

A Bank on Every Corner: Trade Credit and Firm Dynamics

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Motivation

- ▶ Retail firms are one of the largest sources of short-term consumer credit in India
 - ▶ CMIE
 - ▶ IHDS
 - ▶ NSS
- ▶ Firms view the bundling of credit and goods as a key source of comparative advantage
 - ▶ Credit Provision
- ▶ Why does bundling of credit and real goods occur? And what are the implications on firm dynamics and consumer welfare?

Context: small retail firms in India



- ▶ Sole proprietor
- ▶ Products: daily *ration* (flour, rice, cooking oil, milk), packaged goods (soft drinks, chips, chocolate, etc.)
- ▶ Typically sells within neighborhood
- ▶ Customers can buy on cash or **credit**
 - ▶ Biweekly or monthly tabs
- ▶ Selling on credit requires soft information with little to no information sharing on customers across merchants

▶ Info Sources

Historical Parallel in the United States

The credit score and the credit card were **invented** to solve this exact friction

*The extension of trade credit was **common**, and merchants traditionally **relied on soft information** accumulated over time and through repeated personal interactions to make their credit decisions...*

(Liberti and Petersen 2018)

Results preview

Empirical Results:

- 1) Smaller firms have a comparative advantage in learning + enforcing private information
- 2) Private Information + Bundling \Rightarrow Market Power

Four Sources of Data

- 1) Household consumption surveys
 - ▶ CMIE Consumer Pyramids Household Survey
 - ▶ NSS Debt & Investment Survey
 - ▶ India Human Development Survey
- 2) NSS Unincorporated Enterprise Survey, Economic Census
- 3) Our own firm-level survey of retail firms
- 4) Transaction level data on trade credit from a financial platform

Data: App transaction records

- ▶ In place of a paper book/ledger (*khata*), firms can use a Google Play Store app ('the App') to keep accounts and send SMS reminders to customers
- ▶ We have a sample from one district: Rajsamand, Rajasthan
 - ▶ 30k firms → 300k accounts → 4mn+ transactions
 - ▶ Main industries are kirana, fruit and vegetable, dairy, mobile recharge
- ▶ Variables:
 - ▶ Transactions (4.2mn): date, direction, text description, amount in INR
 - ▶ Self-reported defaults (1k)
 - ▶ Repayment reminders (650k)
 - ▶ Phone numbers of merchants and customers
 - ▶ Social network (phone contacts) of merchant

Data: Firm level survey

Pilot:

- ▶ Survey of 200 firms (half urban, half rural) in Delhi area from August-September 2023
- ▶ Captures extensive margin, info sources

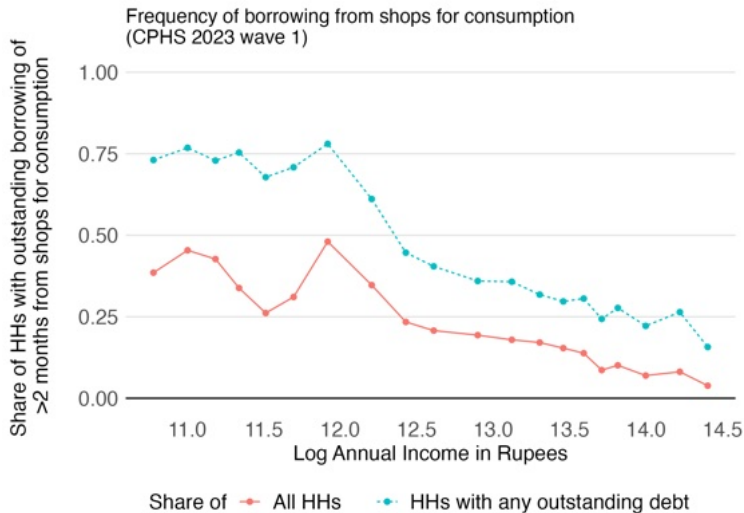
Full survey:

- ▶ In progress in Rajsamand, Rajasthan, India
- ▶ Goal: ~ 2000 firms and ~ 1000 customers on de-anonymized 'App' users

Descriptive facts

- 1) Firm size/profits are increasing in the customer base ▶ Figure
- 2) Persistence of the customer base depends on the provision of credit ▶ Figure
- 3) Provision of credit is decreasing in firm size ▶ Figure
- 4) Firms learn customer types through repeated interactions ▶ Figure

