communications Commission*, 2 J. Law & Econ. 1 (1959); and Thomas W. Hazlett, *The Rationality of U.S. Regulation of the Broadcast Spectrum*, 33 J. Law & Econ. 133 (1990).

ming were considered especially important in the interest of maintaining an informed electorate. As the Commission stated in 1949:

It is axiomatic that one of the most vital questions of mass communication in a democracy is the development of an informed public opinion through the public dissemination of news and ideas concerning the vital issues of the day. . . . The Commission has consequently recognized the necessity for licensees to devote a reasonable percentage of their broadcast time to the presentation of news and programs devoted to the consideration and discussion of public issues of interest in the community served by the particular station. And we have recognized, with respect to such programs, the paramount right of the public in a free society to be informed and to have presented to it for acceptance or rejection the different attitudes and viewpoints concerning these vital and often controversial issues which are held by the various groups which make up the community.¹²

Furthermore, the Commission long asserted that the broadcast market was imperfect, with grave consequences for informational and public affairs programming.¹³ Because creating a knowledgeable citizenry is very nearly a pure public good, the FCC argued that licensees would be unable to internalize the benefits associated with certain format types. In its analysis of radio programming, the Commission formulated a fundamental dichotomy between entertainment and nonentertainment formats. While the Commission believed that broadcasters could internalize benefits from the provision of entertainment formats (principally music), this was not the case for non-entertainment formats, principally news, information, and public affairs programming.¹⁴

This perception of market failure found support in academic circles from traditional models of program choice first introduced by Peter Steiner in 1952.¹⁵ Extending Hotelling's¹⁶ work on locational competition, Steiner (and later authors) concluded that in a market characterized by monopolistic

¹² 13 F.C.C. 1249.

¹³ The perception of this source of market failure was widely held. For example, Judge David L. Bazelon, who was among the most vocal critics of the FD, argued, ironically, that news and public affairs programming "is a perennial loss leader and arguably without FCC intervention to insist upon it, a requirement found in the Fairness Doctrine, licensees might just do away with it" (David L. Bazelon, *FCC Regulation of the Telecommunications Press*, 1975 *Duke L. J.* 213 (1975)).

¹⁴ The FCC used the terms "informational programming" and "nonentertainment programming" interchangeably when regulating program content. See *Deregulation of Radio: Notice of Proposed Rulemaking*, 73 F.C.C. 2d 457 (1979); and *Deregulation of Radio: Report and Order*, 84 F.C.C. 2d 968 (1981). This illustrates the regulatory view that news and public affairs shows were not "entertaining" and would, hence, be undersupplied.

¹⁵ Peter O. Steiner, *Program Patterns and Preferences, and the Workability of Competition in Radio Broadcasting*, 66 *Q. J. Econ.* 194 (1952).

¹⁶ Harold Hotelling, *Stability in Competition*, 34 *Econ. J.* 41 (1929).

competition, broadcasters will choose formats of “excessive sameness.” This conclusion corresponded with the common recognition that the three major broadcast TV networks routinely aimed for the “lowest common denominator,” exhibiting widespread conformity in programming production choices. As Owen and Wildman note: “Steiner-type models have been enormously successful in academic and policy circles because of . . . the consistency of their results with the perceived failure of the advertiser-supported broadcast industry to satisfy consumers’ diverse tastes.”¹⁷ This “overconformity” view of broadcast programming, combined with the perception that informational programming was less profitable than entertainment programming, reinforced the belief that news and public affairs shows would be undersupplied by unconstrained, profit-maximizing stations and that regulatory intervention was necessary to correct the problem.

To affect broadcasters’ programming choices, the Commission developed two principal policy tools. Rules designed to directly change programming decisions, such as the FD, are commonly referred to as *content* regulation.¹⁸ This is distinct from *structural* regulation, which, while formally content neutral, is designed to indirectly influence programming decisions through changes in market structure.¹⁹

Content regulation, especially the FD, has always walked a constitutional fine line. While the Commission repeatedly asserted that it was not in the business of telling licensees what speech to broadcast, it never clarified the vague mandates of the Doctrine.²⁰ This raised critical legal implications, as political discretion in enforcing undefined content standards can easily lead

¹⁷ Bruce M. Owen & Steven S. Wildman, *Video Economics* 65 (1992).

¹⁸ While many, including Judge Bazelon, viewed the FD as “the most overt form of program regulation in which the FCC engages” (Bazelon, *supra* note 13, at 219), there were several other rules governing broadcast content developed at different times. Nonentertainment guidelines were established to ensure that stations broadcast a minimum amount of news, talk, and public affairs programming. Commercial guidelines limited the amount of time broadcasters could devote to advertising. Stations were required to survey community leaders (ascertainment) and respond to community concerns with specific programming. *Equal time* rules still in effect ensure all major candidates for public office the same amount of airtime or news coverage as given their opponents. Note that content controls are also referenced as “behavioral regulation.”

¹⁹ Structural rules include limits on ownership concentration, incentives for minority ownership, and prohibitions on certain cross-ownership positions. For a discussion of minority preferences, see Matthew L. Spitzer, *Justifying Minority Preferences in Broadcasting*, 64 *S. Cal. L. Rev.* 293 (1991); and Jeff Dubin & Matthew L. Spitzer, *Testing Minority Preferences in Broadcasting*, 68 *S. Cal. L. Rev.* 841 (1995).

²⁰ For example, in 1979 the Commission admitted that “[a]lthough the Fairness Doctrine requires stations to provide coverage of controversial issues of interest to the community, we have never defined the term ‘community’ as it applies to fairness issues” (73 F.C.C. 2d 517).

to censorship, violating the First Amendment.²¹ The prevailing precedent is the 1969 Supreme Court ruling in *Red Lion*. In this case, radio station WGCB appealed to the Court to overturn a Commission ruling ordering the station to grant free airtime to a journalist who had filed an FD complaint.²² The Court upheld the FCC's position that a broadcaster could legally be forced, under the threat of license nonrenewal or revocation, to provide *free* airtime to a speaker demanding the right to respond to a controversial broadcast. This was deemed permissible, despite the First Amendment's prohibition on laws regulating speech and the press, based on the so-called physical scarcity doctrine²³ and faith in the FCC's assertion that the Doctrine increased the overall flow of informational and, most particularly, controversial speech. However, the Court specifically noted a potential "chilling effect" from FD enforcement:

It is strenuously argued that . . . if political editorials or personal attacks will trigger an obligation in broadcasters to afford the opportunity for expression to speakers who need not pay for time and whose views are unpalatable to the licensees, then broadcasters will be irresistibly forced to self-censorship and their coverage of controversial public issues will be eliminated or at least rendered wholly ineffective. Such a result would indeed be a serious matter, for should licensees actually eliminate their coverage of controversial issues, the purposes of the doctrine would be stifled. . . . And if experience with the administration of these doctrines indicates that they have the net effect of reducing rather than enhancing the volume and quality of coverage, there will be time enough to reconsider the constitutional implications.²⁴

Given a trial record which excluded any evidence of such an impact, the Court concluded that the possibility of a "chilling effect" was "at best speculative." The FD, and behavioral regulation generally, was upheld. Since the abolition of the FD in August 1987, however, the Supreme Court's conclusion has become a testable proposition. How has the marketplace responded to removal of the potential "chilling effect"? Has informa-

²¹ The legal history of the FD is beyond the scope of this paper. See Fred W. Friendly, *The Good Guys, the Bad Guys, and the First Amendment* (1975); Bazelon, *supra* note 13; and Lucas A. Powe, *American Broadcasting and the First Amendment* (1987).

