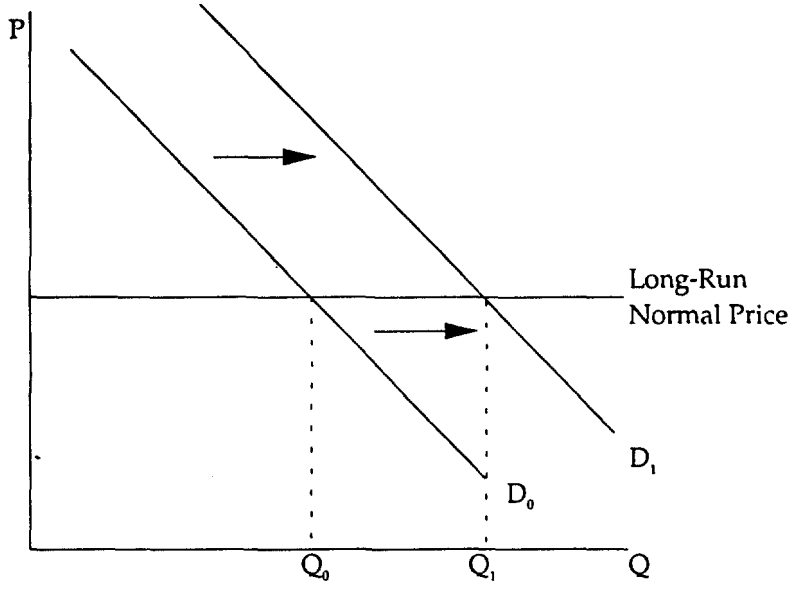
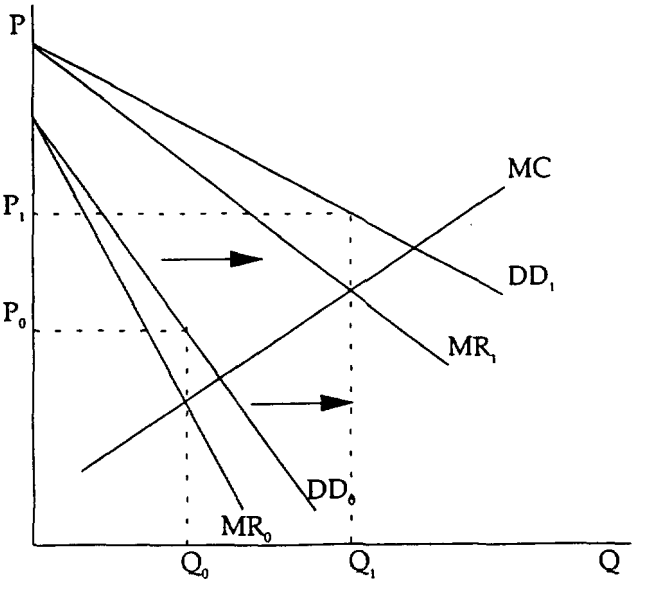
Figure III-1

Shifts in the Demand for Network Television Advertising in the Long-Run

- An increase in demand does not lead to an increase in price in the long run in a competitive market. It leads to increased entry when no barriers to entry exist.



- An increase in demand that does lead to an increase in price in the long run is consistent with a market in which some degree of market power exists because of, for example, barriers to entry due to a scarcity of VHF spectrum allocations.



regulated by the FCC over several decades. Such a scarcity precludes freedom of long run entry so that normal long run supply price is positively sloped while the demand curve faced by each firm is downward sloped. The pattern of network advertising price increases over the 1980s, reproduced from our original report here as **Figure III-2** is only consistent with the second diagram in **Figure III-1,** where a firm with market power responds to an increase in demand in the long run by increasing its price from P_0 to P_1. The observed pattern of prices in the 1980s is totally inconsistent with EI's claim of competitive conditions.

B. THE COMMISSION SHOULD AVOID FALLING INTO THE 'CELLOPHANE TRAP' IN WHICH EI HAS BEEN CAUGHT.

The issue of market power raised above is important to the current debate over the future of PTAR. If the three major networks have market power in the market for national television advertising, support for even technically handicapped UHF competitors can have benefits in bringing advertising rates closer to competitive levels and transferring supra competitive rents from networks to their customers. Evidence offered by EI on behalf of a claimed competitive market in national television advertising consists primarily of assertions that competitors are numerous and more numerous than ever before. Quotes are taken from Owen and (LECG co-author) Wildman (1992) to the effect that prices for different forms of television advertising are interdependent, "there are a number of more or less good substitutes for network advertising," and national network and spot sales "are best regarded as differentiated products in the same market."[37]

