

WW also admit to the fact that PTAR has benefited independent stations. They state that "the [LECG] report is predominantly concerned with preserving the current redistributive effects of PTAR,"⁹ and that repeal of PTAR will "simply" eliminate "what is a 'regulatory advantage' that inefficient independent stations have been enjoying for far too many years."¹⁰

They go on to state:

"In our earlier Comments, we recognized the potential economic benefits that could come from supporting 'infant firms' that otherwise would not survive in the television industry. We acknowledged that the off-network restriction could promote this objective, but with the important proviso that such protection eventually expires. We observed that twenty-five years is a long enough time for infant firms to establish themselves as viable competitors. .."¹¹

While WW raise a number of other issues here, it is clear that these comments negate WW criticisms of our statistical findings. Specifically, we

⁹ Williamson and Woroch (1995), *op. cit.*, p. 1.

¹⁰ *Ibid.*, p. 11. WW spend considerable time, as discussed in Section B.3.c below, differentiating among independent stations. The concern expressed in the above citation focuses upon inefficient independents continuing to benefit from 'regulatory advantage', while "efficient independents who have gained considerable programming and operating experience over time do not rely on the artificial protection of PTAR (p. 11)."

The important point left implicit by WW here is that the efficient independents became efficient, in part, through the protection of PTAR.

¹¹ *Ibid.*, p. 17.

found that PTAR introduced, in WW's terms, a 'regulatory advantage' that had a measurably positive impact upon independent stations. WW argue that our analysis is flawed, and that apparently we cannot draw this conclusion. However, WW cannot have it both ways. If they believe that "in our Comments, we carefully describe how the off-network restriction primarily operated to promote the viability of independent stations,"¹² and that "Apparently, PTAR resulted in a windfall gain to established independent stations,"¹³ they simply cannot be surprised by our statistical findings concerning average independent station ratings and aggregate independent station ratings. That response is disingenuous.

Furthermore, WW seem to endorse our interpretations regarding the impact of improved ratings upon entry. They state that "Marginal stations were nevertheless attracted to the television business especially since 1980. ... [perhaps] by the high ratings of their established counterparts."¹⁴

Finally, WW seem to concur with our conclusion that PTAR helped stimulate the creation of new networks by benefiting independent stations generally and certain independent stations in particular. "The Commission fully recognizes that a possible by-product of the Rules is the creation of new

¹² Ibid., p. 21.

¹³ Ibid., p. 31.

¹⁴ Ibid., p. 5.

networks. In fact, today's emerging networks (Fox, UPN, WB) were created out of the stock of existing independent stations."¹⁵

3. The EI and WW Critique of the LECG Econometric Analysis
 - a. An Overview of the LECG Methods

The overriding conclusions of our statistical analysis (i.e., the comparison of means developed in our Appendix D and briefly recapitulated above) are difficult to deny, particularly since they corroborate our theories of the market in question and those theories and interpretations of EI and WW cited in **Section B.2** above. Indeed, some analysts might have concluded their quantitative investigation with such statistical findings. We felt, however, that while convincing, these statistical results could be advantageously extended and refined through the use of econometric modeling.

In pursuing that econometric refinement, however, we must not lose sight of the fact that we have already found demonstrable evidence of the positive impact of PTAR upon the performance of independent stations. We cannot let minor (and specious) disagreements about such things as the inclusion and/or measurement of certain variables distract us from that overriding conclusion.

That having been said, the reason that we turned to econometric methods was to provide to the Commission greater clarification of our statistical results.

¹⁵ Ibid., p. 18. Parenthetically, the independent stations that have been the foundation of these emerging networks are those "efficient independents who have gained considerable programming and operating experience over time" (p. 11) in large part because of PTAR.

The statistical analysis described above attributes observed changes in the performance of independent stations solely to the enactment of PTAR. That direct attribution is appropriate when based on the comparison of the immediate post-PTAR period (1971-1976) with the control Period 1. However, as the comparison is extended through Period 2 and into Period 3, other economic factors intervened more importantly than they had in the past. Econometric analysis allows us to identify and measure the effects of PTAR while correcting for other factors which may have also affected station performance.

