Black-owned Business Equity in the Covid-19 Era

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Abstract
The COVID-19 era infused unprecedented levels of financial capital to Black-owned Businesses through pandemic-related public sector relief programs and private sector funds developed in response to the Black Lives Matter social movement. It is within this context that I examine how the equity of Black business owners changed during the COVID-19 pandemic relative to that of White business owners. Using a propensity score matching approach to isolate the effect of race, I demonstrate that Black firm owners experienced an 86% greater decline in their business equity values between 2019 and 2023 compared to observationally similar White firm owners. This analysis contributes to the broader literature on the COVID-19 pandemic and its impact on businesses, particularly those owned by racially marginalized households.

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Prior research on how the Covid-19 pandemic impacted Black-owned businesses examines business closure and startup rates, earnings, and access to capital; however, business owner equity as an outcome of interest has been largely ignored by this literature. In this paper, I examine how Black business owner equity changed during the COVID-19 pandemic relative to White business owner equity. Examining business owner equity is vital to understanding both racial inequality in firm health during this period and the broader racial wealth gap at the household level. Yet, we know very little about how Black business owner equity evolved during the COVID-19 pandemic and its accompanying economic crisis.

Shortly after the onset of the pandemic, there was a sharp decline in Black-owned business activity (Fairlie, 2020). However, by 2022, the number of Black owned businesses rose beyond their pre-pandemic level (Fairlie, 2022). Indeed, between 2019 and 2020, higher rates of startup formation were associated with areas in the US where higher shares of Black residents reside, especially in Black neighborhoods with higher median incomes (Fazio et al., 2021). Earnings fell 12-14 percent more for Black than White business owners in 2020, largely due to industry concentration (Fairlie & Fossen, 2022).

Early negative outcomes for Black business owners are likely tied to higher liquidity constraints and less access to emergency credit financing from the Paycheck Protection Program (PPP). Uneven distribution of PPP funds was driven in part by differences in lending practices by different types of financial institutions. Small banks were substantially less likely to lend to Black owned businesses, while top-4 banks exhibited small, if any, disparities in lending by race (Howell et al., 2021). Moreover, Black owned businesses that did receive loans were granted 50% less funding than White owned firms with similar characteristics (Atkins et al., 2022).

Deploying financial technologies to distribute PPP funds appeared to positively impact Black firm owners. They were 12.1 percentage points more likely to acquire PPP loans from fintech firms than from more traditional bank lenders (Howell et al., 2021), and disparities in loan amounts between Black and White owned firms were substantially smaller for loans originating from fintech firms (Atkins et al., 2022b). In fact, when traditional banks utilized automation in their lending processes, PPP loans to Black owned firms were higher (Howell et al., 2024).

Beyond the introduction of new technology, there is also empirical evidence that the Black Lives Matter (BLM) social movement, which coincided with the timing of the Covid-19 pandemic, boosted PPP lending to Black-owned businesses. In counties with BLM protests in the early weeks of the PPP loan program, Black owned businesses enjoyed loan amounts that were 40% higher than borrowers in counties without protests (Garcia & Ortega, 2024). In fact, the BLM movement spawned an era of private sector initiatives to provide financial capital through special funds targeting Black and Latine communities. In June of 2020, PayPal announced a $530M commitment to fund Black and other minority owned small businesses. Not to be outdone, JPMorgan Chase launched a $30B racial equity commitment, which included support for small businesses. According to Crunchbase, venture funding for Black led startups ranged from $850 M to $1.2B during the 5 quarters that stretched from 2021 through early 2022. But this record amount of capital infusion to Black owned firms declined drastically to just $324M by the second quarter of 2022.

Given these public and private sector injections of capital into Black-owned firms during this period, I investigate the effect of race on changes in business-owner equity during and after the pandemic. Using a propensity score matching approach to isolate the effect of race, I show

that Black firm owners experienced an 86% greater reduction in their business equity values between 2019 and 2023 relative to observationally similar White firm owners. This analysis contributes to the broader literature on the Covid-19 pandemic and its impact on businesses, particularly Black owned businesses, though there may be relevance to other marginalized populations of business owners. My work also contributes to the literature on how entrepreneurship impacts wealth and particularly its role in concentrating wealth among a smaller proportion of US households. Finally, this research contributes specifically to the broader literature on the racial wealth gap since business equity is an important component of total net worth.

