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# Limits to Capital: Assessing the Role of Race on the Paycheck Protection Program for African American Farmers in America

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# Introduction

## Backgrounds

The persistent presence of discrimination in various socio-economic settings, including credit access, garners meaningful discussions.

Limits to credit access can hinder revenue generation and land ownership, among other impacts.

Then what about credit access for minority farmers?



# Introduction

## **COVID-19 and the Paycheck Protection Program (PPP)**

Number of actively run small business owners decreased by 3.3 million or 22% in early 2020 (Fairlie, 2020).

To address the financial hardships that small businesses faced, the Coronavirus Aid, Relief, and Economic Security (CARES) was introduced.

\$800 billion PPP program was introduced by the Congress and the US Department of Treasury.

Eligibility: Small businesses with 500 or fewer employees



# Introduction

## **COVID-19 and the Paycheck Protection Program (PPP)**

Recipients could use the loan to cover...

Employee payroll

Mortgage payments

Operational or other approved expenses

Loan forgiveness was granted to business which retained employees

Food supply chains and agriculture, and small farmers were also eligible for these new government payments (Hungerford et al., 2021).



# Research Question

Business owned by minorities are found to be hit hard by disruptions especially in the early stage of COVID-19 pandemic (Fairlie, 2020).

The distribution of the PPP program provides an excellent setting for testing ethnic discrimination in government-sponsored lending programs

**Do we observe racial discrimination from the Paycheck Protection Program issuance for African American farmers?**

Examine the approved PPP loan amount based on race.



# Literature Review

## **Racial discrimination in business lending in general**

Businesses owned by ethnic minorities were more likely to have their loans denied, receive smaller loan amounts, and have shorter maturities (Bates & Robb., 2013; Becker 1957; Becker 2010)

## **Limited credit access for agricultural producers**

Limited credit access can hinder investments and impact farm productivity, resulting in a reduced value of underlying farm businesses (Sant'Anna et al., 2021; Penderson et al., 2012)

## **Racial discrimination in access to financial capital for agricultural producers**

After *Pigford vs. Glickman* (1999), multiple studies conducted on minority-owned farm businesses and their treatment in government lending with mixed results (Dhakai et al., 2019; Escalante et al., 2006; Escalante et al., 2018)



# Data

## **PPP Loan Data from the SBA**

Examine the first and the second draws of PPP loans in 2020 and 2021

Limit our study to recipients with North American Industry Classification System (NAICS) code 11.

Information provided include name, address, loan amount approved, number of employees, race, ethnicity, gender, days to approval, lender information, and so on.



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# Methodology

$$Y_{i,t} = \beta_0 + \beta_1 \text{African American}_i + \gamma_2 X_{i,t} + \text{YearFE} + \text{CountyFE} + \text{IndustryFE} + \epsilon_{i,t}$$

Dependent variables:  $\ln(\text{Loan Amount})$  & PPP Payment per Employee

Main variable of interest: *African American*, 1 if the recipient is African American

Control variables( $X_{i,t}$ ). These include the number of employees, gender, race and ethnicity of the owner, and the specific lending institution type that issued a PPP loan to the recipient.



# Methodology

Two separate regressions:

- (1) Regression only based on recipients who answered their race
- (2) Regression on the entire population of PPP recipients, unanswered bias adjusted using inverse Mills ratio, similar to Atkins et al. (2021)

- Mills Ratio Construction for Unanswered Race

Using a probit model, we estimate the probability of not answering their race based on their characteristics, including percentages of different races of farmers in each county, jobs reported, and types of lenders.



# Summary of Statistics

	2020	2021	Total	Total PPP (in mil \$)	Average PPP
Unanswered	108,918	366,666	475,584	\$14,930.58	\$31,394
Answered	29,180	125,335	154,515	\$4,037.05	\$26,127
White	27,659	116,801	144,460	\$3,805.75	\$26,344
African American	621	3,992	4,613	\$95.63	\$20,730
Other Races	900	4,542	5,442	\$135.66	\$24,929



