Reducing Strategic Default in a Financial Crisis

Sumit Agarwal   Vyacheslav Mikhed   Barry Scholnick   Man Zhang

Discussion by

Taha Ahsin
Duke University

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Summary

- Question
  - How does increasing the cost of default affect borrower behavior?

- Approach
  - Exploit a bankruptcy reform that imposed higher costs on defaulting
  - Use a diff-in-diff across income limit and policy time

- Key Results
  - Defaults fall independent of material changes in ability to pay
  - Effect varies with home ownership and adverse life events

- Comments
  - Anticipation Bias
  - Heterogeneity
 - Model Specification

Context

- Several iterations of Bankruptcy Act of 1869
- Sep 2009 iteration included several amendments to:
  - Employee and pension protection during bankruptcy
  - Maximum amount of debt 3X larger
  - Counseling mandates to receive discharge
- Duration of payments in bankruptcy changed:
  - Pre-reform: made payments for 9 months
  - Post-reform: 21 months if surplus income above 200
 - Increased cost of default

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- **Question:** Timeline of legislation $\rightarrow$ anticipatory behavior?

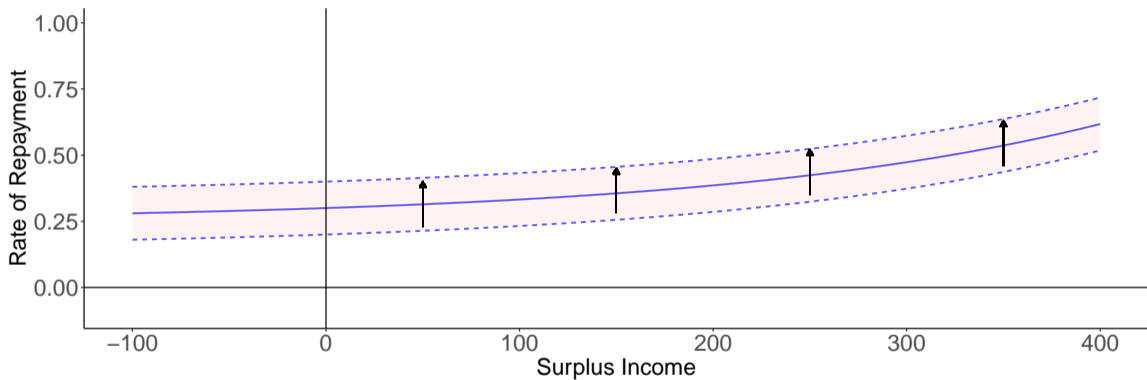# Anticipation Bias and Strategic Behavior
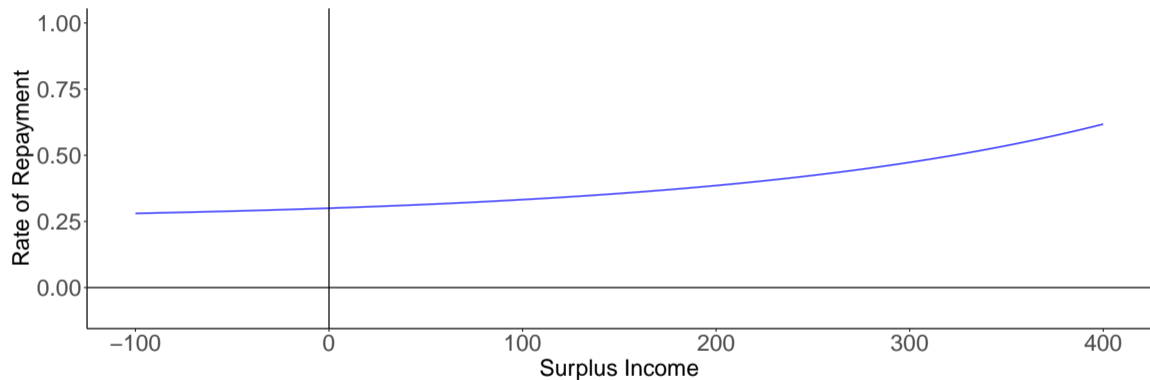
- What would anticipation bias look like?

