Trust as an Entry Barrier: Evidence from FinTech Adoption

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Research Question

The current wave of FinTech innovation is revolutionizing the financial markets. However, FinTech adoption is not universal; different regions have immensely different FinTech adoption rates. What are the factors that affect the competition between banks and FinTech lenders? This paper studies trust in incumbent lenders (banks) serve as an entry barrier to FinTech lender. Trust is important to ALL financial transactions.

Empirical Strategy

I test if a change in the relative difference between trust in banks and trust in FinTech affects households' choice between banks and FinTech. I exploit the exposure to Wells Fargo fraud scandal in 2016 as a negative shock to trust in banks. I use the geographic variation of exposure to the Wells Fargo scandal to estimate the causal effect. I compare FinTech adoption between an area with higher initial Wells Fargo deposits share to an area with lower Wells Fargo deposits share before and after massive media attention in 2016. The empirical strategy is akin to a difference-in-differences approach, and most of the analysis is a variation of the following form,

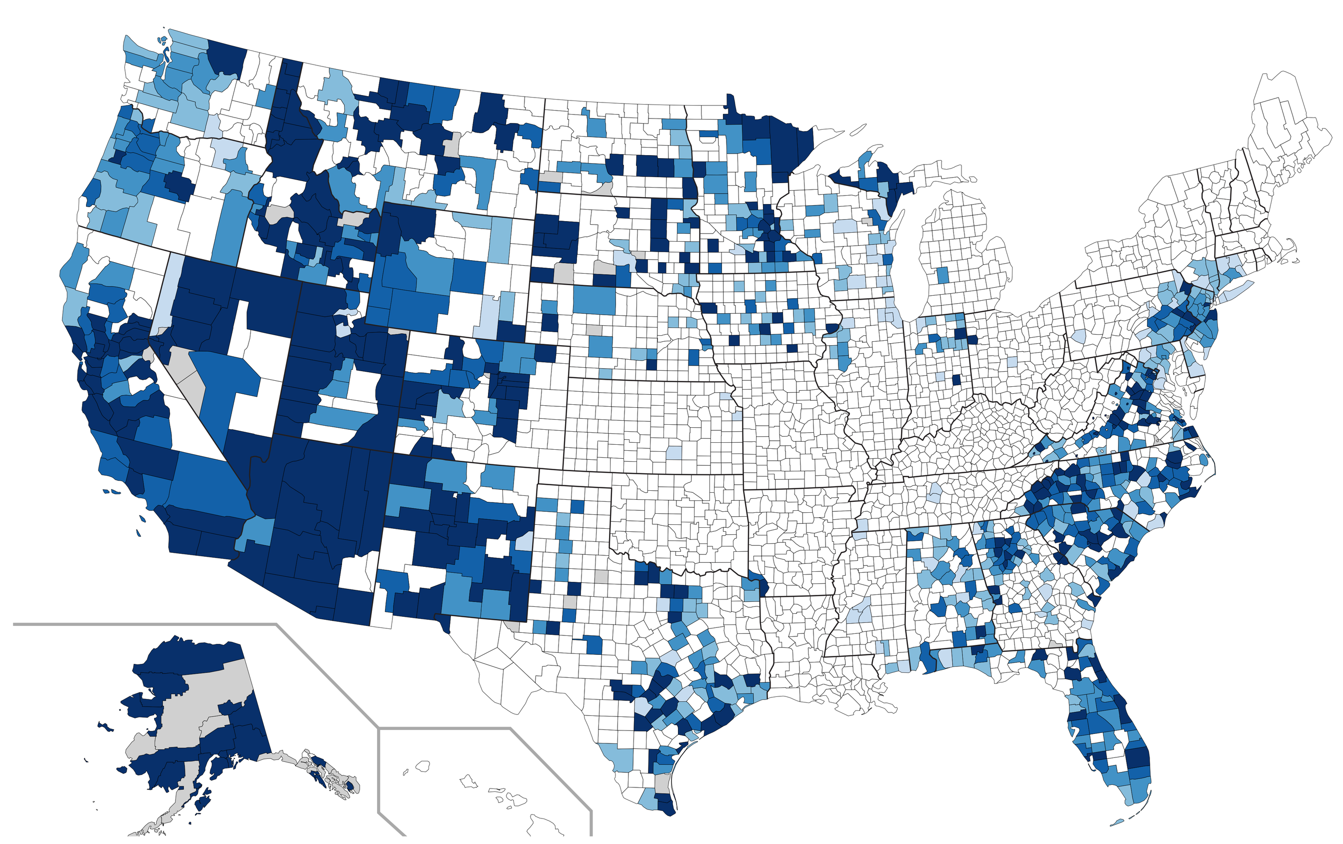
$$y_{(i),c,t} = \beta WFExposure_c \times Post_t + Control_{(i),c,t} + \lambda_c + \delta_t + \varepsilon_{c,t} \quad (1)$$

