NOS. 19-1231, 19-1241

In the Supreme Court of the United States

FEDERAL COMMUNICATIONS COMMISSION, ET AL.,
Petitioners,
v.
PROMETHEUS RADIO PROJECT, ET AL.
Respondents.

NATIONAL ASSOCIATION OF BROADCASTERS, ET AL.,
Petitioners,
v.
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Respondents.

On Writ of Certiorari to the
United States Court of Appeals for the Third Circuit

BRIEF OF THE AMERICAN STATISTICAL ASSOCIATION AS AMICUS CURIAE IN SUPPORT OF RESPONDENTS PROMETHEUS RADIO PROJECT, ET AL.

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STATEMENT OF INTEREST[1]

Amicus curiae the American Statistical Association is the world's largest community of statisticians. Its mission is to promote the practice and profession of statistics. The ASA writes in this case to explain why the Third Circuit is

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[1] All parties have consented to the filing of this brief. No counsel for any party authored this brief in whole or in part, and no person or entity other than the amicus, its members, or its counsel made a monetary contribution intended to fund the brief 's preparation or submission.

correct that, "with regard to ownership by racial minorities … the FCC's analysis is so insubstantial that it would receive a failing grade in any introductory statistics class." App.38a.

INTRODUCTION

The type of impact analysis that the FCC conducted is called a "before-after comparison" (or "change-point analysis"). By choosing this type of impact analysis, the FCC implicitly and inappropriately attributed all societal changes between 1998 and 2013 to the relaxation of the Local Television Ownership Rule. Its conclusions are based on the faulty assumption that, except for the rule change, the world remained static over a 14-year period. By failing to account for the legion of other relevant factors, the FCC's conclusions, as the Third Circuit found, "rested on faulty and insubstantial data." App.40a.

The FCC twice conducted the same before-after comparison. The first time, the FCC concluded that the data did not support a causal connection between the rule's relaxation and minority ownership rates. The second time, 15 months later, the FCC relied upon the same facts to reach the opposite conclusion, finding that the relaxation of the rule caused an increase in minority ownership. App.161a.[2]

This later conclusion is unwarranted. As the Third Circuit noted, "[p]roblems abound with the FCC's analysis." App.37a.

STATEMENT OF THE CASE

The Federal Communications Commission is required to regularly review its ownership rules to determine

[2] App. cites are to the Petition Appendix in No. 19-1241.

whether marketplace changes require rule changes to further the public interest. The FCC espouses the advancement of ownership diversity as a core policy of advancing the public interest. *E.g.*, JA335.

In the 2016 Order, the FCC determined that "the public interest is best served by retaining [the] existing rules with some minor modifications." JA104. It reiterated that the FCC's broadcast ownership rules … help further" the FCC's diversity-ownership goal "by facilitating the acquisition and operation of broadcast stations by … minority- and female-owned businesses." JA335. The FCC also rejected a requested tightening of the Local Television Ownership Rules. JA174.

In rejecting the request, the FCC cited "National Telecommunications and Information Administration (NTIA) ownership data" showing "32 minority-owned full power television stations in 1998 (racial and ethnic minorities)—the year before the Commission relaxed the former rule that had restricted ownership to a single television station in a market." JA174. The NTIA data showed a dip from 32 minority-owned stations in 1998 to 23 in 1999–2000. JA174–175. The FCC also cited ownership data from its 2014 Form 323. JA175. The Form 323 data shows that the minority-owned stations reached 60 in 2009, 70 in 2011, and 69[3] in 2013. JA175.

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[3] "As stated in footnote 16 of the 2014 323 Report, the number of minority-owned stations was temporarily increased by 14 stations because an Asian individual indirectly held a majority interest in these stations while the entity that owned the stations was in bankruptcy. This individual's interest was terminated in November 2013, which eliminated the temporary increase. Even discounting those 14 stations, there were 69 minority-owned stations in 2013 based on the 323 data." JA175 n.214.

In analyzing the data, the FCC found that, "while the data reflect an increase in minority ownership following relaxation of the Local Television Ownership Rule, [it] ha[d] no evidence in the record that would permit [it] to infer causation." JA176.

Fifteen months later, in the Reconsideration Order, the FCC, based on the same data, reached the opposite conclusion. App.161a. It said, "data in the record demonstrate that relaxation of the Local Television Ownership Rule in 1999 did not have a negative impact on overall minority ownership levels." App.161a.

ARGUMENT

As the Third Circuit noted, "the FCC's analysis is so insubstantial that it would receive a failing grade in any introductory statistics class."[4]

A properly performed impact analysis provides statistical evidence that promotes informed decision-making. But a flawed impact analysis can be worse than none at all. It provides a scientific veneer to a decision without any scientific basis. The FCC's impact analysis at issue is irredeemably flawed.

A. A before-after analysis is problematic when the before and after periods are far apart and the studied policy's impact is masked by intervening factors.

