



Criminal Disqualifications in the Paycheck Protection Program

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Summary

- Up to 2.6 to 3.2 percent of sole proprietorships may be ineligible for the Paycheck Protection Program (PPP) due to current or prior criminal justice involvement, based on data from seven states.
- Between 6.9 and 15.4 percent of former convicts rely on self-employment income, including over a quarter of Black and Hispanic women.
- All considered states showed Black and Hispanic men with sole proprietorship income being more likely to be PPP-disqualified due to criminal histories than White men.
- Ineligibility rates would at least triple if exclusion criteria were expanded to include older convictions and less serious crimes.

Disclaimer: Any views expressed are those of the authors(s) and not necessarily those of the U.S. Census Bureau. Results were approved for release by the Census Bureau's Disclosure Review Board, authorization numbers CBDRB-FY20-ERD002-022 and CBDRB-FY20-ERD002-025 (approved 6/2/2020 and 6/12/2020).

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In response to the COVID-19 pandemic, Congress created the Paycheck Protection Program (PPP) to support small businesses as part of the Coronavirus Aid, Relief, and Economic Security Act (CARES) Act.¹ The PPP allows small businesses to secure loans through the Small Business Administration (SBA) for payroll, rent, mortgage interest, or utilities, which may be forgiven if firms maintain employee counts and wages. Businesses are ineligible for the PPP if an owner of 20 percent or more of the equity of the applying business is presently incarcerated, on probation, on parole; subject to an indictment, criminal information, arraignment, or other means by which formal criminal charges are brought in any jurisdiction; or within the last five years, for any felony, has been convicted; pleaded guilty; pleaded nolo contendere; been placed on pre-trial diversion; or been placed on any form of parole or probation (including probation before judgment).

These restrictions were added by the SBA as a part of character determination and in an attempt to curb fraud. In practice, questions related to criminal justice history are included on the application form, and applicants give permission for the SBA to re-

quest criminal records (Small Business Administration 2020a). Additionally, the SBA collects information on the lender, applicant, and loan from lenders in which banks report that the eligibility requirements for loans are met (Small Business Administration 2020b).

To estimate the proportion of small business owners who are excluded from the PPP because of criminal justice involvement of owners, we use restricted individual-level criminal histories in the Criminal Justice Administrative Records System (CJARS) in conjunction with restricted individual tax data from the Internal Revenue Service (IRS) Form 1040. CJARS is a joint project between the U.S. Census Bureau and the University of Michigan with the goal of collecting and harmonizing criminal justice administrative records from across the U.S. and from all levels of government (Finlay and Mueller-Smith 2020). This analysis is part of an effort to use these data to improve measurement of the criminal justice system.

We identify sole proprietorships by whether any of Schedules C, SE, or F were filed with Form 1040 over the five-year period from 2014 to 2018. Tax

Table 1: Percent of Form 1040 Schedule C/SE/F tax filers from tax years 2014–2018 with PPP-disqualifying criminal history status

Tax filing state	in Prison	on Parole	on Probation	Pending Felony Charge	1+ Felony Conviction in Prior 5 Years	Any Measurable PPP Disqualifying Event	Total size of 2014-2018 Schedule C/ SE/F Filing Population
Florida	0.0%	0.0%	0.3%	—	—	0.4%	3,976,000
Michigan	0.2%	0.1%	0.6%	1.2%	2.0%	2.6%	1,384,000
New Jersey	—	—	—	0.4%	0.6%	0.8%	1,351,000
North Carolina	0.1%	0.2%	0.8%	—	0.7%	1.4%	1,493,000
Pennsylvania	—	—	—	0.6%	0.6%	1.0%	1,586,000
Texas	0.6%	0.1%	1.8%	0.6%	1.4%	3.2%	4,813,000
Wisconsin	—	—	—	0.3%	0.7%	0.7%	689,000
Combined states	0.3%	0.1%	1.0%	0.6%	1.2%	1.7%	15,290,000

Source: Calculations are based on IRS 1040 tax forms between 2014 and 2018 tax years and criminal justice involvement as measured in CJARS, vintage 2019.