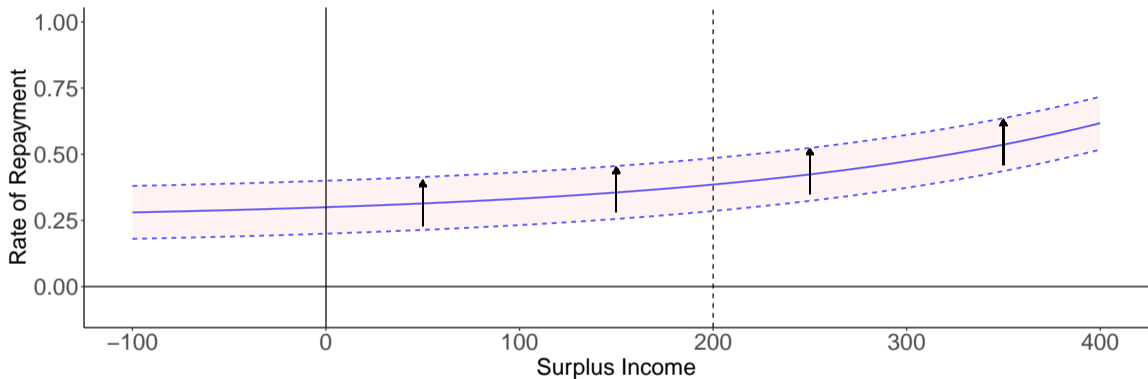# Anticipation Bias and Strategic Behavior
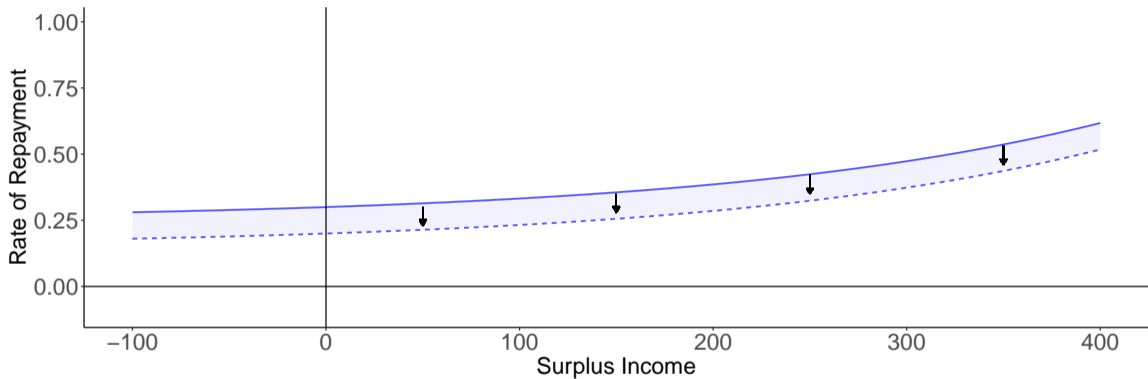
- Initially lower repayment to avoid higher default costs

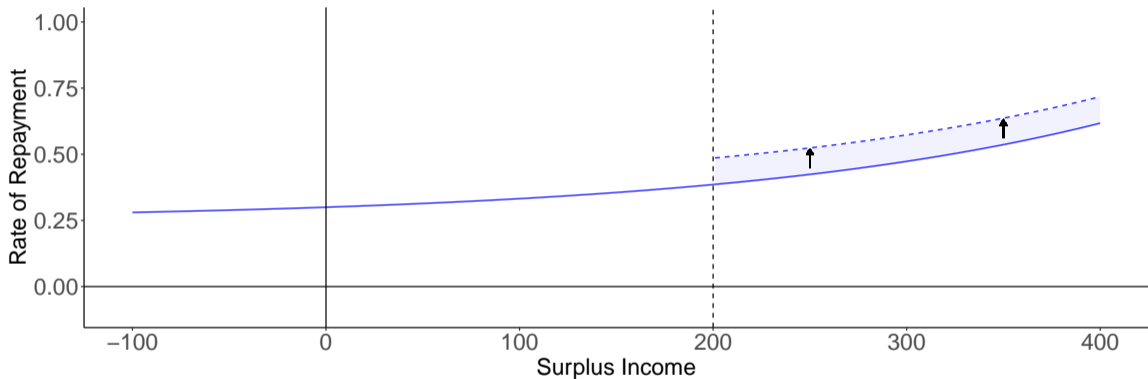# Anticipation Bias and Strategic Behavior