This correction allows us to better estimate the net impact of PTAR and to more accurately predict the future impacts of the repeal of PTAR. A more refined hypothesis is that PTAR influenced the performance of independent stations in each of the largest 30 markets, everything else being equal.

As stated above, to address this hypothesis, we focused upon the top 30 markets because we found insufficient data summarizing independent stations in the smaller markets for the majority of years of our data base (1966-1979). We gave priority to gathering data for these markets and these years because the 1971-1976 years were most like the control period (1966-1970), except for passage of PTAR.¹⁶ We, therefore, wanted the most comparable data for the Period 1 and Period 2 years.

¹⁶ Recall that summary statistics clarifying the relative unimportance of the smaller markets (31-75) over 1966-1979 are presented in footnote 6 above.

To complete this comparison for Period 3, in 1987 102 independent stations were found in the top 30 markets while 27 were found in the markets ranked in size from 31-75. In 1993, these numbers were 117 and 33 respectively. Compare these estimates with those cited by WW in their footnote #38, p. 25.

While we wanted to gather and encode data for all years in Period 3, the expedited time frame established by the FCC simply did not permit such an endeavor. We therefore selected 30 markets in two years (1987, 1993) that were sufficient to observe the longer-run effects of PTAR. We chose 1987 for two reasons. First, much of the expansion of cable that occurred over the 1980s had occurred by 1987. We could thereby observe the effect of cable penetration upon the 30 markets in that year. Second, while the Fox network was nascent in that year, Fox was not providing weekday prime time programming and therefore, was not yet a factor during the programming periods that we analyzed. Therefore, the 1987 ratings data would not be subject to a confounding Fox effect. We chose 1993 because it was the most recent year for which data were available and it would allow us to assess the impact of Fox programming upon ratings.

While we feel that our data base is sufficient to answer the questions posed by our analysis, we feel it is important to explicitly address this issue of the limitations of our data, both with regard to the years included and, as discussed below, the variables included.

When we initially designed our statistical and econometric analyses, we hoped to gather data for all 75 markets, for all years 1965-1993, and for a variety of independent variables that were ultimately not included. However, the time frame of our analysis simply did not permit us to gather all of these data. Indeed, we found that some of the data simply did not exist in a consistent form. We, therefore, gathered those data that were available, given the time constraints of our filing.

While the data could be more complete, that is true of all econometric data bases. While the data base upon which our econometric model is based is not exhaustive for all markets and all years, it is still sufficient to address the issues raised here. It represents the most complete data base available to this proceeding. We find that no other party to this proceeding has invested the time and resources developing supplemental or alternative data. Their criticisms should be viewed in that light.

As stated in our report, we used these data to quantify the hypothesized incremental effect of PTAR using the following regression model:

$$(1) \quad P_{mt} = F(X_t, Z_m, \text{PTAR Dummy}_{mt}, T71) + e_{mt}$$

where P_{mt} is a measure of independent station performance in market m and time period t ; X_t and Z_m denote all other variables that change over time (t) and market (m) (such as population, income and measures of tastes); PTAR Dummy $_{mt}$ and T71 are used to approximate the effects of PTAR; and e_{mt} is a measure of remaining residual error.

Notice that the focus of this model is a given market, m, in a given year, t. This is extremely important. This is the correct focus of the analysis.

We respectfully submit that the Commission should be interested in the following question: Did PTAR engender conditions in existing broadcast markets favorable to the performance and growth of independent stations? To answer this, the Commission must examine the performance of the average

independent station and/or the aggregate of all independent stations in those markets. We have formulated our regression model to do exactly that.

We respectfully submit that the Commission is not interested (and should not be interested) in predicting which independent stations will be successful. The Commission is not interested (and should not be interested) in picking winners.

The variables and structure of Equation (1) of our report are aimed specifically at measuring the incremental impact engendered by PTAR in market m and year t . Our statistical analysis indicates that such an impact existed and that it was positive. Selected reply comments of EI and WW (cited in **Section B.2** above) indicate that such a positive impact existed. The purpose of our econometric analysis was to assess whether such an impact existed in a more fully-specified econometric model, correcting for other factors potentially affecting independent stations.