Notes: Estimates and sample sizes have been rounded to preserve confidentiality. Cells marked with “—” are not computable due to CJARS data limitations. Disqualifying status measured as of April 3, 2018. All results were approved for release by the U.S. Census Bureau, authorization numbers CBDRB-FY20-ERD002-022 and CBDRB-FY20-ERD002-025.

filing status in any given year is an imperfect proxy for currently being a small business owner and cannot identify some small businesses, such as non-sole proprietors that would not file these forms (see the data appendix for more detail). These self-employed business owners are linked at the person level, using a Protected Identification Key (PIK), to CJARS criminal history data.²

Where we have criminal history data available, we measure the set of individuals excluded from the PPP according to the definitions above as of April 3, 2018. Using more recent data is not possible due to lags in data availability. The 2019 vintage of CJARS does not yet have national coverage, so estimates are limited to the seven states for which CJARS has high-quality longitudinal, statewide coverage (Florida, Michigan, New Jersey, North Carolina, Pennsylvania, Texas, and Wisconsin). Together these states represent 29.6 percent of the U.S. population in 2018³, although they are not necessarily representative of the entire population. Procedural coverage varies by state, which limits which disqualifying events can be observed for individuals in some states. We use the term *observed ineligibility* to mean meeting the criteria for ineligibility where that can be observed in a given CJARS state and use caution when interpreting differences across

states. Because the data are not the result of a designed sample, no statistical significance is implied by any of the differences we report. Further details on data availability, construction, and limitations of the analysis are available in the data appendix.

Measuring PPP ineligibility rates

There are more than 250,000 self-employed business owners in CJARS states with one or more observable PPP disqualifying events resulting from some form of prior contact with their filing state’s criminal justice system (**Table 1**). In states where CJARS has the most complete procedural coverage, observed ineligibility rates are the highest; 3.2 percent are ineligible in Texas and 2.6 percent are ineligible in Michigan. The most common reason for exclusion from PPP eligibility in Michigan is having one or more felony convictions in the prior five years; in Texas, the most common reason is for being on probation.

Most of the states in the 2019 vintage of CJARS have either data coverage of the criminal court system (New Jersey, Pennsylvania, Wisconsin) or the correctional population (Florida), but not both limiting the observed disqualifying events. These states exhibit observed ineligibility rates in the range of 0.4 to 1.0 percent. North Carolina, where historical criminal convictions can be observed only for

Table 2: Observable criminal history-based ineligibility rate by demographic group

Tax filing state	Male						Female					
	All	White	Black	Hispanic	<30	30+	All	White	Black	Hispanic	<30	30+
					years	years					years	years
Florida	0.4%	0.3%	1.0%	0.4%	0.9%	0.3%	0.4%	0.4%	0.7%	0.2%	0.6%	0.3%
Michigan	2.6%	1.6%	9.8%	4.5%	5.9%	2.0%	2.6%	1.6%	4.6%	3.2%	3.4%	2.2%
New Jersey	0.9%	0.5%	3.3%	1.7%	1.9%	0.7%	0.7%	0.4%	1.9%	0.7%	1.0%	0.6%
North Carolina	1.4%	0.9%	4.0%	1.3%	3.2%	1.1%	1.5%	1.3%	2.1%	0.7%	1.9%	1.3%
Pennsylvania	1.0%	0.6%	4.7%	3.8%	2.5%	0.8%	0.9%	0.6%	2.3%	1.7%	1.3%	0.8%
Texas	3.5%	2.1%	7.4%	5.6%	7.3%	2.8%	2.9%	2.4%	4.2%	3.6%	4.0%	2.5%
Wisconsin	0.7%	0.5%	5.7%	1.7%	1.8%	0.6%	0.7%	0.5%	2.1%	1.0%	1.0%	0.6%
Combined states	1.8%	1.1%	4.7%	3.3%	4.1%	1.4%	1.6%	1.2%	2.6%	2.0%	2.2%	1.3%

Source: Calculations are based on IRS 1040 tax forms between 2014 and 2018 tax years and criminal justice involvement as measured in CJARS, vintage 2019.

Notes: Estimates have been rounded to preserve confidentiality. Disqualifying status measured as of April 3, 2018. All results were approved for release by the U.S. Census Bureau, authorization numbers CBDRB-FY20-ERD002-022 and CBDRB-FY20-ERD002-025.

those who have participated in the correctional population, yields an intermediate value at 1.4 percent observed ineligible.

The disqualifying statuses are not mutually exclusive. In states with both court and corrections records, between 28 and 58 percent of observed ineligible individuals have more than one disqualification.⁴ Thus, eliminating a single exclusion criteria may not change the overall ineligibility rate in the population substantially.