- To preserve average default rate, higher repayment later

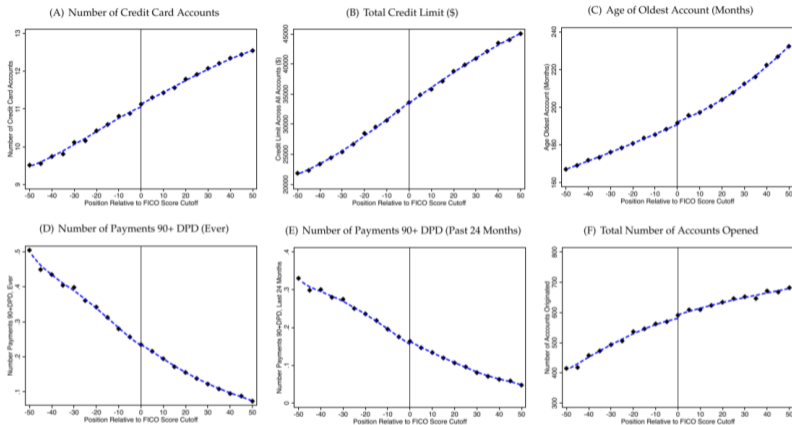# Anticipation Bias and Strategic Behavior

- Issue is avoided thanks to arbitrary income threshold
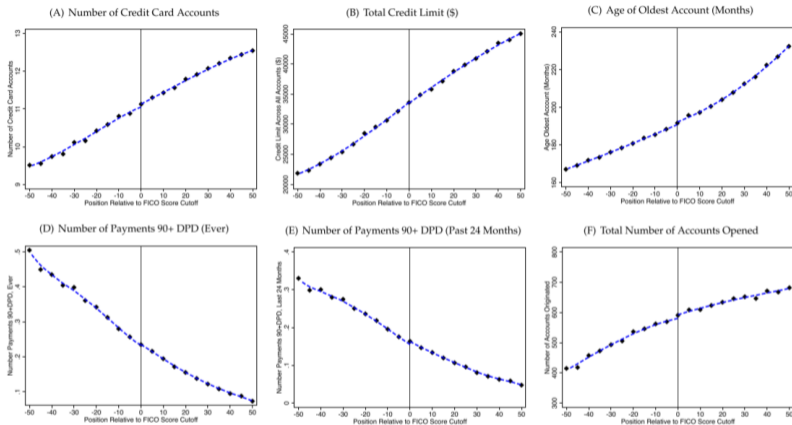
Anticipation Bias and Strategic Behavior