Wells Fargo Scandal

The Wells Fargo account fraud scandal is one of the most prominent corporate scandals after the 2008 financial crisis. Wells Fargo was engaged in creating millions of fraudulent saving and checking accounts, force-placing collateral, and auto protection insurance to customers, and inappropriately charging mortgage rate lock extension fees, dating back to as early as 2005.

I measure the county-level household exposure to the Wells Fargo scandal using the Wells Fargo deposit share on June 30, 2015.

$$\text{Wells Fargo(WF) Exposure}_c = \frac{\sum_{i \in \text{Wells Fargo}} \text{Deposits}_{ic}}{\sum_{i \in \text{All Banks}} \text{Deposits}_{ic}}$$

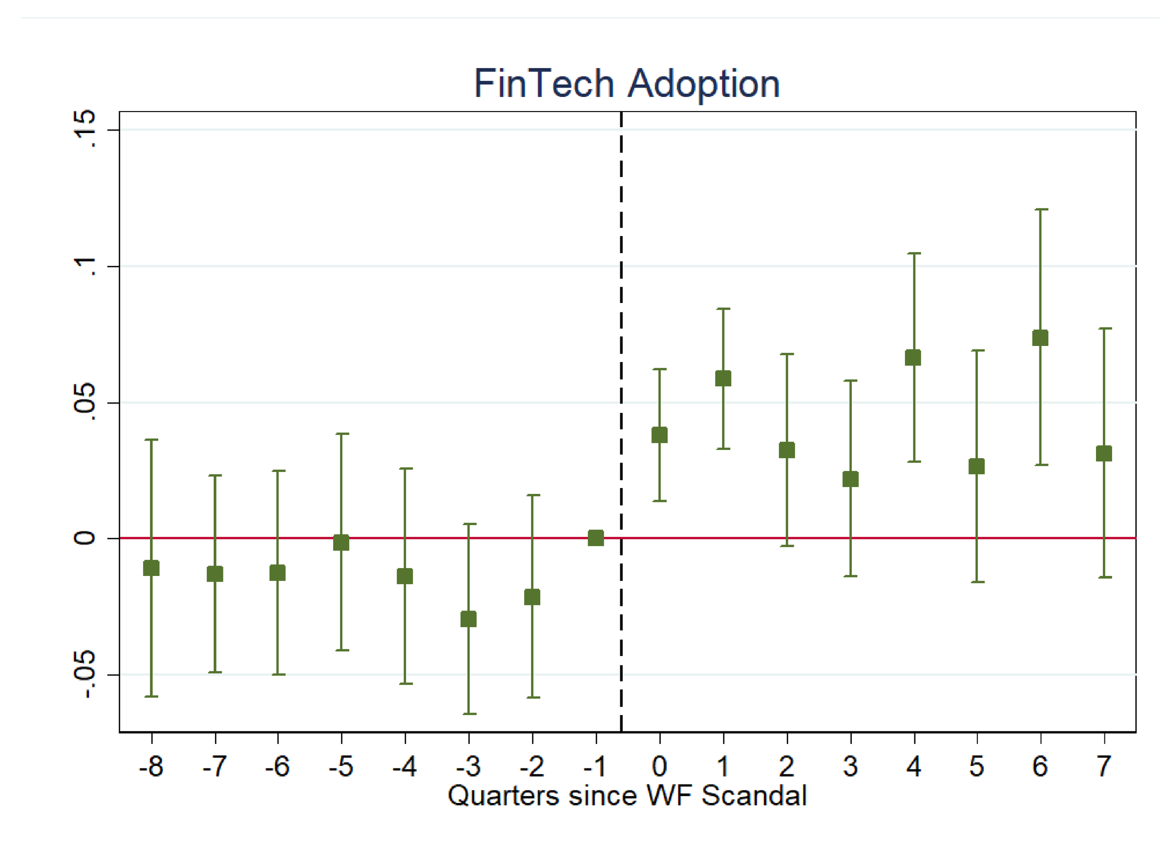


Results

I relate the exposure to the Wells Fargo scandal to FinTech adoption, comparing FinTech adoption in regions with high initial Wells Fargo deposit share to regions with low Wells Fargo deposits share before and after the outburst of the scandal in 2016.