However, the variables and structure of Equation (1) of our report are totally inappropriate for measuring how the incremental impact engendered by PTAR differentially benefited individual stations. Had we attempted to analyze and predict the determinants of the success of individual stations, we would never have used Equation (1). Instead, we would have developed an alternative econometric model focusing on and measuring how each independent station differentially exploited the incremental impact offered by PTAR to all independent stations. As a result, as we discuss more fully in **Section B.3.b** below (see responses to WW.3 and WW.15), the use of our model by WW to

predict individual station performance is indefensible, completely without merit and irrelevant to these proceedings.

The specific variables included as X_t and Z_m in our estimation of Equation (1) are the following [variable names are presented in brackets]:¹⁷

- TV Households [TVHH] in the ADI
- Percentage of TVHH in the ADI with Cable [%CAB]
- Percentage of TVHH in the ADI with UHF reception [%UHF]
- Average real per capita income [PCI] in the ADI
- The number of independent stations in the market [Nind]
- Percentage of TVHH with VCRs [%VCR]

Not all of these variables appear in the final regressions; some were eliminated based upon standard hypothesis testing procedures.¹⁸

¹⁷ As with all econometric efforts, we had hoped to gather additional data. For example, we had hoped to characterize the type of shows offered by the independent stations, including type of program (e.g., news, drama, situation comedy, game show), source of program (e.g., syndicated, off-network, or locally produced), and a measure of the quality of the program (e.g., “first tier” or not). For a second example, we had hoped to gather data summarizing advertising expenditures by ADI market.

It was simply impossible to develop these data under the time frame of our original effort. In some cases, we found that consistent data simply did not exist, e.g., a consistent classification of program types over 1966-1993.

Therefore, we had to prioritize our efforts. We included all of those variables that we considered of primary importance.

¹⁸ Specifically, t tests (for individual parameters) and F tests (for groups of parameters) were used to eliminate those variables for which we could not reject the hypothesis that their effect was zero.

In some cases, linear and quadratic effects were tested – e.g., %CAB and (%CAB)².

Given the correction for these other factors (X_t and Z_m), the regression estimates for PTAR Dummy_{mt} and T71 in Equation (1) will measure the net effect of PTAR in market m and year t. If the implementation of PTAR had a statistically significant effect upon the performance variable P_{mt} , then the estimated regression coefficient for PTAR Dummy_{mt} will be positive and statistically significant. The size of the estimated coefficient will indicate the average size of the effect of PTAR on the performance variable in these markets, everything else being equal. If the effect of PTAR on the performance variable P_{mt} varied over time then the estimated regression coefficient for T71 will be statistically significant, and the size of the estimated coefficient will measure this variation over time, everything else being equal.

b. Response to the Specific EI Criticisms

We now turn to each criticism of the LECG econometric analysis, beginning with those of EI. We cite and enumerate the criticisms and then present our response. When the criticisms are essentially the same, we group them together.

EI.1 "Even if one accepts LECG's deeply flawed econometric model, that model implies that to date PTAR has reduced the number of independents and predicts that PTAR will not increase the number of independents by one per market until 40 years after PTAR was adopted, in the year 2010." EI p. 2.

"LECG claims that one of the chief benefits of PTAR is that it had a positive impact on the number of independent stations after a 5 to 15 year lag, even though there was no immediate effect. ... The LECG model does not account for certain factors that likely contributed to growth in the number of independent stations, such

as increased cable penetration and increased demand for advertising. The LECG model does not even include data for 1980-1986, the time period when most of the growth in the number of independent stations occurred. Moreover, even if one were to accept LECG's model, the implication of that model is that PTAR will not cause an increase in the number of independent stations until after the year 2002!" EI p. 8.

As stated in the discussion of our statistical results, we find that the mean number of independent stations per market declines from 2.0 in 1969-1970 to 1.92-1.96 over 1971-1973 and 1.84 in 1976. It thereafter rises to 3.6-3.9 in Period 3. We interpreted these results to imply that PTAR had essentially no short-run "entry" effect and a positive long-run "entry" effect. This long-run effect accords with economic theory, as suggested by WW (WW, p. 5, as cited in Section B.2 above on p. 17).