Data

Using data from the PSID from 2019 to 2022, I utilize a propensity score kernel matching strategy to estimate the differential impact of the Covid-19 era on Black business owner equity as compared with that of White business owners. This matching approach allows me to construct a counterfactual group of White entrepreneurs to compare with Black entrepreneurs and isolate the effect of race on business owner equity during Covid-19.

The Panel Study of Income Dynamics (PSID) is a longitudinal household survey that began in 1968. It started with a nationally representative sample of 5,000 families and 18,000 individuals in the United States. The survey continues to collect data from those individuals and their descendants every 2 years. These data include information on a variety of demographic, economic, and health-based measures. Of relevance to my analysis, the PSID contains information on business owner equity values, which is collected from one of the questions respondents answer about their wealth. Specifically, the survey asks:

“How much is your part (of the farm or business) worth, that is, how much would it sell for?”

I restrict my sample to Black and White households that owned a business in 2019. I use data from this year since it represents business owners in the PSID dataset before the Covid-19 pandemic. Households from other racial groups and those who do not own businesses are excluded from the sample. I use the 2019 values for household characteristics and business values in 2021 and 2023 are the primary outcomes of interest.

Empirical Strategy

I employ a propensity score kernel matching approach to estimate the average treatment effect on the treated. The outcome of interest is the change in business owner equity during and after the pandemic. In order to account for skewness in the distribution and business owners with $0 in business equity, I define the outcome Y_i as follows:

$$(1)\ Y_i = \ln(\text{Equity}_{i,2019}+1) - \ln(\text{Equity}_{i,2021}+1)$$

$$(2)\ Y_i = \ln(\text{Equity}_{i,2019}+1) - \ln(\text{Equity}_{i,2023}+1)$$

where equation 1 estimates the change in the logged value of business owner equity + 1 from the year before the pandemic to 2021, a year in the middle of the pandemic, and equation 2 represents the change from the period before the pandemic until 2023, the year that the World Health Organization declared the end of the COVID-19 public health emergency.

I define the treatment as $B_i = 1$ if business owner i is Black and set $B_i = 0$ if a business owner is White. A logistic regression model estimates the propensity score for the treatment group, which is the conditional probability of individual i being a Black business owner:

$$p(X_i) = P(B_i = 1 | X_i),$$

where Xi is a vector of pre-pandemic variables including age, sex, marital status, number of children, educational attainment, business equity value in 2019, business industry, and geographic region.

Kernel matching is used to create a counterfactual for each individual in the treatment group using weighted values for all control group members based on their distance from the treated individual. The counterfactual outcome variable is computed using the following equation:

$$\hat{Y}_{i0} = \frac{\sum_{j:D_j=0} K\left(\frac{p(X_i)-p(X_j)}{h}\right) Y_j}{\sum_{j:D_j=0} K\left(\frac{p(X_i)-p(X_j)}{h}\right)},$$

where K(.) is a kernel function and h is the bandwidth parameter. Finally, I estimate the average treatment on the treated, ATT

$$\widehat{ATT} = \frac{1}{N_1} \sum_{i:D_i=1} (Y_i - \hat{Y}_{i0}),$$

where N_1 is the number of Black business owners.

Results

Figure 1 displays the median business equity values for Black and White Business owners in 2019 before the COVID-19 pandemic. The median White firm owner had more than $119K in business equity, while the median Black owner had just under $24K. Changes to business equity during and after the pandemic are shown in Figure 2. White business owners saw their equity values increase from 2019 to 2021 by 47% on average. By contrast Black-owned firms experienced a decline of 36.6%. This disparity fell slightly by 2023. The pre- to post-pandemic change in business equity for White business owners was 23% by 2023. For Black business owners, the change in business equity was -28%.

Figure 3 shows ATT estimates of the percentage change in business owner equity during and after the pandemic by race. All results are statistically significant at the 5% level. From 2019 to 2021, Black firm owners experienced a 2.1 log point or 88% greater loss in business equity than their White counterparts. Before matching the difference was slightly smaller, 79%. The

difference was a bit smaller for the estimated change between 2019 and 2023. Over this time horizon, Black business owners saw an 86% greater decline in business equity values. The unmatched estimate was 82%.

As a final step, I investigate whether differential rates of firm closure between Black and White owned businesses are a key mechanism for explaining variation in declining business equity values. Table 1 shows differences in the logged business equity values between Black and White business owners after propensity score matching, for the full sample and both the subsamples of firms that were still operating in 2021 and those still open in 2023. While the racial differences were smaller in the subsample of surviving firms in 2021, the difference was larger for the subsample of surviving firms in 2023; however, in both cases, the results were not statistically different from the full sample estimates.

