

# Analyzing eviction by race and income during the Covid-19 pandemic

## Introduction

With the onset of the Covid-19 pandemic in 2020, policymakers feared that increased unemployment would prompt a mass wave of eviction filings, displacing renters at a time when our ongoing public health emergency would make it particularly difficult for them to find new homes. Policymakers at the federal, state and local levels ultimately passed eviction moratoria – temporary pauses on many, though not all, new evictions. A rapid drop in eviction filings followed in courts across the country. In this paper, we compare the change in eviction volume in predominantly white census tracts to the change in eviction volume in predominantly nonwhite tracts during the initial period of the federal eviction moratorium passed as part of the CARES Act pandemic relief package.

Eviction is the process of removing tenants from their homes due to nonpayment of rent, illegal conduct or no cause at all. Until relatively recently, few scholars have scrutinized the role of race in this phenomena [7]. Measuring race-based discriminatory practices is difficult, in part, because of methodological limitations and gaps in available data on evictions [5]. However, it is urgent to understand the impact of eviction – and its intersection with factors like race and income – given the long term consequences of evictions for renters, who may face lower credit scores, difficulty finding new housing, joblessness or even homelessness following an eviction [2, 6, 8].

Despite the challenges of studying eviction, a few surveys and court record-based analyses in the U.S. and Canada suggest that Black and Hispanic tenants face a disproportionate volume of evictions [7]. A landmark finding [1], supported by both quantitative and qualitative research, is that evictions in Milwaukee disproportionately displaced women renters in poor Black neighborhoods. Similar dynamics of inequality across race and/or gender have been observed in Washington state [3] as well as New York City and Toronto [4]. [6] finds that while evictions initially declined during the Covid-19 pandemic, majority white neighborhoods experienced a more precipitous drop in new eviction filings than nonwhite neighborhoods in several U.S. counties. We build upon this body of research by studying eviction court data from [6] before and during the Covid-19 pandemic. We describe how the number of evictions in predominantly white neighborhoods changed during the federal eviction moratorium from March 2020 to July 2020 compared to the number of evictions in predominantly nonwhite neighborhoods in five U.S. counties.