Given this observed pattern, any econometric model we estimated to more completely summarize this pattern would reproduce this initial decline and later increase. The severity of the decline will be determined by the functional form chosen. Given this dependence upon functional form and given the limited number of time-series observations that we had in our data base for the 1980s, it would have been imprudent to specify and estimate only one "entry" equation. Hence, we specified and estimated a linear and logit form. While we have some preference¹⁹ for the logit model and its results, we estimated them both to assess whether they provided corroborative explanations of the observed pattern of means.

¹⁹ The logit model allows for a continuous nonlinear growth pattern bounded by 1966 and 1993.

Using each of these equational forms, we tested for the effects of all independent variables in our data base, which are listed in **Section B.3.a**, above. Hence, contrary to EI's claim, we did test for the effect of cable penetration and found that it had no statistically significant explanatory effect on the number of independent stations. Hence, based upon standard econometric procedure, we did not include it in our final estimates of the "entry" equation.

We did not test for the effect of the demand for advertising on the number of independent stations because we found no reliable data summarizing this demand at the ADI market level for our time series (see footnote 17). A priori, we find no reason to believe that advertising demand would be any better at explaining entry than cable penetration, which was found to be statistically unimportant. Indeed, we believe that it is equally likely that causation runs in the opposite direction -- that advertising expenditures were stimulated by the number of independent stations.

As we state clearly in our previous discussion, we were unable to include data for 1980-1986, in spite of our desire to do so. We chose 1987 and 1993 for reasons identified in **Section B.3.a**. We included the 30 markets for these two years to correct for the effects mentioned by EI.

Finally, we use both equations to attempt to bound the entry effects. EI presents only our upper bound results in their Figure 1 (EI p. 10). We recast these results and present our lower bound logit results in our **Figure II-1**, p. 12.

From **Figure II-2** p. 12, we see that the linear equation forces a more dramatic functional form on the data, predicting a decline in the early years of

Period 2 below (-0.2 to -0.4) the averages found in the comparison of means. The logit equation in Figure II-1 forces a less dramatic decline in the dependent variable in the early years.²⁰ We summarized our interpretations of these two equations as suggesting that, correcting for all other variables for which we had data, the long-run effect of PTAR became positive 5-15 years from enactment.

As EI correctly points out, this interpretation can also be expressed as follows: the measured decline following enactment of PTAR disappeared 5-15 years later. A net positive impact upon entry, relative to 1971, occurs between 1981 and 2001. These calculations are presented below.

These results certainly bound the observed patterns found in the estimated mean number of independent stations presented in Tables D.1 and D.2 of our report. Furthermore, these results corroborate our interpretation of those means. Specifically, when we correct for all other factors besides PTAR for which we have data, we find that there still exists a long-run increase in the number of independent stations. Given the observed effect of PTAR upon independent station ratings, it is logical to attribute that increase to PTAR.

²⁰ The dependent variable is the log-odds ratio found in Equation D.4, Appendix D of the LECG report. For our graphical display, we have translated this equation into the number of independent stations using the relationship, $N_{mt} = [\exp(.) / (1 + \exp(.))] * N_{93}$, where $\exp(.) = \exp(XB)$ and N_{93} is the mean of N in 1993 across all markets

Measured Effects of PTAR on Dependent Variable

	<u>Decline Until</u>	<u>Initiation of Positive Effect</u>	<u>Net Positive Effect Relative to 1971</u>
Linear	1986	1986	2000-2001
Logit	1975	1975-1976	1979-1980

EI.2 "LECG asserts that PTAR is the cause of this trend because the trend variable starts in 1971. However, given the growth pattern of independent stations in LECG's data, a trend variable starting in any year prior to and including 1979 would show a positive trend. Hence, simply choosing 1971 as the starting date of the trend is not sufficient to attribute this trend to PTAR." EI p. 9.