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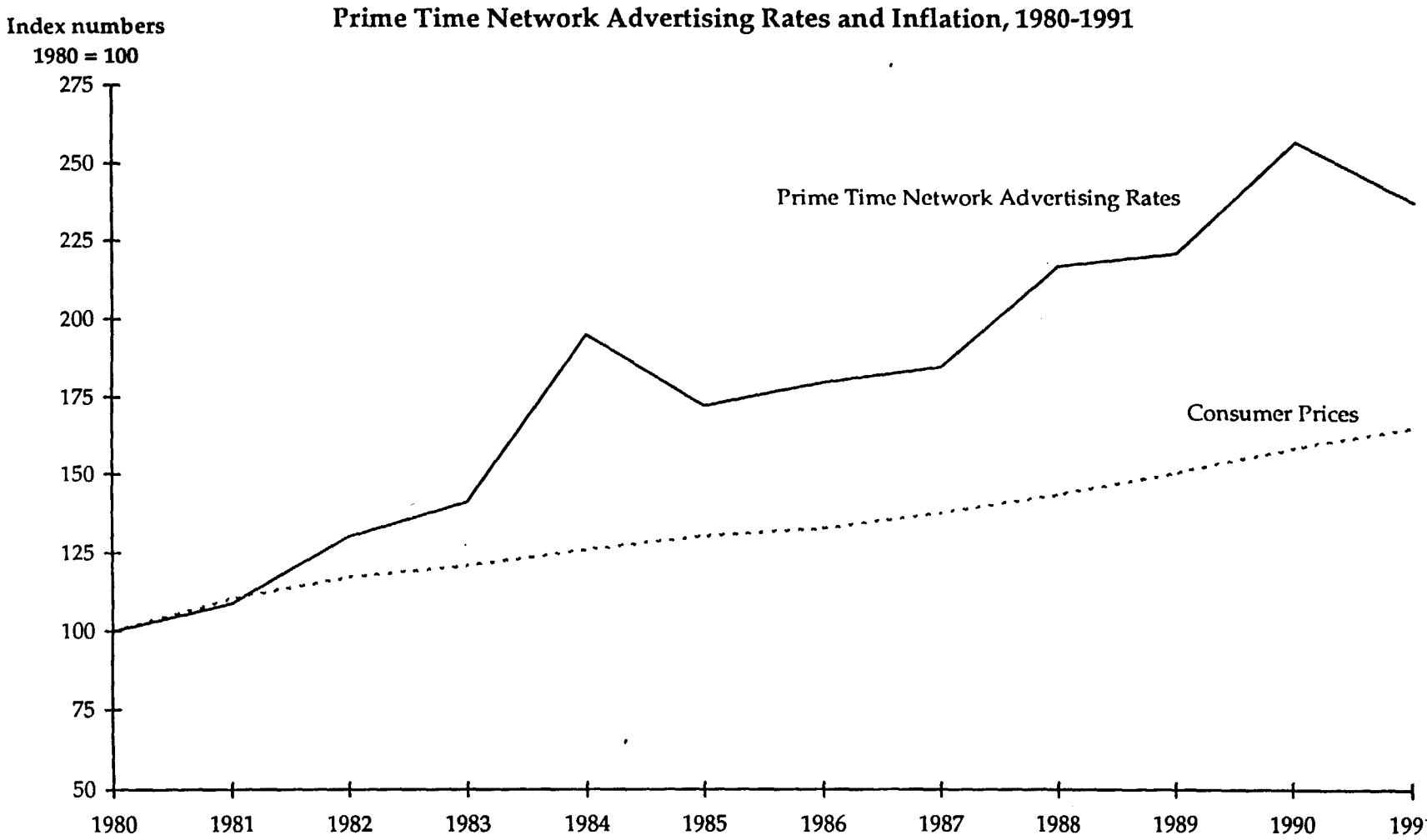
37 The referenced citations to Wildman and Owen are from page 42 of EI's reply comments. The two quotes are from Owen, B. M. and Wildman, S. S. (1992), Video Economics, Harvard University Press, pp. 157 and 13 respectively.

Increases in prime time network advertising rates have far outpaced the rate of inflation.



Note: Index numbers for prime time advertising rates based on cost per 1000 homes.

Sources: Prime Time Network Advertising Rates: A.C. Nielsen.
Consumer Price Index (CPI-U All Items): Council of Economic Advisors, Economic Report of the President, 1994.

Figure III-2

While a degree of substitutability and some interdependence in price certainly implies some competitive discipline, as claimed by EI, such claims, even if valid, by no means constitute evidence that some firms are not enjoying the fruits of market power. It is certainly not possible to reach such a conclusion on the basis of the evidentiary support provided in Owen and Wildman.

The equation of the existence of competitors with substitutes for proof of competitive pricing is a fallacy known among antitrust economists as the **cellophane trap**. Substitute products may be constraining a firm's price only because it has raised its price so far above marginal cost that poorer substitutes are made to look attractive.[38] The cellophane trap is explained by Dennis Carlton in his text, Modern Industrial Organization:

> "The Cellophane case illustrates these difficulties in defining a market. The Court was investigating whether DuPont had market power in the pricing of cellophane. The Court reasoned that DuPont lacked market power because at the current market prices, a user of cellophane had many substitutes, like paper bags, and DuPont's share of the market including these substitutes was not large. However, there was also evidence that price substantially exceeded marginal cost. Based on the foregoing discussion, **it was an error to include other wrapping materials in the market definition because they did not prevent the exercise of market power and constrain the price of cellophane to competitive levels**"

Carlton, Dennis, and Jeffrey Perloff (1990), Modern Industrial Organization, Harper Collins, p. 740. Emphasis added.

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38 EI's recommends that the principles of the Department of Justice Merger Guidelines be used to assess network market power. (Economists, Inc. (1995), p. 41) EI does not present a rigorous application of the Guidelines approach and such an exercise would be irrelevant at any rate. The Guidelines approach to analyzing merger markets is designed to determine whether market power is likely to increase following a merger, not whether one of the parties to a merger has pre-existing market power.

The Commission's initial definition of a broadcast network advertising market was correct. If we carefully examine national cable network advertising and national spot advertising, the two types of national television advertising likely to be the closest substitutes, it is far from obvious that either is a sufficiently close substitute for broadcast network time to prevent networks from setting supra competitive prices.

Cable is <u>not</u> a substitute for the national broadcast network! The main deficiency with cable advertising is limited reach. Slightly over sixty percent of all television households subscribe to cable. (But, in the top 20 markets, this percentage is even lower for 9 of the markets. See **Table C-1** below in **Appendix C.**) Cable is available throughout the United States and thus has the appearance of a national advertising medium, but this is misleading when assessing its ability to force networks to price their time at competitive levels. If the sixty percent of television households subscribing to cable were all concentrated in one geographic region and the remaining forty percent resided in another entirely separate region, few would doubt that market power in the uncabled region would be reflected in nationwide television advertising rates. But this is what some would have us believe about cable as a constraint on network market power.

