

DISCUSSION OF “HOW DOES STRATEGIC COOPERATION IN FINTECH
FIELD AFFECT THE EFFICIENCY OF COMMERCIAL BANKS? EVIDENCE
FROM CHINA”

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THIS PAPER

► **Research question:** how does fintech cooperation affect bank performance?

- fintech cooperation: all-around cooperation in technology, business, and scenarios; banks' annual report disclosure
- bank performance: efficiency (network DEA), various risk-taking indicators, ...

► **Method:**

- Model: loan-to-deposit ratio ψ is increasing in fintech cooperation ϕ

$$\max_{r,D} p(r) [r(W + \psi(\phi)D)] - C(D) - \rho W$$

- DiD estimation

$$Performance_{it} = \alpha + \delta_i + \theta_t + \beta CIF_{it} + Control_{it} + \sigma_{it}$$

► **Main findings**

1. fintech cooperation leads to improved risk-taking capacity, reduced ex-post risk-bearing levels, and enhanced operational efficiency
2. effects are stronger for regional banks compared to national banks

COMMENT # 1: IS THE CHOICE OF FINTECH COOPERATION EXOGENOUS?

- ▶ **In reality:** endogenous in both this action and its timing; not randomly assigned policy
- ▶ **In this paper:**
 - title: *strategic* cooperation
 - model: optimal risk-taking level r with exogenous variations in Fintech cooperation ϕ
 - empirics: treatment and control group
- ▶ **Suggestions:**
 1. list it as a caveat and provide a discussion
 2. find possible IVs: distance to Hangzhou
 3. identify the source of endogeneity and control for it: start with primitives and endogenous the choice of cooperation

COMMENT # 2: MODEL

1. Inconsistent with the following empirical findings

- regression results: increased ex-ante risk-taking (CRWA, Z score) but reduced ex-post risk-taking (loan loss allowance ratio)
- model: both are increasing in fintech cooperation

2. Key assumption: ψ is increasing in $\phi \rightarrow$ fintech cooperation allows banks to lend out more

- in this paper: true within a reasonable range
- **Yunzhi Hu and Pavel Zryumov (2023)**, “Lending Competition and Funding Collaboration”



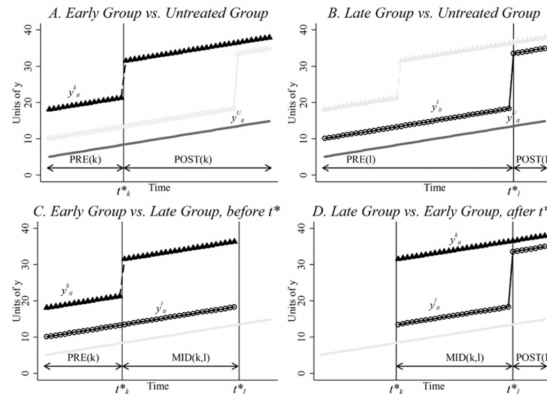
- ▶ Fintechs are often funded by the very banks with which they might compete in the same lending market_{3 / 7}
- ▶ cheaper funding costs of banks + better lending technology of Fintech

COMMENT # 3: FINTECH COOPERATION VARIABLE

- ▶ CIF: fintech cooperation
- ▶ supposed to be one of the key contributions, but **very few descriptions and explanations**
 - what's the fraction of banks adopting fintech cooperation?
 - what kinds of banks are likely to adopt fintech cooperation?
 - what's the time distribution of fintech cooperation?
 - is it reasonable to assign 1 to all the following periods after t with fintech cooperation at t
- ▶ **Possible extensions**
 - different types of cooperation: lending related or not
 - cooperation intensity: number of RMB spent; text emotional analysis

COMMENT # 4: DiD ESTIMATION

- ▶ Now is a difficult period of time for DiD: more than just parallel trend and placebo tests
- ▶ **Goodman-Bacon (2021, 2019)**: if variation in treatment timing, the classical DiD coefficient is a weighted average of canonical “2x2” DiDs



▶ Possible solutions

- Bacon Decomposition
- Callaway and Sant'Anna (2021); Cengiz et al. (2019); Athey et al. (2021); Arkhangelsky et al. (2021); Wooldridge (2021)

COMMENT # 5: COOPERATION V.S. IN-HOUSE PATENTS

- ▶ Fintech technology: **in-house patents** versus **external cooperation**
- ▶ **Iftekhar Hasan, Xiang Li, and Tuomas Takalo (2023)**, “Technological Innovation and the Bank Lending Channel of Monetary Policy Transmission”

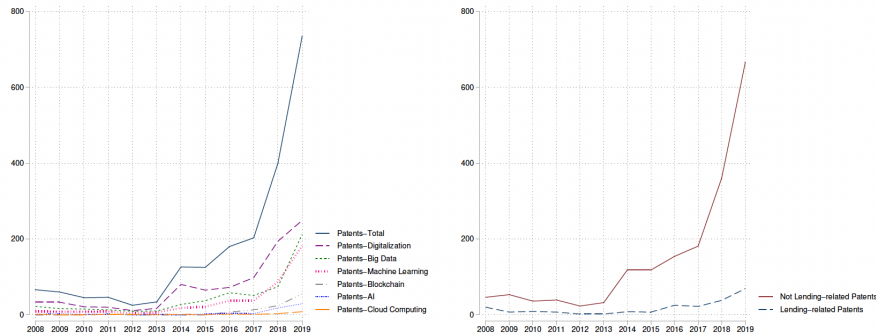


Figure 1: Banks' Technological Innovation: Patent Applications

Notes: This figure shows various numbers of patent filings by banks by filing year. The left panel shows the total number and its division into six technologies, which are AI, big data, cloud computing, digitalization, machine learning, and blockchain. The right panel shows the number of lending-related and non-lending related patent applications separately. We identify the categories of technologies and whether or not the patent application is lending-related based on the descriptions in the patent document.

- patent-based measurement of bank-level technological innovation
- tell whether or not technology is related to the bank's lending business

SUMMARY

- ▶ A nice contribution to the Fintech & Banking literature!
- ▶ Good luck with the publication!