Crowdsourcing Peer Information to Change Spending Behavior

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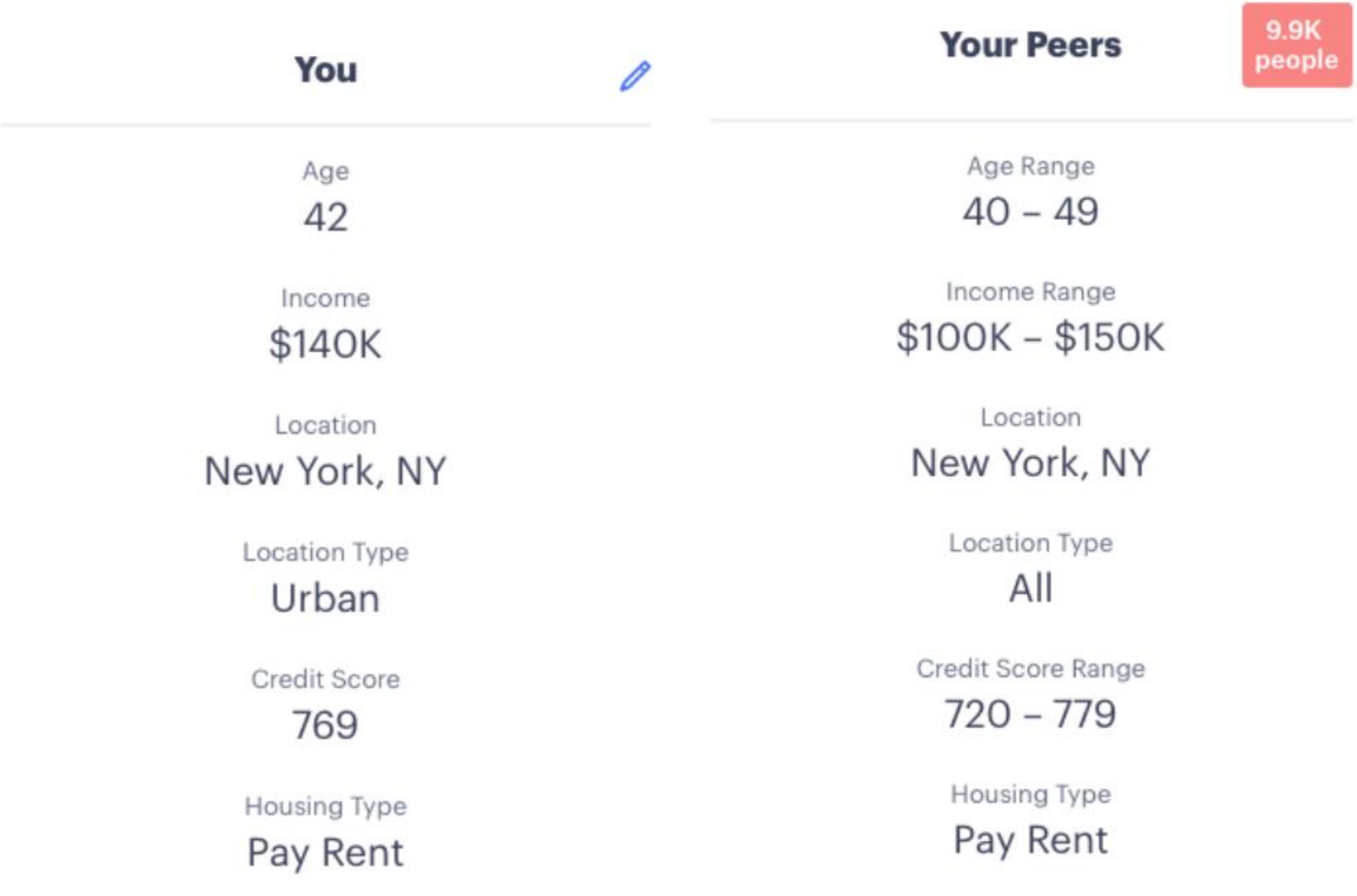
ABFER Webinar - Innovation, Productivity and Challenges in the Digital Era: Asia and Beyond
December 7, 2022

Summary of paper

- Question: Do consumer spending respond to the revelation of information about their peers’ spending?
- Empirical setting: a financial aggregator app with peer comparison
  - When users sign up, they are paired with a group of anonymous, demographically similar peers
  - They see their own real-time spending (through their own linked accounts) as well as the peer spending retrieved in a past time
- Main finding: Consumers do adjust their spending by converging to the peer level!
- The authors also go out of their way to establish external validity through a separate RCT.