²² The actual regulations at issue were the so-called personal attack rules, considered sister regulations to the FD, with precisely the same constitutional issues at stake. A journalist who had written a book on Barry Goldwater had been sharply criticized on the radio station, and the dispute was over how a reply should be handled. WGCB had offered the journalist the chance to respond on the air under the same terms and conditions which had been offered the original (offending) speaker. (The personal attack came in a 15-minute broadcast which had been purchased from the station for \$7.50; the complainant was offered the same deal.)

²³ That this rationale for regulation was unconvincing to economists has been clear since Coase (*supra* note 11).

²⁴ 395 U.S. 393.

tional programming increased or decreased in aggregate? A quarter century after *Red Lion* we have the opportunity to empirically examine the effects of the FD on electronic speech.

III. AN ECONOMIC MODEL OF THE FAIRNESS DOCTRINE

Enforcement of the FD was triggered by a complaint filed by a private party alleging an FD violation. The Commission would then request that the licensee in question respond to the complaint. The process would occasionally lead to a formal hearing by the Commission, during which the licensee's programming choices would be scrutinized in great detail. Most typically, FD complaints were filed either at the time of license renewal or license transfer.²⁵ The costs (to the licensee) associated with an FD complaint ranged from the legal and lobbying expense involved in responding to the initial accusation, to the award of free airtime to complainants. The most potent weapon the FCC wielded, the capacity to revoke a license or refuse renewal (or transfer) for an uncooperative licensee, was rarely used. Nonetheless, the threat of loss of license was a powerful motivation for dispute settlement as well as behavior modification (as an "electronic publisher") to avoid programming likely to provoke complaints in the first place.

That broadcasters were overwhelmingly successful in protecting licenses from confiscation does not mean that rent-defending expenditures were trivial.²⁶ One dimension of such "expenditures" is what is, in fact, being tested empirically in observing how removal of the FD changed programming decisions. It should also be noted that some radio stations did lose their licenses pursuant to FD challenges.²⁷ At bottom, the licensee "failure rate" is a function not only of the credibility of the threat made by regulators to delicense those stations which violate the FD but also of the efforts expended by licensees to resist such appropriation.

A key aspect of the FD regime was that the complaint process was triggered by individuals disgruntled with a station's coverage of public issues

²⁵ When stations are sold, the FCC must approve transfer of the federal broadcast license as part of the transaction.

²⁶ One particularly sensational case illustrates this point. In 1970, two Florida television stations owned by the Washington Post were subjected to license challenges by Nixon allies after the Jacksonville station uncovered unfavorable evidence about G. Harold Carswell, the president's embattled Supreme Court nominee. Both challenges were unsuccessful, although the attack against the Miami station lasted 7½ months and was only withdrawn after the Post agreed to pay the challengers' legal fees (Powe, *supra* note 21, at 131).

²⁷ WLBT (Jackson, Mississippi) in 1969, and WXUR (Philadelphia) in 1973. See Powe, *supra* note 21.

who could “fine” broadcasters by simply filing a fairness complaint.²⁸ Because defending a license against a formal FD challenge would consume real resources, broadcasters had an incentive to avoid either sort of filing (under the first prong—insufficient coverage of public issues—or the second—unbalanced coverage of public issues). It is apparent that these incentives worked in opposite directions, insofar as the supply of informational programming was concerned. It is ambiguous, therefore, as to whether the FD “chilled” or “warmed” coverage of news and public affairs.

A. *An Affirmative Obligation: The “Warming Effect”*

The first part of the FD, requiring broadcasters to address issues of importance in their communities, can be characterized as an incentive to increase the output of informational programming. If a broadcaster fails to comply with the rule, the FCC can ultimately take away the license. In the limit (as the probability of license revocation or nonrenewal goes to one), the broadcaster will invest the present value of the license (L) to ensure compliance. However, as the output of informational programming increases, the likelihood that the station will lose its license in an FD challenge falls.²⁹ There are still real costs incurred by licensees associated with defending against unsuccessful, even frivolous, fairness complaints, but we assume that these costs are highly correlated with the expected loss of rents. Thus the penalty function for the broadcaster under the first prong of the FD,

$$R_1(I) = Lp_1(I),$$

is equal to the expected loss in rents from an FD challenge, for a given supply of informational programming, where

$R_1(\)$ = expected lost rents;³⁰

I = the quantity of informational programming supplied;

$p_1(\)$ = the probability of license revocation or nonrenewal pursuant

²⁸ For example, the 1985 FCC proceedings investigating the FD recount a battle that ensued over a California referendum on a glass recycling program. The beverage industry prepared an advertising campaign in opposition to the bottle bill. When the pro-bottle lobby learned of the advertisements, they wired 500 stations demanding twice the amount of airtime free from any station accepting the commercials. Two-thirds of the stations subsequently refused the bottle industry’s ads (102 F.C.C. 2d 176).

²⁹ Probably very rapidly. That is, once some threshold level of news programming is provided, the chances that the station will lose its license falls close to zero. Indeed, the FCC routinely identifies “safe harbors” which inform licensees as to what minimum standards will protect them against license challenges for insufficient quantities of nonentertainment programming.

³⁰ Or rent-defending expenditures.

to an FD complaint under the first prong; and $\partial p_1(I)/\partial I < 0$, because the probability of a successful FD challenge under the first prong falls as the supply of informational programming increases.

We can characterize the first-prong incentive as a penalty incurred by the licensee attempting to protect license rents, L , against a petitioner claiming that the licensee did not offer the sufficient quantity of informational programming. We assume that FCC enforcement of the FD is sufficiently predictable that if the licensee does not supply any informational programming, he is sure to lose his license ($p_1(0) = 1$).

B. Informational Programming as a Liability: The "Chilling Effect"

The second FD prong, requiring broadcasters to present balanced perspectives on the coverage of public affairs encouraged in the first prong, has the effect of making each unit of informational programming more costly by raising the probability that an FD challenge will be filed.³¹ As broadcasters increase the amount of controversial programming, they increase the likelihood that they will incur a demand for free airtime under the FD.

The lost rents associated with violating the second prong of the Doctrine would encompass the legal fees incurred responding to an FCC inquiry, providing free airtime to the plaintiff, and incurring loss of a license. Because rent-defending expenditures are highly correlated with the expected loss, the penalty function would be of the form

$$R_2(I) = Lp_2(I),$$

where

$p_2(I)$ = the probability of license revocation or nonrenewal under the second prong of the FD; $\partial p_2(I)/\partial I > 0$, since an increase in the supply of informational programming will raise the probability of a successful FD challenge under the second prong; and

$p_2(0) = 0$, as we assume that in the extreme case of zero supply of informational programming, no FD challenge under the second prong would be possible.

³¹ This, of course, does not imply that stations have no commercial interest in "fairness," only that the possibility of FD penalties impact the licensee's program choices at the margin.

C. *Net Effects: Global Warming or Planetary Cooling?*

Assuming profit-maximizing behavior and using the FCC's entertainment/nonentertainment format dichotomy, the objective function for a broadcaster in the absence of the FD would be

$$\max_{I,E} \left\{ \Pi = [P_I, P_E] \cdot \begin{bmatrix} I \\ E \end{bmatrix} - TC(I, E) \right\},$$

where

P_I and P_E = price vectors of advertising time for informational and entertainment programming, respectively;

I and E = the output quantities of informational and entertainment programming;

$I + E = 24$ hours;

and we assume that informational programming can be controversial whereas entertainment is not controversial, and that broadcasters exhibit price-taking behavior.

