OESTERREICHISCHE NATIONALBANK
EUROSYSTEM

Discussion of „Precautionary motives in short-term cash management - Evidence from German POS transactions”

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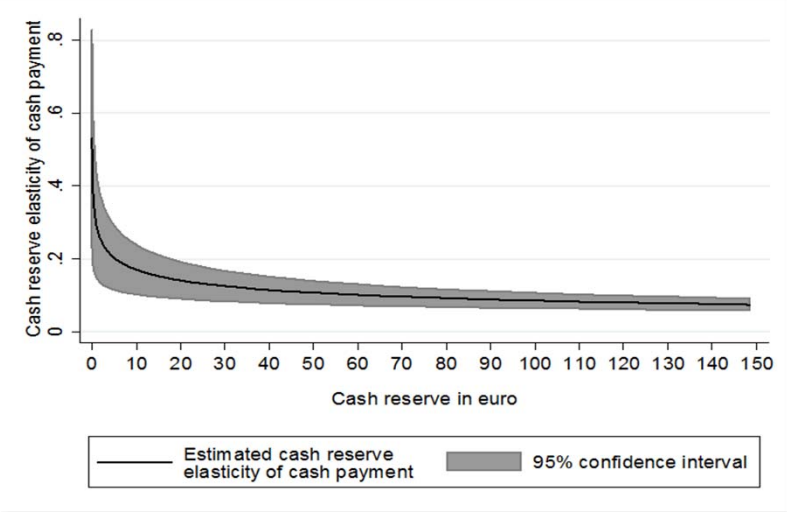
Summary

Uses transaction data from German payment diary to investigate whether individuals withhold cash for precautionary reasons

Findings:

- Probability of a transaction being settled in cash significantly declines as the amount of money in one's wallet decreases
- The cash reserve elasticity of cash payments is around 0.1 and increases as the amount of cash in one's wallet approaches zero → nonlinearity



→ "individuals refrain from parting with the entire amount of cash in their wallet and retain a certain amount of cash as a reserve."

Source: Eschelbach/Schmidt (2015)

Summary

- Focus on very short-run (can be 5 minutes)
- Presents a choice model:
  - Focuses only on transactions for which choice existed (consumers with cards, acceptance + enough cash on hand)
  - [Commercial: Huynh/Schmidt-Dengler/Stix (2014) analyze how average cash balances are affected by changes in card acceptance.]

<u>Very interesting</u>

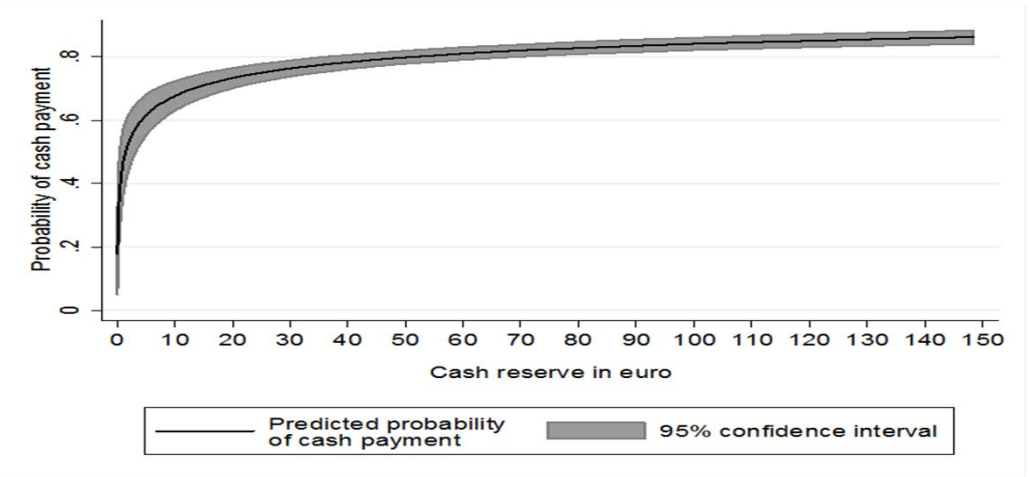
- because knowledge on short term-cash management is very limited
- part of this due to lack of data → payment diaries provide information on cash balance at each transaction
- tedious to calculate these per-transaction balances
- complements and informs theoretical models (Alvarez-Lippi, and others)

Main Comments

- Identification of non-linearities
- Role of withdrawal costs versus lack of card acceptance
- Other sources of heterogeneity across consumers
- Reverse causality

Identification of non-linearities

- Most action for very low cash reserves:
  - with 10€ cash reserve, probability of cash payment 67%
  - with 5€ cash reserve, probability of cash payment 61%
  - with only €1 left, probability falls to 46%.