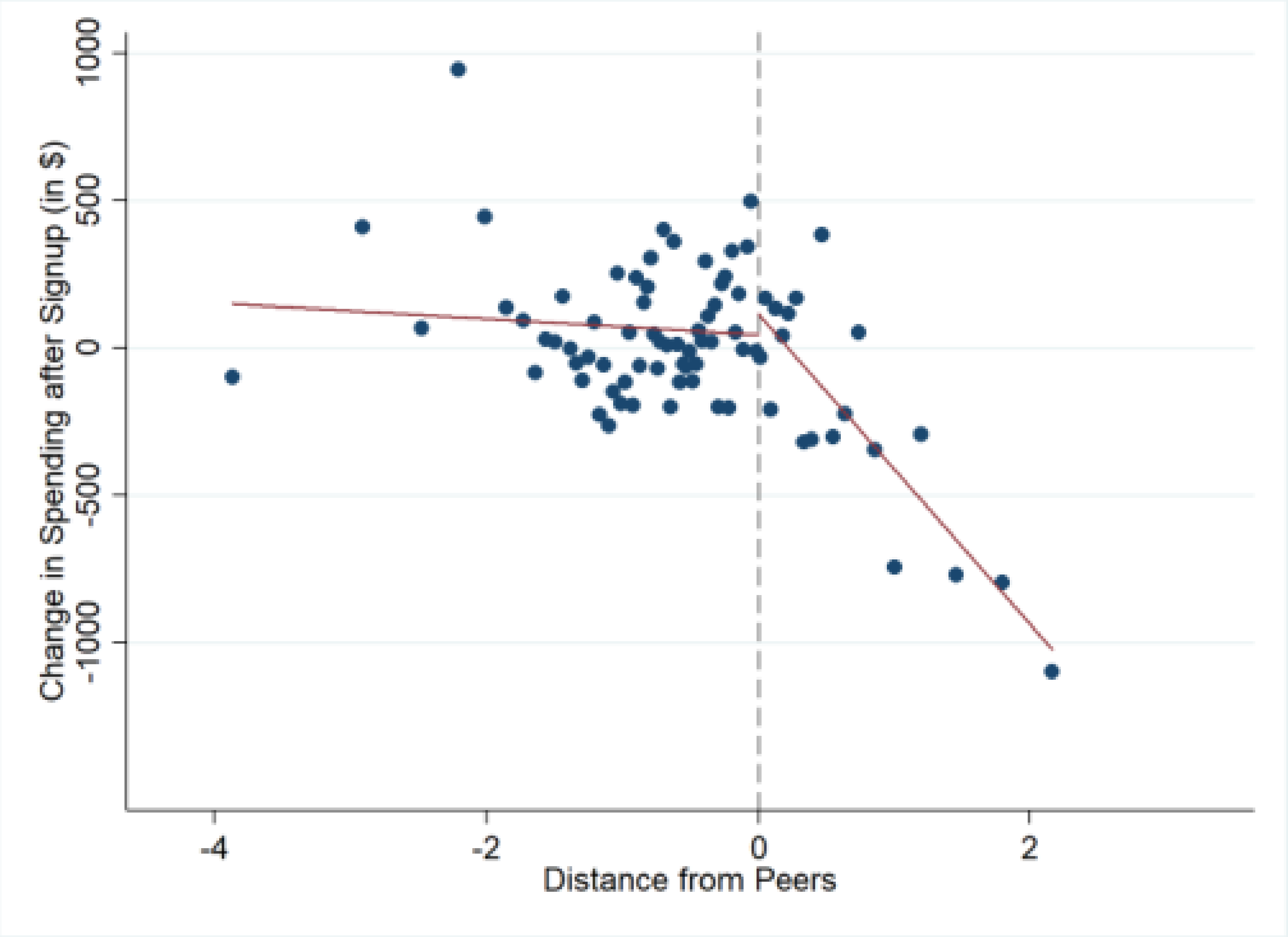
Anonymous peers



(a) User Profile

(b) Peer Group Information

Asymmetric convergence of consumption level to that of peers



Outline of discussion

- Fantastic paper that I enjoy reading:
  - Clean setting for identifying the information channel of peer effects
  - Excellent empirical execution
  - Novel finding of asymmetric convergence to peer spending
- Implications for big data and household decision-making
- Comments and ideas
  - Mechanisms of peer effects in consumption
  - Comparison with peers: consumption vs savings
  - Measurement of distance from peers