- Treatment independent of surplus income above and below
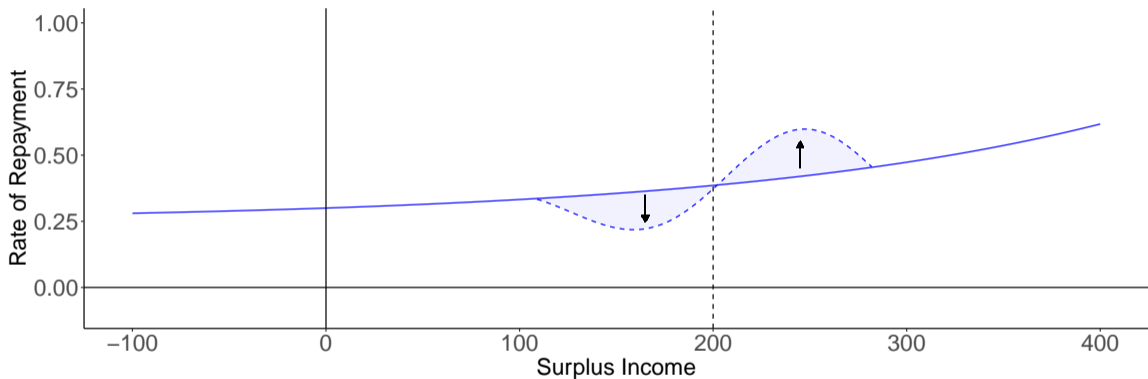
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- Comment #1: Threshold may be correlated with other characteristics
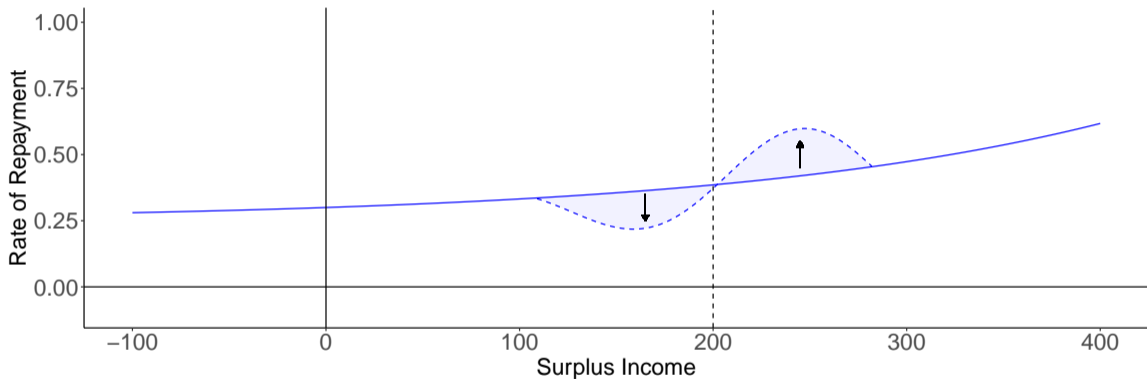
Anticipation Bias and Strategic Behavior

(A) Number of Credit Card Accounts (B) Total Credit Limit ($) (C) Age of Oldest Account (Months) (D) Number of Payments 90+ DPD (Ever) (E) Number of Payments 90+ DPD (Past 24 Months) (F) Total Number of Accounts Opened

- Comment #1: Threshold may be correlated with other characteristics
- Solution: Investigate how characteristics change around threshold
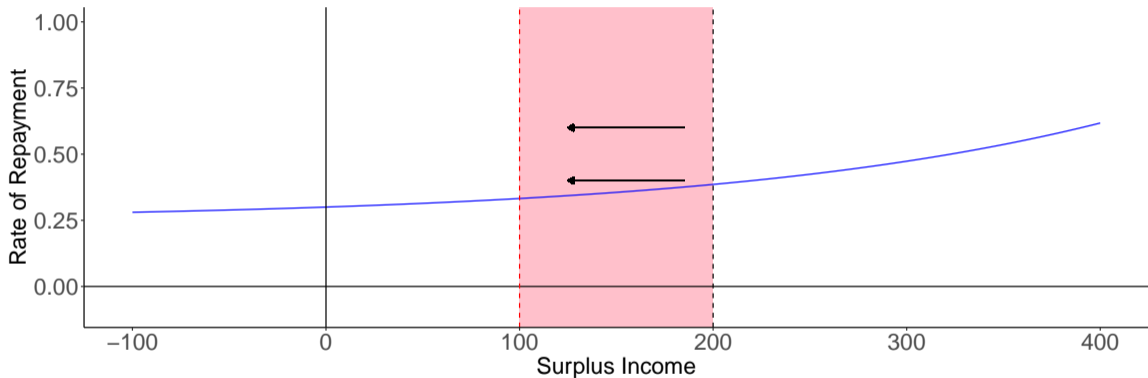
Anticipation Bias and Strategic Behavior

- Possibly strategic behavior around threshold?