While it is possible to attain geographic coverage at or near network levels through spot and barter advertising, these vehicles have what would appear to be significant disadvantages relative to the advertising transactions of the major networks. For spot and barter, the audiences typically are aggregated across dayparts, and thus are often less homogeneous than those offered by the networks in prime time. Program audiences are smaller and for non - prime time

programs are not measured as frequently, or with the same precision as network prime time audiences. Verification that advertisements have actually run on individual stations is difficult and a constant source of complaint.

As EI states in footnote 63 of their initial comments, spot advertising is best viewed as an inferior substitute for network advertising in the market for national ad coverage, and as such should sell at a lower price.[39] However, as EI clearly documents on the following page, spot time actually sells at a much higher price per thousand viewers delivered than network advertising time -- in 1994 a CPM of $12.29 for spot compared to a $7.64 CPM for network.[40] A higher priced inferior substitute cannot be a source of pricing discipline. The fallacy that spot advertising constrains the price of national network advertising that is laid bare by EI's own data is explained (unintentionally) by EI in footnote 65 of its initial comments on page 31.

Network time and spot time are also imperfect substitutes in markets for regional coverage. Here network buys, which produce unwanted geographic coverage, thereby increasing total costs, are the inferior substitute, and as such sell at a price discount that constrains the price of spot time. But clearly this relationship cannot work in both directions.

C. THE NETWORKS CONTINUE TO HAVE MARKET POWER

EI makes much of the oft repeated truism that (under the right conditions) unfettered competition produces efficient results -- the implication being that

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39 Economists Inc. (1995), p. 30.

40 Ibid., p. 31.

interventions like PTAR disrupt the otherwise efficient operation of a competitive market for the services of broadcast television stations and networks. The problem with this argument is that the conditions required for competition to generate efficiency simply aren't satisfied in this market. This has been known for a long time and Bruce Owen, President of Economists Incorporated, is one of the people best known for pointing this out.

> "The antitrust division should be free to seek structural remedies for network power, including such possibilities as limiting any one network to 24 continuous hours of operation per week."

Bruce M. Owen (1975), Economics and Freedom of Expression, Ballinger, p. 185.

> "The principal problem facing the FCC in its regulation of the television networks has been the issue of network market power vis-a-vis stations and programmers. As we saw in Chapter 2, this network dominance is due in part to public good and networking economies."

Bruce M. Owen in Owen, Bruce M, Beebe, Jack H., and Manning, Willard G., Jr., (1974) Television Economics, Lexington Books, p. 91.

> "If we are stuck, for the moment, with three commercial, advertiser-supported networks, is there anything we can do about *their* structure to improve television performance? . . . The first and most obvious alternative is simply to diversify control of program selection on the networks. This could be done by making the networks (considered as systems integral with their affiliated stations) into common carriers. Thus would in effect require program producers, or more likely advertisers, to buy program time on the networks at published and conceivably regulated prices, possibly through brokers."

Bruce M. Owen (1974), ibid, pp. 132-133.

We assume that Dr. Owen and his firm, Economists, Inc., have changed their minds about major network market power since they represent the major networks in this proceeding.[41]

But, as evidenced in LECG's March 7 Economic Report, there is also contemporary evidence in the 1990s that the major networks retain market power. The former president of the Walt Disney Company, Richard Frank, pointed out in 1990 that the major networks' market power has being exercised through rapid increases in prime time network advertising rates.

> "But the fact is that none of these changes [*in the video distribution market*] have altered the essential dominance of the Networks in American television. Consider these realities of the television business:
>
> - Only the Networks can reach 98% of the nation's television audience.
>
> - Only the Networks are capable of consistently purchasing high cost, quality programming."

Only the Networks are a gateway to a nationwide prime time audience.

> "NBC's contention that alternative delivery mechanisms have power equal to the Network is absurd. ABC, CBS, NBC

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41 In its reply comments, Economists Inc. attributes to LECG co-author, Steven Wildman, a statement made by Owen and Wildman in their 1992 book, Video Economics: "[T]he Prime Time Access Rule (PTAR) . . . works against viewers' interests." (p. 180). The sentence fragment omitted by EI in the above quotation references as supporting authority two studies done by Robert Crandall, ("The Economic Effect of Television-Network Program 'Ownership'," The Journal of Law and Economics, Vol. 14, No. 2 (October 1971), pp. 385-412 and "FCC Regulation, Monopsony, and Network Television Program Costs," Bell Journal of Economics and Management Science, Vol. 3 (1972), pp. 483-508), just after the implementation of PTAR. Obviously, LECG co-author Wildman's views about PTAR have changed since he looked at those 1971 and 1972 articles in co-authoring Video Economics.

> and FBC have a 75% market share. Because of their continuing dominance, the cost of a network commercial has increased by an annual average of almost nine percent during the last ten years, and a total of 40% just since 1986."

Frank, Richard, Summary Statement, Testimony of The Walt Disney Studios, before the Federal Communications Commission, MM Docket 90-162, En Banc Hearing, December 14, 1990.

While there are a number of reasons why competition among television network broadcasters doesn't produce efficient outcomes in the current broadcast marketplace, three are particularly obvious and have been discussed extensively in the academic literature and in policy forums: (1) Entry is restricted; (2) The most popular program types are oversupplied; and (3) Programs which appeal to more specialized tastes are undersupplied relative to their value to viewers at the margin.