Social interactions shape our economic and financial decisions

Natural for individuals to consult with their social networks:

- Which new phone should I buy?
- Where should I shop for grocery goods?
- Which bank should I go with?
- How much should I pay for this house?
- Is this a good neighborhood for kids?
- What type of mortgages should I take?
- Which stocks should I invest in?
- Which broker should I use?
- Etc etc

Technology changes who are our peers

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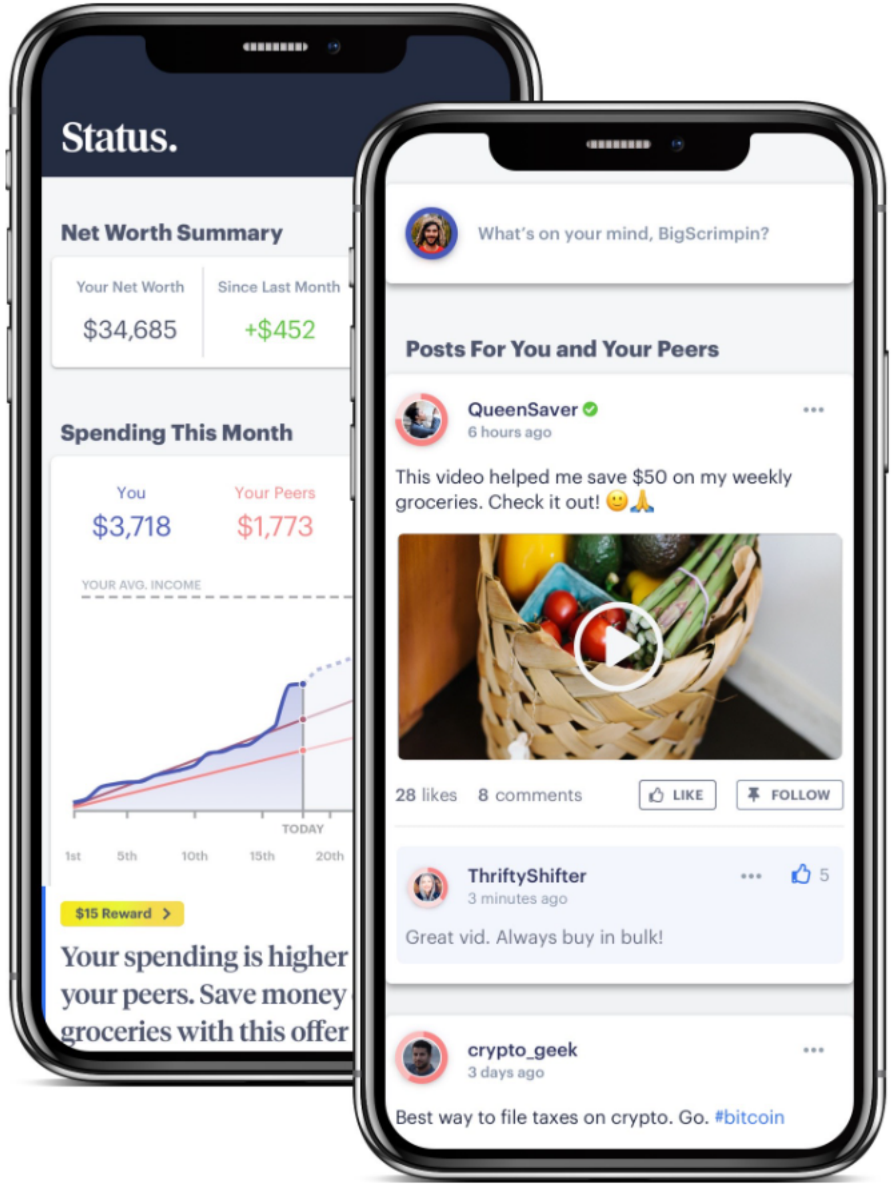