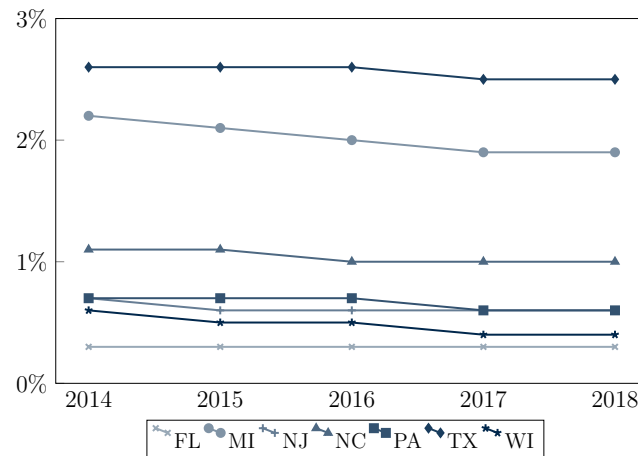
Since tax filing status in any given year is an imperfect proxy for current self-employment and criminal justice involvement may interrupt tax filing or employment, we measure disqualification rates for the set of identified business owners in each of the tax years separately. Observable disqualification rates are modestly lower when the analysis sample of Schedule C/SE/F filers is disaggregated by tax year (**Figure 1**). The observed ineligibility rate among those who file in any one year is generally one-fifth lower than the ineligibility rate among those who filed at least once over the five-year period (**Table 1**).⁵ A likely explanation is that those who file these tax schedules in multiple years are less likely to have an observed disqualifying event, although this should be interpreted cautiously as the disqualifying events themselves may interrupt or delay tax filings.

The incidence of observable PPP disqualifications varies by demographic group (**Table 2**). In most states, male and female filers exhibit similar rates

of observable ineligibility, except in Texas where male disqualifications are notably higher (3.5 percent compared to 2.9 percent). Male and female filers under the age of 30 are especially at risk for ineligibility based on their observed criminal history. Across CJARS states, young men have ineligibility rates 0.6 to 4.5 percentage points higher than older filers and young women have rates 0.3 to 1.5 percentage points higher than older filers.

Black men face the highest rates of ineligibility across all examined demographic groups, 0.7 to 8.2 percentage points higher than White men depending on the state of tax filing. In the two states with the

Figure 1: PPP disqualification rate by tax year of Schedule C, SE, or F filing



Source: Calculations are based on IRS 1040 tax forms between 2014 and 2018 tax years and criminal justice involvement as measured in CJARS, vintage 2019.

Notes: Disqualifying status measured as of April 3, 2018. All results were approved for release by the U.S. Census Bureau, authorization numbers CBDRB-FY20-ERD002-022 and CBDRB-FY20-ERD002-025.

Table 3: Percent of PPP-ineligible individuals who have filed Form 1040 Schedule C/SE/F in tax years 2014–2018 by type of disqualification

Tax filing state	in Prison	on Parole	on Probation	Pending Felony Charge	1+ Felony Conviction in Prior 5 Years	Any Measurable PPP Disqualifying Event	Total size of 2014-2018 Schedule C/ SE/F Filing Population
Florida	2.3%	15.8%	18.6%	—	—	10.7%	140,000
Michigan	5.7%	8.5%	17.1%	14.9%	14.7%	13.7%	259,000
New Jersey	—	—	—	9.4%	8.4%	9.0%	117,000
North Carolina	5.4%	8.4%	15.1%	—	11.3%	11.9%	173,000
Pennsylvania	—	—	—	8.6%	7.4%	8.2%	184,000
Texas	9.2%	12.8%	21.6%	16.3%	15.4%	16.1%	948,000
Wisconsin	—	—	—	6.9%	6.9%	7.0%	70,000
Combined states	7.6%	10.3%	19.9%	12.7%	12.7%	13.4%	1,891,000

Source: Calculations are based on IRS 1040 tax forms between 2014 and 2018 tax years and criminal justice involvement as measured in CJARS, vintage 2019.

