Discussion

Digital Payments and Consumption: Evidence from the 2016 Demonetization in India

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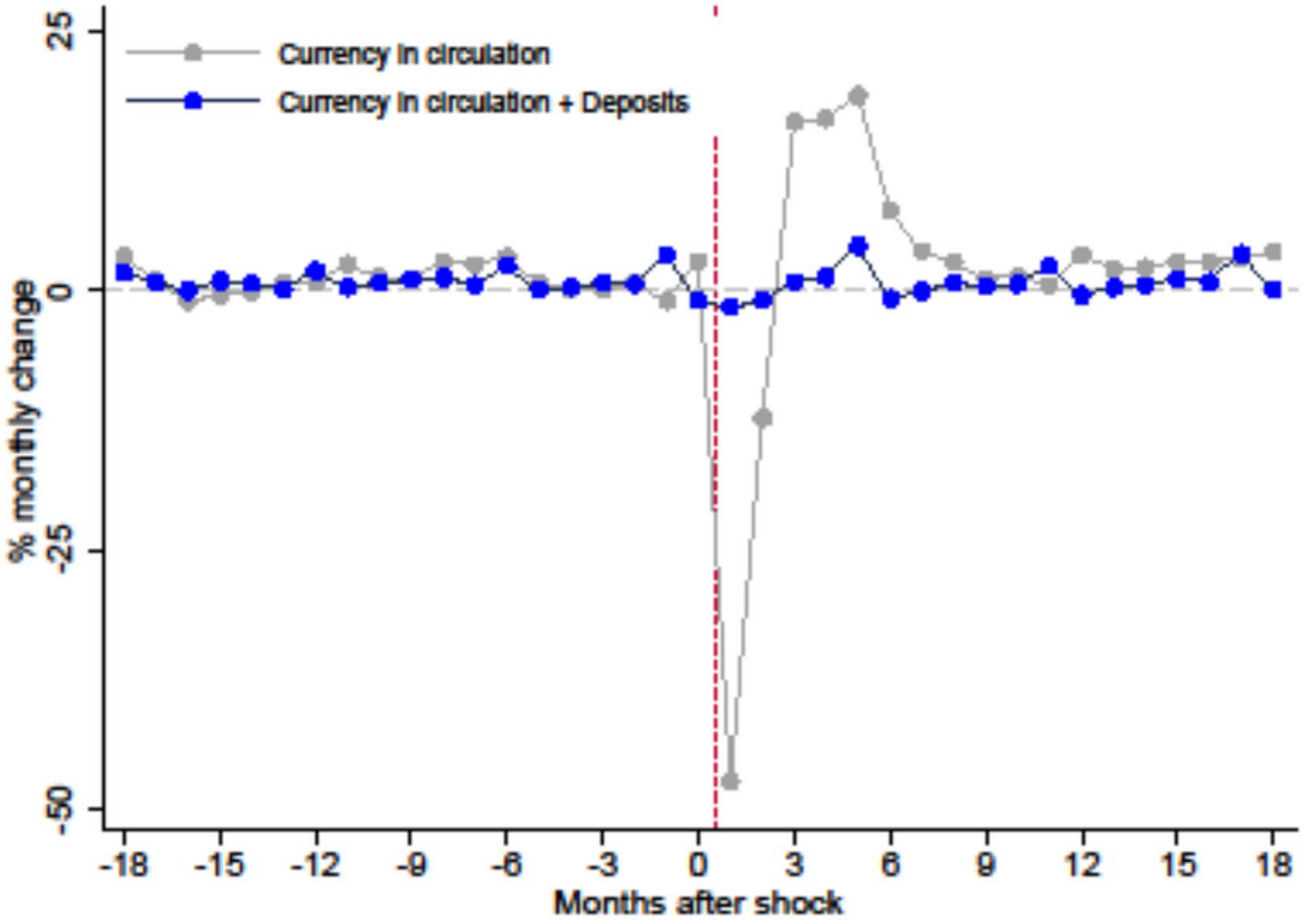
Summary

- How does the adoption of electronic payments affect consumers' behavior?

- The setting is the 2016 Indian Demonetization:

2016 Indian Demonetization



Summary

- How does the adoption of electronic payments affect consumers' behavior?

- The setting is the 2016 Indian Demonetization:
  - Cash became scarce for a couple of months;
  - Households were "forced" to use electronic payments.