The limitations of a before-after comparison are well understood by statisticians. The analysis assumes that the data from before a point in time are comparable to the data

[4] App.38a.

that would have been collected after that point—but for the occurrence of a specific change.

An appropriate use of a before-after comparison typically justifies this assumption by choosing "before" and "after" periods that are close together in time. In that case, environmental conditions during the "before" and "after" periods are nearly identical, but for the change.

For this reason, before-after comparisons may be useful for evaluating the immediate impact of an event, such as a policy change. But, when the "after" period is long after the "before" period, the impact, if any, is obscured by intervening factors that occurred throughout the observational period. A before-after comparison is no longer appropriate without taking into account other historical factors that could have influenced the outcomes examined. Additional or alternative analysis is required to properly determine the impact of the policy change.

B. The FCC's before-after analysis does not meet the minimal standards for an impact analysis.

In an attempt to determine how the FCC's 1999 relaxation of the Local Television Ownership Rule impacted minority- and women-owned businesses, the FCC conducted a before-after comparison. The FCC used 1998 as the "before" period, and then four separate "after" periods: 2001; 2009; 2011; and 2013.

Specifically, the FCC identified 32 minority-owned full power stations in 1998, before its 1999 relaxation of the Local Television Ownership Rule. The FCC identified 23 minority-owned full power stations in 2001, 60 in 2009, 70 in 2011, and 83 in 2013. The FCC made no adjustments to account for the 15-year period between the "before" and "after" periods. It simply attributed the changes in the number of minority-owned businesses between 1998 and 2013 to the policy change.

The FCC concluded that its relaxation of the ownership restrictions is the but-for cause of the difference in minority-owned television stations between the "before" and "after" periods. In doing so, it implicitly assumes that the data collected on minority-owned television stations before 1999 is similar to the data that would have been collected after 1999 but for the relaxation of ownership restrictions.

This assumption underlying the before-after comparison may be reasonable between 1998 and 2001. But—as the respondents note—that comparison undermines the FCC's position. Br. at pp. 36–39. It demonstrates a significant dip in minority-owned stations: from 32 to only 23.

The assumption is likely unreasonable between 1998 and 2009, 2011, or 2013. The change in the number of minority–owned stations was likely influenced by the legion of other factors that changed over the intervening decade. These factors quite possibly mask the harmful impact of relaxing the Local Television Ownership Rule, such that, had the rule not been relaxed, considerably more minority-owned stations would have operated during the "after" period. But as the Third Circuit noted, "The Commission made no attempt to assess the counterfactual scenario: how many minority-owned stations there would have been in 2009 had there been no deregulation." App.39a.

Note that a reasonable comparison between "before" and "after" periods is the first of several steps necessary to assess the impact of the relaxation of the Local Television Ownership Rule. Even if a before-after comparison fairly represented the impact of relaxation, the evaluation must be consistent with all of the evidence, including the fact that the number of minority-owned stations declined between 1998 and 2001. It cannot ignore contradictory evidence. If the FCC chooses to rest its decisions on an impact analysis, to conduct a reasonable one it should use the "theory of change," [5] plainly stating the underlying assumptions and supporting evidence that confirm relaxation delivered its intended impact.

1. The implicit assumption underlying the FCC's before-after comparison is unsubstantiated and almost certainly unrealistic and unreasonable. In performing a before-after comparison, the FCC assumed that the conditions under which telecommunications firms operated in 1999 would continue in perpetuity. But even a casual observer can see that the media landscape changed considerably between 1999 and 2009–2013.

Among the variables are the significant changes of the internet age, such as the rise of smartphones and social media, and streaming media's replacement of physical media (DVD and VHS). For example, the iPod was not released until 2005, and the iPhone not until 2007; Facebook did not launch until 2004; and Netflix did not start streaming content until 2007.

These and a legion of other changing factors render a direct, unadjusted, before-after comparison of such remote time periods misleading evidence for determining the impact of a telecommunication policy change, such as relaxing the Local Television Ownership Rule.

But the FCC did not account for these and other changing factors. As the Third Circuit noted,

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[5] *See generally, e.g.*, https://www.sopact.com/theory-of-change.

> "the FCC's statistical conclusions are woefully simplistic. They compare only the absolute number of minority-owned stations at different times, and make no effort to control for possible confounding variables." App.38a.

As this implicitly notes, it is impossible to know whether the number of minority-owned firms increased as a result of the relaxation, or if the expanding market would have occurred regardless. It is necessary to account for the technological and other changes that revolutionized the telecommunications industry. And if the number of minority-owned firms declines after accounting for these changes—as it did immediately following the rule's relaxation—it is necessary that the FCC's evaluation account for these declines.

The FCC may not have needed to conduct a before-after comparison. But upon choosing to do so with distant periods (i.e., 1998 and 2009–2013), no conclusions could reasonably be drawn without accounting for other historical factors that could have influenced the data.