One of the conditions that must be satisfied for competition to generate efficient outcomes is that firms be free to enter and exit a market in response to returns that are, respectively, above or below competitive levels.[42] While exit is relatively free in broadcasting, entry is not. The supply of full power television stations has been rigidly fixed since the FCC's decisions on how much spectrum to allocate to television broadcasting in the late 1940s and early 1950s. More importantly, the amount of VHF spectrum allocated to television is not sufficient

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42 Alternatively, if there are enough firms in a market to prevent collusion and each is able to expand capacity indefinitely, then competition among existing firms will be sufficient to ensure an efficient outcome even no new firms are allowed to enter. Obviously, broadcasters can supply at most 24 hours of programming daily. More importantly, each broadcaster can supply only a single channel of programming in competing for the audience available at any given time.

to satisfy the demand for VHF stations, and has been recognized as such almost from the moment these initial allocations were announced.

Much of the history of television regulation since the mid-1950s can be explained as attempts by the Commission to rectify the shortage of VHF spectrum through a series of unsuccessful attempts to bring UHF stations to competitive parity with their VHF counterparts. While technically handicapped UHF stations may still find it possible to enter as marginal players in the television industry, it should not be surprising to find that the "scarcity [of VHF TV licenses] has led to economic rents —— profits in excess of those required to keep stations in business."[43] These rents are clearly reflected in the time series of average VHF and UHF profits reported in the initial LECG report.[44] (See **Figures III-3 and III-4** reproduced here from LECG's March 7 Economic Report). Network affiliates capture almost all of the rents and independent stations earn a competitive minimum rate of return.

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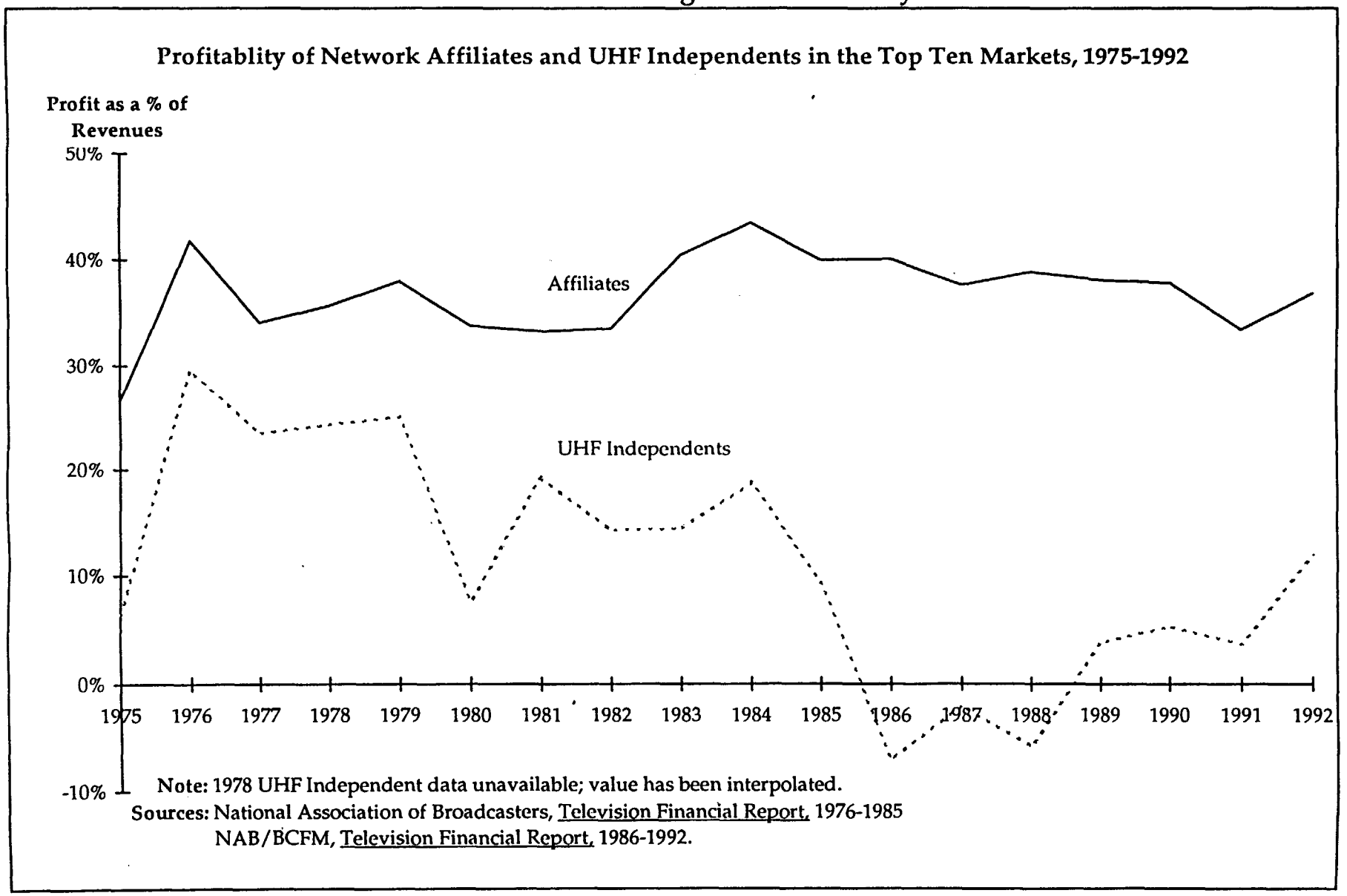
43 Owen and Wildman (1992), p. 15.

44 EI claims the UHF/VHF profitability data reported by LECG fails to demonstrate a UHF handicap because the data also show that UHF independents are more profitable than UHF affiliates. This relationship is an artifact of the facts that: (1) The apportionment of licenses among markets has resulted in many more viewers per station (and thus larger audiences to be sold to advertisers) in large markets than in small markets. As a result, on average (but not at the margin) large market stations are more profitable than small market stations; (2) The UHF profitability statistics are dominated by the profits of the numerous and more profitable UHF stations in the 10 largest markets; and (3) Most UHF affiliates of the three major networks are in small markets. If one took EI's calculations of average profitability for UHF independents and affiliates seriously, an immediate conclusion would be that networks contribute negative value to their affiliates, so the opportunity cost of lost network programming associated with PTAR would be negative.