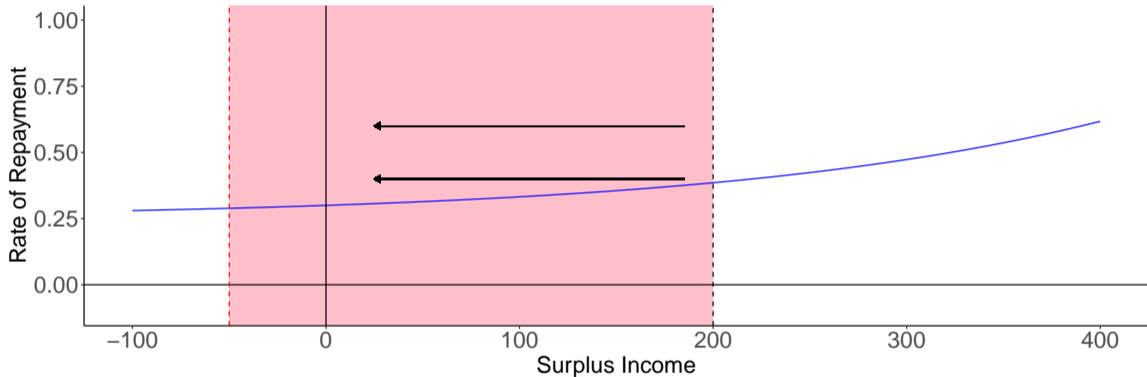# Anticipation Bias and Strategic Behavior

- Possibly strategic behavior around threshold?
- Not issue because paper uses pre-policy income
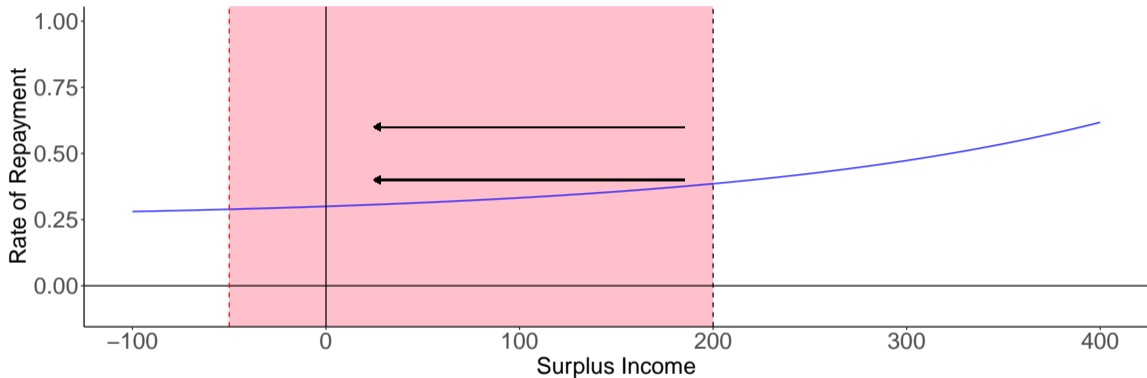
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- Comment #2: Pre-policy income may fall during crisis
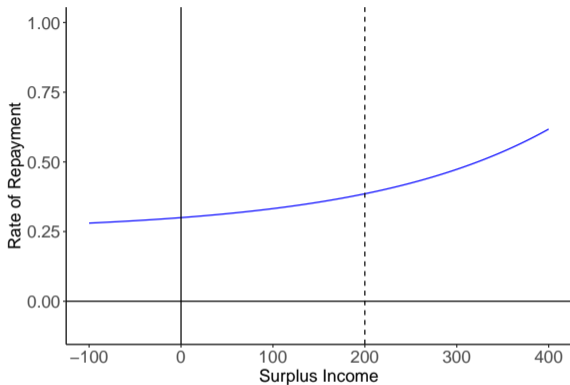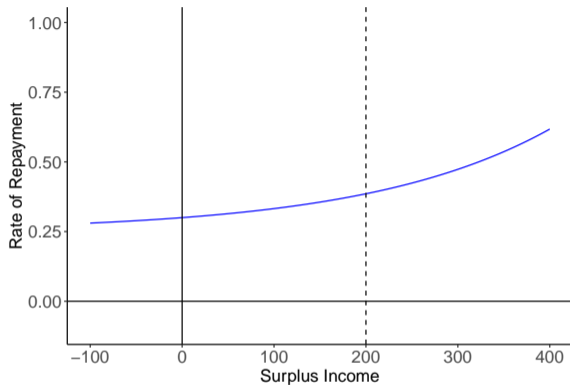
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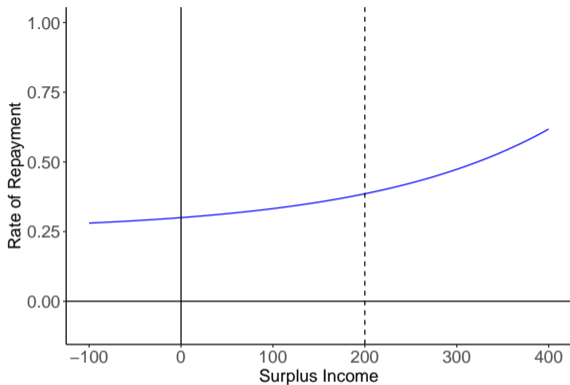
Anticipation Bias and Strategic Behavior

