Fintech Nudges: Overspending Messages and Personal Finance Management

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Motivation
- Policy makers intend to influence individual behavior
- Nudges are relatively a cheap way of intervention
- Fintech apps are a new tool to monitor personal finance

Research Question
Can overspending messages on a money management app serve as “fintech nudges” to influence individuals’ financial behavior, given that they are tailored to each and every one of the app users?

Data
- Money management app data from major commercial bank in Canada
- Daily transaction data at account level
  - Date, amount, merchant, and spending category
- Daily app usage data at user level
- Month-end financial and demographic information at user level
- From June 19, 2017 to January 24, 2018
- 55,586 app users in the sample

Empirical Strategy
- Charles David
  - Age: 30
  - Account balance: C$10,000
  - Average spending on 16th: C$100
  - Spending on July 16, 2017: C$199
  - Spending multiple: 1.99
- Baseline Regression Discontinuity specification:
  \[ Y_i(t+1) = \alpha + \beta_1 \mathbb{1}[X_i(t) > cutoff] + \gamma_1 \mathbb{1}[X_i(t) \leq cutoff] f(X_i(t)) + \epsilon_i(t+1) \]

Empirical Results

Significance of Magnitude
- Back-of-the-envelope calculation gives that if an average user had read all the messages sent, she would have reduced spending by C$411 per year
- This saving is tantamount to 10.4% decrease of credit card debt
- Hence, fintech nudges can lead to meaningful, if not substantial, changes in personal finance

Conclusion
- Message feature induced changes in households’ spending patterns
  - Message recipients reduced spending on following day
  - They reduced spending on Shopping
- Effects of fintech nudges are persistent
- Effects are more pronounced for users with higher liquid wealth, users living in a city with highly educated population, older users, and users who are more finance-savvy
- Effects spread over from one app user to another in same family
- Reading an overspending message leads to lower likelihood of monitoring accounts in future
- In the end, it is the tailored feature that makes fintech nudges relevant and effective

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