2019 ANNUAL REPORT
2019 again proved to be another extremely productive year for the Phoenix Center, so much so that all of our many accomplishments and accolades cannot be summarized here.

As always, the Phoenix Center’s research in 2019 was prolific. To begin, the Phoenix Center issued twelve (12) scholarly papers in 2019. We are also extremely proud to report that Phoenix Center scholars had six (6) papers published, or accepted for publication, in academic journals. Finally, Phoenix Center staff authored twelve (12) op-eds in various media outlets.

Once again, our efforts did not go unnoticed. For example, Phoenix Center Chief Economist Dr. George Ford remains in the top 1% of authors downloaded on the Social Science Research Network, and I am not far behind in the top 1.4%. More importantly, the Phoenix Center’s webpage again received nearly 1.5 million hits in 2019.

We also tried to contribute to the broader policy community. For example, I was again honored to serve as the co-chair of Federal Communications Bar Association’s committee to oversee the FEDERAL COMMUNICATIONS LAW JOURNAL. In addition, I was privileged to serve on the Executive Committee of Federalist Society’s Telecom Practice Committee.

George also did his part. For example, George continued to serve on the Federal Communications Commission’s Removing State and Local Regulatory Barriers BDAC Working Group. In addition, George once again had a paper accepted for presentation at the Telecommunications Policy Research Conference ("TPRC").

Phoenix Center staff were also asked to speak at a variety of forums in 2019. For my part, I was asked to moderate a Federalist Society teleforum entitled Next Steps in the Net Neutrality Saga - Mozilla v. FCC. I was also asked to speak about current issues spectrum policy at the 2019 Practicing Law Institute Telecom Conference. As for George, he testified before the Alabama state legislature about municipal broadband and he also presented his research before SEARUC. Most notably, George was honored to be selected to present the keynote address at the Pacific Telecommunications Conference in Hawaii.

We are again proud to report that we were able to make a significant contribution to the policy debate in 2019. For example, our research was cited by the Federal Communications Commission in its Section 621 Order on franchise fee reform. And, perhaps most significantly, because our counterfactual peer-reviewed empirical research provided the primary evidence upon which the FCC relied to demonstrate that the costs of Title II reclassification outweighed the benefits in its Restoring Internet Freedom Order, the validity of our research and our amicus brief were a central point of discussion in the D.C. Circuit’s opinion in Mozilla v. FCC.

Finally, the Phoenix Center again put on several fantastic programs of its own this year. First, we held our Eighth Annual Rooftop Policy Roundtable Discussion, where we had with a keynote presentation by Federal Trade Commission Commissioner Christine Wilson and an excellent interactive conversation about privacy and broadband policy over drinks and cigars. We also held our Nineteenth Annual U.S. Telecoms Symposium with a keynote by FCC Commissioner Brendan Carr to another standing-room only crowd.

Once again, not a bad year...

— Lawrence J. Spiwak, President
PHOENIX CENTER PUBLICATIONS

The Phoenix Center continued to publish a prodigious amount of scholarly research in 2019. As always, all of the Phoenix Center’s research is available free on the Phoenix Center’s web page and on the Social Science Research Network.

PHOENIX CENTER POLICY PAPER SERIES

The Phoenix Center’s POLICY PAPER SERIES seeks to provide an in-depth analysis of the current regulatory and political paradigms, as well as to provide constructive and well-reasoned solutions to the problems of the day. In 2019, the Phoenix Center issued the following POLICY PAPERS:

- PHOENIX CENTER POLICY PAPER No. 55, A Fresh Look at the Lifeline Program (July 2019).

PHOENIX CENTER POLICY BULLETIN SERIES

The Phoenix Center’s POLICY BULLETIN SERIES is designed to provide a forum for responding to discrete policy issues in a shorter format than our PHOENIX CENTER POLICY PAPER SERIES. The Phoenix Center published the following POLICY BULLETINS in 2019:

- PHOENIX CENTER POLICY BULLETIN No. 45, Infrastructure Investment and Franchise Fee Abuse: A Theoretical Analysis (April 2019).
- PHOENIX CENTER POLICY BULLETIN No. 46, Addressing Spectrum Holdouts With A Transaction Threshold: A Theoretical Analysis (July 2019).
- PHOENIX CENTER POLICY BULLETIN No. 47, Innovation in Spectrum Repurposing: The C-Band As A Principal-Agent Problem (September 2019).