The profitability gap between network affiliates and UHF independents in the top ten markets has increased with the growth of cable systems.

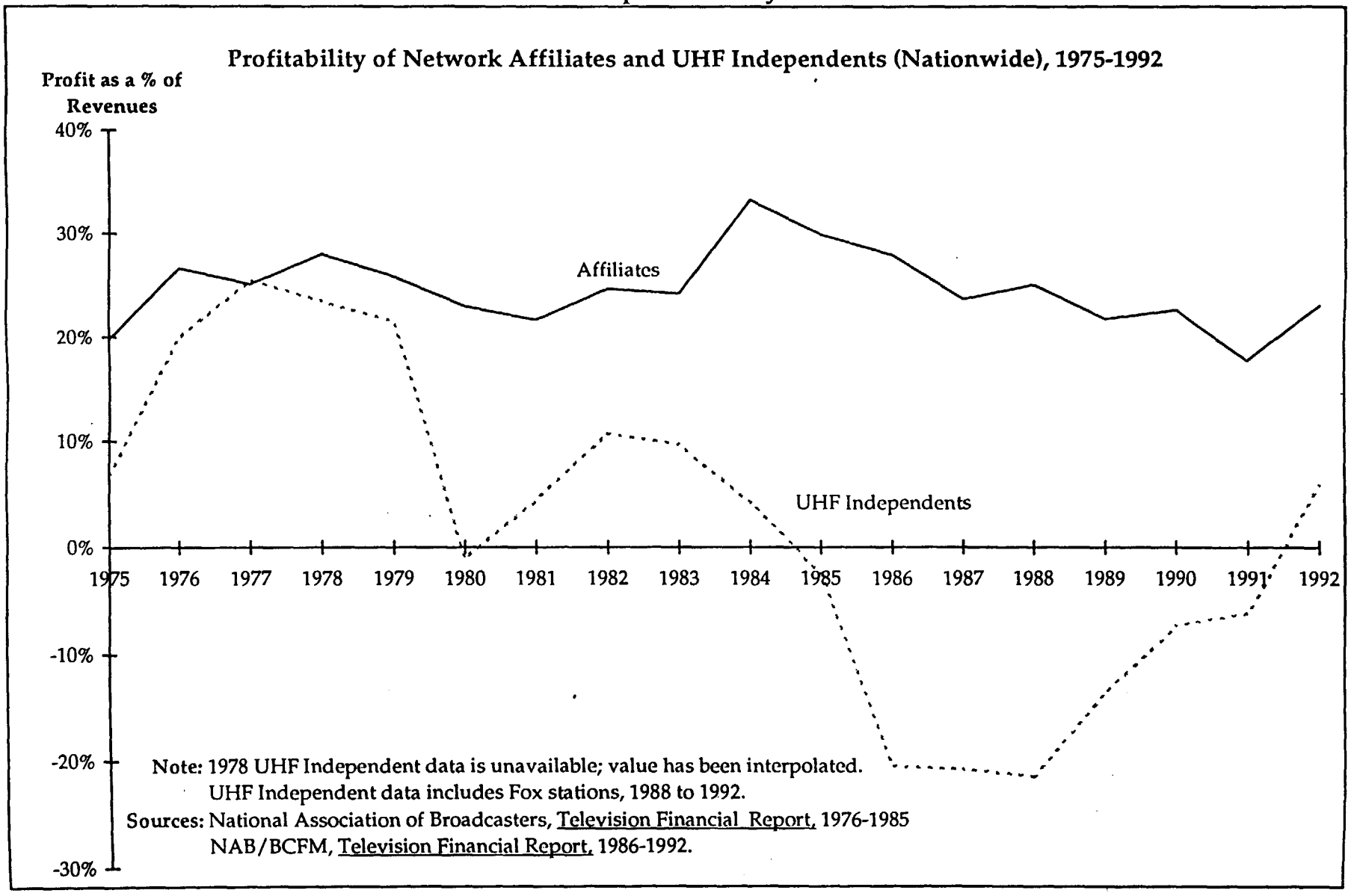


Note: 1978 UHF Independent data unavailable; value has been interpolated.

Sources: National Association of Broadcasters, Television Financial Report, 1976-1985
NAB/BCFM, Television Financial Report, 1986-1992.

Figure III-3

UHF profitability plummeted during rapid cable growth in the mid 1980's and only returned to profitability after 1991.



Note: 1978 UHF Independent data is unavailable; value has been interpolated.
UHF Independent data includes Fox stations, 1988 to 1992.

Sources: National Association of Broadcasters, Television Financial Report, 1976-1985
NAB/BCFM, Television Financial Report, 1986-1992.

Figure III-4

Economic rents for VHF affiliated stations do not necessarily imply inefficiency. However, when rents are the product of artificial restrictions on the entry of the technically most efficient types of firms, the output supplied by the firms capturing these rents is less than what would be observed in a truly competitive market. Regulatory interventions designed to increase supply in this market will benefit customers in these markets -- in this case viewers and advertisers.[45]

This analysis makes clear why EI goes to such lengths on behalf of its major network clients to disprove what industry participants accept as an indisputable fact —— that UHF stations operate at a significant technical and economic handicap relative to VHF stations. The presence of UHF stations merely places a cap on the rents earned by VHF stations and the networks they affiliate with, but in no way eliminates them. LECG's profitability data are strong time series evidence that these rents remain substantial.