Source: Eschelbach/Schmidt (2015)

- Is the nonlinearity for low reserve values identified?
  - → average amount of cash prior to making a tx = 120€
  - → average tx size = 25€

Role of withdrawal costs versus lack of card acceptance

In a world with universal acceptance (as in the sample) …

- why does someone hold cash at all?
  - Preferences, relative costs
- why should probability of cash payment depend on the amount of cash in the wallet?
  - Opportunity costs vs. withdrawal (shoe-leather) costs
- why hold precautionary cash balances
  - Withdrawal costs

  → Universal acceptance world does not yet exist

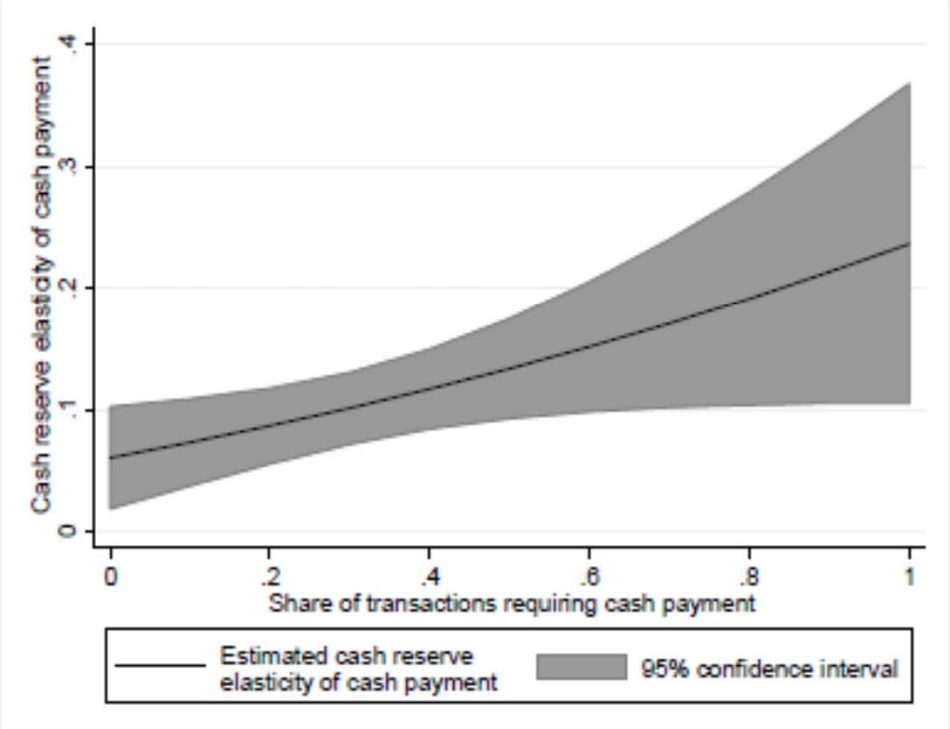
  - Lack of card acceptance → precautionary reason

Role of withdrawal costs versus lack of card acceptance

Paper studies both aspects

1) Lack of acceptance

Fig. 7 Cash reserve elasticities as a function of a consumer's share of transactions requiring cash payment