PHOENIX CENTER POLICY PERSPECTIVES

The Phoenix Center’s POLICY PERSPECTIVES SERIES is designed to provide a forum for its individual staff members to express their views on current policy developments. The Phoenix Center published the following POLICY PERSPECTIVES in 2019:

- PHOENIX CENTER POLICY PERSPECTIVE No. 19-01, Estimating Betas in Practice: Alternatives that Matter and Those that Do Not (January 9, 2019).
- PHOENIX CENTER POLICY PERSPECTIVE No. 19-02, Broadband as a Source of Rural Decline: A Look at the Data (June 13, 2019).
- PHOENIX CENTER POLICY PERSPECTIVE No. 19-03, Quantifying the Overstatement in Broadband Availability from the Form 477 Data: An Econometric Approach (July 11, 2019).
- PHOENIX CENTER POLICY PERSPECTIVE No. 19-04, Cost-Benefit Analysis at the FCC: A Look at the 900 MHz Band (September 16, 2019).
- PHOENIX CENTER POLICY PERSPECTIVE No. 19-05, Statistical Negligence in Title II Impact Analysis (October 1, 2019).
- PHOENIX CENTER POLICY PERSPECTIVE No. 19-06, Does Title II Reduce Infrastructure Investment? Repairing Hooton’s Analysis (October 15, 2019).
- PHOENIX CENTER POLICY PERSPECTIVE No. 19-07, Infrastructure Investment in the Railroad Industry: An Econometric Analysis (December 9, 2019).
PHOENIX CENTER PUBLICATIONS

@LAWANDECONOMICS, THE OFFICIAL BLOG OF THE PHOENIX CENTER.

Started in 2012, the Phoenix Center’s @LAWANDECONOMICS blog provides a useful and immediate outlet for our scholars to comment on the issues of the day. In 2019, the Phoenix Center released the following blog:

- Welcoming Private Sector Efforts to Increase Broadband Adoption (August 6, 2019).

ACADEMIC PUBLICATIONS

In 2019, the Phoenix Center’s staff had six (6) papers published, or accepted for publication, in academic journals:


- The Preemption Predicament Over Broadband Internet Access Services, FEDERALIST SOCIETY REVIEW (forthcoming winter 2020).

- Interference, Sunk Investment, and the Repurposing of Radio Spectrum, INFORMATION AND COMMUNICATIONS TECHNOLOGY LAW (forthcoming winter 2020) (originally released as PHOENIX CENTER POLICY BULLETIN NO. 40).


OP-EDS:

The Phoenix Center had the following op-eds published in 2019:


- Duopoly is Not a Dirty Word, FEDERALIST SOCIETY BLOG (February 27, 2019).


- The “Save the Internet Act” Raises Numerous Legal Pitfalls, BLOOMBERG LAW (April 1, 2019).


- Proposed Reforms to FCC’s Lifeline Program Require A Bit More Thought, FEDERALIST SOCIETY BLOG (July 22, 2019).

- “Winning the Race to 5G” Is No Excuse to Ignore the Law and Economics, FEDERALIST SOCIETY BLOG (July 26, 2019).

- How Economics Can Help Guide Our Thinking About the C-Band, FEDERALIST SOCIETY BLOG (September 17, 2019).
PHOENIX CENTER PUBLICATIONS

- **Insight: Elaine Chao Needs to Better Prioritize DOT’s Spectrum Fights**, BLOOMBERG LAW (September 25, 2019).

- **Insight: Clock Ticks on Congress and STELAR Reauthorization**, BLOOMBERG LAW (November 21, 2019).

MAJOR CITATIONS:


- **In the Matter of Inquiry Concerning Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion**, FCC 19-102, FIFTEENTH BROADBAND DEPLOYMENT REPORT NOTICE OF INQUIRY, __ FCC Rcd __ (rel. October 23, 2019) at n. 46, citing PHOENIX CENTER POLICY PERSPECTIVE NO. 19-03, Quantifying the Overstatement in Broadband Availability from the Form 477 Data: An Econometric Approach (July 11, 2019).