In an unregulated (no FD) market, the equilibrium solution is $P_I = MC_I$, yielding a quantity of informational programming I^* . This represents the traditional determination of the quantity of informational programming supplied and demanded.

Now we consider the effects of the FD on format choice. Adding penalty functions for the two FD prongs, the broadcaster's new objective function would be

$$\max_{I,E} \left\{ \Pi = [P_I, P_E] \cdot \begin{bmatrix} I \\ E \end{bmatrix} - TC(I, E) - Lp_1(I) - Lp_2(I) \right\}.$$

Solving the objective function yields

$$P_I = MC_I + L[\partial p_1(I)/\partial I + \partial p_2(I)/\partial I].$$

Thus, the supply function for informational programming is shifted by the penalty functions. Whether supply shifts out in response to the FD, increasing the equilibrium output, or shifts in, reducing output, depends on the sign of the term in brackets (that is, which FD effect dominates). The equilibrium quantity of informational programming increases if

$$[\partial p_1(I)/\partial I + \partial p_2(I)/\partial I] < 0$$

and falls if

$$[\partial p_1(I)/\partial I + \partial p_2(I)/\partial I] > 0.$$

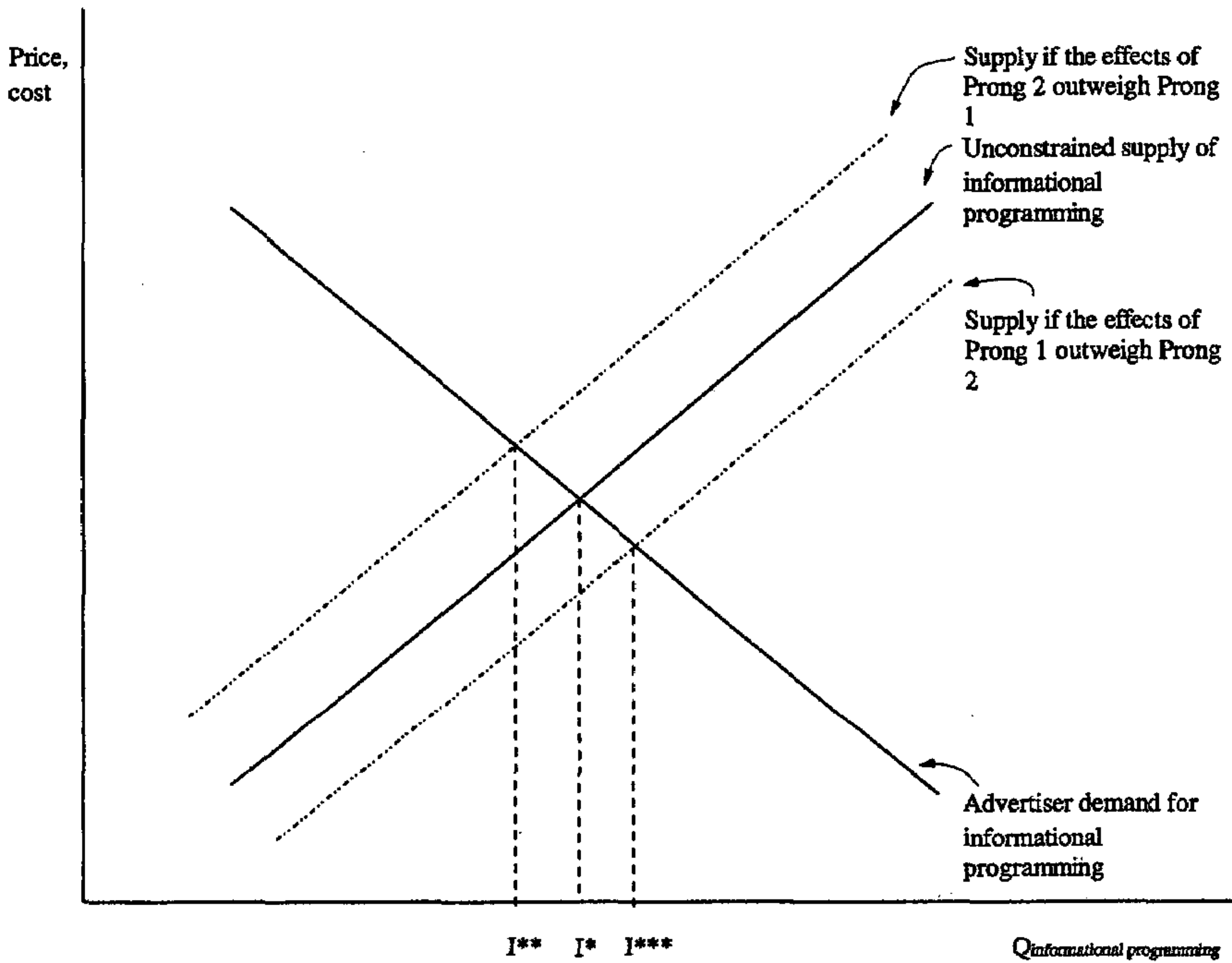


FIGURE 1.—Equilibrium effects of the Fairness Doctrine

Hence, the net effect of the FD on the supply of informational programming is ambiguous. (See Figure 1.)

For decades, the FCC promulgated and enforced the Doctrine with the argument that it stimulated the supply of informational programming. The Supreme Court, when it formulated the constitutional test for the FD in *Red Lion*, accepted the Commission's assertion that neither of the Doctrine's prongs had a negative effect on informational programming. However, by 1985 the Commission embraced a different view, stating:

Because a decision by this Commission to deny the renewal of a broadcast license is "a sanction of tremendous potency" which can be triggered by a finding by this Commission that the licensee failed to comply with the Fairness Doctrine, a licensee has the incentive to avoid even the potential for such a determination. Therefore, in order to attenuate the possibility that opponents, in a renewal proceeding, will challenge the manner in which a licensee provides balance with respect to the controversial issues it chooses to cover, a broadcaster may be inhibited from pre-

senting controversial issue programming in excess of the minimum required to satisfy the first prong of the fairness doctrine.³²

This finding of a “chilling effect” was then taken by the Commission to be of sufficient magnitude to dominate any potential benefits (the “warming effect”) of the FD, which the agency abolished on the rationale that it lessened the quantity of informational programming.

Did the FD warm or chill? After the 1987 elimination of the FD, we are poised to test for its effects. On the one hand, if it had, on net, a warming effect, we could expect the equilibrium quantity of informational programming in Figure 1 to fall from I^{***} to I^* , as supply shifts in, in the wake of the FD repeal. On the other hand, if the FD had a net “chilling effect,” we would expect informational programming to increase from I^{**} to I^* , as supply shifts out following repeal of the rule in 1987. It is this issue we seek to resolve by observing format choices made by FCC licensees in the radio broadcasting market before and after the FD.

IV. APPLYING THE SUPREME COURT’S TEST

A. *The U.S. Radio Market, 1975–95*

In examining the 1975–95 period in the U.S. radio market there are three important “events” to consider. First, there is rapid growth in the overall number of radio stations, with the growth coming primarily in the FM band (see Figure 2). FM, which had been long suppressed by FCC policy,³³ finally came of its own in the 1960s (following the FCC’s authorization of stereo broadcasting on FM [only] in 1961) and passed AM in listening share in 1979.³⁴ The increasing number of stations was a function of two interactive forces: public policy (more licenses were supplied by the Commission) and market demand (more stations were economically viable).

