

ATM pricing and deployment

by Krzysztof Wozniak, 16th BoF Simulation Seminar, 30 August 2018

Discussant: Uwe Schollmeyer , Bundesbank University of Applied Sciences, Hachenburg

Contribution

- Wozniak looks at network(s) of automated teller machines in the USA.
- Topic definitely needs more research.
- Nice data panel, but: data representative?
- Methodology: linear model with instrumental variables
- Some first questions:
 - What exactly is the reference to Fox (2013)?
 - What is “the networks home state”? → state dependent networks?

Research Questions

–Research questions:

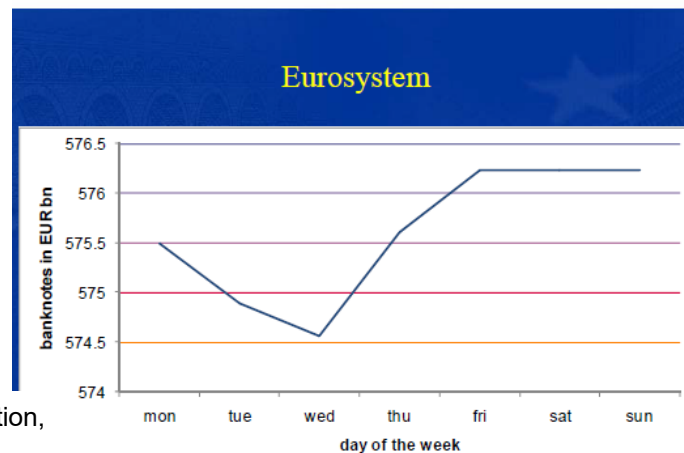
- Sensitivity of consumers to ATM surcharges
- Determination of ATM surcharge levels
- Deployment of ATM
- Some other questions covered → paper needs more focus
 - E.g.: Is the day of withdrawal relevant for the surcharge level?
(Possibly not, see slide 17, approach 3)
Or is it for central bankers just interesting in the context of forecasting the autonomous factors in monetary policy implementation?

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Source: ECB Presentation Banknotes in Circulation,
Paul Mercier, 14 February 2007, p. 15

Intra-weekly seasonality
(average banknotes per day of the week over the last 2 years)



Supply side: Deployment of ATMs

Free cash withdrawals seem to be more widespread in locations where the consumer has more alternatives to walk away

- Borrow some methodology from regional / spatial economics?
- Old question in competition policy: What is the relevant market?
- Distance to next available ATM available in data? (shoe leather cost)



Why look only at the USA? Institutional features in different countries

Scholten, Bram (2017) : Decline management: the case of cash. Policy response in the Netherlands and the Nordic countries, Deutsche Bundesbank International Cash Conference 2017 – War on Cash: Is there a Future for Cash? 25 - 27 April 2017, Island of Mainau, Germany

<https://www.econstor.eu/bitstream/10419/162915/1/Scholten.pdf>

“In Finland, the Netherlands and Sweden, ATM withdrawals are always free of charge for clients of the major banks. (Recently, Finnish banks have started to limit the number of free of charge withdrawals.) In the Netherlands, this is the result of market forces. In Sweden, the competition authority requires that the banks that participate in Bankomat also do not charge their clients for withdrawals from other ATMs.”

- Germany would also be interesting case study: Competition among banks for customer deposits inter alia via ATM networks and levels of surcharges.
 - Cash still widely used in Germany.

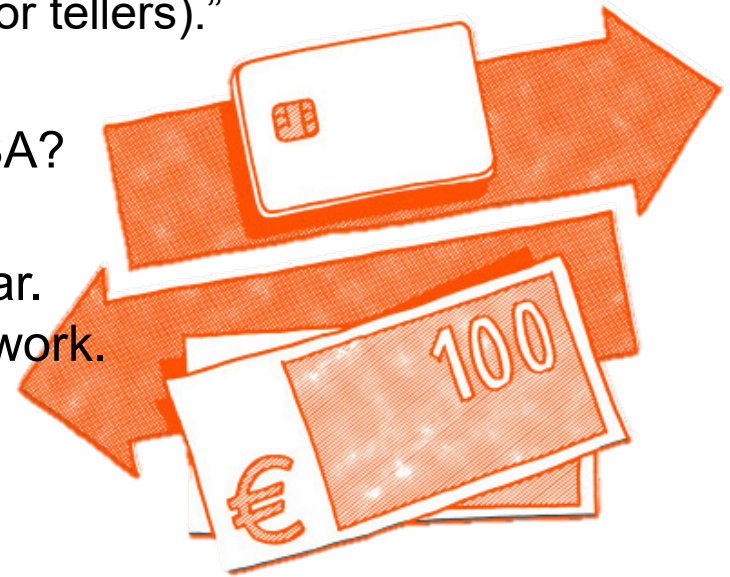
Are the USA different? Where do US consumers get their cash from?

Bagnall et al.: Consumer Cash Usage: A Cross-Country Comparison with Payment Diary Survey Data, International Journal of Central Banking, Volume 12, Issue 4, December 2016, p. 1-61, here p. 24:

“Cash is obtained from ATMs, bank tellers, and other sources (family, cashbacks, etc.). Except for US, the main source of cash is the ATM; ...”

Footnote 19: “As previously outlined, US stands out in this respect: the share of people obtaining cash from other sources at least once a month (90%) is above that of ATMs and tellers (70% and 40%, respectively), and the withdrawal frequency at these other sources is far above that for ATMs and tellers (3.3 compared to 1.3 for ATMs and 0.7 for tellers).”

- Distribution of cash via cashback in the USA?
(not in the sense of bonus program)
- In Euro Area getting more and more popular.
Allowed by ECB banknote recycling framework.



Thank you



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