	Origination		Application	
	FinTech (1)	FinTech (2)	FinTech (3)	FinTech (4)
WF Exposure× Post	0.011***	0.010**	0.010***	0.009**
	(3.0)	(2.4)	(2.8)	(2.4)
Population		0.001		0.002
		(0.8)		(1.4)
Unemployment Rate		-0.053*		-0.054**
		(-1.9)		(-2.1)
County Char.	No	Yes	No	Yes
Borrower Char.	Yes	Yes	Yes	Yes
County FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Observations	34179861	29985964	44856156	39029308
Adjusted R^2	0.096	0.093	0.080	0.077

The dependent variable is a dummy variable equal to 100 if the lender is FinTech. Following existing literature on FinTech lending in the residential mortgage origination market, I define a FinTech lender as an institution that provides full-scale, comprehensive online mortgage origination services. Column (1) shows that an increased exposure to the Wells Fargo scandal leads to an increase in the probability of choosing a FinTech lender. A one-standard-deviation increase in exposure to the Wells Fargo scandal in a county leads to a 0.12-percentage-point increase $(= 10.4 * 0.011)$ in the probability of choosing a FinTech lender, which is a 2% increase from the average probability of choosing a FinTech lender, (7.6). The result is significant at the 1% level.



The figure shows the dynamic effects of exposure to the Wells Fargo scandal on FinTech adoption. The treatment dynamics are consistent with the parallel trends assumption. The increase in FinTech adoption occurred in the treated areas only after the scandal in 2016, and there existed no pre-trends before the scandal.

Trust Erosion in Banks

After establishing the relationship between the exposure to the bank scandal and the probability of choosing a FinTech lender, I show that the Wells Fargo scandal erodes trust in banks. Using a difference-in-differences model, I estimate the effects of exposure to the bank scandal on trust in banks. The dependent variable is an individual's trust in banks, which is measured using the Gallup survey data. Trust in Banks is a dummy variable equaling to one hundred if the respondent reports "a great deal" or "a lot of" confidence in banks.

	Trust in Banks			Trust in Big Business		
	(1)	(2)	(3)	(4)	(5)	(6)
WF Exposure× Post	-0.267**	-0.290**	-0.281**	0.008	-0.028	-0.001
	(-2.1)	(-2.2)	(-2.1)	(0.1)	(-0.2)	(-0.0)
% with less than 35K income			-1.346**			-1.015
			(-2.0)			(-1.6)
Respondent Char.	No	Yes	Yes	No	Yes	Yes
County FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	4026	4026	3683	4026	4026	3683
Adjusted R^2	0.000	0.008	0.064	0.004	0.044	0.072

Column (1) of the Table shows that exposure to bank scandals leads to a decrease in the probability of reporting trust in banks. The results show that exposure to the Wells Fargo scandal does not decrease trust in big businesses. The trust that households place on FinTech and non-FinTech shadow banks do not change after exposure to the Wells Fargo scandal. This is therefore consistent with the relative difference between trust in banks and trust in FinTech decreasing after the scandal.

Robustness

One underlying assumption for my identification strategy is that the exposure to the Wells Fargo scandal affects FinTech adoption only through decreased trust in banks. An alternative possibility is that the FinTech share may change because banks in areas with more exposure to the Wells Fargo scandal may reduce their credit supply more after the scandal. I find that the percentage of mortgage rejected does not significantly increase for all types of lenders after exposure to the Wells Fargo shock.

Conclusion

This paper analyzes the role of trust in incumbent financial institutions in deterring new entrants with innovative technology. Using the Wells Fargo scandal as a negative shock to households' trust in banks, I document that areas with larger exposures to the Wells Fargo scandal leads to an increase in the probability of choosing a FinTech mortgage lender. My analysis further shows that the erosion of trust in banks relative to other financial institutions is the most likely channel through which the exposure to the Wells Fargo scandal affects FinTech adoption.