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Banking Deserts and the Paycheck Protection Program

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- The pandemic has exposed many underlying inequalities throughout the United states
- Access to banking services is one such inequality that has been further exposed by the pandemic and the response to it.
 - Many American live in a banking desert or banking hinterland.
 - This may make it harder on small businesses since they will not have as much access to “relational lending.”
- The pandemic caused many businesses to layoff their workers.
- The Paycheck Protection Program (PPP), was created in March 2020 to help struggling small business owners retain their employees.
 - Loans were originally distributed through existing SBA 7(a) lenders.

- We examine how the preexisting geographic distribution of banks affected the disbursement of PPP loans.
- We have three main hypotheses:
 - Relative banking deserts and hinterlands received fewer PPP loans.
 - Loans went to relatively advantaged labor markets.
 - The smallest businesses (those with less than 50 and less than 10 employees) were not the major beneficiaries of the program.

Data & Methodology

- PPP loan data come from the Small Business Administration (November 2020).
 - Number of loans, loan amount, number of jobs reported, and business address.
- Banking data come from the Federal Deposit Insurance Corporation and the National Credit Union Administration.
 - Number, type, and location of banks.
- These data are combined with other county-level measures and then aggregated up to the commuting zone level.

$$\begin{aligned}
 Y_i = & \beta_0 + \beta_1 \text{Bank Concentration}_i + \beta_2 (\text{Bank Concentration})_i^2 + \beta_3 \text{Bank HQs}_i \\
 & + \beta_4 (\text{BankHQs})_i^2 + \beta_5 \text{COVID19}_i + \beta_6 \text{NonWhite Share}_i \\
 & + \beta_7 \text{Smallest Business Share}_i + \beta_8 \frac{\text{Emp.}}{\text{Pop.}_i} + \beta_9 \frac{\text{H.H.Med.Inc.}}{\text{H.H.MeanInc.}_i} \\
 & + \beta_{10} \text{GDP per Capita}_i + \beta_{11} \text{BA} + \text{Share}_i + \epsilon_i
 \end{aligned}$$

Results

All PPP Loans: Hypothesis 1

	Loans per Sm. Bus.	Amount per Sm. Bus.	Jobs per Sm. Bus.
Banks + C.U.s per 10k	1.002*** (6.89)	-0.234* (-1.78)	-0.183 (-1.37)
(Banks + C.U.s per 10k) ²	-0.527*** (-5.76)	0.049 (0.57)	0.012 (0.15)
Bank HQs per 10k	0.333** (2.46)	0.102 (0.73)	0.215 (1.61)
(Bank HQs per 10k) ²	-0.115 (-1.24)	-0.079 (-0.47)	-0.096 (-0.60)

Highlighted standardized results presented. All specifications include the full slate of controls and robust standard errors were calculated. T-statistics included in parenthesis.

All PPP Loans: Hypotheses 2 & 3

	Loans per Sm. Bus.	Amount per Sm. Bus.	Jobs per Sm. Bus.
<u>Employment</u>	0.203***	0.206***	0.219***
<u>Population</u>	(4.08)	(3.20)	(2.67)
Share of Bus. < 10 Emp.	-0.148*** (-3.39)		
Share of Bus. < 50 Emp.	-0.151*** (-3.58)		

Highlighted standardized results presented. All specifications include the full slate of controls and robust standard errors were calculated. T-statistics included in parenthesis.

First Round PPP Loans: Hypothesis 1

	Loans per Sm. Bus.	Amount per Sm. Bus.	Jobs per Sm. Bus.
Banks + C.U.s per 10k	0.968*** (7.05)	0.001 (0.01)	0.057 (0.47)
(Banks + C.U.s per 10k) ²	-0.564*** (-6.69)	-0.097 (-1.38)	-0.142* (-1.86)
Bank HQs per 10k	0.397*** (2.96)	0.211* (1.68)	0.364*** (2.92)
(Bank HQs per 10k) ²	-0.272*** (-3.39)	-0.256* (-1.74)	-0.338** (-2.16)

Highlighted standardized results presented. All specifications include the full slate of controls and robust standard errors were calculated. T-statistics included in parenthesis.

First Round PPP Loans: Hypotheses 2 & 3

	Loans per Sm. Bus.	Amount per Sm. Bus.	Jobs per Sm. Bus.
<u>Employment</u>	0.229***	0.320***	0.261***
<u>Population</u>	(5.45)	(4.37)	(3.73)
Share of Bus. < 10 Emp.	-0.155*** (-432)		
Share of Bus. < 50 Emp.	-0.122*** (-3.33)		

Highlighted standardized results presented. All specifications include the full slate of controls and robust standard errors were calculated. T-statistics included in parenthesis.