Summary

- Basic idea for identification:
  - Compare households that were using heavily cash before with households that were using more electronic payments.

- Assumptions:
  - Households more dependent on cash will need to switch into electronic payments: **tested**!
  - The degree of dependence on cash only affects an households through this payment channel and not other ways: **robustness!**

Summary

- Amazing data coming from a large supermarket chain in India:
  - Household level data on consumption (i.e. supermarket purchase).
  - Information on type of purchase and payment method.

- High-quality detailed data!

- Most of the analyses are household level, but they also examine product level effects.

Summary

- The use of electronic payments increased during the Demonetization among consumers;
- Households more dependent on cash increased consumptions relatively more.
- The divergence happens exactly around November, and it is mostly driven by payments made by debit cards.
- Effects are more consistent with a behavioral response (i.e. over-spending because of the lack of salience) rather than cost-saving.

Contribution

- This paper helps understanding better what happened during the Demonetization.

- Previous literature:

  – Crouzet et al. (2020): the Demonetization allowed the Indian Economy to overcome “coordination frictions” in the adoption of electronic payments, therefore inducing mass adoption of new payments methods.

  – Chodorow-Reich et al. (2019): the Demonetization hada large, negative effects on the Indian Economy, but the adoption of electronic payment allowed the economy to limit the damage.

Contribution

- This paper helps understanding better what happened during the Demonetization.
- This paper:
  - Shows that consumptions did not collapse even among the most affected households (i.e. those more dependent on cash).
  - If anything, these households actually consumed more.
  - This helps going from the micro-adoption story in Crouzet et al. (2020) to the aggregate-level results (district) in Chodorow-Reich et al. (2019).
- More broadly (outside demonetization)
  - Novel insights on how households use electronic payments;
  - Better understanding of the “dark-side” of electronic payments.

Overall summary

- Nice paper to read:
  - Amazing data!
  - Careful execution!

- My comments:
  - Results interpretation;
  - Alternative mechanisms;
  - Others.

Interpretation

- The paper is framed as an examination of how the adoption of electronic payments affect consumption.

- However, the test they really run is a comparison of consumption changes around the Demonetization of households that were more (or less) dependent on cash.

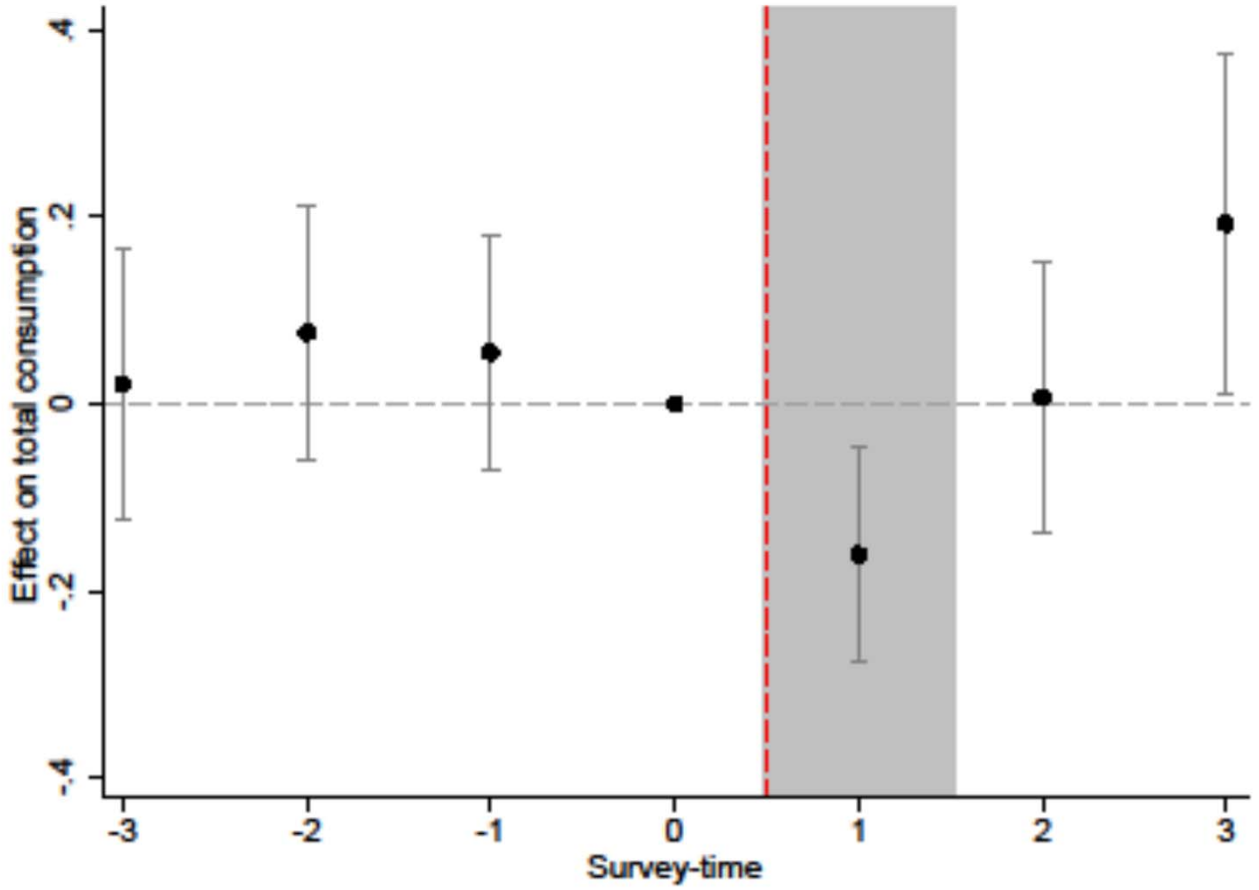
- Household dependence on cash may affect consumption through different channels.

