

Broadband Internet and the Stock Market

Investments of Individual Investors

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04.30.2024

1 Research questions

Does fast broadband Internet increase stock market participation for individuals that rarely participate?
Does it improve existing individual investors' portfolio efficiency?

2 Why are the research questions interesting?

- What financial democratization caused by the Internet means has not been determined yet.
 - Does it mean improved portfolio choices by households, or does it amplify behavioral biases?
 - Prior studies tended to the latter: Internet has mixed effects on the quality of financial decisions.
 - Thus the impact of Internet on market participation and portfolio selection needs to be studied.
- The data sets of Broadband in Norway recorded trading data.
 - As a source of exogenous differences in Internet use.
 - Prior studies focus on subgroups, data sets in this paper cover entire population.

3 What is the paper's contribution?

(1) Literature on effects of the Internet use on investors' portfolio choices

Previous literature: Negative effect: Excessive stock trading among adopters of online trading platforms. (*Barber et al(2022)*)

This paper: The trend of using Internet for information acquisition and learning is clearer which leads to better portfolio decisions for investors.

(2) Literature in household finance

Previous literature: Trying to figure out why too few individuals invest in equity markets —the "participation puzzle". (*Guiso, Sodini(2013)*)

This paper: Analyzing the impacts of faster Internet access on an exogenous reduction in the fixed costs. Market participation increases due to fast broadband internet.

(3) Policy debate on government expansion or funding of broadband infrastructure

Previous literature: Focusing on the effects of internet on education and health. (*Bauerly et al(2019)*)

This paper: Revealing the impact of this policy: financial democratization.

4 What hypotheses are tested in the paper?

H1: The use of broadband internet having a positive impact on equity market participation.

H2: Faster broadband Internet improves portfolio efficiency and investors' financial decisions.

a) Do these hypotheses follow from and answer the research questions?

- Yes

b) Do these hypotheses follow from theory or are they otherwise adequately developed?

- An increase in the share of the population investing in equity funds suggests that positive effects of

broadband internet on equity market participation.

- Positive effects of increased access to broadband internet among existing investors: They increase equity fund portfolio shares and Sharpe ratios.

5 Sample: comment on the appropriateness of sample selection procedures.

The NCSD data provides records of common stock and fund transactions between 2000 and 2010, which is detailed enough to compare broadband expansion experience differences.

6 Dependent and independent variables: comment on the appropriateness.

A clear causal relationship is presented between the dependent(market participation rate) and independent(the impact of broadband coverage) variables.

7 Regression model specification: comment on the appropriateness.

The paper explains in the assumptions section why there is a causal relationship between the linear specification and why the fixed effects of municipalities and time hold.

8 What difficulties arise in drawing inferences from the empirical work?

The timing of the broadband coverage expansion is correlated with prereform urbanization. The potential trends in stock market participation between urban and rural cities may differ, and there may be biases in the estimation.

9 Describe at least one publishable and feasible extension of this research.

Whether regulators can better manage the market and investors through the application of broadband Internet to reduce some speculation that disrupting market balance.

References

- [1] Barber, Brad M., Xing Huang, Terrance Odean, and Christopher Schwarz, 2022, Attention induced trading and returns: Evidence from Robinhood users, *Journal of Finance* 77, 3141–3190.
- [2] Guiso, Luigi, and Paolo Sodini, 2013, Household finance: An emerging field, in *Handbook of the Economics of Finance*, 1397–1532 (Elsevier).