Designing Dealer Compensation in the Auto Loan Market: Implications from a Policy Change

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November 3, 2022

FTC Microeconomics Conference

The Helicopter View

- Paper about designing dealer compensation in the auto loan market
  - $150bn market growing at about 8% per year
  - Paucity of empirical research on bargaining in B2C domain
  - Managerially relevant and well-motivated ndings
- Market Overview
  - Traditionally, dealers add markup to the banks' recommended interest rate
    - Results in discrimination based on credit score, demographics etc
  - Policy makers advocate non-discretionary compensation schemes
    - Can be a xed (i) percentage of loan, (ii) interest rate or (iii) lump-sum payment
- Key variation
  - Target banks switch from discretionary to non-discretionary scheme with xed 3% (of loan amount) commission

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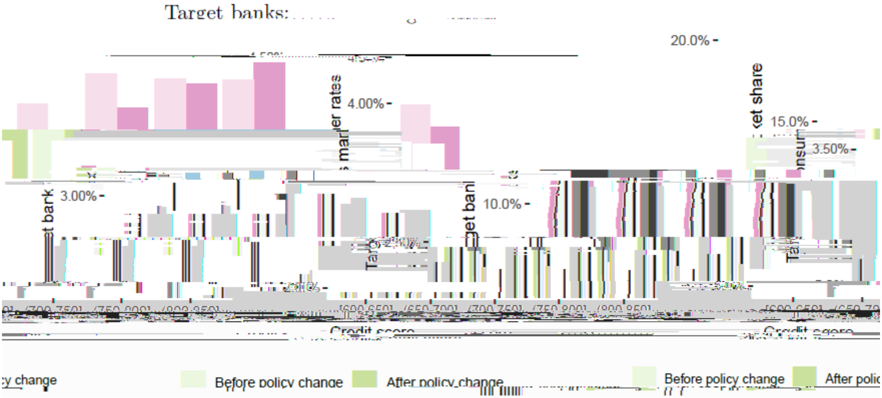
Non-discretionary scheme di erentially a ects consumer with low (high) credit score



The nuts and bolts ...

- Nash bargaining between dealer and consumer determines interest rate
  - Careful to recognize that not all variation may be coming from negotiations
- Choice of bank negotiated, i.e. depends on the relative bargaining power
- Estimate model using method of moments
- Counterfactual scenarios hold xed
  - Percentage of loan amount
  - Dealer rate
  - Lump-sum payment
    - Highest market share and consumer welfare
    - Best aligns dealer's rate with consumer's bargaining power

Some Thoughts

Institutional details

Empirical model and estimation

Counterfactual analysis

Institutional Details

- Does dealer have to disclose all interest rates to consumers?
  - If not, could the dealer only disclose the \best" interest rate
- Dealer not only negotiates interest rate but also selectively discloses information
- Could decisions about loan term and interest rate (and possibly loan amou be made jointly?
  - Any evidence to rule this out

Empirical Model and Estimation

- Some clari cation on consumer's reservation rate (R_i) would be helpful
  - Typically, consumer's WTP but interpreted as a customized posted price
  - Treated as a structural parameter, i.e. policy invariant
- How should we interpret bargaining power?
  - Represents cost of negotiating, impatience etc.

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  - In the model, influences bank choice in addition to negotiated rate
- How account for negotiated prices for non-chosen alternatives?
  - Method of simulated moments somewhat circumvents this issue
  - Bank choice (y_i) a function of expected interest rate of non-chosen alternative
    - Non-chosen alternative likely to have higher interest rate, all else equal

Counterfactual Analysis

- Analysis assumes no response from general banks
  - Authors careful not to study industry-wide regime change
  - In the medium-long run, general banks would respond to changes in target banks' policies
  - Thinking about the competitive reaction can bolster the contribution
- Could bank speci ed non-discretionary compensation vary by credit score?
  - Variation in commission rates or lump-sum payments
  - Variation in payment mechanism

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In Summary...

Well executed analysis of an important and understudied area

Analysis leverages the variation in policy/data

Managerially relevant and well-explained ndings

Congratulations!

Thank You!!!