Discussion of "Price fluctuations and the use of Bitcoin: An empirical inquiry"*

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*Views expressed are personal and do not necessarily reflect official positions of De Nederlandsche Bank.

This is original research that uses two empirical approaches to learn more about Bitcoin.

- Part 1: Bitcoin returns are primarily driven by the popularity of Bitcoin and transactional needs of Bitcoin users.

- Part 2: Payment usage of Bitcoin in e-commerce companies that accept Bitcoin is relatively high for start-ups, companies in developing countries, in countries with a large shadow economy and when customer knowledge of Bitcoin is high. Usage also depends on the availability of other payment options.

Although this paper makes a useful contribution to the literature, there is room for improvement.

1) Discuss the shortcomings of the knowledge variable. ➡
2) Motivate better why educational campaigns are important. ➡
3) Discuss the shortcoming that only adopters are studied. ➡
4) More detailed information is needed to better judge complements and substitutes of Bitcoins. ➡
5) Discuss to what extent it is possible to predict future returns and use based on your findings. ➡

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1) Discuss the shortcomings of the knowledge variable.

- Finding: positive link between *Bitcoin_Knowledge and Bitcoin_Sales.*

"How would you rate the knowledge of your customers regarding Bitcoin?"

"What is the fraction of sales value conducted via Bitcoin?"

- How do merchants form their knowledge judgment? ["*...most of the sample specialized in Internet Business.*" so they don't talk directly to the customer.]
- Is there reverse causality?
- How to control for this?

2) Motivate better why educational campaigns are important.

- *"...customers' knowledge about Bitcoin significantly influences its use. This highlights the* importance of educational campaigns..."

- Is this a valid conclusion?
  - A more reliable measure of knowledge seems to be needed.
  - Need to control for other standard factors (perceived user-friendliness, safety, speed and costs).
  - There is no information on the knowledge level of non-adopters.
  - The effectiveness of educational campaigns is questionable.
- Who wants to stimulate use and would want to pay for these campaigns?

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3) Discuss the shortcoming that only adopters are studied.

- *"To some extent these findings reflect the incentives of vendors and customers to adopt this novel technology at an early stage in its genesis."*

- To draw conclusions on the factors behind adoption of Bitcoin one should study both adopting and non adopting firms and consumers.
- What withholds and triggers companies (consumers) to accept (use) Bitcoin?
- It seems more interesting to know what would cause more and more companies and consumers to adopt Bitcoin than what explains differences in use between the small proportion of companies that already adopted it.

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4) More detailed information is needed to better judge complements and substitutes of Bitcoins.

- Dummy variables for the acceptance of other payment methods are included in the *Bitcoin_Sales* regressions.

- Drawbacks:
    - No information on share of sales by each of the other payment instruments and how this compares to similar companies that do not accept Bitcoin.
    - No information on which payment instruments consumers have adopted.
- More research is needed.

5) Discuss to what extent it is possible to predict future returns and use based on your findings.

- Based on IV estimation *Δtransactions* is only significant at 10% level in Table A and not significant in Table B. So popularity is *the* factor influencing returns.

- How well can we predict future returns by only tracking the popularity measures? Is it still difficult to predict returns?

- Can your findings be used to predict future adoption and use patterns? Or is there first more research needed based on information about both adopters and non-adopters and other factors?

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Thank you for your attention!

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