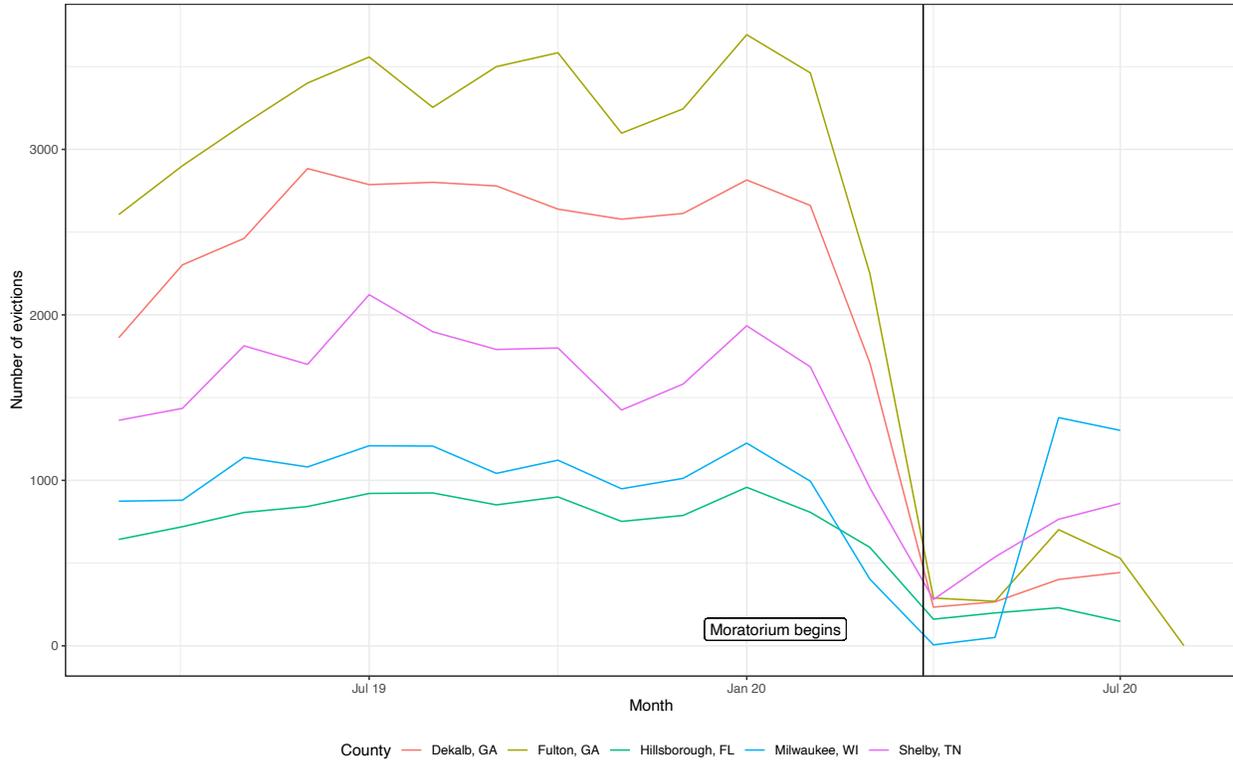
## Dataset

We analyze a subset of eviction court lawsuit data collected by the Howard Center for Investigative Journalism at the University of Maryland at College Park and Big Local News at Stanford University. These filings indicate that eviction cases were *opened* against a tenant or tenants; they do not show if the lawsuits ultimately resulted in tenants’ removal from their homes. We limit our analysis to 147,829 unique eviction records collected between January 2019 and August 2020 for which the original authors of [6] successfully geocoded defendants’ addresses in order to derive the census tract in which they live. We exclude the remaining 26,224 records that were not geocoded successfully, meaning that our data does not reflect the full population of evictions. The original data includes total population estimates using 2018 American Community Survey 5-year estimates. We merge this data with 2019 ACS 1-year estimates of household income.

In *Figure 1a*, we show the volume of eviction filings by county over time. We note that eviction volume in each of the counties plummeted in the first eight months of 2020, likely driven by court closures, the federal eviction moratorium under the CARES Act and local eviction moratoria. This pattern – a sharp decrease in new eviction filings between February and March, followed by a partial rebound before the federal eviction moratorium expired on July 24 – was relatively consistent across all counties.

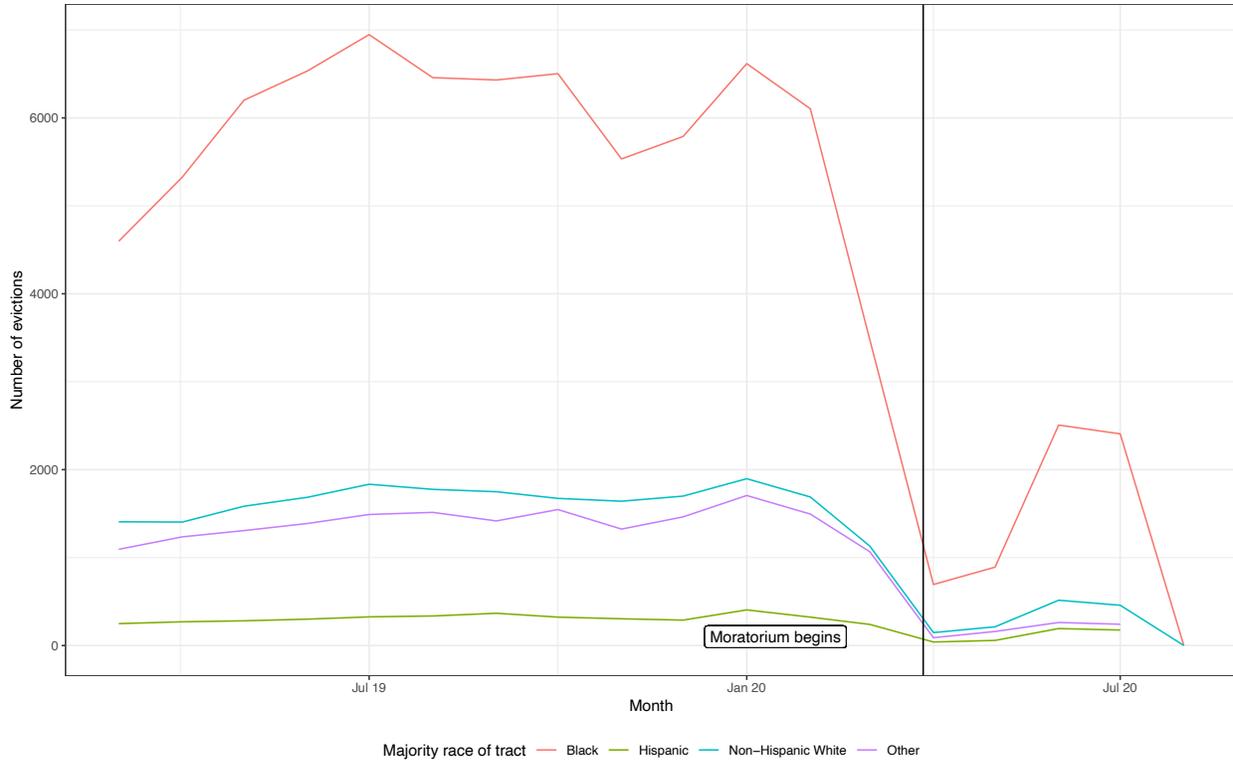
*Figure 1b* shows the change in eviction volume by majority race of census tract from 2019 to 2020, showing that the decline in eviction filings occurred across neighborhoods, regardless of majority race. By raw numbers, the total decline in eviction volume was largest in majority Black tracts, where eviction volume was the highest of all of the groups pre-pandemic; the percent decline in eviction filings, however, was greatest in tracts categorized as “Other” (-83.9%), followed by majority white tracts (-77.4%) and, thirdly, majority Black tracts (-75.5%). Though this change narrowed the gap between the number of evictions in majority Black neighborhoods and the number of evictions in other neighborhoods, it did not eliminate it. The number of evictions in majority Black neighborhoods remained higher than those filed in other neighborhoods throughout the period.

