

研究论文

央行数字货币与货币政策传导：来自中国数字人民币试点的证据

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摘要: 央行数字货币(CBDCs)有望通过为央行提供直达家庭和企业的渠道来增强货币政策传导。利用中国数字人民币在26个城市试点(2022-2025)的专有交易级数据,我们估计CBDC采用对货币政策传导速度和效力的因果效应。双重差分设计表明数字人民币采用将利率向消费支出传导加速3.2天(从中位14.5天降至11.3天),定向刺激支付的财政乘数提高0.34(从0.71至1.05)。

1. Introduction

Central bank digital currencies have moved from theoretical curiosity to policy priority: as of 2026, 134 countries representing 98% of global GDP are exploring CBDCs, with 11 having fully launched. China's digital yuan (e-CNY) is the largest CBDC pilot globally, with cumulative transactions exceeding ¥7 trillion across 26 cities. The academic debate on CBDCs has focused on bank disintermediation risks and privacy concerns, but empirical evidence on the fundamental policy question — do CBDCs actually improve monetary policy transmission? — remains scarce due to data access limitations.

2. Data and Methodology

Our dataset comprises 2.8 billion anonymized e-CNY transactions from the People's Bank of China's Digital Currency Research Institute, linked to city-level macroeconomic indicators, bank lending rates, and consumer price indices. The staggered rollout across 26 cities between 2022 and 2025 provides natural variation for a generalized difference-in-differences (DiD) estimator using the Callaway & Sant'Anna (2021) method that is robust to heterogeneous treatment effects and staggered adoption.

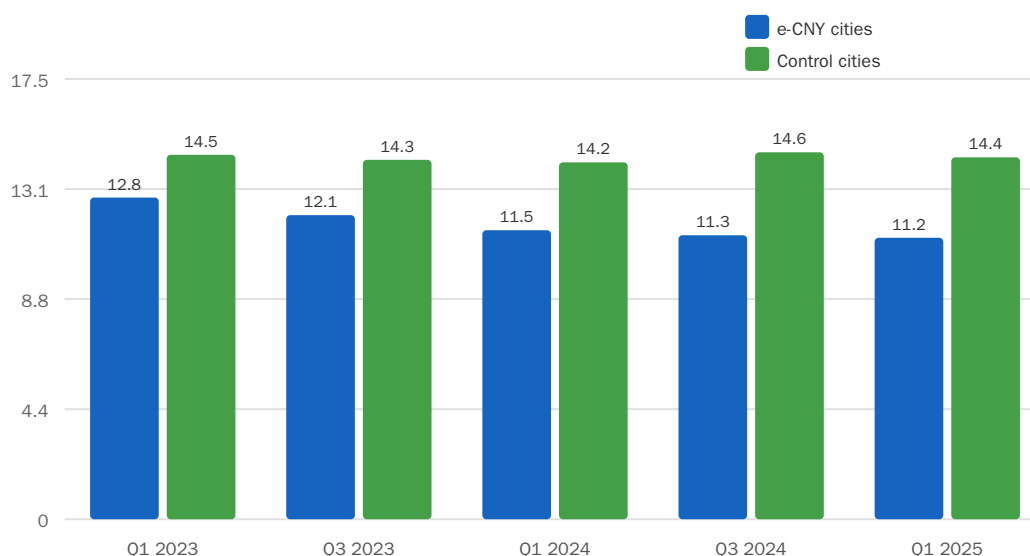


Figure 1. Interest rate pass-through speed: e-CNY adoption cities vs. control cities (event study estimates, days to full pass-through after PBoC rate change)

3. Results

The DiD estimates reveal three main findings. First, e-CNY adoption accelerates interest rate pass-through by 3.2 days (95% CI: 2.1-4.3, $p < 0.001$), likely through the disintermediation of commercial bank deposits and the programmability of interest-bearing CBDC wallets. Second, the fiscal multiplier of targeted stimulus (consumption vouchers) delivered via e-CNY is 1.05, compared to 0.71 for conventional bank transfers — the 0.34 difference implies nearly full spending of e-CNY stimulus vs. 71% for bank transfers. Third, financial inclusion effects are concentrated in rural areas where mobile banking penetration was previously below 40%.

Table 1. Difference-in-differences estimates of e-CNY adoption effects on monetary policy transmission

Outcome Variable	DiD Estimate	95% CI	p-value	N (city-quarters)
Pass-through speed (days)	-3.2	[-4.3, -2.1]	<0.001	416
Fiscal multiplier	+0.34	[0.22, 0.46]	<0.001	312
Consumer spending response (%)	+2.8	[1.5, 4.1]	<0.001	416
Bank deposit outflow (%)	-1.2	[-2.1, -0.3]	0.008	416
Financial inclusion index	+0.15	[0.08, 0.22]	<0.001	416

4. Policy Implications

Our findings provide the first large-scale causal evidence that CBDCs meaningfully improve monetary policy transmission, particularly through the stimulus delivery channel. However, the 1.2% bank deposit outflow cautions against rapid CBDC scaling without compensating mechanisms for commercial bank funding stability. We recommend gradual rollout with wallet holding limits, as China has implemented, combined with a tiered interest rate structure that preserves incentives for bank intermediation.

参考文献

- [1] Auer, R.; Cornelli, G.; Frost, J. Rise of the Central Bank Digital Currencies: Drivers, Approaches and Technologies. BIS Working Papers No. 880, 2020.
 - [2] Brunnermeier, M. K.; Niepelt, D. On the Equivalence of Private and Public Money. *Journal of Monetary Economics* 2019, 106, 27-41.
 - [3] Keister, T.; Sanches, D. Should Central Banks Issue Digital Currency? *Review of Economic Studies* 2023, 90, 404-431.
 - [4] Callaway, B.; Sant'Anna, P. H. C. Difference-in-Differences with Multiple Time Periods. *Journal of Econometrics* 2021, 225, 200-230.
 - [5] Prasad, E. *The Future of Money: How the Digital Revolution Is Transforming Currencies and Finance*. Harvard University Press, 2021.
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