EI makes much of the fact that the networks face more competition now than they ever have in the past. This is true. But when one group of competitors has an absolute cost advantage over the others, the mere presence of additional competitors does not preclude the privileged few from exercising market power. On the contrary, the fact that there has been so much entry into television distribution by non-broadcast competitors itself might be taken as evidence of

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45 Deintermixture (making each market either all VHF or all UHF) is an example of a regulatory solution to the inefficiency associated with the combination of too few VHF signals and technically handicapped UHF signals that was once considered but is now probably politically infeasible. For example, Owen and Wildman (1992), p. 17, argue that "[I]n 1958 the FCC could have remedied the scarcity of channels by making each city either purely UHF or purely VHF. This would have eliminated the engineering and image disadvantages of stations on UHF."

how far the broadcast segment of the television industry has fallen short of satisfying consumer and advertiser demands.

This inappropriate equation of the presence of competitors with the existence of competitive efficiencies is pervasive in EI's original study and in its reply comments.

By now the irrelevance of the EI and Williamson and Woroch argument that the UHF technical handicap is not a market failure should be apparent.[46] The artificial constraint on the amount of VHF spectrum allocated to television prevents the appropriate market response, so by definition the market has not failed. The failure was in the design of regulatory policies nearly half a century ago, the consequences of which we must deal with now. If VHF broadcasters have a significant cost advantage over their competitors in the television marketplace and competition among themselves does not push their prices, products, and outputs to competitive levels, then it is worth asking whether further intervention is warranted to ameliorate the consequences of those original regulatory structures established over 40 years ago.

Not only has EI presented contradictory evidence in this proceeding as to whether or not the markets PTAR affects are competitive, but the major networks' own association has presented a compelling 1995 marketing report

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46 Technically this is a misuse of the term market failure because "market failure" refers to a situation in which market participants do not respond to the potential for increasing net social surplus while a handicap can only be a characteristic of one of the players. We use the term in this inappropriate way here only because it is used in this way repeatedly in the EI reply comments to which we are responding. For a market failure to occur, the market has to at least have the opportunity to respond to the possibility of redirecting resources in ways that increase net social surplus.

aimed at potential advertisers that raises anti-competitive concerns. We summarize some of the more interesting comments and reproduce some of the more interesting quantitative indices of market power in 1995 in **Appendix C**.

IV. LECG'S COST-BENEFIT ANALYSIS ESTABLISHES CLEARLY THAT PTAR HAS STRONG SOCIAL BENEFITS AND LOW SOCIAL COSTS, WHILE REPEAL HAS NO IDENTIFIABLE SOCIAL BENEFIT WHATSOEVER

A. ANALYSIS OF PTAR BENEFITS

EI's critique of the non econometric LECG study, which focused on the benefits of PTAR, rests on three primary assertions: (1) LECG provided no "coherent economic rational as to why the Rule is (or was) needed"[47]; (2) LECG offers "no credible rationale for why it is now or ever was desirable to promote entry [by independent stations] that would not occur in a competitive market"[48]; and (3) "[A] technical UHF handicap is not, and never has been, a market failure."[49] This last observation is echoed by Williamson and Woroch.

In restating the case for the continuation of PTAR we will address these criticisms as well. We develop the logical arguments supporting the two restrictions independently below.

1. The economic rationale for an access period

LECG's argument that the Rule is beneficial has been attacked by EI for not having a sound basis in economic theory. This position is puzzling, to say the least. The essential elements of the argument are stated quite clearly in EI's initial and reply comments in this proceeding.[50] As EI pointed out in its own

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47 Economists, Inc. (1995), p. 6.

48 Ibid., p. 7.

49 Ibid., p. 22.

50 Another puzzle is why over fifty pages of EI's 65 page reply should be devoted to an argument with no "coherent economic rationale."

study of the costs of PTAR, both networks and independent stations are valued by viewers. They cited a very old study by Noll, Peck and McGowan which indicated that viewers valued both affiliate and independent station signals, although affiliates' signals more than independents' signals.[51] EI then calculated the opportunity cost of PTAR as one seventh of viewers' valuation of prime time programming on the three major networks minus the value to viewers of the syndicated programs network affiliates run in the access period due to PTAR.[52] In its reply comments, EI observes that because the rule favors independent stations, "it should be no surprise that to the extent it produced any noticeable effect, the effect would be favorable to such stations"[53] and that "the Rule may have increased independent stations' ratings" and may have stimulated entry by independent stations.[54]

This alone is a sufficient theoretical basis for retaining the network restriction of PTAR. Viewers lost the chance to see network programs, which they may have valued more than the syndicated programs that replaced them in the short run during one-half hour of prime time. They gained the full schedules of the independents whose entry was stimulated by PTAR, which they also valued. If the additional independents led to the formation of new networks, whose programming is valued even more, then the viewer benefits were even greater. (EI ignored the value of new stations and new networks to

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51 Noll, Roger G., Merton J. Peck, and John L. McGowan (1973), Economic Aspects of Television Regulation, The Brookings Institution.

52 The way in which the Noll, Peck and McGowan's results were misused to produce the grossly inflated estimate of a $200 billion opportunity cost of lost network programs is detailed below.

53 Economists, Inc. (1995), p.6.

54 More specifically, EI stated that the Rule "may have induced a few marginal independent stations to enter the market" Economists, Inc. (1995), p. 7. Neither the fewness nor the marginality of these entrants are supported by EI's analysis.

advertisers in its initial comments. It disingenuously dismisses these elements of value in its reply comments. This social value should also be added to the benefits side of the calculation.) PTAR has both costs and benefits. Whether the benefits outweighed the costs, or vice versa, can only be determined empirically.