- In 2018, the Federal Communications Commission released its Restoring Internet Freedom Order, which reversed the Obama Administration’s controversial decision to classify broadband Internet access as a common carrier “telecommunications” service under Title II of the Communications Act of 1934. To justify its policy shift, the current Commission relied heavily on the Phoenix Center’s peer-reviewed economic research which showed that the imposition of regulations designed for the old Bell System monopoly upon the Internet had an adverse effect on the investment decisions of Internet Service Providers. As a result, the agency’s reliance on our work became a central point on appeal in Mozilla Corporation v. Federal Communications Commission, 940 F.3d 1 (D.C. Cir. 2019). While the court was reluctant to take an affirmative position on the merits of the economics because it did “not sit as a panel of referees on a professional economics journal, but as a panel of generalist judges obliged to defer to a reasonable judgment by an agency acting pursuant to congressionally delegated authority,” the D.C. Circuit nonetheless found the Agency’s reliance on our work reasonable.

CITATIONS IN THE ACADEMIC LITERATURE

The Phoenix Center is once again proud that our work was cited by other scholars in the academic literature. In 2019, citations to Phoenix Center research could be found in leading journals such as the AIPLA QUARTERLY JOURNAL, the BOSTON UNIVERSITY LAW REVIEW, the COLUMBIA BUSINESS LAW REVIEW, the FEDERAL COMMUNICATIONS LAW JOURNAL, TELECOMMUNICATIONS POLICY, GROWTH AND CHANGE, PAPERS IN REGIONAL SCIENCE, ENVIRONMENTAL SCIENCE AND POLLUTION RESEARCH, JOURNAL OF GERONTOLOGY, the JOURNAL OF MEDICAL INTERNET RESEARCH, and the JOURNAL OF LEGAL ASPECTS OF SPORT, among others.
CONTRIBUTING TO THE PUBLIC DIALECTIC

2019 provided fertile soil for those interested in policy research. In this section, we highlight some (but not all) of what we at the Phoenix Center found to be the interesting policy issues of 2019 and where we believe we added constructively to the debate.

Cable Franchise Reform

Before a cable operator can construct and operate a cable system for multichannel video and other services, Section 621 of the Communications Act requires that operator to obtain a non-exclusive franchise from the local franchising authority (or, in a few instances, a state authority). By virtue of their monopoly power over public rights-of-way, local franchising authorities are in a position to extract concessions from cable operators, especially during re-negotiations with incumbent operators that have made large sunk investments in geographic-specific networks. In 1996, Congress amended the franchise fee cap to no more than five percent (5%) of cable service revenues only, exempting revenues derived from non-cable services provided by operation of the cable system, such as broadband. Still, absent effective oversight, many local franchising authorities skirt the cap by extracting discretionary contributions, both monetary and in-kind, over-and-above a five-percent tax on gross cable service revenues.

In an attempt to rein in the excesses of local franchise authorities, the Federal Communications Commission—tasked by statute with removing barriers to infrastructure investment—issued a Notice of Proposed Rulemaking in which the Agency is proposing to subject all in-kind exactions from cable systems to the five-percent (5%) cap, subject to the few statutorily-created exceptions. In response to the Commission’s call, the Phoenix Center conducted an economic analysis which set forth simple economic and financial models, along with a more complex two-stage investment model that mimics the regular negotiations that occur between the cable operator and local authorities, which demonstrated that local franchise authorities’ extra-statutory exactions from cable operators deter investment by both incumbents and new entrants. We appreciate the fact that the Agency cited our paper in three different places in its final Section 621 Order.

Network Neutrality

Once again, net neutrality featured heavily in the debate in 2019. As always, the Phoenix Center’s substantive research played a major role in the discussion.

As noted supra, Phoenix Center Chief Economist Dr. George Ford’s empirical research provided the primary economic evidence upon which the FCC relied to find that the costs of reclassification outweighed the benefits in the Restoring Internet Freedom Order. We were delighted that the D.C. Circuit on appeal in Mozilla v. FCC cited our amicus brief and ruled that the Agency’s reliance on our work was reasonable.