Second, there was the “Deregulation of Radio,” as the FCC called its proceeding that began in 1978 and concluded in January 1981. This rule-making ended a number of licensing requirements for commercial AM and FM licensees, including the following rules:

Nonentertainment Program Regulation. The FCC eliminated “guidelines” indicating how much informational programming each station

³² 102 F.C.C. 2d 162. While this statement marked a major departure in FCC policy by admitting that $\partial p_2(I)/\partial I > 0$, it did not reach the conclusion that the net effect of the FD overall was to reduce the flow of controversial speech.

³³ Lawrence Lessing, Edwin Howard Armstrong: Man of High Fidelity (1969).

³⁴ Vincent M. Ditingo, *The Remaking of Radio* 18, 60 (1995).

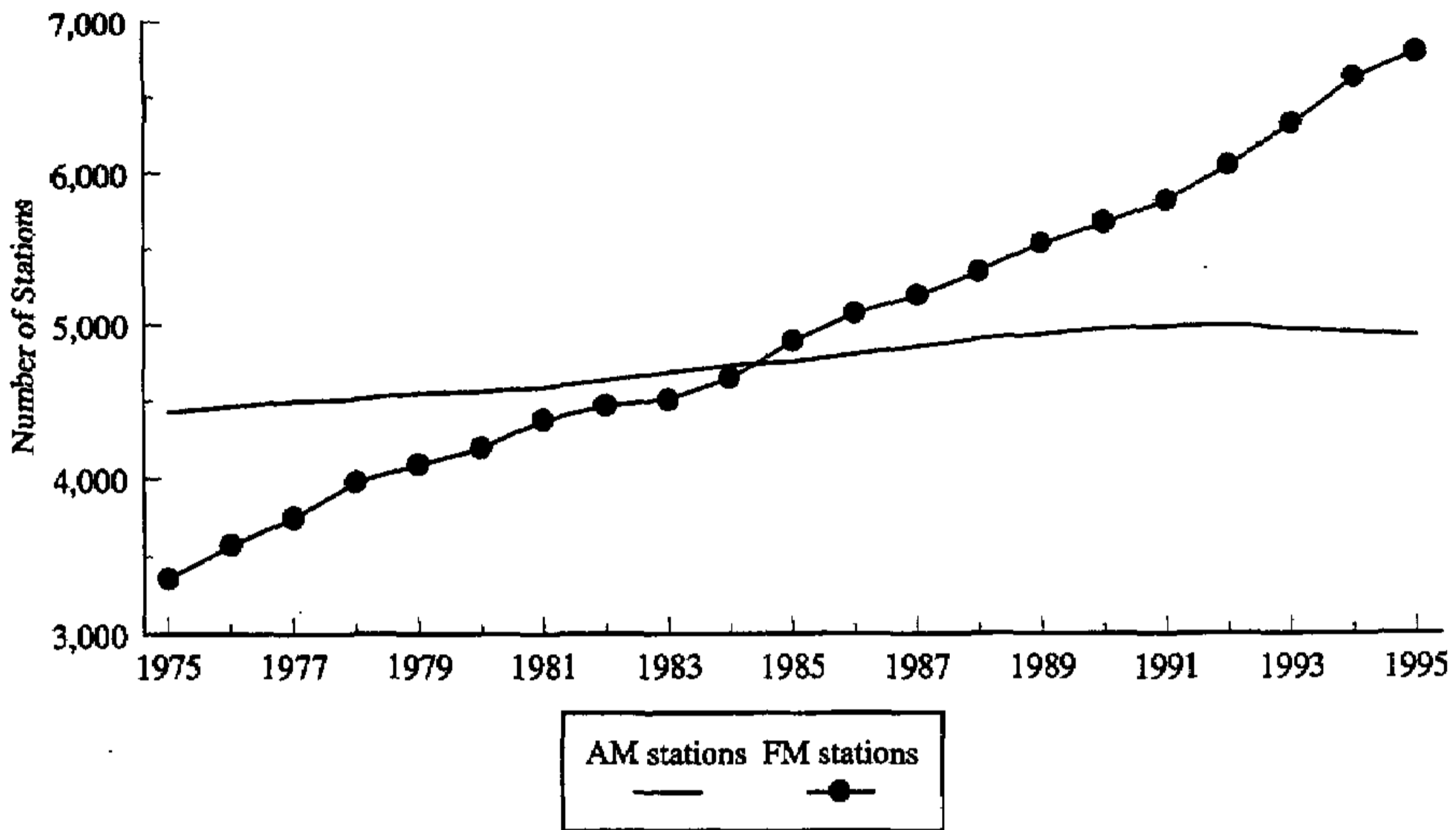


FIGURE 2.—AM and FM stations (nationwide)

should render to have its license renewed, replacing it with “a generalized obligation for commercial radio stations to offer programming responsive to public issues.”

Ascertainment. Elimination of formal documentation of “community needs.”

Commercials. Abolition of FCC guidelines on maximum commercial time allowed on radio stations.

Program Logs. Elimination of program logs, to be replaced by “an annual listing of five to ten issues that the licensee covered together with examples of programming offered in response thereto.”

The nonentertainment guidelines required AM stations to offer 8 percent nonentertainment programming and FM stations to offer 6 percent. In simple terms, informational programs were considered to be news, talk, and public affairs, while entertainment programming consisted of music. The ascertainment process required stations to survey “community leaders” to determine issues of importance to their listeners and then document the station’s response to these concerns through programming. The commercial guidelines set an upper limit on commercial time of 18 minutes per hour. The program-logging rule required stations to record all programs broadcast.

The FCC’s stated rationales for deregulation were that market competition could discipline stations more effectively than behavioral rules en-

forced by the government and that the rules themselves led to numerous inefficiencies.³⁵

Third, there followed the abolition of the FD in August 1987. This has been described above.

B. Radio Formats

To analyze the effects of the FD on broadcasters' format choices, we obtained data on radio programming³⁶ for both AM and FM broadcasters nationwide over the period 1975–95.³⁷ These data are summarized for AM radio in Table 1.

Throughout the interval, music is the dominant broad category.³⁸ Yet, there is a pronounced upward trend in the number of formats reported over this period. In 1975 the music category was dominated by only a few formats such as *country-western* and *adult contemporary*. By 1995 the music category consisted of more than 20 specific formats, including *urban contemporary*, *new age*, and *bluegrass*. If the number of identifiable formats is considered a broad (if crude) measure of the diversity in programming available to the consumer, the overall trend is toward an increase in program listening choices.

Starting with raw data from the 29–45 categories reported by the *Broadcasting and Cable Yearbook*, we aggregate formats into five broad categories: music, information, religious, foreign language/ethnic, and mixed.³⁹

³⁵ As noted by Commissioner James Quello, the Commission recognized that “the process of license renewal appears to be a very expensive, time-consuming method of ferreting out those few licensees who have failed to meet a subjective ‘public interest’ standard of performance.” The principal objective of the 1981 deregulation was to streamline this renewal process, with the conviction that “the enormous savings in time and money could be used for more constructive purposes in programming and news” (73 F.C.C. 2d 594).

³⁶ The other market regulated by the FD, broadcast television, also merits study. Measurement of program content is made problematic there, however, by the lack of distinct station formats; each show must be characterized as information or entertainment programming. We await further research in this arena.

³⁷ The source was the *Broadcasting and Cable Yearbook* (1975–95), which publishes detailed information on broadcasters, including a list of stations by principal format. A principal format (as defined by the Yearbook) is one that the station broadcasts for more than 20 hours per week. Under this definition, it is possible for a station to have more than one principal format. Our data series begins in 1975 because this was the first year the Yearbook compiled comprehensive data on radio stations by format.