- The Paycheck Protection Program evolved as time went on.
 - Some of the restrictions on lenders were loosened to make the disbursement of loans easier.
- To capture the changing nature of the program we also use the sample of loans from when the regulations were changed after the first round.

- Hypothesis 1:
 - Commuting zones with a higher concentration of banks still received more PPP loans (0.700***).
 - Diminishing returns to the number of banks are also present for the 2nd round of loans (-0.317**).
 - Bank Headquarters were not a significant factor in the second round.
- Hypothesis 2:
 - Commuting Zones with stronger labor markets received more loans, but the result is not as strong as the previous results (0.103*).
- Hypothesis 3:
 - The CZs with the a greater share of the smallest businesses still received fewer loans in the second round of funding (Less than 10: -0.096*; Less than 50: -0.133***).

- Part of the regulation change after the first round of funding was allowing fintech companies to make PPP loans.
 - Fintech companies rely more on automation to make lending decisions.
- Fintech companies are able to make loans remotely, so borrowers are not geographically constrained.
 - This may reduce the inequality of access that originally existed in the PPP.

- Hypothesis 1:
 - CZs with fewer banks received more of the fintech loans (0.634***).
 - These CZs also received a greater total amount per small business (0.724***).
 - More jobs per small business were retained with the fintech sample in high banking CZs (0.701***).
- Hypothesis 2:
 - Places with a relatively stronger labor market did not get more of the fintech loans.
- Hypothesis 3:
 - CZs with a higher share of small businesses with less than 10 employees were not disadvantaged for the fintech loans, but CZs with a greater share of small businesses with less than 50 employees did receive significantly fewer fintech PPP loans (-0.173***).

Conclusions

- An existing relationship with a bank is beneficial for businesses.
 - Banks can utilize “soft” information and “relational lending” when making lending decisions.
- We find evidence that access to banks mattered for receiving PPP loans.
 - Places with a higher concentration of banks received a higher number of PPP loans.
 - This held when we examined the program in total, first round loans, and second round loans.
 - Fintech loans improved access and went to places with fewer banks per person.

- Access to banks should be taken into account for future similar programs.
- Fintech can be a solution to the issue of access and should be part of future policy.
- More policies are needed to support community banks and increase access to community banks.
- Targeting the loans toward regions that faced particularly stark economic shocks would have help equalize the distribution.

Questions?

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Number of PPP Loans by Bank Type

	(1)	(2)	(3)
Banks + C.U.s per 10k people	1.002*** (0.0102)		
(Banks + C.U.s per 10k people) ²	-0.527*** (0.000280)		
Banks per 10k people		1.030*** (0.0112)	
(Banks per 10k people) ²		-0.552*** (0.000293)	
C.U.s per 10k people		-0.019 (0.0288)	-0.049 (0.0282)
(C.U.s per 10k people) ²		0.044 (0.0126)	0.049 (0.0120)
Comm. Banks per 10k people			1.171*** (0.00888)
(Comm. Banks per 10k people) ²			-0.581*** (0.000236)
Non-Comm. Banks per 10k people			0.367*** (0.0151)
(Non-Comm. Banks per 10k people) ²			-0.247*** (0.00225)
Bank HQs per 10k people	0.333** (0.0284)	0.305** (0.0302)	0.183 (0.0292)
(Bank HQs per 10k people) ²	-0.115 (0.00336)	-0.109 (0.00350)	-0.026 (0.00352)

Number of PPP Loans: Rural/Micro

	(1) Loans	(2) Loan Amount	(3) Jobs Retained
Banks + C.U.s per 10k people	0.260*** (3.30)	-0.086 (-1.31)	-0.053 (-0.81)
Bank HQs per 10k people	0.071 (0.78)	-0.018 (-0.35)	-0.021 (-0.31)
(Banks + C.U.s per 10k people) ²	-0.106 (-1.34)	-0.051 (-1.05)	-0.060 (-1.18)
(Bank HQs per 10k people) ²	0.059 (0.43)	0.049 (0.71)	0.082 (0.84)
Micro	-0.024* (-1.92)	-0.002 (-0.07)	0.031 (1.47)
Rural	-0.001 (-0.03)	-0.032 (-0.86)	0.005 (0.14)

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	All Loans	First Round	Fintech
COVID-19 Cases per 10k	0.060** (2.32)	-0.035* (-1.80)	0.177*** (3.84)
Non-white Share	1.59*** (3.40)	0.050 (1.37)	0.221*** (4.61)

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