Notes: Estimates and sample sizes have been rounded to preserve confidentiality. Cells marked with “—” are not computable due to CJARS data limitations. Disqualifying status based on observed criminal history measured as of April 3, 2018. All results were approved for release by the U.S. Census Bureau, authorization numbers CBDRB-FY20-ERD002-022 and CBDRB-FY20-ERD002-025.

most thorough procedural data coverage of the justice system (Texas and Michigan), 5.3 to 8.2 percent of Black men with reported self-employment income have an observed disqualifying event, representing over 28,000 individual business owners. Hispanic men also exhibit elevated rates of observed ineligibility compared to White men in all seven states, although the Hispanic-White disparity is not as stark in Florida and North Carolina.

Similar qualitative dynamics are present for female filers but with more modest base levels and less severe racial disparities among female filers.

Prevalence of self-employment business income in the criminal justice population

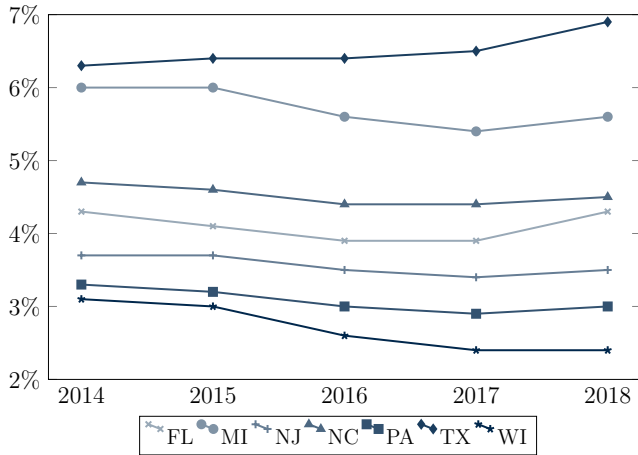
To examine the importance of business and self-employment income in the criminal justice population, we also examine the rates of Schedule C, SE, and F filing among those with disqualifying criminal histories (**Table 3**). Overall, 13.4 percent of individuals in the combined CJARS sample with observable PPP disqualifying events claimed these forms of income to the IRS. The rates vary by state from 7.0 percent in Wisconsin to 16.1 percent in Texas.

As a comparison, approximately 20.1 percent of the

general adult population in these seven states filed a Schedule C, SE, and/or F with their tax return at least once between 2014 and 2018, with 15.2 percent and 22.6 percent in Wisconsin and Texas, respectively.⁶ Given that individuals who interact with the criminal justice system are consistently found to have employment rates below 50 percent,⁷ business and self-employment income represent a plausibly important mechanism for achieving self-sufficiency in this population. The relatively high filing rates among PPP-disqualified individuals given baseline employment levels could be a strategic response to documented evidence of labor market discrimination and hiring barriers that individuals with criminal histories face.⁸

The disqualifying events with the highest rates of Schedule C, SE, and F filings are: being on probation, having pending felony charges, and having one or more felony convictions in the prior five years. At the high end, over one-fifth of Texas probationers had some form of self-employment income registered with the IRS between 2014 and 2018 (approximately 87,000 individuals). Those who are disqualified due to current or prior institutional confinement in prison have the lowest rates of Schedule C, SE, and F tax filings, especially those currently in prison

Figure 2: Schedule C/SE/F filing rate over time among PPP ineligible population



Source: Calculations are based on IRS 1040 tax forms between 2014 and 2018 tax years and criminal justice involvement as measured in CJARS, vintage 2019.

Notes: Disqualifying status measured as of April 3, 2018. All results were approved for release by the U.S. Census Bureau, authorization numbers CBDRB-FY20-ERD002-022 and CBDRB-FY20-ERD002-025.

where rates fall between 2.3 and 9.2 percent.

The rate of Schedule C, SE, and F filings in the PPP-ineligible population when disaggregated by tax year are lower than estimates based on the five years of pooled tax records (**Figure 2**). In the full sample of CJARS states, among those in the observable PPP-ineligible population who filed in at least one of the five years, only two-fifths filed in any given year. This indicates a high degree of tax filing churn in

this population, which could be an indication of either lower adherence to regular on-time tax filings or higher turnover in the underlying economic activity itself.

There is no standard pattern across states in whether Schedule C, SE, and/or F filings increase, decrease, or remain flat between 2014 and 2018. Florida and Texas show some degree of increase over time, while Michigan, Pennsylvania, and Wisconsin show discernible declines. In the other states, the rates are stable.