However, the D.C. Circuit’s ruling in Mozilla did not mean the debate over net neutrality went away; given the political tenor of the debate our academic research into this highly-controversial issue continued throughout 2019.

For example, Phoenix Center Chief Economist George Ford authored a paper in the REVIEW OF NETWORK ECONOMICS providing an in-depth analysis of the economic evidence used by the FCC in its


**Contributing to the Public Dialectic**

*Restoring Internet Freedom Order.* In addition, George authored two critiques of a forthcoming paper by Christopher Hooten that exposed numerous fatal flaws in that analysis.

In addition, early in 2019, Congressional democrats made a cynical effort to codify the FCC’s 2010 Open Internet Order into law. To remind everyone of the legal pitfalls of such an effort, Phoenix Center President Larry Spiwak published a detailed law review in the *Federal Communications Law Journal* entitled *USTelecom and its Aftermath* and authored several op-eds on the topic.

**Spectrum Repurposing**

For many years, policymakers have sought to develop mechanisms to repurpose spectrum from low to high-value uses. In 2019, the Phoenix Center again offered some contributions to this important task.

One problem we attempted to tackle was the thorny issues of holdouts. We constructed an economic model in which a license aggregator seeks to obtain licenses secretly for a socially-valuable repurposing, but the probability the innovator’s plan is revealed to incumbent licensees rises as more licenses are acquired, exacerbating the holdout problem. We then considered whether a transaction threshold may effectively address the holdout problem by permitting, probabilistically at least, a positive return to the innovator. We found that such a transaction threshold would permit the socially-valuable repurposing of spectrum to occur.

We also looked at the question of whether the FCC needs to conduct a formal cost/benefit analysis for market transaction in spectrum. We concluded it did not. As we demonstrated, while cost-benefit analysis has its place in regulatory decision-making, such cost-benefit tests are normally not conducted for market transactions in spectrum, and for good reason: a regulatory cost-benefit test is satisfied by the repurposing itself, absent significant third-party effects or antitrust concerns.

**Broadband Deployment and Universal Service**

One of the most controversial topics in telecom is access to adequate broadband service. As usual, the Phoenix Center did not shy away from this difficult topic.

Take, for example, the Federal Communications Commission’s Lifeline program, which offers subsidies to qualifying low-income households. Much attention is devoted to improving the administration of the program to reduce waste, fraud and abuse, but some reforms appear motivated by the claim that nearly all Lifeline subscribers would obtain service even without the subsidy. To examine this question, the Phoenix Center reviewed the evidence supporting that claim and found it lacking. We also offered new empirical evidence showing that in modern times the relationship between regular paid subscriptions and Lifeline accounts reveal no displacement. In addition, we offered theoretical analysis to show that the “free but limited” service packages offered by resellers may explain this result. Our analysis also revealed that many of the Commission’s reforms, including proposals to exclude resellers from the program and the scheduled increases in minimum service standards, are counterproductive in that both reforms will increase the alleged displacement of Lifeline for regular accounts.

We also looked at the claim that the lack of broadband has led to a declining population in rural areas as people flee to the city for broadband access. If this assertion is true,
then we would expect to see a change in relative population trends during the Broadband Age between urban and rural areas. Yet, we examined the evidence and found that population data reveal no systematic change in county-level population trends. If anything, the data indicate that the population growth differential has narrowed between urban and rural areas in the Broadband Age. When comparing population trends only between rural and urban counties with above average-broadband availability, however, the growth differential is larger during the Broadband Age, suggesting factors other than broadband are driving rural population loss.

We also looked at the FCC’s data collection methodology for broadband availability. The Commission collects broadband availability data from broadband providers at the census block level, which is the smallest geographic unit used by the Census Bureau for data tabulation. In collecting and reporting these data, it is assumed that if a single home in a census block has access to broadband, then every home in the census block has access to broadband. Plainly, this “all-in assumption” overstates broadband availability to some degree. While this likely overstatement is the source of much discontent and debate, there has been no attempt to date to quantify the magnitude of the overstatement.