³⁸ Music accounts for 90.8 percent of AM programming in 1975, falling to 51.7 percent in 1995. In FM the share of music formats falls from 89.8 percent to 79.6 percent over the period.

³⁹ The “mixed” category consists of formats such as *agriculture* and *drama/literature*, which neither fit well into one of the other categories nor have any clear relationship between one another.

TABLE 1

AM RADIO STATION FORMAT SUMMARY: 1975 AND 1995

	MUSIC		INFORMATIONAL		RELIGIOUS		FOREIGN/ETHNIC		MIXED					
	1975	1995	1975	1995	1975	1995	1975	1995	1975	1995				
Adult contemporary	944	583	News	75	295	Gospel	0	315	Native American	5	3	Agriculture	13	66
Beautiful music	52	94	News/talk	0	854	Religious	142	597	Filipino	0	1	Children	0	16
Big band	1	129	Public Affairs	10	18				Foreign/ethnic	9	55	Comedy	1	1
Black	165	108	Talk	130	396				French	3	3	Drama/literature	1	0
Bluegrass	0	16							Greek	2	5	Educational	0	19
Blues	0	21							Italian	3	1	Other	0	34
Classical	21	17							Japaneasc	2	2	Sports	0	325
Classic rock	0	48							Polish	2	4			
Country	1,199	1,221							Portuguese	0	6			
Disco	0	1							Spanish	62	286			
Folk	0	1												
Jazz	5	22												
Middle of the road	1,404	333												
New age	0	7												
Nostalgia	0	85												
Oldies	67	486												
Polka	4	4												
Progressive	47	15												
Rock/AOR	168	53												
Top 40	254	70												
Urban contemporary	0	102												
Variety	216	122												

SOURCE.—Broadcasting and Cable Yearbook (1975, 1995).

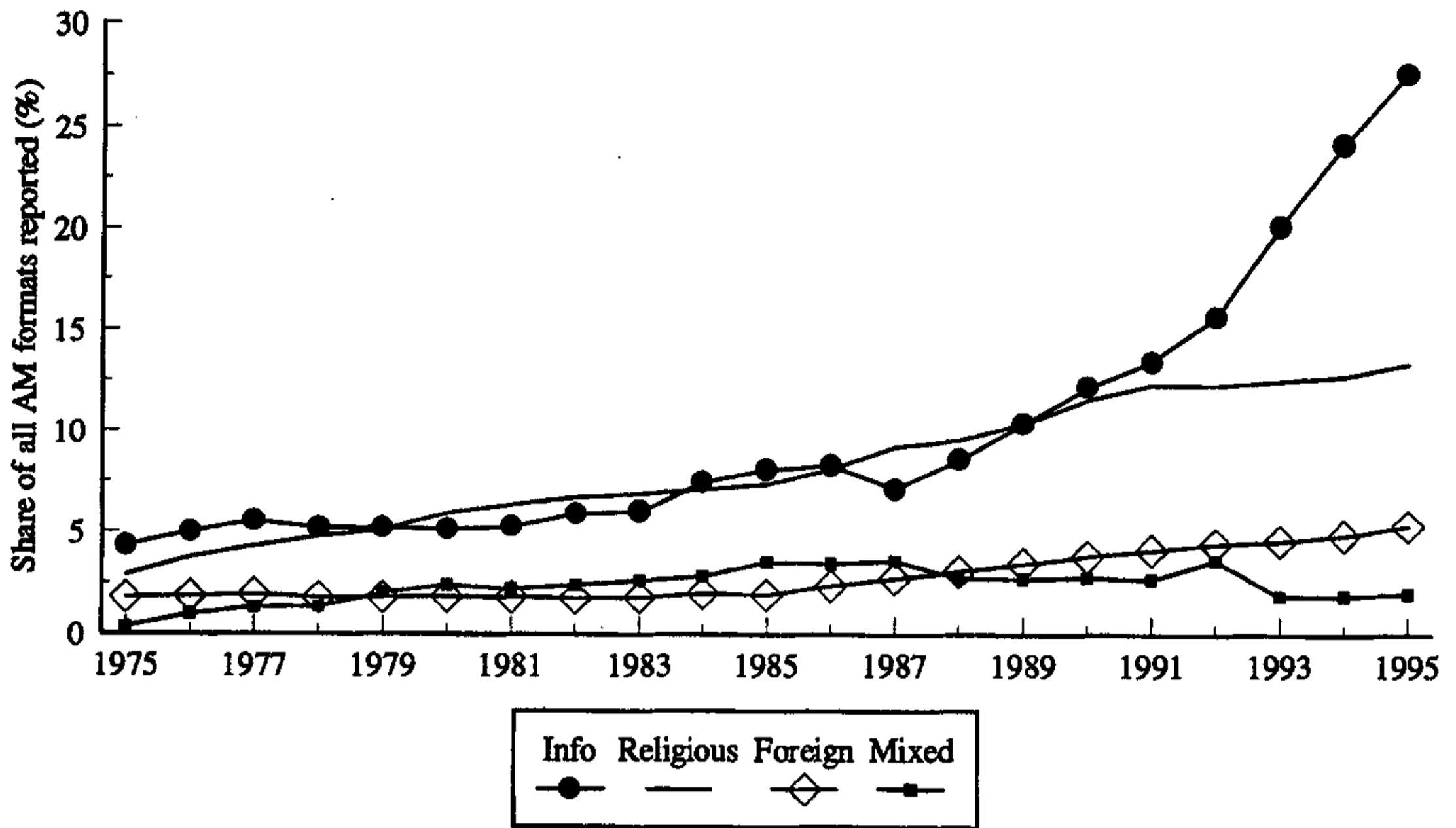


FIGURE 3.—Selected AM format categories (nationwide: 1975–95)