Distinct patterns emerge when looking at the demographic breakdown of tax filing rates among the PPP-disqualified population (**Table 4**) compared to the demographic comparison of ineligible rates conditional on tax filing previously discussed (**Table 2**). White and Black male offenders show similar Schedule C, SE, and F filing rates in each state, which is surprising given the stark ineligibility differences between these groups. In Florida and Texas, states with large Hispanic populations, Hispanic male offenders are 7.8 and 3.4 percentage points more likely, respectively, to file Schedules C, SE, or F than their White counterparts.

Female justice-involved individuals claim self-employment income to the IRS at higher rates than their male counterparts for all demographic subgroups (2.8 to 14.7 percentage points higher across states). This is especially true for PPP-ineligible

Table 4: Schedule C/SE/F filing rates among PPP-ineligible populations by demographic group

Tax filing state	Male						Female					
	All	White	Black	Hispanic	<30 years old	30+ years old	All	White	Black	Hispanic	<30 years old	30+ years old
Florida	8.3%	7.4%	6.2%	15.2%	9.3%	7.8%	23.0%	15.8%	32.2%	31.0%	26.0%	21.2%
Michigan	11.7%	11.6%	12.0%	9.7%	12.3%	11.4%	21.9%	13.1%	39.3%	20.0%	25.9%	19.7%
New Jersey	8.1%	9.5%	5.9%	9.3%	6.5%	9.0%	12.7%	7.0%	21.0%	18.2%	14.0%	12.6%
North Carolina	9.9%	11.1%	8.8%	12.2%	9.6%	10.2%	18.9%	14.4%	27.6%	25.0%	20.9%	17.6%
Pennsylvania	7.5%	8.9%	6.2%	8.9%	6.3%	8.5%	10.8%	7.0%	17.7%	19.6%	12.0%	10.2%
Texas	14.8%	13.8%	11.8%	17.2%	15.4%	14.5%	20.6%	14.1%	29.8%	26.2%	22.0%	19.9%
Wisconsin	6.4%	7.8%	5.9%	5.0%	4.9%	7.0%	9.2%	7.3%	25.0%	11.1%	10.5%	9.4%
Combined states	12.0%	11.6%	9.6%	15.9%	11.9%	12.0%	19.0%	12.5%	29.1%	25.6%	20.9%	18.1%

Source: Calculations are based on IRS 1040 tax forms between 2014 and 2018 tax years and criminal justice involvement as measured in CJARS, vintage 2019.

Notes: Estimates have been rounded to preserve confidentiality. Disqualifying status measured as of April 3, 2018. All results were approved for release by the U.S. Census Bureau, authorization numbers CBDRB-FY20-ERD002-022 and CBDRB-FY20-ERD002-025.

Table 5: Implications of broadening the PPP exclusion criteria

Tax filing state	Any prior participation in correctional population	Any previous felony conviction	Any record of criminal justice contact	Any prior participation in correctional population	Any previous felony conviction	Any record of criminal justice contact
	Percent of Schedule C/SE/F filers who would be ineligible according to expanded observable criteria			Percent of those who would be ineligible according to expanded observable criteria who file Schedule C/SE/F		
Florida	1.4%	—	1.4%	10.9%	—	10.9%
Michigan	4.7%	6.1%	40.8%	12.7%	12.9%	15.0%
New Jersey	—	2.3%	3.6%	—	7.2%	7.9%
North Carolina	7.1%	3.1%	7.1%	10.9%	10.3%	10.8%
Pennsylvania	—	1.2%	5.2%	—	8.1%	9.7%
Texas	9.4%	4.6%	14.5%	17.8%	15.3%	17.9%
Wisconsin	—	2.4%	9.5%	—	8.0%	9.9%
Combined states	5.8%	3.7%	10.6%	15.0%	12.2%	14.4%

Source: Calculations are based on IRS 1040 tax forms between 2014 and 2018 tax years and criminal justice involvement as measured in CJARS, vintage 2019.

Notes: Estimates and sample sizes have been rounded to preserve confidentiality. Cells marked with “—” are not computable due to CJARS data limitations. Disqualifying status based on observed criminal history measured as of April 3, 2018. All results were approved for release by the U.S. Census Bureau, authorization numbers CBDRB-FY20-ERD002-022 and CBDRB-FY20-ERD002-025.

Black women (17.7 to 39.3 percent) and Hispanic women (11.1 to 31.0 percent).