EI is correct in stating that any economic effect that increases with time will show a positive relationship with a time trend. However, all trend variables are not equivalent. For example, if we began our time trend in 1940 when there were no independent stations, we would still find a positive trend relationship with the number of independent stations in our data base. However, that positive trend would be inferior for explaining our data. Indeed, it would be nonsensical.

We did assess whether an alternative trend variable beginning in 1966 would produce the same results as T71. It did not. In particular, in the linear model, the quadratic trend variable ($T66^2$) was not significant at accepted levels. The implied trend from this estimated model was therefore uniformly negative. We concluded, therefore, that not all trends are equivalent, and since PTAR was

enacted in 1971, that T71 therefore provided the best approximation of the phenomenon being modeled.

To reiterate our approach, given the data that we have, the focus of our analysis was first to develop a set of variables which best expressed the hypothetical incremental effects of PTAR and second to test whether those variables had any explanatory power, correcting for all other factors. As a result, our PTAR Dummy and T71 are formulated in order to most directly assess the incremental effects of PTAR. It is true that T71 is correlated with other time trends. However, that does not mean that the use of the trend is incorrect. It means that we must be careful and modest in interpreting our results.

EI.3 "LECG states that PTAR had a positive effect after about 15 years, or around 1985. LECG has misinterpreted its own model. The positive effect to which LECG refers is that by 1985 PTAR was causing no further decline in the number of stations. ... It is not until after about 32 years, or in 2002, that LECG's model predicts a positive effect of PTAR on the number of independent stations. Only after approximately 40 years, or in 2010, does LECG's model predict that PTAR will have increased the number of independent stations by one per market." EI, pp. 9-10.

We address this criticism in EI.1. We did not misinterpret our results. EI chose to cite only part of our results, namely those most favorable to EI's position.

EI.4 "In its comments, the FTC staff examined the factors contributing to broadcast stations growth and concluded that '[i]t has been the growth of cable, more than any other factor, that has facilitated the entry of new commercial television stations, and the formation of

new advertiser-supported broadcast television networks ...' " EI p. 11.

"LECG admits that its model does not account for the effect of increased cable penetration on the number of independent stations. Moreover, LECG has not attempted to account for the effect of increased advertising demand on the growth of independent stations. In fact, LECG states that it cannot even tell when the growth of independents occurred because it lacks data for 1980-1986, the period during which the number of independent stations in LECG's sample markets increased most rapidly. Amazingly, LECG did not collect data for the time period that contained the phenomenon that it sought to explain." EI, p. 13.

As discussed in EI.1, EI has misstated our analysis. We were concerned about the growth of cable and its effect upon station growth. We did account for it by including our variable summarizing cable penetration. We tested both linear and quadratic effects of %CAB. We thereby tested for and corrected for the incremental effect of cable. We found that cable television penetration had no effect upon station growth. The relevant coefficients were statistically insignificant in both the linear and logit models. We therefore dropped cable penetration from the model.

We did not include the years 1980-1986 for reasons discussed above. Clearly, including such data would have given better results on the effect of cable.

EI.5 "In sum, LECG's analysis of the factors that affected the growth of independent stations is seriously flawed. Consequently, its conclusion that the growth in the number of independent stations is attributable to PTAR is unsupported. The primary basis for LECG's conclusion is an econometric model that identifies the growth of independent stations, but cannot distinguish its cause.

The model does not include data for the time period during which most of the growth of independent stations occurred. It does not account for factors such as increased cable penetration and expanded advertising demand that are likely to have influenced the growth in the number of independent stations. Even if LECG's model is assumed to be properly specified, its prediction of no growth for thirty years is at odds with LECG's own conclusions." EI, p. 13.

As discussed above, EI continues to mis-characterize our treatment of cable penetration, which we found to have no statistical effect upon station growth. While we would have liked to test for the effect of advertising demand, we were not able to develop the appropriate data series to do so. While we would have liked to test for both effects using data over 1980-1986, we were unable to develop the appropriate data series to do so.

In sum, we disagree that our analysis of the factors that affected the growth of independent stations is seriously flawed. We will admit that our conclusions must be cautious. We believe that our econometric results, from both the linear and logit model, can only be used to corroborate the findings of our statistical comparison of means.