2. The real market failure issue

Clearly, the UHF-as-market-failure argument is a straw man built up to be torn down. But it is important that the feigned response to this non issue not divert attention from the very real market failure problem that has traditionally been associated with advertiser supported television. It fails to reflect the intensity of viewer preferences in the selection of programs provided. Peter O. Steiner's 1952 article in the Quarterly Journal of Economics is generally credited as the earliest clear statement of this fundamental problem.[55] In the intervening forty plus years Steiner's basic conclusion has continued to be supported -- when broadcast competitors are few they tend to oversupply the types of programs favored by the majority of viewers and undersupply the types of programs that respond to minority tastes.[56] Sole reliance on advertiser support is the most

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55 Steiner, Peter O. (1952), "Program Patterns and Preferences, and the Workability of Competition in Radio Broadcasting," Quarterly Journal of Economics, Vol. 66, pp. 194-223.

56 Numerous authors have elaborated on his basic model (see, e.g., Beebe, J.H. (1977), "Institutional Structure and Program Choices in Television Markets," Quarterly Journal of Economics, Vol. 91, pp. 15-37, Owen, B.M., J.H. Beebe, and W.G. Manning (1974), Television Economics, Lexington Books, and Owen and Wildman (1992)) and have addressed the same problem with newer modeling techniques (e.g., Spence, A.M. and B.M. Owen (1977), "Television Programming, Monopolistic Competition and Welfare, " Quarterly Journal of Economics, Vol. 91, pp. 103-126, Wildman, S.S. and B. Owen (1985), "Program Competition, Diversity, and Multichannel Bundling in the New Video Industry," in Video Media Competition: Regulation, Economics, and Technology, ed. E.M. Noam, Columbia University Press, Noam, E.M. (1987), "A Public and Private-Choice Model of Broadcasting," Public Choice, vol. 55, pp. 163-187, and Owen and Wildman (1992).

important, but not the only, factor contributing to this market failure. When broadcasters are rewarded for the number of viewers they can deliver to advertisers, they have an incentive to carve up the audience for majority taste programs with highly similar offerings of the same types of programs, even when viewers realize little value from the duplication, because a fraction of a large audience is worth more to advertisers than is the totality of a small audience.[57]

The traditional remedy for this market failure is increasing the supply of competing stations.[58] This is one of the theoretically predicted and empirically supported effects of PTAR. As the number of competitors increases, the share of the majority taste audience each can capture diminishes. This increases the relative profitability of minority taste programs so that with enough stations in the market, new networks will enter with the intent of offering viewers programming that is differentiated from that provided by the incumbents. Thus we saw the Fox network enter with a strategy and programs designed for younger viewers not completely satisfied with the traditional networks' fare. Not surprisingly, to this point this program genre had enjoyed its most prominent success on first run syndication used to counterprogram the traditional networks' offerings.

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57 Somewhat surprisingly, in the absence of perfect price discrimination the bias against diversity persists even with pay support, although in attenuated form (Spence and Owen (1977), Owen and Wildman (1992), p. 111).

58 Monopoly and government control are two other remedies for the market failure associated with advertiser support that are commonly discussed in the academic literature. Neither a monopolist nor a government operator would benefit from offering duplicative versions of popular program types because the duplication would not significantly increase viewing audiences. Both monopoly and government control have their own rather obvious problems and neither is a serious option for the United States, although both approaches have been employed in other countries.

This brings us back to the relevance of the UHF handicap. Because they are weaker than VHF stations -- in essence therefore they are the marginal entrants in their markets -- the hope for new networks depends on factors like PTAR that improve the viability of currently marginal UHF stations.[59]

3. The viewer benefits argument for the off-network restriction

Both EI and WW err in their criticisms of LECG argument on logical grounds. EI fails to clearly distinguish between the network restriction and the off-network restrictions of PTAR. As a consequence EI ends up demonstrating one of PTAR's benefits. Williamson and Woroch make the mistake of using what stations are willing to pay for syndicated programs as their sole measure of a program's value. They ignore the fact that with free TV benefits to viewers are not reflected in market transactions. Williamson and Woroch's mistake is a natural one for economists whose careers have been spent studying industries in which price is a sensible index of consumer benefits. On the other hand, it is hard to see EI's argument as anything other than a logical non sequitur. Both EI and WW misunderstand the intertemporal nature of the LECG market failure analysis.

The social welfare benefits of the off-network provision are empirically proven. The basic argument for the off-network provision of PTAR is fairly straight forward. While the competition between existing off-network and first run syndicated programs is simultaneous, the investment decisions supporting the two types of programs are not. The production costs of a network program

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[59] This is another problem with EI's comparison of mean profits for UHF independents and affiliates. What is relevant is the profitability of marginal stations, which are largely UHF.

that successfully makes it into syndication are typically incurred four to five years before the first episode is shown in syndication while the costs of first run programs are incurred much closer to the date they air.[60]

Thus, the production costs and development costs of a network program are precommitted and sunk by the time it enters syndication, while for a first run program production costs are still a decision variable at the time of syndication. At the time it is sold for its first syndication season, much of its development costs are still in the future. When a station manager is confronted with a choice between equally popular off-network and first run programs (programs that would draw equivalent audiences), the supplier of the off-network program will almost always be able to underbid the supplier of the first run program.

In fact, up to a point, an off-network program will be able to underbid first run programs that would draw larger audiences because, at the very least, ongoing production costs must be covered in the license fees for first run programs, and the cost of developing the program must be covered as well if the first run program is new. Obviously viewer interests are not well-served if off-network programs are substituted for the first run programs that most viewers like more. In addition, because some first run programs will be underbid by off-network programs contributing less to viewer welfare, first run programs will be under supplied relative to their net welfare contributions.