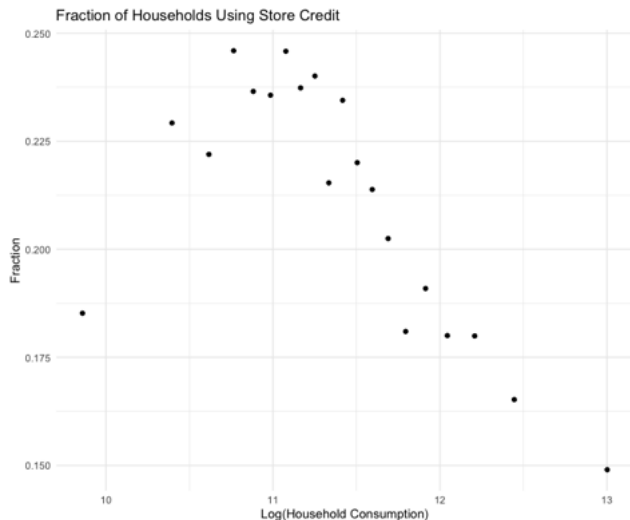
Firms are a large source of short-term consumer credit (CMIE)



Source: CMIE Consumer Pyramids Household Survey, January-April 2023

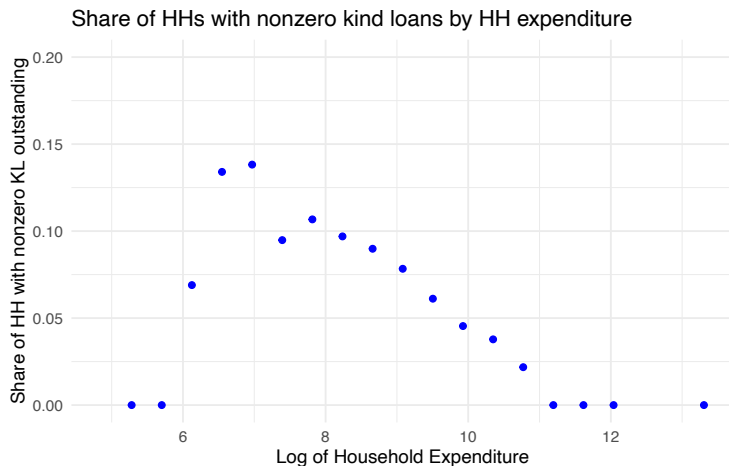
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Firms are a large source of short-term consumer credit (IHDS)



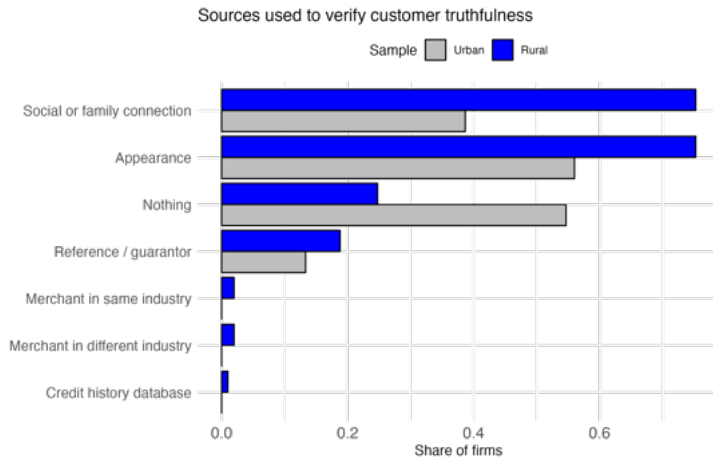
Source: India Household Development Survey [▶ Back](#)

Firms are a large source of short-term consumer credit (NSS)



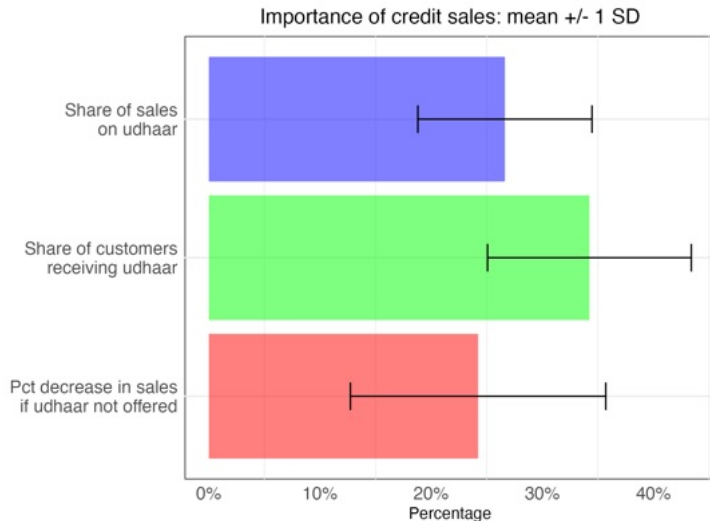
Source: National Sample Survey Debt and Investment (2019) [▶ Back](#)