Technology changes who are our peers

#1. Mechanisms of peer effects in consumption

Peer effects in economic and financial decisions (Kuchler & Stroebel, 2021)

- Social learning: spread of information, sentiments, beliefs through peers
  - Actual information is valuable for sound decisions.
  - Typically from peers who you indeed know: friends, colleagues, etc
  - **It can also be from unknown peers enabled by big data (this paper!)**
- Social perception: social networks facilitate enforcement of norms, rules, and agreements
  - E.g., social shaming, social stigma, and threats of ostracizing
  - This mechanism is unlikely to operate in the current setting
- Social utility: peers' actions directly enter individuals' utility functions
  - Social comparisons, "keeping up with the Joneses"
  - Fear of missing out (FOMO)
  - Question: for the current setting, can this mechanism play a role?

Peer effects in consumption level: social learning or social utility?

- When will information from peers be valuable for decision-making?
  - High-stake or infrequent decisions
  - Issue at hand is difficult to understand
  - Soft and context-specific information needed
  - Other information sources have biases or conflicts of interest
- Information about peers' level of consumption..
  - Does not relate to high-stake or infrequent decisions
  - Does not relate to high sophistication barriers
  - Does not provide soft and context-specific information
  - Might be more accurate than other information sources where conspicuous consumption is over-represented.
- Overall, I think the learning channel is not as compelling for consumption as to other settings such as housing choice, mortgage, investment.

Peer effects in consumption level: social learning or social utility?

- On the other hand, the social utility channel for consumption is quite clear.
  - Individuals may have preferences over relative differences between own consumption and the consumption of their peers (Abel, 1990).
  - In external habit formation models (Campbell & Cochrane, 1999), habit is determined by aggregate consumption.
  - No social pressure is needed!
  - Results in this paper suggest more nuanced relevant comparison groups in social utility.

#2. Comparison with peers: consumption vs savings

$$\Delta \text{ wealth} = \text{savings} = \text{income} - \text{spending}$$

Comparing the saving rate with peers can speak closely to the low savings phenomenon used as the motivation.

- The transaction data enable accurate measures of income, spending, and savings for the app users.
- For the anonymous peer groups, the approximate saving rate can be calculated as the difference of average income and average consumption.
- We expect the above- and below-peer spenders to correspond to below- and above-peer savers naturally. Do they?

#2. Comparison with peers: consumption vs savings

- Whether and how do households adjust savings towards the peer level?
- Beshears et al. (2015) find that individuals *decrease* their retirement plan contributions when given information about the contributions of their peers and attribute to discouragement from upward social comparisons.
- In this setting, does the convergence of consumption to peers' level imply the convergence of savings to peer level?
- If so, how do households make the adjustment? Do they respond in their financial market participation and investments?

#3. Measurement of distance from peers

- ¾ of users have below-peer spending and ¼ are above-peer, why?
  - It could be that the measurement month for peers coincides with a high-spending month such as holiday season. Do you find that users whose spending at sign-up covers the same month are more balanced?
- Monthly spending and its comparison with peers at sign-up:
  - Average monthly spending in the past 90 days: $4,671
  - Above-peer spenders on average spent $4,000 more than peers
  - Below-peer spenders on average spent $4,400 less than peers
  - These mean gaps are not straightforward to interpret, driven by outliers?
- Do users with small vs large difference from peers respond differently? If adjustment is costly, we'd expect that only users with substantial difference would adjust their spending.

Policy implications

- Technology-enabled solutions to facilitate household financial planning
- Technology changes who are our peers in the domain of finance.
- Provision of targeted peer information can influence behaviors → can be a useful tool to improve financial well-being.
- Is there a compromise between data privacy and transparency? The creation and use of anonymous peers preserves privacy and allows for aggregate statistics to be computed (see also Abbe, Khandani, and Lo, 2012, 2018).

Singapore Financial Data Exchange (SGFinDex)

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Ravi Menon, Managing Director, Monetary Authority of Singapore