DOES BROADBAND TECHNOLOGY AFFECT SOCIAL SECURITY APPLICATIONS?

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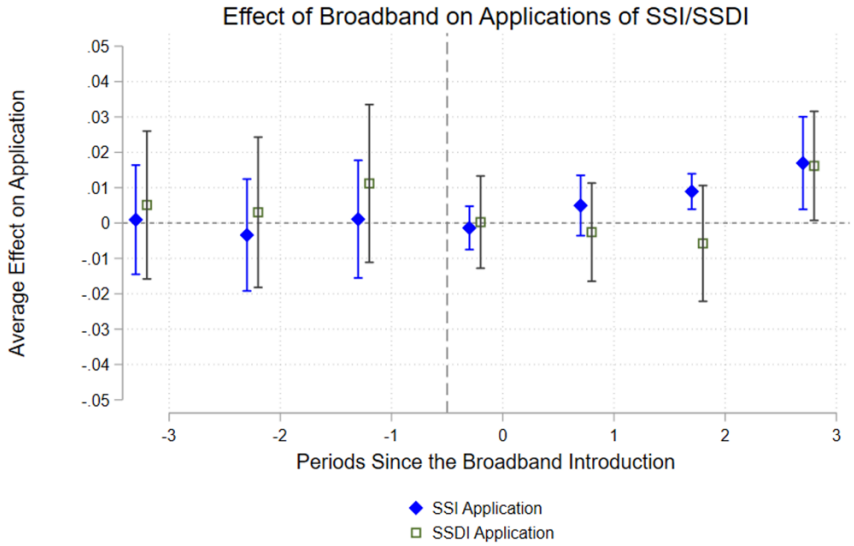
Does High-Speed Internet (Broadband) Technology Affect Social Security Applications?

Policymakers have recently been paying enormous attention to broadband connectivity in the US, with about $65 billion allocated for high-speed internet across states. It is, however, unclear whether broadband technologies affect an individual's likelihood of applying for Social Security Insurance (SSI) or Social Security Disability Insurance (SSDI). This paper evaluates whether better availability of broadband services affects the probability of applying for SSI and SSDI among the most vulnerable age group, i.e., older adults aged 50+. I found broadband rollout statistically significantly increased the probability of applying for SSI and SSDI over time (dynamic treatment effect); however, there was a small and insignificant positive increase in the likelihood of applications as the average treatment effects (ATE). The estimates from this paper highlight the unmeasured benefits of the broadband expansion and have important policy implications on policies related to SSI and SSDI and broadband availability.

Better broadband increases the likelihood of applications for social security benefits.



This study is one of the first to provide causal evidence on whether better broadband access increases the probability of applying for SSI and SSDI benefits among older adults in the US. Specifically, I study whether broadband improves production efficiency and reduces the friction to apply for SSI and SSDI benefits. The paper employs a quasi-experimental design, using the staggered introduction of high-speed "fiber broadband" in census tracts, to evaluate broadband's effects on the likelihood of applying for SSI and SSDI among older adults. I use the biennial waves from individual panel data of the Health and Retirement Study (HRS), a nationally representative study of individuals aged 51+. The analysis period is from 2010 to 2018, having over 11,000 person-year observations. The key dependent variable in my regressions is an indicator equal to one if the HRS respondent reports that they applied for the SSI and SSDI benefits during the survey year. I use two yearly data sets on broadband at the census tract level from 2010 to 2018. Merging individual panel HRS data with the broadband data at the census tract and year level allows me to exploit the spatial, temporal, and, importantly, individual-level variation in the staggered introduction of high-speed fiber broadband to estimate the intent to treat (ITT) effect. The new staggered difference-indifferences (DID) treatment estimator developed by Borusyak et al. (2021) forms the basis for my primary estimations because it addresses the negative weighting problems and does not rely on the strict assumption of homogeneity as commonly found in two-way-fixed-effects (TWFE) estimators.

This study finds that introducing high-speed fiber broadband technology positively affects the likelihood of applying for SSI and SSDI benefits over time (dynamic treatment effect) among older adults. I, however, find a statistically insignificant but positive effect in the average treatment effect (ATE). Specifically, I find a 0.4- and 0.2-percentage point increase in the likelihood of application for SSI and SSDI benefits, respectively. In 2018, there were over 640,000 applications for SSI benefits for the age group of 51 to 70. The estimates from this paper suggest an additional about 2,560 applicants for SSI benefits after the broadband expansion. These findings emphasize the need for policies that promote broadband expansion and more investments to understand other structural barriers involved in online applications for SSI and SSDI benefits.

Implications

- Broadband expansion carries a significant potential for older adults to receive SSI/SSDI benefits, potentially due to online services facilitated by the availability of the Internet.
- Broadband can be beneficial in Rural and underserved areas to reduce the geographic and racial digital divide.

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