- Comment #2: Pre-policy income may fall during crisis by a lot
- Solution: Run tests on localities with limited changes to income

Heterogeneity and Income

- Comment #3: Heterogenous response to crisis may correlate with threshold

Heterogeneity and Income
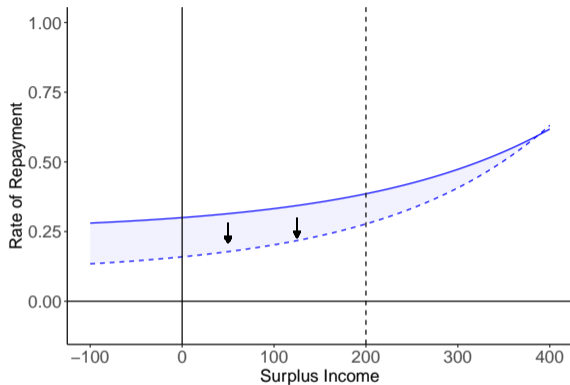
Low income:

- More financial constraints
- Debt overhang

Heterogeneity and Income

Low income:

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High income:

- Favorable treatment by creditors
- Concern over credit access

Heterogeneity and Income

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Heterogeneity and Income

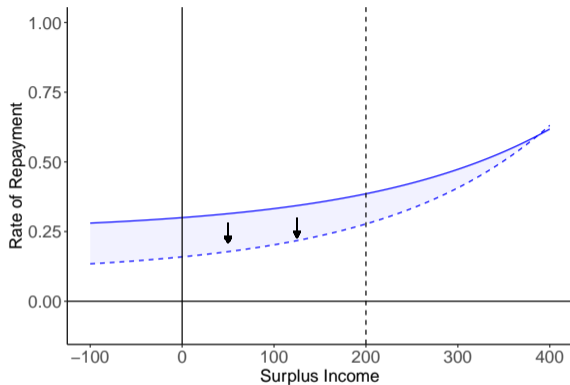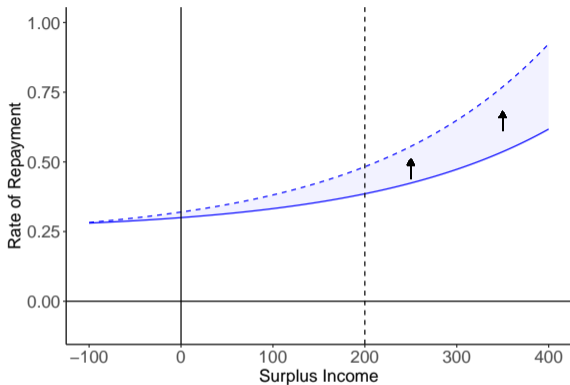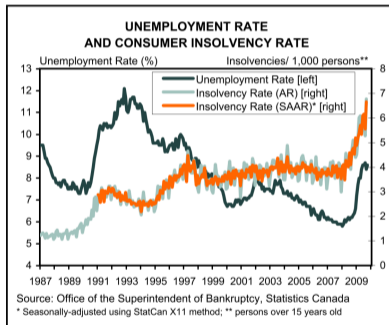- Comment #3: Heterogenous response to crisis may correlate with threshold
- Solution:
    - Present changes in repayment across each income decile
    - Run placebo tests across different income thresholds

Model Specification

- Motivation: Insolvency and unemployment correlated

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UNEMPLOYMENT RATE AND CONSUMER INSOLVENCY RATE

Unemployment Rate (%) — Insolvencies/ 1,000 persons**

Legend:
- Unemployment Rate [left]
- Insolvency Rate (AR) [right]
- Insolvency Rate (SAAR)* [right]