Focus on interpretation on the findings

Demonetization and Consumption

- Indirect channel:
  - Demonetization → Electronic payments → Consumption
  - Why is consumption affected?
    - Transaction costs: electronic payments are more efficient, which allows you to consume more
    - Behavioral response: payments made electronically are less salient, which may lead to over-consumption.
- Direct channel:
  - The Demonetization impaired consumption.
  - Households more dependent on cash should be more affected.

Demonetization and Consumption



Crouzet et al. (2020), data from CMIE survey. Consistent evidence in Chodorow-Reich et al. (2019)

Demonetization and Consumption

- These results are **NOT** inconsistent with their positive effects.

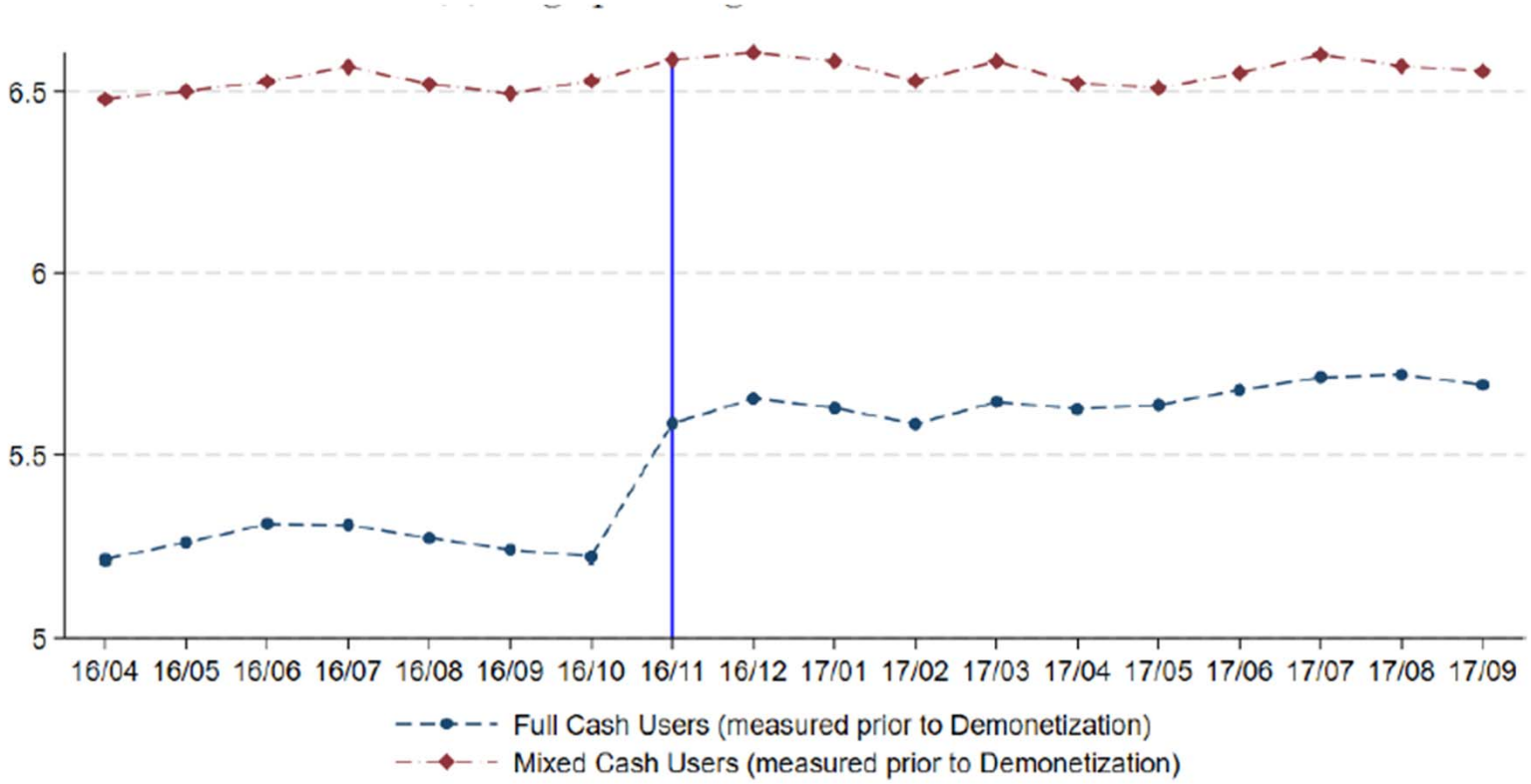
- Different margins:
  - The other papers exploit variation across districts in India.
  - This paper only exploits within-district variation (district X time F.E.)

