

Discussion of

“Monetizing privacy with central bank digital currencies”

By Rod Garratt and Michael Lee

CB & DC seminar

Interesting paper, important topic, elegant model

3 means of payment

Traditional cash:

- inconvenient $-k$
- privacy α

Electronic payment:

- convenient
- data used to design products // customers' taste γ
- but breaches privacy

CBDC

- convenient
- privacy α

Industry structure

Firms produce good at cost c

n (competitive) traditional firms: can't use data

2 (strategic) data driven firms : collect data to design products when customers use electronic payments

- the larger the number of customers you have
- the more info you acquire
- the better the design of your product

→ monopoly

- attracts all the customer \iff designs best product
- set price to extract all rents from customers

Customer utility without CBDC

If buys from monopolist using electronic means of payment

$$v + \gamma - p^m$$

If buys from traditional, competitive firm using cash (at competitive price = cost c)

$$v + (\alpha - k) - c$$

Monopoly pricing

Set price to make customer just indifferent

$$v + \gamma - p^m = v + \alpha - k - c$$

$$p^m = c + \gamma - (\alpha - k)$$

With CBDC

If buys from monopolist using electronic means of payment

$$v + \gamma - p^m$$

If buys from traditional, competitive firm using CBDC

$$v + \alpha - c$$

Monopoly price makes customer just indifferent

$$p^m = c + \gamma - \alpha$$

→ must give customer more in exchange for data/privacy

Yet, CBDC not used in equilibrium: just useful to limit market power, no revenue: only CB can afford to do that

My two (virtual) cents

Assumption that using cash is inconvenient = plausible

Assumption that data firm design & sell better products = ????

Waze give you direction using customer data ... but for free ?

I have a hard time thinking of good examples



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