Sources of Soft Information



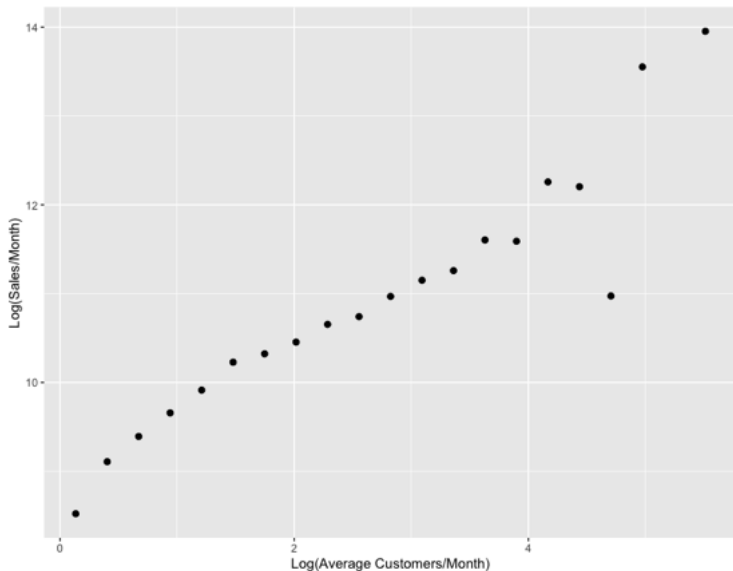
Source: Firm Survey [▶ Back](#)

Trade credit as a key service



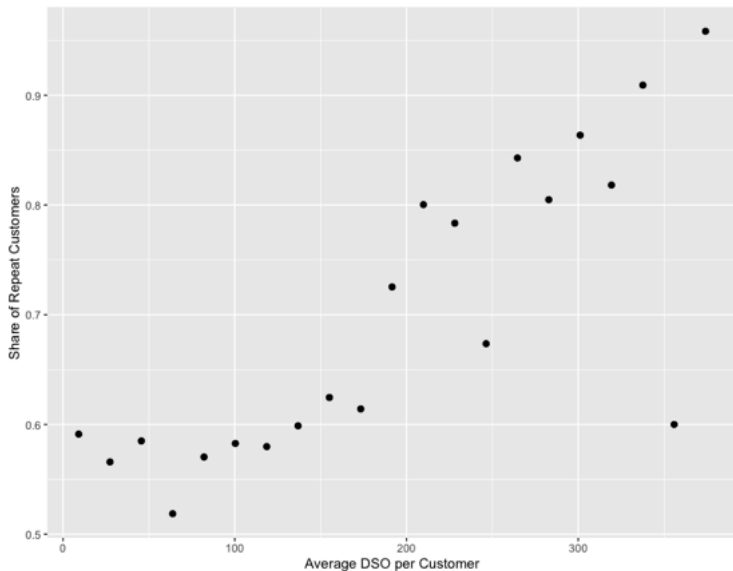
Source: Firm Survey [▶ Back](#)

Profits increasing in firm customer base



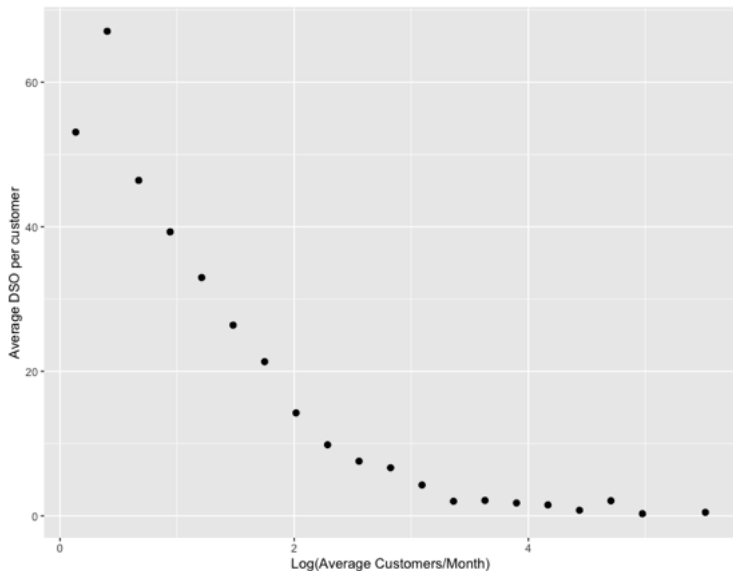
Source: App Data [▶ Back](#)