- Their approach shuts down a lot of channels through which the Demonetization could negatively affects households.

Demonetization and Consumption

- However, my prior would have been that – at least at the margin – households more dependent on cash would have been more negatively affected.

Demonetization and Consumption



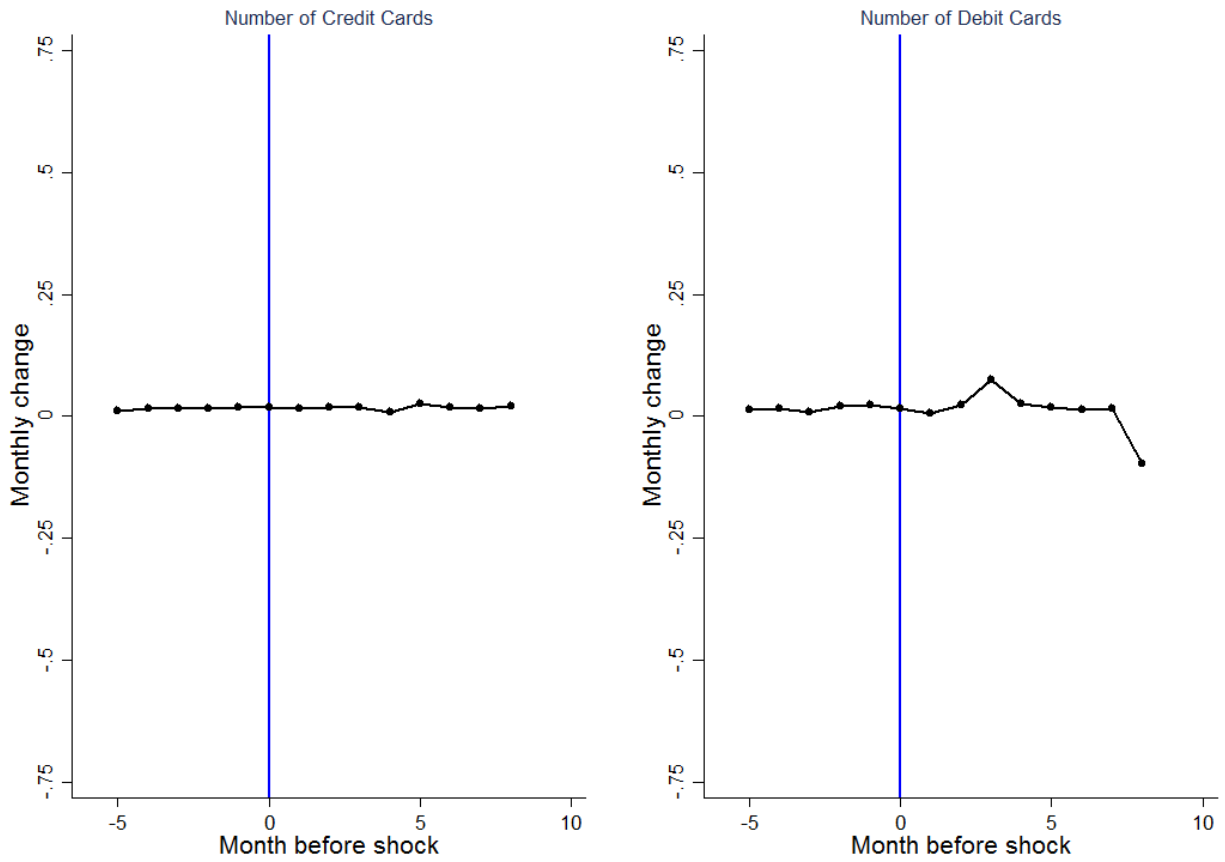
Individuals using electronic payments were on average unaffected, while the bulk of their increase is about those using only cash.

