

Summary of *Broadband Internet and the Stock Market*

Investments of Individual Investors

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1. What are the research questions?

- Whether broadband internet use leads to increased stock market participation
- Whether broadband internet affects the trading behavior and portfolio efficiency of individuals who are already stock market investors.
- What are the channels through which internet use leads to increased equity market participation?

2. Why are the research questions interesting?

- Faster internet results in decreased cost on transaction and improved efficiency on information acquisition.
- Exceptional register data sets makes it possible to study the effect on the entire population.
- There is no systematic research on the effect of the roll out of the broadband internet, prior studies have diversified results including behavior biases and detrimental effects.

3. What is the paper's contribution?

- Contribution to the effect of internet use on portfolio choice.
 - Existing literature documents detrimental effects of the use of internet. (see Barber et al. (2022), Allen et al. (2022))
 - This paper document positive effects of internet use on the stock market participation and portfolio efficiency of individual investors.
- Contribution to household finance about the “participation puzzle”.
 - Prior studies suggest factors including personal wealth, educational attainment, computer ownership and financial literacy.
 - This paper focused on the progress on faster internet access.
- Contribution to debates on government expansion or funding of broadband infrastructure.
 - This paper shed light on this policy's positive effects.

4. What hypotheses are tested in the paper?

- H1: Broadband internet access leads to increase in stock market participation among individuals. .
- H2: Among existing investors, broadband internet access leads to increased diversification and portfolio efficiency.
- H3: The effect of increased internet use works through increased use of the internet for information acquisition and learning.

The hypotheses root in the core topic that progress in internet use motivates participation in equity market.

- H1 focuses directly on main research question.
- H2 draws the view back on the contemporary.
- H3 excavates the mechanism of the effect.

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

• The entire data set is highly comprehensive and can be representative of all the population and the market.

6. Dependent and Independent Variables.

• **Dependent variables:**

y_{kt} : the stock market participation rate for municipality k in year t , including *HoldsAny*, *HoldsFunds*, *HoldsStocks*, which measures the proportion of residents in a municipality entering the market, why does it use household instead of individuals?

• **Independent variables:**

The main independent variables are internet variables, including $z_{k,t-1}$, $i_{k,t}$, which are broadband coverage rate and user rate, why is the coverage rate in $t-1$ while user rate in t ?

7. Regression/prediction model specification.

$$i_{k,t} = \phi z_{k,t-1} + \gamma_k + \theta_t + v_{k,t}$$

$$y_{k,t} = \omega i_{k,t} + \alpha_k + \tau_t + e_{k,t}$$

- The paper exploits an IV model and its reduced form to assess the impact of internet use.
- The model follows a strict verification on exogeneity and exclusion, making the results more reliable.

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

• **Establishing Causality:** Broadband coverage progress has extensive influences on the whole society, which makes it impossible to completely isolate its effect in stock market participation.

• **Endogeneity Concerns:** Regions with higher demand for stock investments might receive broadband earlier.

• **omitted variable bias:** Other concurrent economic or technological developments could also influence investment behaviors.

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

Research on the effect of increase in the scale of **fintech services** on the market efficiency may be more in line with recent years' tendency.