There is no clear difference in filing rates between younger and older disqualified populations. This is true for both male and female individuals involved in the criminal justice system.

Expanded Exclusion Criteria

PPP assistance eligibility only considers current and recent (past five years) involvement in the criminal justice system. If the exclusion criteria were broadened to consider one’s full criminal history, many more individuals would be banned from receiving financial assistance (**Table 5**).

Including all prior episodes in the correctional population, which includes probation, parole, and incarceration, in the exclusion criteria would expand the observed disqualification rate from 1.0 to 6.9 percentage points among CJARS states with relevant data coverage relative to exclusions based solely on current involvement in the correctional population. Similarly, expanding the exclusion criteria to consider any prior felony conviction regardless of when it occurred would expand observed disqualification rates from 0.6 to 4.1 percentage points compared to the current five-year review window. There is likely a high degree of overlap in ineligible individuals from

expanding either those with any felony conviction and those with any correctional episode in states where historic coverage of both is observed. Differences in observed ineligibility rates across states likely reflect the length of historic coverage of court and correctional records in each state.

If any form of criminal justice contact (e.g., arrest and misdemeanor conviction) jeopardized PPP eligibility, a substantial portion of Schedule C, SE, and F filers would be impacted. Variation across states is driven by the differences in data coverage in CJARS. For Michigan, CJARS includes extensive information on local ordinance violations. Expanding the exclusion criteria to include all forms of criminal justice contact, including these violations and misdemeanor and felony charges, would raise the observed ineligibility rate up to a striking 40.8 percent of filers. In Texas and Wisconsin, CJARS data availability translates the expanded criteria to include misdemeanor and felony charges, which would raise observed ineligibility rates to 14.5 and 9.5 percent of Schedule C, SE, and F filers, respectively.

The rate of Schedule C, SE, and F filing among the criminal justice-active population does not vary substantially when expanding to include these broader definitions of possible PPP exclusion, including

greater historical coverage of conviction that occurred more than five years ago. This indicates that reliance on self-employment income is not a temporary status associated with transitioning out of criminal justice involvement, but instead a regular feature of the economic lives of those with criminal histories.

Conclusion

The SBA's PPP criminal history eligibility requirements will not impact the majority of individuals in the United States. This is because most individuals do not have contact with the criminal justice system, and the criminal history exclusion criteria have been limited both in historical scope and offense severity.

Based on the criminal history we can observe in Michigan and Texas, where criminal history data are most complete, 2.6 percent and 3.2 percent, respectively, of sole proprietorships are ineligible to request financial support through the PPP based on current eligibility requirements. Extrapolating those percents to the U.S. as a whole would translate to roughly 664,000 and 817,000 ineligible individuals nationwide.⁹

There is a disparate impact of criminal justice-based disqualification criteria by race, sex, and age, with Black and Hispanic men, younger men, and Black women experiencing higher than average exclusion from PPP eligibility due to higher rates of contact with the criminal justice system in each state. Black and Hispanic men with business income are 0.7 to 8.2 and 0.1 to 3.5 percentage points more likely to be PPP-ineligible compared to White men; Black women are 0.3 to 3.0 percentage points more likely to be PPP-ineligible than White women across the seven CJARS states.

Exclusion from PPP financial support may jeopardize an important income source and negatively impact self-sufficiency in the population with recent criminal histories. This is especially true for minority women, over a quarter of whom report self-employment income to the IRS.

While these exclusion criteria may reduce the risk of financial fraud, they may lead to business closures, increased recidivism, escalated future criminal activity, and reduce minority representation among small businesses.

Notes

¹Public Law 116-136 Sections 1102 and 1106, amended in Public Law 116-139.

²A Protected Identification Key (PIK) is a unique person identifier produced by the Census Bureau Personal Identification Validation System (PVS), which enables records to be linked anonymously across data sets, thereby protecting sensitive personally identifiable information. See <https://census.gov/data/linkage> for more information.

³Authors' calculation from state populations in U.S. Census Bureau (2019).

⁴These estimates are calculated by summing the total number of observed ineligible individuals across each of the five event categories and comparing to the total number of PPP ineligible individuals in the state. In prison, on parole, and on probation are by definition mutually exclusive categories. As a result, there is no overlap in Florida where CJARS statewide coverage is limited to corrections records.