Source: Office of the Superintendent of Bankruptcy, Statistics Canada
* Seasonally-adjusted using StatCan X11 method; ** persons over 15 years old
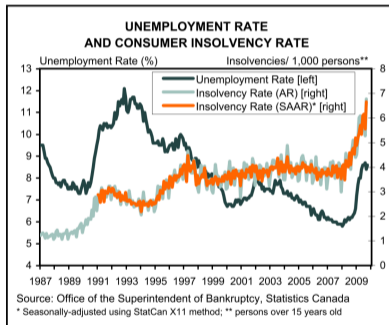
- While rising unemployment is the spark, high household debt relative to personal disposable income appears the kindling for the heightened pace of insolvency.

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- Illustration:

$$Y_{i,t,z,v} = \sum_{\tau=2}^{12} \beta_i \times \mathbb{I}_{\tau=t} \times \textit{subprime}_i + \sum_{i=1}^{5} \textit{age}^i + \alpha_i$$

  - $Y_{i,t,z,v}$ indicates when a non-delinquent loan enters delinquency
  - *subprime* indicates a loan has a FICO credit score below 620
  - *t* indicates the month relative to January 2009
  - 1 million loans across California, Arizona, Florida, and Nevada
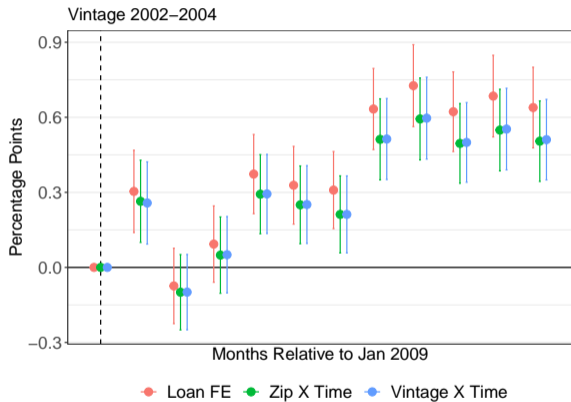 - 10 million observations across 12 months

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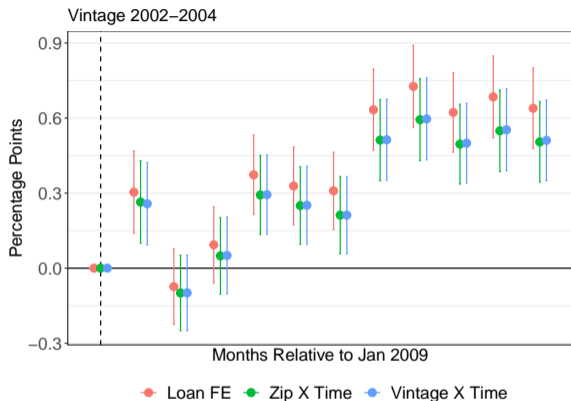- Illustration:

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- $\alpha_{t,z}$ and $\alpha_{t,v}$ are time-varying fixed effects for zip and vintage
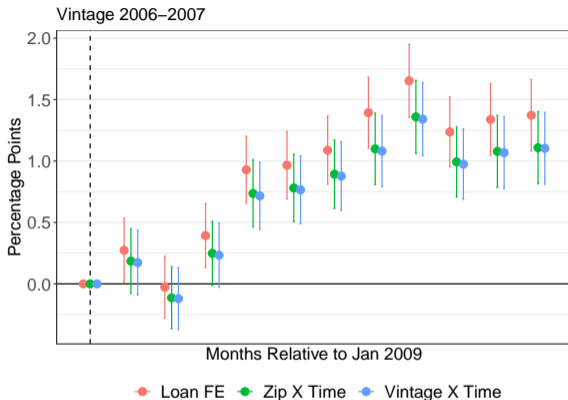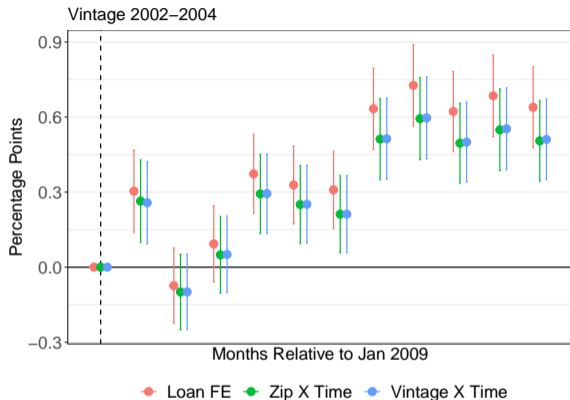
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Vintage 2002–2004

