Long Run Price Elasticities of the Demand for Credit: Evidence from a Countrywide Field Experiment in Mexico

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Introduction

• Randomized controlled trials are useful and important.
  – They introduce exogenous variation that can be used to estimate the impact of interventions.
  – They introduce exogenous variation that can be used to estimate flexible and less restrictive models.

• Randomized controlled trials can be very narrow:
  – The variation they introduce permits the identification of a very narrowly defined parameter that is sometimes neither particularly interesting nor relevant for policy.
  – The parameters identified by the experiment can be mapped into the parameters of a useful model only under very stringent and far fetching assumptions.

• RCTs can be delusional and tempt into collecting very few data.
The authors set up a randomized control trial with the explicit purpose of estimating the interest rate elasticity of the demand for loans.

Two different levels of interest rates (changes) are randomly assigned across different regions in Mexico with the purpose of tracking.

Administrative data are available over a period of time on:
- Number of loans (before and after the introduction)
- Amount loaned
- Profits, repayment rates etc.

Also data on regional level variables, competitors, etc.
Summary

- Three different specifications
  - Diff in diff with time and regional fixed effects,
    \[ Y_{rt} = \alpha + \beta^1 (LowRate_r \cdot Post_t) + \rho R + \tau T + \epsilon \]
  - Time fixed effects and treatment fixed effect
    \[ Y_{rt} = \alpha + \beta^2 (LowRate_r \cdot Post_t) + \lambda LowRate_r + \tau T + \epsilon \]
  - Simple differences (and pre-treatment variables)
    \[ Y_{rt} = \alpha + \beta^3 (LowRate_r) + \psi Y_r^p + \tau T + \epsilon \]
Summary

- Different variables
  - No of loans, Amounts, repayments etc.
  - Crowding in, no effects on average interest rates

- Overall effect and time varying effects

- Different groups (outreach)
  - No impacts on the new loans, on the poor etc.
    - Indicates heterogeneity of effects.
Praises

- I like very much the use of a RCT to estimate demand elasticities
  - Karlan and Zinman (2009)
  - Dupas (demand for bednets)
  - Juster and Shay (1964) – auto loans

- The randomization across areas (rather than within regions – across branches or across individuals) is key
  - Ambitious project to get at the GE effects and not only the demand elasticities.

- Nice use of administrative data (from Compartamos) complemented by credit bureaus data.
Criticisms

- No model in the exercise
  - How do we interpret the results?
  - Extensive and intensive margins
  - Implicit assumptions are very strong

- Only administrative data

Details:
- Long run?
- Lack of supply effects?
No model in the exercise

- What decisions do people make?
  - Very little information is provided about what are these loans for.
  - What are the determinants of the demand for loan?
    - Is the interest rate the only factor?
      - Maturity (see Juster and Shay, 1964)
      - Risk (and risk sharing)
      - Expected returns to investment
      - Income and alternative resources

- Is there a unique elasticity?
  - Non linearities would imply that both extensive and intensive elasticities depend on initial conditions
  - There seems to be considerable evidence of heterogeneity
The elements of a model: demand for loans

- Productive (and risky) investment projects
  - (high expected rates of return $\Rightarrow$ to justify high APR)
- Lumpy investment and fixed costs (corner solutions)
- Lack of risk sharing.
  - (within group dynamics).
Implications of the model

- Elasticity of the demand for loans depends on:
  - Distribution of clients around the kink.
  - Within group dynamics (risk sharing)
  - Preferences, expected returns (and their distribution), fixed costs

- The distribution of clients around the kink depends on the evolution of the system and in general will not be constant.

- Risk sharing could give an alternative explanation of why the elasticity increases over time

- The implication of all this is that the estimated impact cannot be extrapolated even within the same context
Only administrative data

- Admin data are ok but they prevent the empirical modeling of individual behaviour.
- This might be crucial to understand what happens to the demand side.
- The implicit model that can be identified with these data is very restrictive.
Details and minor points

• Identification of impact assumes no supply responses
  – does the fact that delinquency does not change indicate that there are no supply responses?

• Does the fact the coefficient increases over time indicate that the impact increases over time?
  – How do we interpret that evidence?

• What can explain the evidence of crowding in and no effect on interest rates?
Conclusions

• Interesting paper.

• It provides the first step towards the understanding of the demand for loans:
  – Next step should be modeling individual demand

• Individual data should include elicitation of preferences, beliefs, expectations.