To wit, examination of the average number of stations suggests that there is a possible long-run positive impact of PTAR upon station growth, which is predicted by basic economic theory. However, our comparison of means does not correct for other factors. We have attempted to test for and correct for those other factors, as best as we can given the available data. Having tested for and corrected for those other factors, we still find that PTAR had a positive long-run impact. The linear and logit models provide a range of predicted effects. We do

not endorse any one specific set of predictions. Rather we rely upon the range of estimated effects to explain the effects of PTAR over 1966-1993.

Given our awareness of the limitations of these econometric results, notice that we did not attempt to predict changes in the number of stations beyond 1993, either with the assumed continuation or assumed repeal of PTAR.

EL.6 "LECG's logit model suffers from all the infirmities described above in connection with its linear model and more besides. For example, many observations were excluded from the analysis. The model's specification forces LECG to exclude from the analysis those markets that did not experience any growth in the number of independent stations and those markets that saw a decrease in the number of independent stations. This is because the logarithms of zero and of negative numbers, for example, are not defined. Hence, LECG only includes observations for those markets in those years that had an increase in the number of independent stations, and observations only for years when the number of independent stations in a market were less than the number in that market in 1993. This model specification includes 84 fewer observations than were included in the linear specification." EI, p.14.

"In addition, LECG's logit specification only makes sense if the number of independent stations is expected to reach some upper limit or 'saturation point'. LECG defines the saturation point in terms of the actual number of stations in each market in 1993, rather than the technical/regulatory limit on the number of stations in each market. ... Third, the model falsely assumes that there can be no further growth in the number of independent stations after 1993." EI, p. 14.

Many of these comments suggest that EI has not understood our logit model. For example, the logit model does not exclude markets where there was a decrease in the number of stations. In many markets, the number of stations increased, then decreased and then increased again. The logit formulation

accommodates that phenomenon. Hence, it does not include only "observations for those markets in those years that had an increase in the number of independent stations."

It is true that the estimation of the model does not use data for the year 1993 for all markets, for the reasons stated by EI.²¹ Likewise, for obvious reasons, we could not use any data for those markets for which we did not have 1993 information. As a result, we did have fewer observations with which to estimate this model. However, these data issues do not diminish the empirical relevance of our reported results, all of which are statistically significant.

Furthermore, the insights gained by the logit formulation require no such overreaching determination of the "technical/regulatory saturation point" of each market. Nor does the model assume that there shall be no further growth in the number of stations in the future. Indeed, it is silent about station growth beyond 1993, and we do not use it to predict station growth beyond 1993.

What the logit model does do is the following. It focuses on the pattern of station growth over the historical period relative to the end product of that growth in 1993. It attempts to statistically attribute the sources of that past growth to PTAR and/or any other factors that were relevant. If most markets experienced a decline in stations from 1966 to 1993, this approach would be inappropriate. However, such a decline occurred in none of our markets. In some markets, the growth in the number of stations oscillated around a positive trend. Such a pattern can be accommodated by the logit model.

²¹ Specifically, $(Prind_{m_t}/(1-Prind_{m_t}))$ is undefined in this case.

Indeed, the comparison of a given year with 1993 in the logit model is analogous to comparing the mean number of stations in 1993 with the mean number of stations in previous years. That comparison does not require that the estimated mean for 1993 reflect the technical/regulatory saturation point of each market. Nor does it assume that there shall be no further growth in the number of stations in the future.

EI.7 "The LECG logit model, like its linear model .., implausibly implies that PTAR had a negative effect at first on the number of independent stations. However, the time required for PTAR to have a positive effect in the logit model differs from the linear model by a factor of three." EI, p. 15.

We addressed these issues in EI.1 and EI.6. We did not estimate the linear and logit models to provide the same estimate of the long-run effect. Instead, we estimated several alternative specifications to bound the results of our comparison of means.