⁵This relative difference in observed ineligibility is calculated by comparing the rate in individual years for each state shown in **Figure 1** to the pooled rate in **Table 1**. This calculation is also done in the next section with **Figure 2** and **Table 3**.

⁶These estimates are calculated by dividing the total number of Schedule C filings reported by the IRS between 2014 and 2018 in the seven states divided by the estimated total population over the age of 18 in 2018 in these states. See Table 1 and U.S. Census Bureau (2019).

⁷For example, see Looney and Turner (2018).

⁸For example, see Pager (2007).

⁹These figures are calculated by multiplying the Michigan and Texas-based disqualification rate to the nationwide estimate of the number of Schedule C tax filers in 2016 reported in Dungan (2019).

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Data Appendix

Tax-based measures of business income and self-employment

Self-employment is measured using flags for a Form 1040 with Schedule C, SE, and/or F submitted to the IRS in any of the 2014 through 2018 tax years. Sole-proprietors businesses and farmers file a Schedule C and/or F, respectively. Both classifications report net profits subject to self-employment taxes using a Schedule SE.

Sole proprietorship is the most common form of reported self-employment with Schedule C forms filed for 17 percent of households in 2016.¹⁰ The vast majority of households file at least two of the three self-employment forms making subgroup analysis less meaningful. Thus, we pool individuals filing any of Schedules C, F, or SE as the population of small business owners rather than reporting on them separately.

Schedules C, SE, and F are filed at the household level. In order to link filings with individuals, we assume that the head of household or the primary filer is the individual reporting self-employment or business income. This excludes secondary filers and dependents, which would otherwise overestimate the size of the PPP-eligible population. Additionally, we exclude a small number of primary filers without a valid Protected Identification Key (PIK) since we cannot link the filer to criminal justice data without it.

We are unable to identify non-sole proprietorships, which may include equity owners in larger firms who may be less likely to have criminal records. This omission could lead to an overestimate of the ineligibility rate for all small businesses in the U.S. We are also unable to identify whether any sole proprietorships may be too large to be eligible for the PPP. We expect this potential bias would have a minimal impact on our findings.

Observable criminal histories

Criminal justice involvement is observed using the 2019 vintage of the Criminal Justice Administrative Records System (Finlay and Mueller-Smith 2020). Events are measured relative to April 3, 2018, and require a few notable assumptions. First, we do not currently observe parole or probation exit dates. We define individuals as currently on parole (probation) if they entered parole (probation) within three years of the reference date. Second, in the 2019 vintage one cannot directly determine whether a felony charge is still pending as of the reference date, and consequently define a felony charge as pending if it was filed within two years of the reference date.

Each state varies in coverage over time and criminal justice involvement types. Table 1 indicates the types of

criminal justice involvement that are not included in the CJARS repository. Due to the variation in coverage, we do not interpret differences across states as generally meaningful and cannot attribute statistical significance to these differences. Caution is also warranted when interpreting pooled estimates as they combine states with different populations and data coverage. Below we further describe the types of records collected in each of the seven states used in this analysis.

Florida: Records from the Florida Department of Corrections

- Prison 1997–2019 (statewide)
- Parole 2017–2019 (statewide)
- Probation 2017–2019 (statewide)

Michigan: Records from the Michigan State Court Administrative Office and the Michigan Department of Corrections

- Local ordinance, misdemeanor, and felony court records 1981–2019 (statewide starting in 1997)
- Prison 1981–2019 (statewide)
- Parole 1981–2018 (statewide)
- Felony probation 1981–2019 (statewide)

New Jersey: Records from the New Jersey Superior Court

- Felony court records 1980–2018 (statewide)

North Carolina: Records from the North Carolina Department of Public Safety in a statewide repository

- Prison 1978–2018 (statewide)
- Parole 1996–2018 (statewide)
- Probation 1980–2018 (statewide)

Pennsylvania: Records from The Administrative Office of Pennsylvania Courts

- Misdemeanor and felony court records 2008–2018 (statewide)

Texas: Records from county clerks, district clerks, sheriff's offices, and the Texas Department of Corrections

- Misdemeanor and felony court records 1980–2018 (various counties)
- Prison 1978–2018 (statewide)
- Parole 1978–2018 (statewide)
- Probation 2000–2019 (statewide)
- Arrest 1980–2019 (various counties)

Wisconsin: Records from the Wisconsin court system

- Misdemeanor and felony court records 2008–2018 (statewide)