To fill this gap, we released a study where we attempted to quantify, by statistical means, the magnitude of the overstatement of broadband availability resulting from the all-in assumption. Augmenting the Commission’s Form 477 data with cost and demographic data, our econometric model estimates that the overstatement rate is a little over 3%. Consequently, of the 120 million homes said to have access to 25-3 Mbps broadband under the all-in assumption, about four million homes may, in fact, not. We also found, as expected, that that the overstatement rate is much higher in rural areas.

**Municipal Broadband**

Municipal broadband again featured heavily in the Phoenix Center’s research agenda in 2019.

Among other research, we looked at the claim that municipal broadband will lead to increased employment. Using data obtained from the U.S. Census Bureau’s American Community Survey, we sought to quantify the economic impact, if any, of the county-wide government-owned network (“GON”) in Chattanooga Tennessee on labor market outcomes. Labor market outcomes analyzed include, among others, labor force participation, employment, wages, and information technology employment. We then applied modern statistical methods are applied including the Difference-in-Differences estimator, Coarsened Exact Matching, and the wild bootstrap to the data. Despite an exhaustive search, we found no improvement in the local labor market from the city’s broadband investments relative to comparable cities without a government-owned network. In contrast, we found that an automotive plant built in the area substantially increased automobile manufacturing employment.

**Railroad Regulation**

Prior to the Staggers Rail Act of 1980, overzealous regulation brought the U.S. rail industry to the brink of total financial ruin. The Staggers Act restrained regulatory excesses, leading to an economic resurgence of the rail industry. Even so, some firms in the rail industry struggle to earn a
Contributing to the Public Dialectic

Despite the Surface Transportation Board’s (“STB’s”) own evidence of financial fragility and its disastrous regulatory past, the STB is now contemplating ways it may return to a more aggressive regulatory posture, including rate regulation and forced access. Analysts and industry officials worry that a regulatory revival at the STB might unwind the significant progress experienced since deregulation, worsening an already precarious financial situation and threatening continued investment in the sector at a time when the nation’s critical infrastructure is crumbling. The Phoenix Center contributed to this debate by releasing a study that quantifies the relationship between industry revenues and returns on infrastructure investment by the largest firms in the railroad industry. This study found significant, causal relationships between the financial health of the rail industry and its investment behavior.

Intellectual Property

Intellectual Property continues to be one of the fastest growing areas of the Phoenix Center’s research agenda. We were very excited that PHOENIX CENTER POLICY BULLETIN NO. 39, Promotional Effects and the Determination of Royalty Rates for Music was accepted for publication by the JOURNAL OF MEDIA ECONOMICS.

By way of background, when a terrestrial radio station plays a song during its over-the-air broadcast, the artists and their record labels receive no compensation for the sound recording right. Yet radio’s digital competitors—including streaming services and satellite radio—do pay performance royalties to performers and their labels for the sound recording. Terrestrial radio’s cost-advantage is not the result of marketplace deals or competitive forces, but from a statutory preference granted to radio broadcasters. Legislation aimed at leveling the playing field has been strongly resisted by broadcasters based on the claim that radio provides a promotional effect, or free advertising, for record labels and performers.

Our paper demonstrated that any promotional effect is fully internalized in a marketplace bargain between the music and radio industries. As such, we found that any alleged promotional effect provides no basis for federal law to mandate the free use of music by the terrestrial radio broadcast industry.

Other Activities:

- Phoenix Center President Larry Spiwak continued to serve as co-chair of Federal Communications Bar Association’s committee to oversee the FEDERAL COMMUNICATIONS LAW JOURNAL.
- Phoenix Center President Larry Spiwak continued to serve on the Executive Committee of Federalist Society’s Telecom Practice Committee.
- Phoenix Center Chief Economist Dr. George Ford continued to serve on the Federal Communications Commission’s Removing State and Local Regulatory Barriers BDAC Working Group.