Recall the observed pattern found in the comparison of means presented in Tables D.1 and D.2 of our original report. The mean number of independent stations in 1969-1970 was 2.00. This mean number decreased to 1.96-1.93 over 1971-1973. While this decrease is not statistically significant, any econometric equation will be affected by it. We therefore expected that both econometric models would have negative first-order effects, even though it is an artifact. We expected that the time pattern of the effects would be different for the two models, given the different curvatures imposed by them. It does not surprise us that the time effects differ by a factor of three. However, because the logit model

best summarizes the historical pattern of means, we find it to be the preferable model.

EI.8 "Nevertheless, its analysis does not hold constant at least one very important factor, the emergence of the Fox network. LECG notes that Fox affiliates thrived in the competitive environment of the 1980s. ... LECG did not account for the presence of Fox in its econometric analysis. Hence, its econometric model erroneously attributes Fox-induced growth in ratings to a long-run PTAR effect." EI, p. 15.

"In discussing its Tables V.1 and D.2, LECG notes that in the long run the increase in access period ratings is not statistically significant. After correcting for other factors, LECG still does not find a long-run effect using its own measurement criteria [footnote referring to the LECG econometric model]. The data presented in LECG's Tables D.1 and D.2 indicate that for non-Fox independents, average ratings during the access period are lower in the long run (1987-1993) than they were in the pre-PTAR period. ... This evidence indicates that PTAR has had no long-run effect either in the access period or in the carry-over period. Rather, any long-run increase in ratings is attributable to Fox. Because LECG did not control for the presence of the Fox network in its econometric analysis, any finding of a long-run PTAR effect using that analysis is also questionable." EI, p. 18-19.

"Given the statistically very different performance of Fox affiliates and non-Fox independents, it is likely that all of the measured trend effect is due to the presence of Fox network programming." EI, p. 19.

First, let us address the mischaracterizations that EI makes about our treatment of Fox affiliates.

In our report, we explicitly measure the relative performance of those independent stations that would ultimately become Fox affiliates as well as those that would not. Hence, we have not tried to hide their importance in this analysis.

However, in 1987, these stations did not benefit from Fox network effects because Fox programming was still nascent.²² Instead, it would appear that Fox benefited by allying with the most successful independent stations. Hence, we interpret the fact that Fox affiliates had high ratings in 1987 as proof that PTAR helped support the successful growth of an emerging network, by raising independent station ratings and increasing the number of independent stations.

The effect hypothesized by EI is really only relevant to 1993, when Fox had had a chance to develop more complete weekday prime time network programming. In that year, it is possible that both PTAR and Fox-network affiliation had a positive effect upon ratings.

We assessed this possibility by re-running our original regressions (reported in Table D.4) while dropping all 1993 data, the only year for which the PTAR effect could possibly be confounded with the Fox-network effect.

Those complete regression results are reported in **Appendix A** below. For purposes of this discussion, we present selected results, all of which are statistically significant.

²² In 1987, no Fox programs appeared in any of our markets during either the access period or the two half hours following the access period. In fact, the Fox network broadcast no weekday prime time programming in 1987.

	<u>All Data</u>		<u>Excluding 1993 Data</u>	
	<u>Access Period</u>	<u>All Programming Periods</u>	<u>Access Period</u>	<u>All Programming Periods</u>
PTAR Dummy	0.034	0.0152	0.036	0.0146
T71 ²	---	4.00*10 ⁻⁵	---	2.98*10 ⁻⁵

Notice that during the access period, the measured effect of PTAR has increased (from 0.034 to 0.036), once we drop the 1993 data. For all three programming periods, the effect of the PTAR Dummy remains very similar (0.0152 versus 0.0146), while the long-term trend effect (T71²) has diminished by 25% (from 4.00*10⁻⁵ to 2.98*10⁻⁵). However, this long-term trend effect is still statistically significant.

Hence, while we concede that the inclusion of 1993 data may introduce some element of a Fox-network effect, we contend that dropping that year fully eliminates the effect. For this reduced data set, we find that PTAR is still important and statistically significant in the long run as well as the short run.