Demonetization and Consumption

- However, my prior would have been that – at least at the margin – households more dependent on cash would have been more negatively affected.
  - Start to use electronic paper vs. adopting.

- What could explain this?
  1. Individuals only using cash already had debit cards and they switched at no cost.
  2. Individuals only using cash were able to adopt debit cards and started to use them at no cost.

Debit/Credit Card new issuance was stable



The largest increase in adoption was coming from mobile wallets.

Demonetization and Consumption

- However, my prior would have been that – at least at the margin – households more dependent on cash would have been more negatively affected.

- Which story could be explaining their results?
  1. Individuals only using cash already had debit cards and they switched at no cost.
  2. Individuals only using cash were able to adopt debit cards and switch at no cost.
  3. Starting to use debit cards was actually "expensive", but the positive direct effect is so large to overcome these costs!

Interpretation

- It seems important to distinguish between the different scenarios (1-3).

- What can they do?
  - Can they estimate their effects using only adopters, and comparing adopters but low users, vs. bigger users?
    - Similar to the analysis dropping all-cash.

  - Who are the households using this supermarket?
    - Does the typical family already have a debit cards?

  - Think more about whether their results are possible under-estimated, if adoption frictions hinder some families to have a debit card.

Demand vs. supply of electronic payments

- They show the increase in consumption is mostly driven by debit cards, in smaller parts mobile money, and no effects on credit cards.

- Actual use is an equilibrium decision depending on both the demand and supply of payments options.

- One Supermarket chain → Supply constant:
  - Good for internal validity, bad for external validity.

Demand vs. supply of electronic payments

- Do they expect the same results if they had data on:
  - A chain of coffee shops,
  - Small, street vendors,
  - High-end clothing boutique.

- What can they do?

