I am third-year PhD Economics student at the Graduate School of Arts and Sciences at NYU. My primary field of interest is industrial organization and my secondary fields of interest are econometrics and microeconomic theory. I have successfully completed the mandatory first-year curriculum in microeconomics, macroeconomics, and econometrics as well as graduate courses in both theoretical and empirical industrial organization and econometrics.

My research interests lie at the intersection of industrial organization, innovation and political economy. I am especially interested in how government regulations and institutions impact competition in the technology space. Currently, I am working on two projects on competition between technologies in broadband subsidy auctions and the role of political pressure in shaping market structure in the emerging TV industry during McCarthyism.

Technology Choice and Dynamic Competition in Broadband Subsidy Auctions The diffusion of new technologies can be slow and unequal. This geographic inequality can be exacerbated when technologies differ in their fixed and marginal costs, and face limited incentives to invest in low-income rural areas. Despite being a ubiquitous technology in most urban areas, around 30% of residents in rural and Native American areas in the United States lack access to reliable high-quality broadband.

Expanding broadband access in underserved rural areas has been priority for multiple federal administrations with opver $90 billion invested in federal programs over the past twenty years. The Broadband Equity, Access, and Deployment (BEAD) program, launched as part of the Infrastructure and Investment Act 2021, is the largest ever federal program implementing broadband subsidy procurement auctions to improve access. An important feature of BEAD, and prior broadband programs, is that multiple broadband technologies such as fiber, satellite and fixed wireless compete in them. These technologies differ in deployment costs, service quality, scalability and long-term performance.

In my project, I investigate how governments should design subsidy auctions when both the technological frontier and market conditions evolve over time. Governments need to trade off between technologies with relatively lower costs to deploy and technologies with higher deployment costs but more reliability. Under BEAD, the two main competing technologies are fiber and satellite. Fiber deployment incurs large fixed costs but lower marginal costs. This would translate to network complementarities, greater scalability, and potentially lower prices for low-income customers, which are a large share of BEAD's focus. Alternatively, satellite broadband is cheaper and quicker to launch especially for geographically isolated households but network congestion can push up marginal costs and prices. Therefore, minimizing subsidy expenditure may not necessarily improve affordable reliable broadband access.

BEAD provides an ideal and interesting setting since the program initially prioritized fiber deployment

but subsequently shifted to a more technology-neutral approach. Therefore, there are two versions of bids collected which would allow me to study the impact of technology choice on participation, bidding behavior, subsidy requirements, and the allocation of infrastructure investment. Currently, I am collecting application-level data from state broadband offices and merging them with historical data from previouse federal auctions.

Political Pressure and the Emergence of Television My second project studies the interaction between political pressure, government regulation, and the development of new media technologies during the emergence of television broadcasting in the United States. Despite extensive current policy debate on how regulation and market competition can evolve jointly, there is limited empirical evidence on the matter.

Television emerged as technology in the late 1940s and 1950s at the time when public prosecution and investigation of media firms was heightened due to McCarthyism. Unlike newspapers and other print media, television broadcasters required government-issues licenses to operate. The Federal Communications Commission (FCC) exercised discretion over the allocation and renewal of broadcast licenses. This created a space where media competitions was distorted by firms' willingess to acquiesce to political pressure.

Notably, the FCC suspended the processing of applications for new television stations in 1948 and resumed in 1952 after modifying their regulations. This created substantial variation in adoption of VHF and UHF frequencies, the value of existing license and overall market competition. Political pressure may have affected firms differently depending on whether they were waiting for a license, and which technology they chose.

Currently, I am collecting and digitizing historical FCC records on station applications, licensing approval, ownership, and exposure to investigation by the House Un-American Activities Committee (HUAC).

Shreya Mathur
s.mathur@nyu.edu
475-243-4615