Conclusion

As policy debates have become increasingly politicized over the years, we still believe (perhaps over-optimistically) that, in the end, substance matters. The policy choices we face are hard, and they should be treated with the respect and analytical rigor they deserve. Hopefully, the Phoenix Center has contributed positively towards restoring some of this analytical rigor to the dialectic.
CONFERENCES AND SYMPOSIUM

Rooftop Policy Roundtable

On June 20, 2019, the Phoenix Center held our Eighth Annual Rooftop Policy Roundtable Discussion where we facilitated a set of interactive conversations on the roof of the University Club to a standing-room only crowd over drinks and cigars. This year’s theme was Broadband for All – A Fool’s Errand or the Key to Economic Prosperity? To start the event, we were privileged to be joined by Federal Trade Commission Commissioner Christine Wilson for a keynote discussion about the current state of antitrust and digital privacy, after which we had a broader discussion with a panel of experts including Shane Tews—Visiting Fellow, American Enterprise Institute; Hank Hultquist—Vice President, Federal Regulatory, AT&T; Joanna McIntosh—Senior Vice President, NCTA; and Robert Quinn—Partner, Wilkinson Barker Knauer, LLP.

Phoenix Center Annual Telecoms Symposium

On December 3, 2019, the Phoenix Center held its Nineteenth Annual U.S. Telecoms Symposium to another standing-room crowd. Once again, the discussions were both informative and lively.

The Symposium began with a panel entitled STELAR – To Re-authorize or To Let Expire? That is the Question... Joining us to discuss this topic were Jonathan Schwantes—Senior Policy Counsel, Consumer Reports; Jeff Blum—SVP and Deputy General Counsel, DISH; Jeffrey Prince—Chief Economist, Federal Communications Commission; Michael Nilsson—Partner, Harris, Wiltshire & Grannis.

Next, we were delighted to host a “fireside chat” with Jim Cicconi—Interim Senior Executive Vice President for External and Legislative Affairs, AT&T.

Finally, we once again revisited the thorny issue of digital privacy. This year, we were grateful to be joined by Daniel Caprio—Co-Founder and Chairman, The Providence Group; Shane Tews—Visiting Fellow, American Enterprise Institute; Neil Chilson—Senior Research Fellow for Technology and Innovation, Charles Koch Institute and former FTC Chief Technologist; and Jeff Brueggeman—Vice President Global Public Policy, AT&T.

Per tradition, our Symposium ended with the presentation of the Phoenix Center’s Annual Jerry B. Duvall Public Service Award. The Duvall Award does not seek to recognize the recipient’s personal politics; instead, the Duvall Award is intended to recognize the policymaker who most demonstrated the “political courage in, and contribution of analytical rigor to, the United States telecoms policy debate.” This year, it was our privilege to bestow our Duvall Award upon FCC Commissioner Brendan Carr. Given Commissioner Carr’s long and distinguished career in public service, we could think of nobody who epitomized this standard more in 2019.

Phoenix Center scholars provide a unique and important perspective in policy debates. You turn down the rhetoric and focus on the facts, the law, and the economics. So thank you for your many contributions. The work that we do at the FCC is better because of it.

— FCC Commissioner Brendan Carr
YEAR IN PICTURES

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MISSION STATEMENT

The Phoenix Center for Advanced Legal & Economic Public Policy Studies is a non-profit 501(c)(3) educational and research organization that studies broad public-policy issues related to governance, social and economic conditions, with a particular emphasis on the law and economics of telecommunications and high-tech industries.

Founded in 1998, the Phoenix Center’s mission is to provide independent assessments of the economic and material implications of regulatory and economic policy in the U.S. and abroad.

The Phoenix Center achieves this goal by providing an honest and credible voice in the public dialectic by supporting objective, solutions-based academic research to the forefront that is unencumbered by political hyperbole or agendas and is instead well grounded in fact, law and economic theory.

Long-Term Goals:

(1) The Phoenix Center’s seeks to remind stakeholders that it is crucial to avoid political hyperbole and instead approach public policy with the analytical rigor and solemnity it deserves.

(2) The Phoenix Center seeks to promote public confidence in the democratic process, government’s institutions and in the free enterprise system.

(3) The Phoenix Center seeks to foster an environment where citizens can openly and vigorously debate today about what kind of a world they want to live in tomorrow.

The “ideal of democracy rests on the belief that the view which will direct government emerges from an independent and spontaneous process. It requires, therefore, the existence of a large sphere independent of majority control in which the opinions of the individuals are formed.”

— Friedrich von Hayek