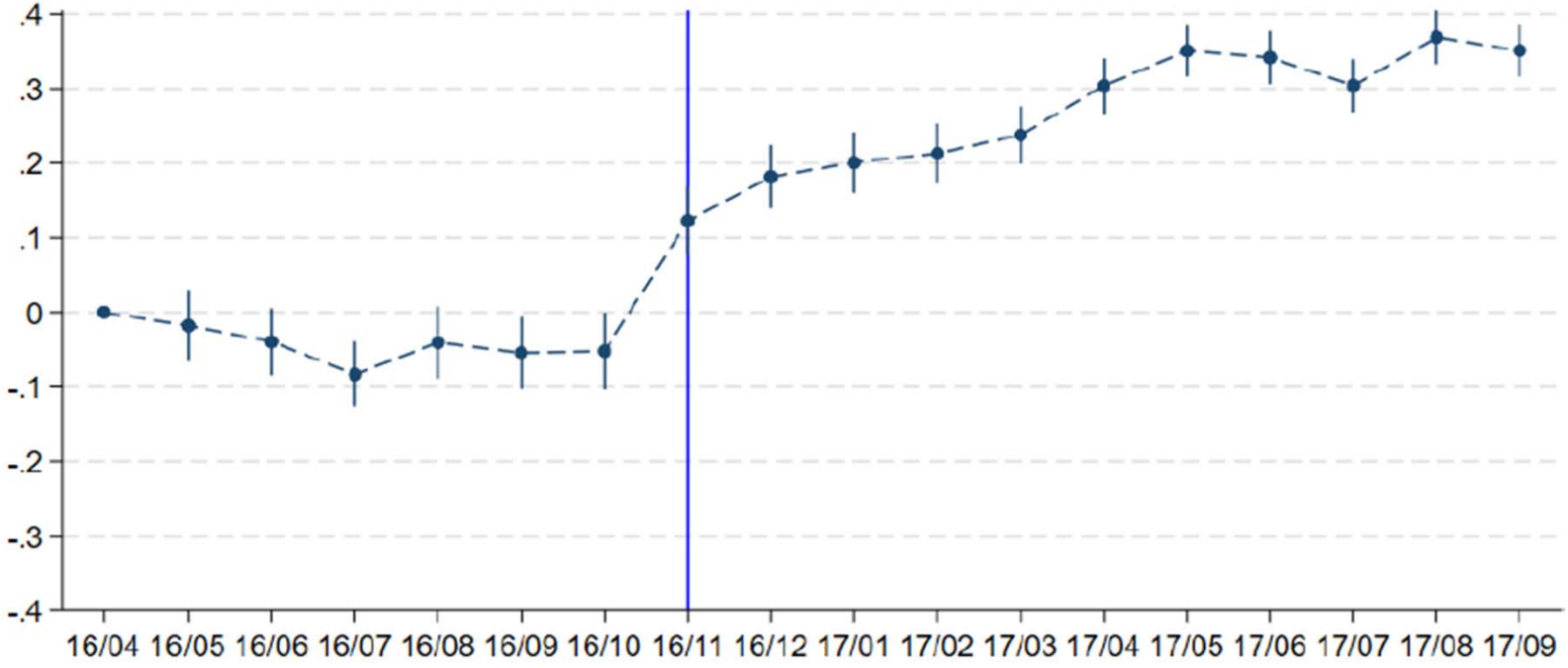
  - Be more cognizant of this limitation when interpretating the response across payment methods;

  - Is there any heterogeneity across stores on what options are available?

Mechanism: behavioral response

- They argue that their results are more consistent with the presence of a behavioral response:
  - Digital payments are less salient → you spend more.

Results are very persistent



Mechanism: behavioral response

- They argue that their results are more consistent with the presence of a behavioral response:
  - Digital payments are less salient → you spend more.

- How do they think about the persistence?
  - A simple model of behavioral biases should predict some reversal, as people learn over time about their errors.

- What else could be going on?
  - Habit-formation: you make mistakes and then you get used to this higher (and sub-optimal) level of consumption.
  - It takes a long time to learn:
    - If most of the effect is extensive margins (i.e. I buy a new TV I do not need), it may take enough time for everyone to make mistakes, learn, and stop repeating.

- Examining whether the effects are driven by consistent, small over-spending or few big tickets purchase (e.g. TV) could be helpful.

Mechanism: intra-family shopping behavior

- Assume a principal-agent setting for shopping behavior.
- One family member manages the finances (“principal”), while another actually does grocery shopping (“agent”).
- In this model, cash has the advantage becomes it allows the principal to commit on specific expenses.
  - Example: you need to buy X, Y, and Z, so I only give you 100 rupees.

Mechanism: intra-family shopping behavior

- Assume a principal-agent setting for shopping behavior.
- One family member manages the finances ("principal"), while another actually does grocery shopping ("agent").
- Electronic payments does not have this property:
  - If the principal gives the debit card to the agent, she may not be able to ex-ante control expenditure.
- One implication: it may be optimal for the principal to now directly participate to the shopping.

Mechanism: intra-family shopping behavior

- In other words, this model suggests that the use of electronic payments may change the individual doing shopping.
  - This change may then affect the basket of consumed goods.

- Who is “the principal” and “the agent”? How is shopping conducted in India?
  - Do they have the identify of the person paying?
  - (Already before) how does the typical family in the data look compare the typical Indian Family?

- Could this mechanism explain a shift of consumption across stores?
  - They rule out movement from informal to formal, but what about within formal?
  - Husband and wife now shop together in one store, so they move part of their consumption with them into larger stores.

Conclusion

- This paper presents novel evidence on how households' behavior can be affected by the adoption of electronic payments.
- The data used is amazing, the empirical method is generally sound, and results are potentially important.
- I would advice for more work aimed to clarify the mechanisms! Nice paper already!

Thanks!