Furthermore, while discussing these results, it is useful to clarify a potential misunderstanding by EI of our results. We interpret the coefficient of the PTAR Dummy to be an immediate, "first-order effect" (p. 51 of Appendix D). We further interpreted the coefficient of any trend variables (T71²) to be "second-order effects (p. 51 of Appendix D)." As a result, any short-run effects of PTAR are approximated by the coefficient of the PTAR Dummy. The long-run effects, however, include both the measured effects of the PTAR Dummy and T71².

Hence, EI misspeaks when it states that, "after correcting for other factors, LECG still does not find a long-run effect [in the access period] using its own measurement criteria." We do find a long-run effect in the access period and for all programming periods. For the access period, the measured effect is merely the coefficient of PTAR Dummy. And notice that now that we have dropped those observations that could involve a Fox effect, our measure of the long run effect of PTAR during the access period has increased 6%, from 0.034 to 0.036.

Indeed, EI totally mischaracterizes our findings regarding the long-run effects of PTAR. Our comparison of means indicates that average and aggregate ratings increased in Period 2 with the enactment of PTAR, a finding that surprises neither EI or WW, as indicated in **Section B.2**.

In the longer run, average station ratings increased from Period 1 to Period 3, both in the access period and in all three programming periods.²³ Furthermore, the ratings increases in Period 3 were predominantly experienced by those independent stations that would ultimately become Fox affiliates. Indeed, these ratings increases were probably the leading indicator for predicting which independent stations Fox would seek to affiliate with over 1987-1993 (see **Section B.2** above).

Our econometric results corroborate and clarify these findings. We find that PTAR had a long-run positive impact upon average station ratings in the access period and in all three programming periods. We find this effect for the entire data base. We find this effect even when we drop the single year (1993)

²³ The increase during the access period is not statistically different from zero.

when there could have been an hypothesized Fox-network effect. Hence, the arrival of the Fox network did not produce the observed ratings. Using the 1966-1987 data, it is fairer to state that the observed ratings induced by PTAR helped engender the Fox network.

EL.9 "The evidence presented in Tables V.1, D.1 and D.2 however, indicates that during 1987-93 there was no effect of PTAR on independent station ratings during the access period or carry-over period. ... These data therefore imply that the repeal of PTAR would have little effect on independent station ratings." EI, p. 19.

"Thus LECG's extrapolation into the future likely reflects the initial short run, rather than current,[sic] effect of PTAR on independent station ratings and is likely to attribute to PTAR ratings increases that are really caused by emerging network programming." EI, p. 20.

"The evidence presented by LECG is consistent with PTAR having a positive initial short-run effect on independent station ratings during the access period, but not with an additional long-run effect. Any long-term ratings gain seems to be attributable to Fox network programming." EI, p. 21

As discussed in **Section B.2** and EI.8, we do not deny that in 1993 the Fox network benefited those independent stations that became affiliates. However, we have demonstrated that PTAR has had a statistically-significant measurable short-run and long-run positive impact upon the ratings of independent stations. This effect is independent of Fox affiliation. Participation in the Fox network merely complemented the effects of PTAR.

When considering repeal of PTAR, it would be irresponsible to ignore the measurably demonstrable positive impacts PTAR has had on independent station ratings in the short run and in the long run. It is clear that Fox affiliation also has contributed to the performance of independent stations. Hence, Fox affiliates would be harmed less by repeal than other independents. However, there is absolutely no evidence that Fox affiliation has supplanted PTAR as the determinant of Fox affiliate performance. Hence, repeal would do incremental damage to Fox affiliates and more severe damage to non-Fox independents.

Likewise, there is persuasive evidence that PTAR helped create the successful independent stations upon which Fox founded its network. Repeal of PTAR will damage those remaining successful independents that will provide the basis for subsequent emerging networks.

EI.10 "Despite LECG's finding of a statistical difference between the performance of Fox affiliates and non-Fox independents, LECG did not take this factor into account when testing for the effects of PTAR. In short, LECG has offered no credible evidence that repeal of the Rule is likely to have a significant impact on the ratings of independent stations or the growth of emerging networks." EI, p. 21.

We have addressed some of this criticism in responses to EI.8 and EI.9.

We believe that our econometric and statistical results provide the best analysis in the record of the effects of PTAR upon independent station performance. While we would have liked to have had more years of data to