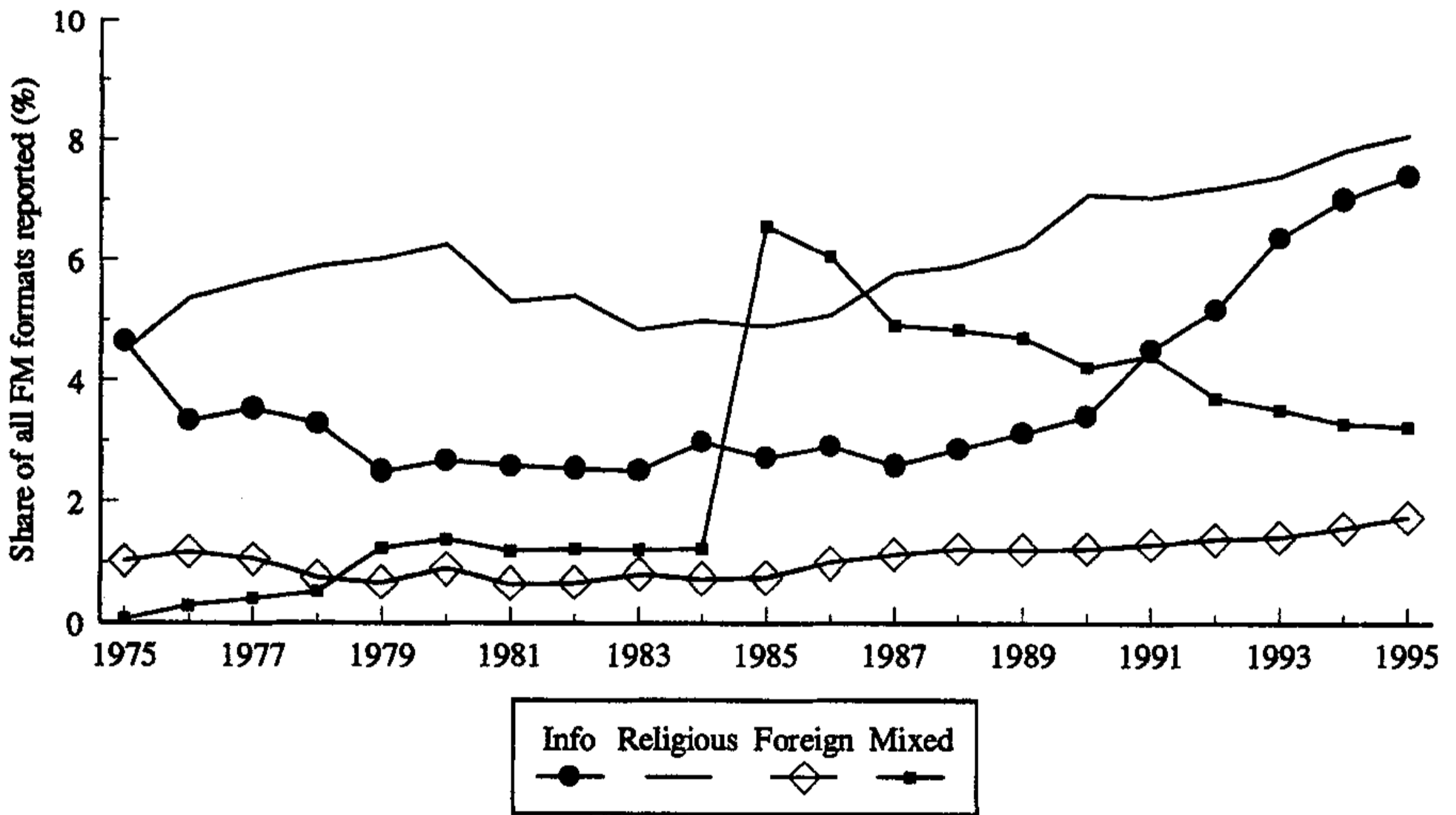


FIGURE 4.—Selected FM format categories (nationwide: 1975–95)

Grouping the *Yearbook* formats into five broad groups minimizes sampling error associated with categorizing programming.

In Figures 3 and 4 we have omitted the shares accounted for by music formats, which form the residual category. While there appears to be an upward trend in each of the nonmusic categories over the entire 1975–95

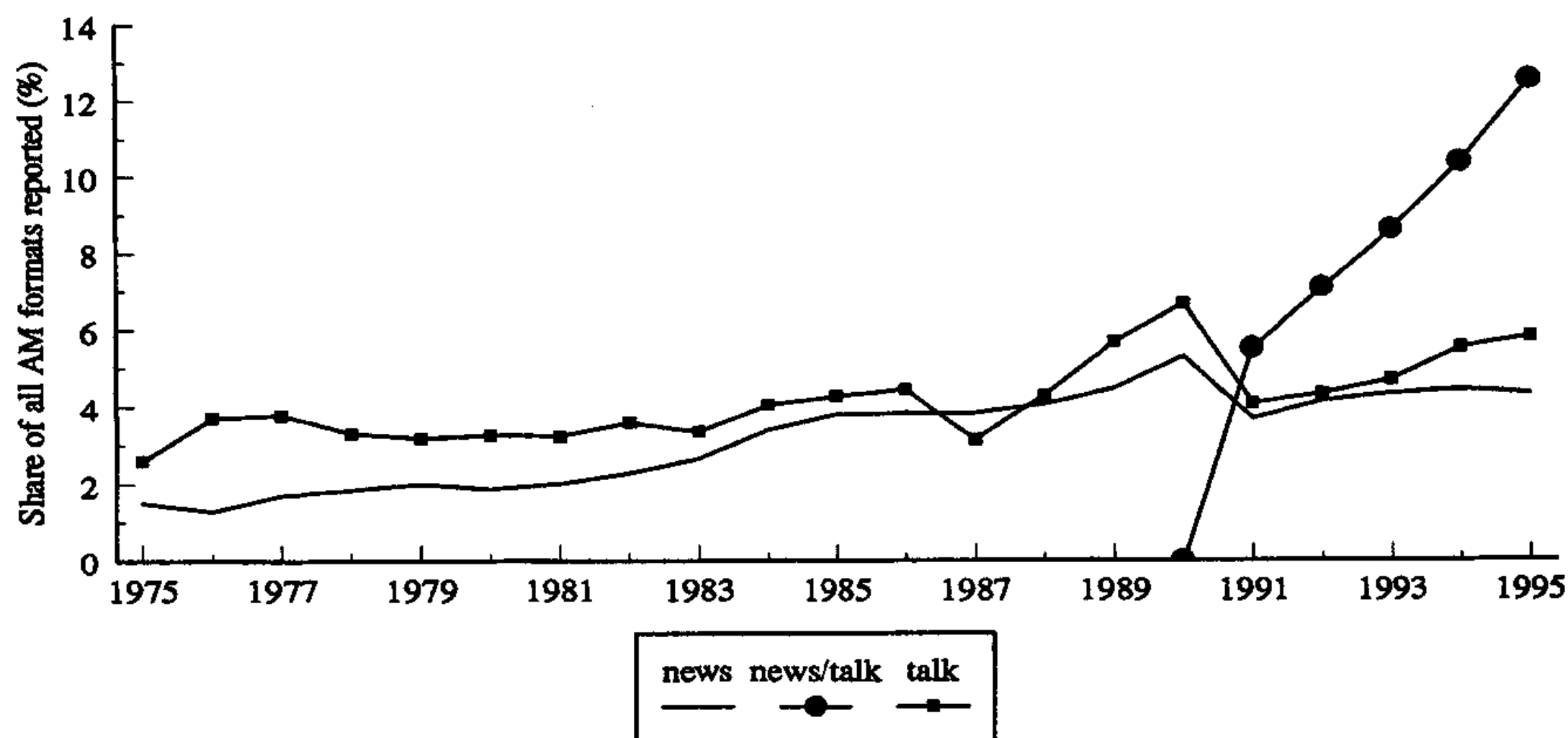


FIGURE 5.—AM information formats (nationwide: 1975–95). The share of public affairs programming is negligible.

range, the trend in informational programming is most dramatic. The share of informational programming on FM increases from 4.64 percent in 1975 to 7.39 percent in 1995. The more dramatic increase is in the AM band, where the share of informational programming goes from 4.29 percent to 27.60 percent. Particularly impressive is the increase in AM informational share from 7.11 percent in 1987 to 27.60 percent in 1995.

Figures 5 and 6 show the breakdown of the informational category into news, news/talk, public affairs, and talk.⁴⁰ We see that in AM the news/talk format drives the later increases in informational programming. Interestingly, in the FM band it is a surge in news formats that drives the rise in informational formats.

C. Testing Regime Changes

In this section we examine the effects of the 1987 elimination of the FD on the observed quantity of informational programming on AM radio.⁴¹ In

⁴⁰ News/talk was a new category in 1990. It, obviously, is a combination of the two formats.

⁴¹ We do not analyze the FM format data because of a change in reporting beginning in 1985, when the category *educational* was introduced. While this change affected both AM and FM, the effects on FM were much more dramatic. The broad category *mixed*, which includes the *educational* format, jumps from a 1.55 percent share in 1984 to a 6.56 percent share in 1985, as a result of this change in reporting.