2. Amicus Phoenix Center for Advanced Legal & Economic Public Policy Studies argues that the FCC satisfied its responsibility for an impact statement by first making a judgement call that minority and women-owned businesses were not negatively impacted by FCC policy changes and then looked for but could not find data to contradict that judgment.

But by conducting only a before-after comparison, the FCC effectively ignored the evidence. By not accounting for the changing media landscape and other factors, the FCC may as well not have collected the data in the first place. This can be demonstrated using familiar, everyday examples.

C. The flaw in the FCC's before-after analysis can be demonstrated through familiar concepts.

Familiar, everyday before-after comparisons require us to adjust for societal changes so that fair comparisons are made. These adjustments are necessary and intuitive. For example, investors are well aware that their retirement account could double in value, but if the value of the dollar has halved, their financial situation has not improved. Such reasoning explains a range of commonly accepted practices, such as cost-of-living-adjustments to salaries and benefits.

1. A popular example of the necessity and intuitiveness of adjustment is the analysis of box office performance.[6] When the FCC relaxed the Local Television Ownership Rule in 1999, James Cameron's *Titanic* was the highest grossing film of all time, yielding $2.1 billion dollars over its initial rollout starting December 18, 1997. By 2009, Cameron's *Avatar* was the highest grossing film of all time, yielding $2.7 billion dollars over its initial rollout starting December 16, 2009.

A before-after comparison suggests *Avatar* was much more popular than *Titanic* since it yielded 29 percent more revenue. But this comparison does not account for the fact that the value of money changed between 1997 and 2009. The Consumer Price Index (CPI-U) reports that prices of all goods and services increased 34 percent between December 1997 and 2009. Thus, adjusted for inflation,[7] *Titanic*

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[6] Box office data is from https://www.boxofficemojo.com.

[7] Inflation adjustments made using https://www.bls.gov/data/inflation_calculator.htm.

grossed $2.8 billion in 2009 dollars, and *Avatar* grossed 1.3 percent less than *Titanic* during its initial rollout.

In fact, adjusted for inflation, the 1939 movie, *Gone with the Wind*, is the highest grossing film of all time. It grossed $0.19 billion dollars over its initial rollout starting December 15, 1939. But the CPI-U rose 1,500 percent over the next seventy years, making those sales worth $2.9 billion in 2009 dollars.

This example demonstrates the importance of adjusting before-after comparisons for inflation, the changing value of money over time. Inflation masks the societal impact of *Avatar* relative to *Titanic* or *Gone with the Wind*. But many other changes occurred between 1939, 1999, and 2009 that may require adjustment as well. If the purpose of the analysis were to compare the popularity of each film, it would make sense to account for, among other things, the growing U.S. population. For example, one could adjust the numbers based on the percentage of the population that purchased a ticket to see each film.

2. Adjustments for multiple societal changes are common. For example, since World War II, housing prices have increased more than tenfold. Not only did the value of money decrease substantially since that time period, but the typical house became larger and its amenities nicer. If homeowners want to know whether the value of their houses increased, it is necessary to adjust data on home sales for both inflation and housing quality. This adjustment can be done using the Housing Price Index or Case-Shiller Index, and the necessity and intuitiveness of these indices explain their popularity in finance.

3. Examples of appropriate and inappropriate before-after comparisons can be demonstrated using this Court's practices over time.

An example of an appropriate use of the before-after comparison might examine the impact of this Court's implementation of the two-minute rule. During OT 2018, before the rule's implementation, the average time to first question was just over 60 seconds. During OT 2019, when the rule was implemented, the average time to first question was nearly 117 seconds. By performing a before-after analysis, we attribute the implementation of the two-minute rule to the near doubling of the time to the first question. And, since little, if anything, else changed between the two terms, it might be reasonable to attribute the difference to the rule's implementation.

An example of an inappropriate use of the before-after comparison might examine the impact of the FCC's relaxation of the Local Television Ownership Rule on the length of this Court's majority opinions. The average majority opinion length in 1999 was 4,982 words. In 2013, it was 6,337—a 27 percent increase. Clearly, the FCC policy change did not inspire the Court to write longer opinions. But a careless before-after comparison could be used to "demonstrate" that it did.

CONCLUSION

The FCC was required to determine the effect of its policies on minority-owned businesses. A correctly performed impact analysis provides convincing evidence that promotes sound decision-making and communicates the merit(s) of a proposed action. But a cursory before-after comparison can be worse than no analysis at all—providing a veneer of science to a decision with no scientific basis. The FCC did not meet the minimum standard for assessing the impact of its policy. Additional analysis is required to comply with the requirement that the FCC determine the effect of its policies on minority-owned businesses. The judgment of the court of appeals should be affirmed.

Respectfully submitted,

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