Customer retention varies with trade credit



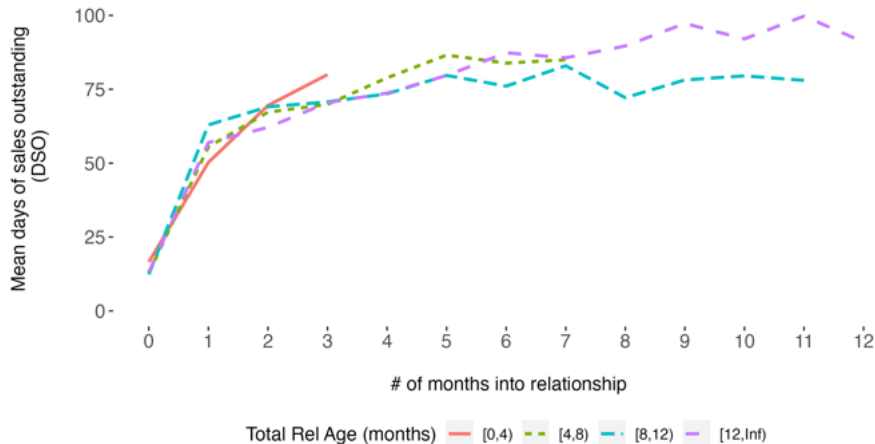
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Trade Credit decreasing in firm size



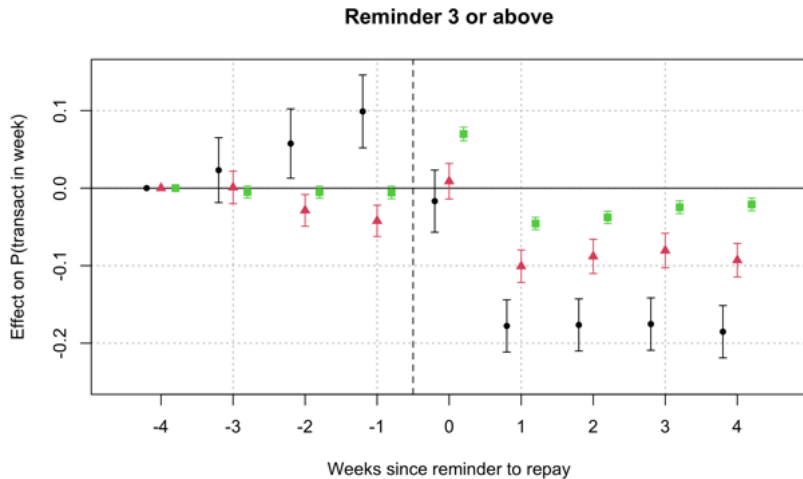
Source: App Data [▶ Back](#)

Trade credit offered grows slowly over time



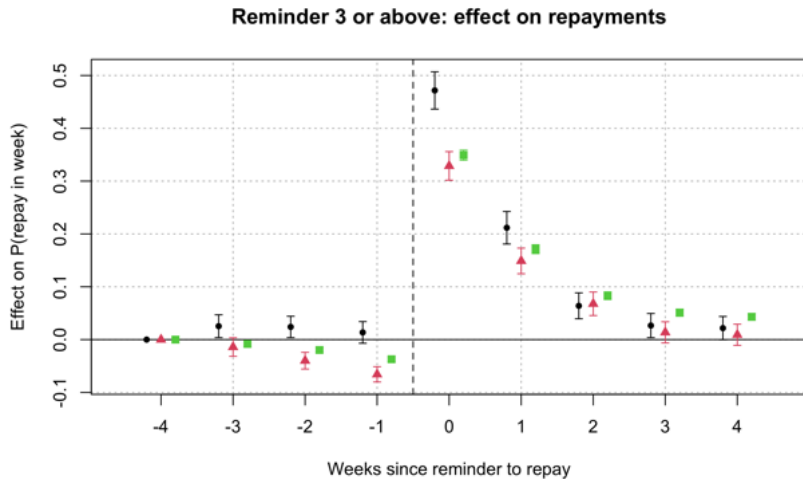
Source: App data, relationships initiated 1/1/2020-4/1/2022

Learning after relationship-shock



Source: App data [▶ Back](#)

Learning after relationship-shock



Source: App data [▶ Back](#)