Percentage Points

Months Relative to Jan 2009

● Loan FE   ● Zip X Time   ● Vintage X Time

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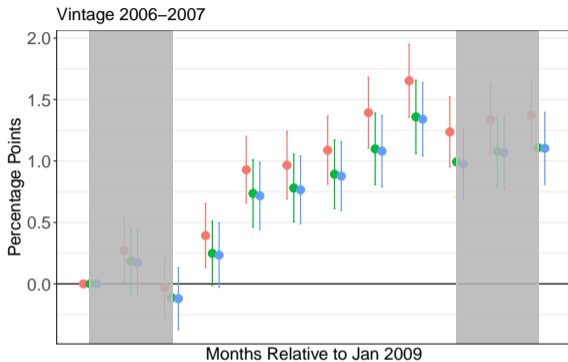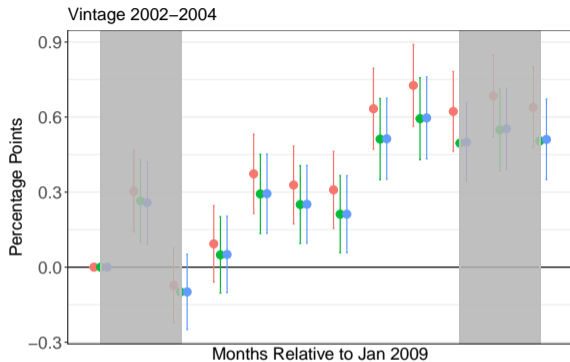Loan FE • Zip X Time • Vintage X Time
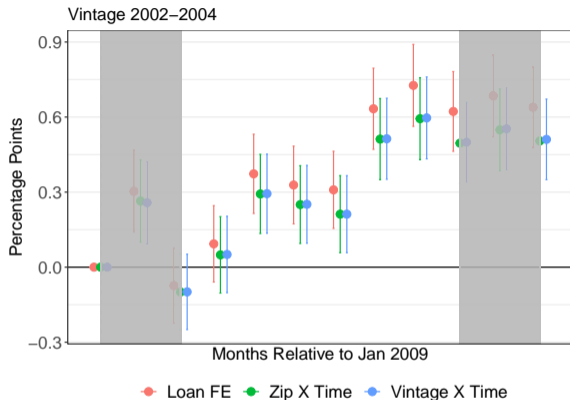
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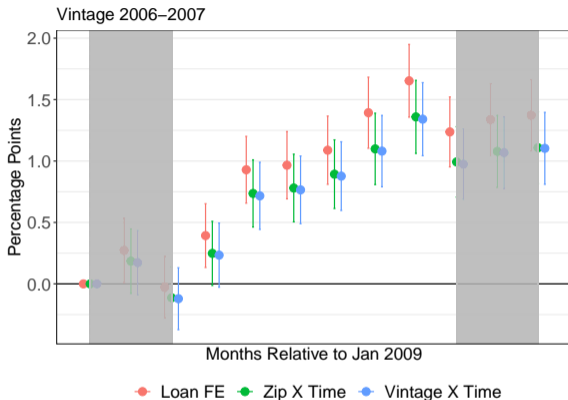
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Takeaway: Time-variation is important

Contribution

- Literature on foreclosure moratorium $\sim$ decrease in default cost
  Collins and Urban (2018), Gabriel et al. (2021), O'Malley (2021), Artavanis
  and Spyridopoulos (2022)

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- Side comment #1: Emphasize novelty of adverse life events
- Side comment #2: Explore role of creditors

Conclusion

- Paper uses a convincing design to study strategic default
- Additional tests can add confidence to estimates
- Alternative modelling can address some endogeneity issues