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60 We are ignoring the distinction between development costs and production costs that was developed in our initial comments. Relative to the timing of investments in network programs, both development expenditures and production related expenditures for first run syndicated programs occur close to the date of that programs are broadcast.

Displacement of first run programs by less popular off-network programs would not be a problem if off-network programs were more popular than the access programs they would replace, as EI claims,[61] but the record in this proceeding, including the initial study submitted by LECG and the position paper that was widely circulated by Disney in the months preceding the NPRM on PTAR clearly demonstrates that the most popular access period programs are first run programs in markets where both are available to affiliates. EI's position also contradicts the claim and evidence presented by EI President Bruce Owen in Video Economics, (a co-authored book with LECG expert Steve Wildman) that "first-run syndicated programs are far more popular than off-network reruns."[62]

To model competition between first run and off-network syndicated programs, we begin with the assumption that, with the exception of the fact that a network program's production costs are sunk at the time of syndication, the costs related to syndication and potential syndication revenues for both types of programs are the same. On the cost side, this is a fairly close approximation of the relationship observed for off-network programs and the expensive first run programs produced for the access period.[63] While this is not an accurate characterization of the relative revenues generated by the two types of programs, it is a useful starting point. Owen and Wildman argue that the program supply

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61 Economists, Inc. (1995), pp. 33-34.

62 Owen and Wildman (1992), p. 180. See also Table 5.7 on the same page which provides the empirical support for this claim. This Table shows that whereas off-network programs accounted for 65% of the audience for syndicated programs when PTAR was enacted in 1971, by 1989 first run programs had 70% of the total audience for syndicated programs.

63 As was noted in our initial comments and pointed out again by EI in their reply comments, per episode production costs for the typical prime time network program exceed network license fees by about $90,000, which is in the same ball park as the range of $70,000 to $100,000 per episode costs estimated for first run programs shown primarily in the access period.

market is sufficiently competitive that few, if any, producers can earn supra-competitive rents for long.[64] Therefore costs in excess of network license fees are attributable to syndication.

Let c be the production costs incurred for syndication for both off-network programs and for first run programs.[65] Because popularity and revenues for both types of programs are hard to predict, program producers consider the probability weighted values of a range of possible revenues in setting their production budgets. We assume that programs either draw large audiences, in which case advertising revenue is r_h, or they draw smaller audiences, with lower advertising revenue of r_s.[66]

Consider a first run program and an off-network program competing for the access slot on a network affiliate. There are four possible outcomes to this competition depending on the popularity of each program. Suppose both programs would generate revenue of r_h. The minimum price at which the first

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64 Owen and Wildman (1992), p. 54.

65 One of the simplifications of this model relative to that presented in our initial comments is that here we are ignoring costs that are substantial for both first run syndicated programs and for network programs that are incurred in developing concepts for new programs, researching viewer preferences, and the costs of developing and producing programs that are not successful in syndication. All of these costs are sunk for both types of programs and must be covered in the earnings of successful programs. We are also ignoring distribution costs, which were considered in the model presented in our initial comments, because these should be about the same for both types of programs and therefore don't affect the outcome of the competition between them.

66 Although the requirement that both off-network and first run syndication producers generate enough revenues to cover both production costs and the costs of programs that fail and program development costs was stated explicitly in our initial comments, WW criticized that model for driving program license fees to levels at which these costs would not be covered. Allowance for different license fees depending on the relative popularity of the two programs makes more explicit the way in which these other costs are recovered.

run producer will supply its programs is at its production cost of c. Because production costs are sunk, the off-network supplier can undercut the first run producer with a price of just slightly under c. So the off-network distributor will win and receive revenues of approximately c. For the same reasons, bidding between the two syndicators will produce exactly the same outcome and syndication price if both programs are lower audience appeal programs with revenue potential of r_s.

Suppose now that the first run program would generate revenue of r_s and the off-network program would generate revenue of r_h. Competition would drive the first run program's supply price down to its minimum of c, which would leave the station with a profit of r_s-c. The off-network program supplier can offer the station an equivalent deal with a price of r_h-r_s+c and win the bidding with a price just slightly below that. Unfortunately, the first run program supplier can't do nearly so well when it has the more popular program. Because the minimum supply price for the off-network program is zero, the first run producer will have to offer the station a price of just under r_h-r_s to win the station. This will happen only if r_h-$r_s \geq c$. If $c > r_h - r_s$, the off-network program will win with a price of $c-(r_h-r_s)$ even though a more popular first run program was available with equal production costs. This is the bias against viewer welfare described in our first report.

The possibility that stations may chose off-network programs over more popular but no more costly first run programs is indicative of an inefficient bias against first run programs in program production as well because, for first run and off-network programs that make the same prospective contributions to station revenue and viewer enjoyment, first run producers will lose some

competitions to inferior off-network programs, while off-network programs will always make a positive profit when they are more popular than first run alternatives. Thus the return to first run production investments will be less than the return to off-network production investments even when the two types of programs make equivalent contributions to viewer welfare and station profits are equivalent on average. These same biases exist when first run programs make larger prospective contributions to viewer welfare and station revenues than do off-network programs.

These outcomes are summarized in **Table IV-1** for the example developed below.

Table IV-1
Possible Outcomes for Off-Network and First Run Programs

Off-Network Revenue	First Run Revenue: r_h	First Run Revenue: r_s
r_h	Off-Net wins. Price = c.	Off-Net wins. Price = r_h-r_s.
r_s	1st run wins and price = r_h-r_s if r_h-$r_s \geq c$. Off-Net wins otherwise and price = c-(r_h-r_s).	Off-Net wins. Price = c.

The sunk cost advantage of off network syndicated programming would not be a problem if there was a large enough supply of technically comparable outlets that all programs could find a home and an audience. Unfortunately, this is not the case. Despite the effect of cable in reducing the UHF signal quality