Conclusion

This paper adds to the body of work on Black owned businesses during the Covid-19 pandemic by examining how Black business owner equity changed during the Covid-19 pandemic relative to White business owner equity. I use data from the PSID, and a kernel-based propensity score matching approach to provide the first evidence of greater losses in business equity among Black business owners relative to their White counterparts after accounting for demographics, industry, and pre-pandemic levels of equity.

My analysis provides a solid foundation for future study of how racial economic inequality evolved during the COVID-19 error, but it is not a definitive work on the subject, given the study's limitations and remaining unanswered questions. While the PSID reports rich disaggregated data on wealth by race, the sample size imposes constraints. Another potential mechanism driving my results may be racial differences in PPP loan forgiveness. Unfortunately,

only 5 Black business-owning households in this PSID sample received PPP loan forgiveness which prohibited further analysis on the matter.

Nevertheless, these results also contribute to the broader literature on the racial wealth gap (Addo et al., 2024). (Derenoncourt et al., 2024) estimate a White to Black wealth ratio of 6 to 1 and use data from 1860 to 2020 to demonstrate the persistence of the racial wealth gap. My work suggests that this gap may have widened in the years after their study period, at least for the subset of business-owning households. Moreover, they illuminate how crisis-induced shocks may exacerbate the racial wealth gap, not simply through changes in income or credit access but also by depleting a business owner's equity.

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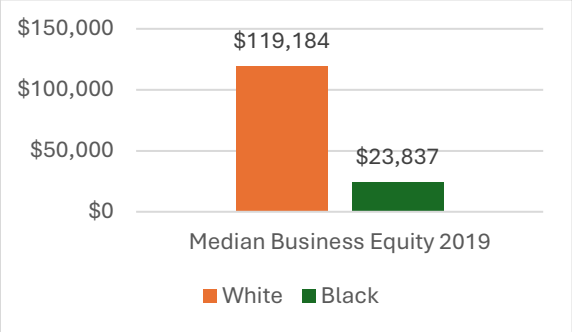
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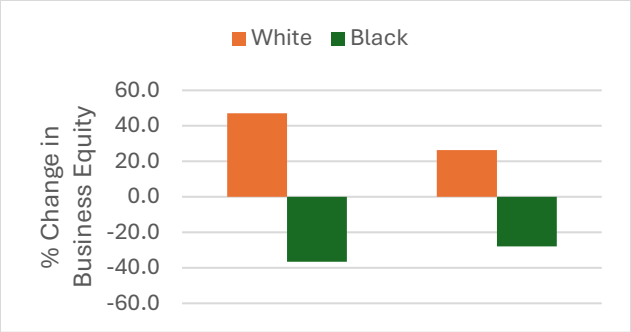
Figures

Figure 2: Median Business Equity in 2019 by Race



Source: PSID
Notes: Values in 2023 USD

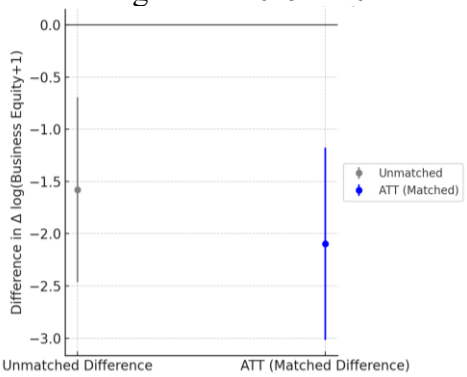
Figure 3: Percent Change in Business Equity Values by Race



Source: PSID
Notes: Values in 2023 USD

Figure 3: Differences in Business Equity Losses for Black and White Business Owners from 2019 – 2023

Change from 2019 – 2021



Change from 2019 - 2023

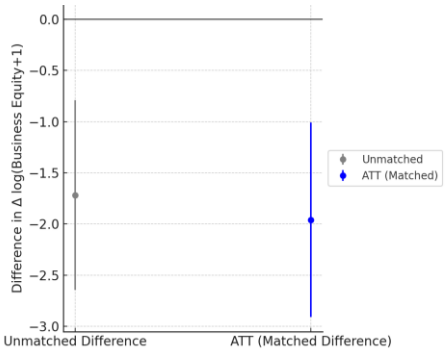


Table 1: Differences in Business Equity Losses for Black and White Business Owners from 2019 – 2023 among Surviving Firms

	All	Survivors	Difference
2021	-2.0963**	-1.0843	-1.0121
2023	-1.9597**	-3.7748***	1.8151