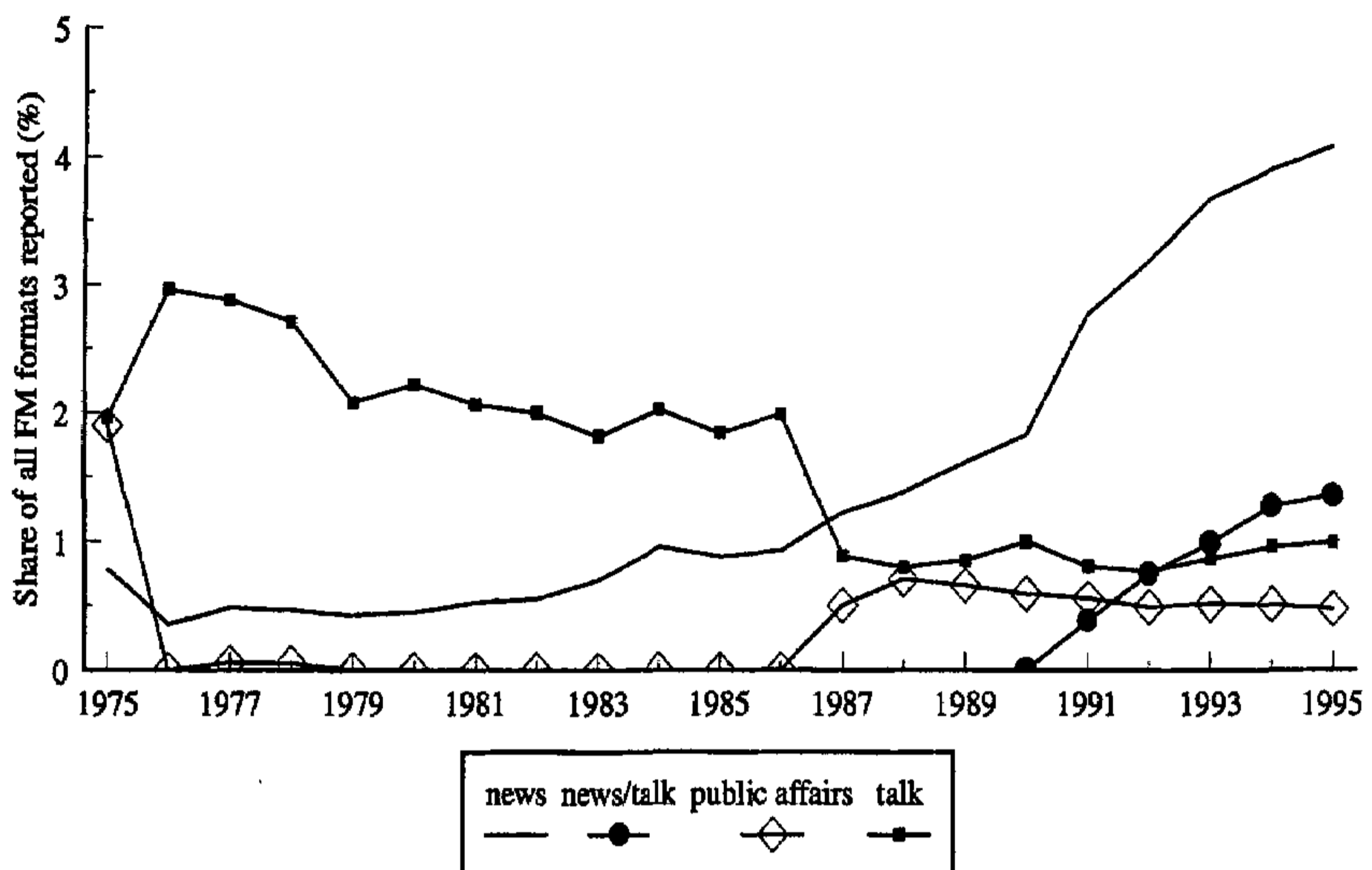


FIGURE 6.—FM information formats (nationwide: 1975–95)

keeping with the basic framework of the Steiner model, given a small number of stations in any market, we expect to see most stations concentrating on entertainment formats. However, with new entry, stations should attempt to diversify into nonentertainment formats such as informational programming. The years 1975–95 correspond to a period of high licensing activity by the FCC.

We model INFO, the share of informational program formats as a percentage of all types of formats on AM radio, as a function of the number of competing stations on AM (AMS) and FM (FMS). Thus for informational programming:

$$\text{INFO}_t = \beta_0 + \beta_1 \text{AMS}_t + \beta_2 \text{FMS}_t + \epsilon_t \quad (1)$$

Within this framework, we attempt to determine the effects of the deregulatory events on informational programming in AM radio. We use a single-date switching regression framework based on (1) to find the most likely date for a regime switch date over the period. The model is as follows:

$$\text{INFO}_t = \beta_{01} + \beta_{11} \text{AMS}_t + \beta_{21} \text{FMS}_t + \epsilon_{1t}, \quad t = 1, \dots, t_{k-1};$$

and

$$\text{INFO}_t = \beta_{02} + \beta_{12} \text{AMS}_t + \beta_{22} \text{FMS}_t + \epsilon_{2t}, \quad t = t_k, \dots, T;$$

where t_k is the switch date (the first year of the new regime). Our goal is

TABLE 2
SWITCH DATES FOR AM INFORMATIONAL FORMATS

Date	Posterior Odds Ratio	$\ln \mathcal{L}$
No switch		-38.832
1979	.000	-17.830
1980	.000	-20.137
1981	.000	-19.550
1982	.000	-17.611
1983	.001	-15.994
1984	.003	-14.955
1985	.048	-12.104
1986	.034	-12.453
1987	1.000	-9.063
1988	.032	-12.492
1989	.027	-12.673
1990	.070	-11.723
max ($\ln \mathcal{L}$)		-9.063

NOTE.—The posterior odds ratio (POR) is the ratio of the probability of the switch occurring at a particular date to the probability of the switch occurring at the maximum likelihood estimate date.

to estimate t_k using a maximum likelihood (ML) procedure suggested by Goldfeld & Quandt⁴² and applied by Mankiw et al.⁴³

Assuming normally distributed errors, the log-likelihood function for the model is

$$\ln \mathcal{L} = -(T/2)\ln(2\pi) - (t_{k-1})\ln(\sigma_1^2) - (T - t_{k-1})\ln(\sigma_2^2) - \left(\frac{1}{2\sigma_1^2}\right) \epsilon_1' \epsilon_1 - \left(\frac{1}{2\sigma_2^2}\right) \epsilon_2' \epsilon_2,$$

where σ_1^2 and σ_2^2 are the error variances under the pre- and postderegulation regimes, respectively. We can determine the ML estimate of t_k by computing the ML estimates of the parameters for all possible t_k and then choosing the value that maximizes the log-likelihood function above.

The MLE values for various switch dates are reported in Table 2. According to these results, the most likely date for a structural change in the

⁴² Stephen M. Goldfeld & Richard E. Quandt, *The Estimation of Structural Shifts by Switching Regressions*, 2 *Annals Econ. & Soc. Measurement* 475 (1973).

⁴³ N. Gregory Mankiw, Jeffrey A. Minon, & David N. Weil, *The Adjustment of Expectations to a Change in Regime: A Study of the Founding of the Federal Reserve*, 77 *Am. Econ. Rev.* 358 (1987).

provision of informational programming on AM radio was 1987, coincident with the formal elimination of the FD.