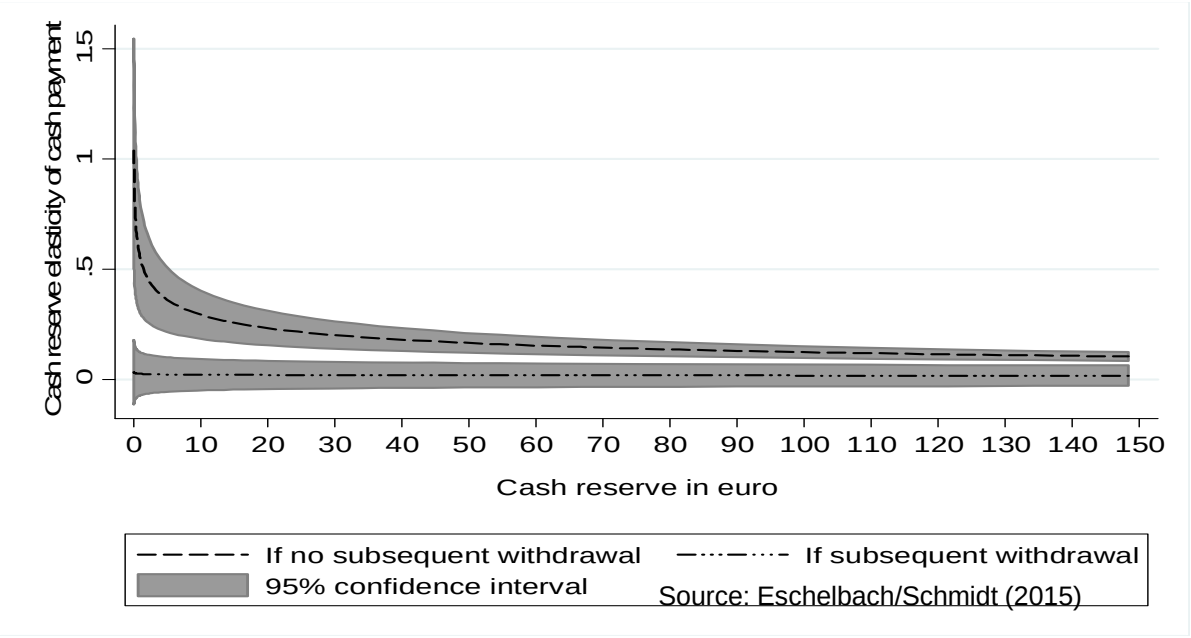


Source: Eschelbach/Schmidt (2015)

→ Can you simulate how increase in acceptance affects *average* cash balances?

Role of withdrawal costs versus lack of card acceptance

2) Withdrawals



→Could mean that consumers plan withdrawals:

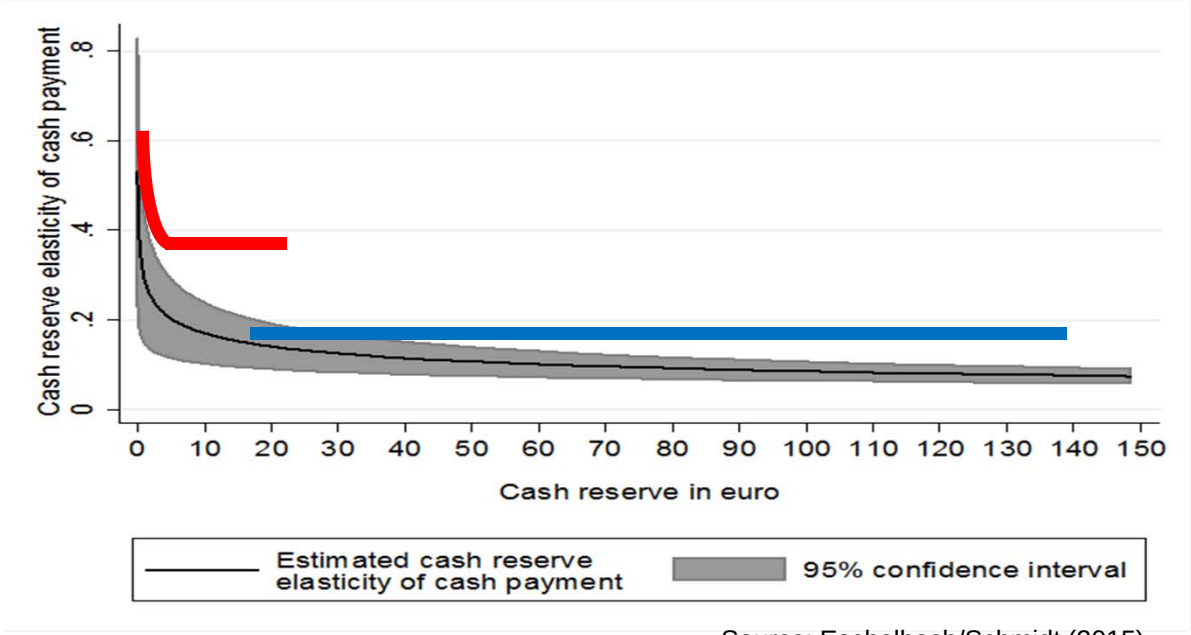
→Eventually you identify whether consumers <u>plan or do not plan</u> withdrawals but not whether withdrawal costs affect cash reserve elasticity

→More convincing: consumers in low ATM density regions should have higher cash reserve elasticity

- <u>Acceptance or withdrawals more important?</u>

Other sources of heterogeneity across consumers

- Some consumers like to make card payments but they keep some reserves → high cash reserve elasticity, mostly linear, not identified for larger cash balances
- Some consumers prefer cash payments → relatively low cash reserve elasticity, not identified for smaller cash reserves



Source: Eschelbach/Schmidt (2015)

Reverse Causality

- Assumption: cash balances → probability of cash payment
- Could be the other way around
  - "individuals who plan to use cash in a particular payment situation carry more cash on her"
- Paper tries to circumvent this by splitting the sample in transactions directly preceded by withdrawal and not
  - "in case of reverse causality, the cash reserve elasticity should be higher for transactions which are directly preceded by a cash withdrawal."
  - as this is not found → evidence that reverse causality is not driving the results
- This is indicative only: consumers could plan further ahead than 1 tx
  - e.g. withdrawal in the afternoon but restaurant in the evening
  - some problems understanding argument
- Other sources of endogeneity: cash consumers could choose to shop in low acceptance environment