# Summary of Statistics

Type of Lending Institution				
	Credit Union	Commercial Bank	Farm Credit System	Non-traditional Lender
<b>African American Farmers</b>	39 (0.85%)	2,524 (54.74%)	9 (0.20%)	2,039 (44.22%)
<b>All Farmers</b>	12,028 (1.91%)	556,425 (88.56%)	42,650 (6.79%)	17,227 (2.74%)
County Characteristics				
	Rural County		Urban County	
<b>African American Farmers</b>	1,308 (28.35%)		3,305 (71.65%)	
<b>All Farmers</b>	496,055 (78.73%)		134,044 (21.27%)	



# Summary of Statistics

Income-level Characteristics		
	Low- to Moderate- Income	Not Low- to Moderate- Income
African American Farmers	2,343 (50.79%)	2,270 (49.21%)
All Farmers	557,907 (88.54%)	72,192 (11.46%)
Average Number of Employees		
African American Farmers	Rural	Urban
	1.57	2.27
All Farmers	Rural	Urban
	2.49	7.43
Days to Approval		
African American Farmers	Traditional Lenders	Non-Traditional Lenders
	73.37	93.74
All Farmers	Traditional Lenders	Non-Traditional Lenders
	45.69	85.21

	Mean	SD	95% Confidence Interval	
Ln(PPP amount)	9.54	0.00	9.53	9.54
PPP per job	12,537.08	10.13	12,517.23	12,556.92
LMI	0.89	0.00	0.88	0.89
Rural	0.79	0.00	0.79	0.79
Days to Approval	46.77	0.04	46.70	46.87



# Results: PPP loan amount

	1	2	3
African American	0.041 (0.027)	0.061*** (0.018)	0.077*** (0.018)
Rural County	-0.008 (0.015)	-0.034*** (0.009)	-0.030*** (0.009)
LMI	0.003 (0.010)	-0.003 (0.008)	-0.0052 (0.008)
Female	-0.20*** (0.022)	0.002 (0.007)	0.013 (0.009)
African American x Rural	-0.13*** (0.035)	-0.11*** (0.029)	-0.12*** (0.030)
African American x LMI	-0.036 (0.024)	-0.016 (0.023)	-0.028 (0.023)
Jobs Reported	0.021*** (0.001)	0.018** (0.00)	0.017*** (0.00)
Constant	10.07*** (0.16)	9.96*** (0.12)	9.98*** (0.12)
Mills Ratio	N	N	Y
Control Variables	Y	Y	Y
Year Fixed Effect	Y	Y	Y
County Fixed Effect	Y	Y	Y
NAICS Fixed Effect	Y	Y	Y
Unanswered	N	Y	Y
R <sup>2</sup>	0.31	0.34	0.34
No. of Observation	153,901	617,138	617,138



# Results: PPP payment per employee

	1	2	3
African American	3668.96*** (242.97)	2765.90*** (170.72)	2816.85*** (175.53)
Rural County	23.20 (125.61)	224.99** (76.33)	219.42** (76.49)
LMI	374.58*** (74.39)	349.23*** (63.71)	345.96*** (63.56)
Female	-786.61*** (171.20)	-1532.64*** (54.20)	-1754.35*** (65.64)
African American x Rural	-2132.47*** (302.81)	-1381.48*** (247.64)	-1413.33*** (254.36)
African American x LMI	-708.80** (220.87)	-541.07* (210.40)	-572.50*** (217.07)
Constant	12429.96*** (1768.25)	10630.73*** (985.89)	10432.36*** (987.59)
Mills Ratio	N	N	Y
Control Variables	Y	Y	Y
Year Fixed Effect	Y	Y	Y
County Fixed Effect	Y	Y	Y
NAICS Fixed Effect	Y	Y	Y
Unanswered	N	Y	Y
R <sup>2</sup>	0.24	0.19	0.20
No. of Observation	153,901	617,138	617,138



# Results and Discussion

In an unreported tests, African American farmers received significantly smaller PPP loans in 2020 in most specifications, while the sign of coefficients reversed in 2021.

Observed negative coefficients on African American minorities in rural areas or in low- to moderate-income group show evidence of possible discrimination/increased difficulty.

Results call for policymakers to carefully monitor the PPP distribution in those areas and implement refined approaches to help those in need of financial assistance.

Future work (extension & research) will focus on the heavy reliance on non-traditional lenders and the availability financial support information





# Q&A

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