To judge the degree of confidence in these point estimates of the date the new regime began, we calculate the posterior odds ratio for alternative switch dates. Under a diffuse prior (all possible switch dates are equally likely), the ratio of the likelihood values for different switch dates produces the posterior odds ratio

$$\text{POR}(t_k) = \exp\{\ln \mathcal{L}(t = t_k) - \ln \mathcal{L}(t = t_{\text{MLE}})\}.$$

Table 2 reports, for a range of possible switch dates, the posterior odds ratio of that date as a switch date compared to the ML date (for INFO, $t_{\text{MLE}} = 1987$). The calculated PORs give strong evidence that any other date would be unlikely as a switch date in a single switch model. As the estimated switch dates are coincident with the 1987 event, it would appear that the repeal of the FD was an influential regulatory event.

Table 3 reports the regression results under the ML estimated switch date. The results are consistent with the anticipated effects of entry on product differentiation in the Hotelling/Steiner model. Prior to the elimination of the FD, the number of AM stations had a positive effect on the choice to broadcast an information format, as evidenced by the positive coefficient on AMS. However, the effect of FM stations is not statistically different from zero. After the regime change we see that the number of FM stations has a positive effect on the provision of AM information formats, suggesting that the elimination of the FD facilitated greater format substitution between AM and FM. This would follow from the elimination of a regula-

TABLE 3
REGRESSION RESULTS

	PERIOD	
	1975-86	1987-95
Constant	-64.719*** (19.15)	25.531 (17.19)
AMS	.017** (.0053)	-.018*** (.0038)
FMS	.002 (.0012)	.013*** (.0003)
$\ln \mathcal{L}$	-6.174	-2.889
SSE	1.966	1.001
σ_n	.467	.409

NOTE.—SSE = sum of squared errors.

** Significant at $\alpha = 5$ percent.

*** Significant at $\alpha = 1$ percent.

tory regime that imposed a tax on controversy, thereby improving the competitive position of AM radio (which enjoys a comparative advantage in talk formats).⁴⁴ Freed from a constraint on controversial formats, AM licensees' programming would be influenced by new entry in FM, which is dominated by entertainment formats. The negative coefficient on AMS in the post-FD period may seem contradictory; however, the number of AM stations falls slightly from 1993 through 1995. This would be one explanation for the unexpected sign on β_{12} .⁴⁵ The fact that INFO rises even as AMS falls during part of the post-FD period is itself compelling evidence of the importance of regulation (vs. competition) in affecting the observed quantity of informational programs.

V. CONCLUSION

[W]ere it to be shown by the Commission that the fairness doctrine [has] the net effect of reducing rather than enhancing speech, we would then be forced to reconsider the constitutional basis of our decision in [*Red Lion*]. (U.S. Supreme Court in, *FCC v. League of Women Voters of California*, 468 U.S. 364 (1984))

The evidence suggests that the 1987 elimination of the FD had a pronounced effect on radio station formats—in favor of informational programming. Correlation is not causality, but the correlation is very strong. This evidence would seemingly be crucial to the analysis of the FD in both the judicial system and the legislative branch of government. While the Supreme Court is on record as identifying a “chilling effect” as the aspect of the FD which could trigger a successful First Amendment challenge to the FCC’s regulatory regime (see passage quoted at the beginning of this section), it has noted that such evidence is not in the record. Within the legislative policy debate, the FCC has been criticized by Congress for its 1985 finding that the FD “chilled” free speech, precisely on the grounds that it reached such a conclusion lacking any factual or “statistical” basis.⁴⁶

⁴⁴ Signal clarity in the AM band is inferior to FM, input dollar for input dollar. Therefore FM has a comparative advantage in music formats; AM in nonmusic formats.

⁴⁵ Estimation of (1), over the period 1987–92, yields a positive coefficient on both independent variables, further suggesting that the sign of β_{12} in the 1987–95 period is a result of a falling number of AM stations over the last 3 years of the period. Estimating over just 1987–92, we find (standard errors in parentheses):

$$\text{INFO} = -57.757 + 0.003\text{AMS} + 0.010\text{FMS}.$$

(20.710) (0.0051) (0.0009)

⁴⁶ This criticism intensified sharply after the Commission abolished the Doctrine in August 1987. See Edward Markey, *The Fairness Doctrine, Congress, and the FCC*, 6 Comm. Lawyer 1 (1988).

To wit, the following interchange between Representative John Dingell (D-Mich.), then chairman of the House Commerce Committee, and Commissioner Mark Fowler, then chairman of the FCC, in House hearings held in April 1987:

MR. DINGELL: Did you have anything other than anecdotal information about the desperate state of mind in which broadcasters found themselves or did you have some statistical information about the number of programs they would have put on or the number of programs that they did not put on because of the presence of the Fairness Doctrine?

MR. FOWLER: We did not have statistical information per se but that anecdotal evidence as I just said, it seems to me, is highly relevant and probative on the question as to whether or not broadcasters are chilled by the operation of the Fairness Doctrine and we so found.⁴⁷

The debate produced something of a standoff, as previous Commissions had—using similar methods—concluded that the FD did not have a net “chilling effect.” Note the statement, at the same House hearings, of former FCC Chairman Charles Ferris, commenting on the FCC’s 1985 Fairness Doctrine report:

The FCC focused only on the supposed chilling effect of the Fairness Doctrine. In my tenure as Chairman of the FCC, I saw no credible evidence of a chilling effect. In fact, during 1979, during my watch, the Commission explicitly found that the Fairness Doctrine enhanced, not reduced, speech. The FCC under my predecessor also conducted [a] broad inquiry into the effects of the Fairness Doctrine in 1974 and found no evidence of a chilling effect. This FCC, in finding a chilling effect in its recent Fairness Doctrine report, relied solely on the self-serving anecdotes of the broadcaster. The FCC made no attempt to reconcile its findings with those of equally expert Commissions in 1974 and 1979. It cited no changed circumstances.⁴⁸

Hence the political demand for market evidence as to the net effect of the economic incentives meted out by the FD.

The statistical results of examination of the pre- and post-FD radio market are buttressed, interestingly enough, by some further “anecdotal” evidence, however. In the wake of the Doctrine’s abolition, the marked increase in informational programming was associated with a drive to reinstate the FD. The momentum for this legislative effort was provided, according to those leading the initiative, by the gaining importance of talk radio as a medium of expression. A sponsor of H.R. 1985, a bill entitled

⁴⁷ Hearing on H.R. 1934 before the Subcommittee on Telecommunications and Finance of the Committee on Energy and Commerce, House of Representatives, 100th Cong., 1st Sess. 79 (April 7, 1987).

⁴⁸ *Id.*

The Fairness in Broadcasting Act of 1993, was Representative Bill Hefner (D-N.C.). A flyer issued by his office openly argued that his measure aimed to control “TV and Radio talk shows that often . . . make inflammatory and derogatory remarks about our public officials. THE FAIRNESS DOCTRINE IS URGENTLY NEEDED.”⁴⁹ This sort of legislative rationale was commonly characterized in news reports as an attempt to apply pressure on radio broadcasters viewed as antagonistic to Congress and the administration.

Given the evidence presented above, it is not irrational for members of Congress to believe that the FD could indeed alter the quantity of public debate. (Whether changes in quantities affect the terms of debate awaits further study.) The data suggest that even in the absence of free entry, informational programming increased with the lifting of regulatory burdens. This is evidence that the old rules indeed provided a disincentive to broadcasting informational programs. The Supreme Court, if it is still looking for a “chilling effect,” might carefully examine this experience in the radio broadcasting market.

⁴⁹ Charles Oliver, Can the FCC Muzzle Rush Limbaugh? *Inv. Bus. Daily* 1 (August 16, 1993).