Figure 1a: Change in eviction volume by county, 2019 – 2020



Source: The Howard Center for Investigative Journalism and Big Local News

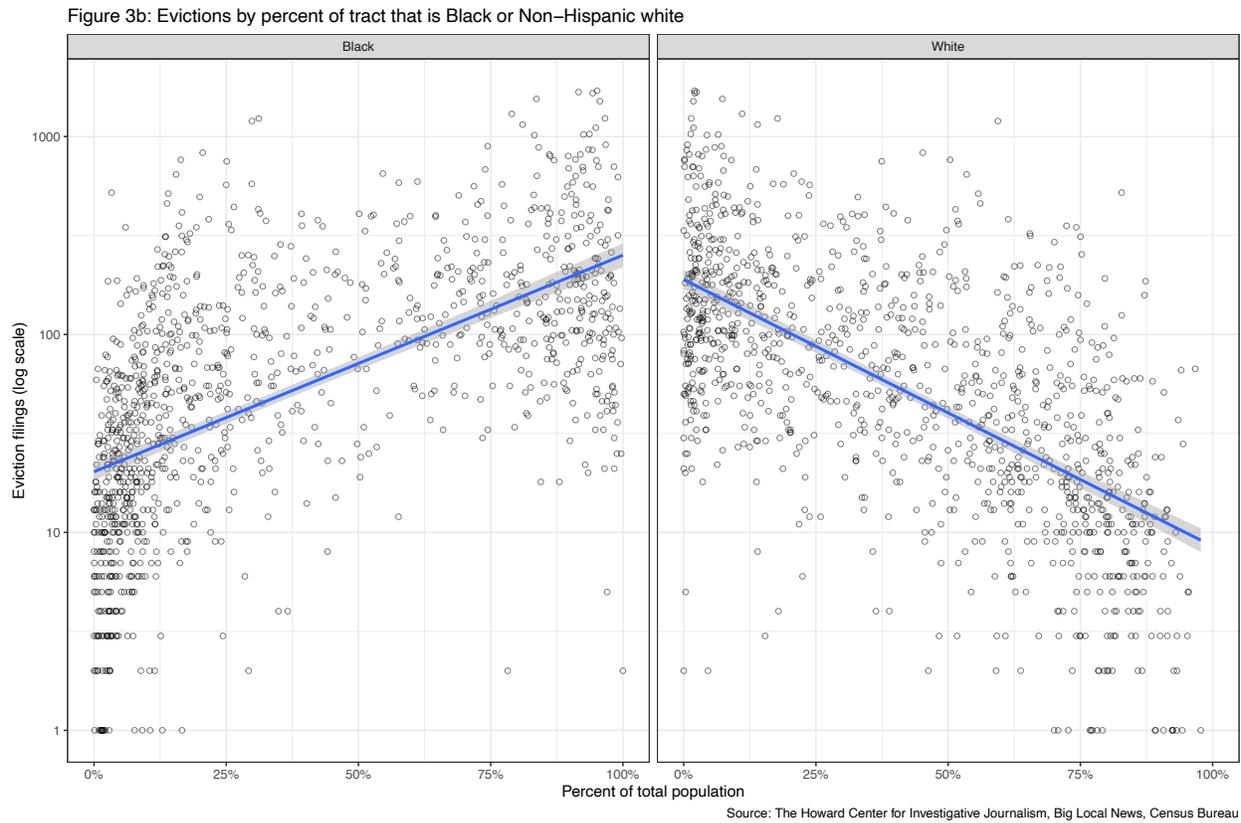
Figure 1b: Change in eviction volume by majority race of tract, 2019 to 2020



Source: The Howard Center for Investigative Journalism and Big Local News, Census Bureau

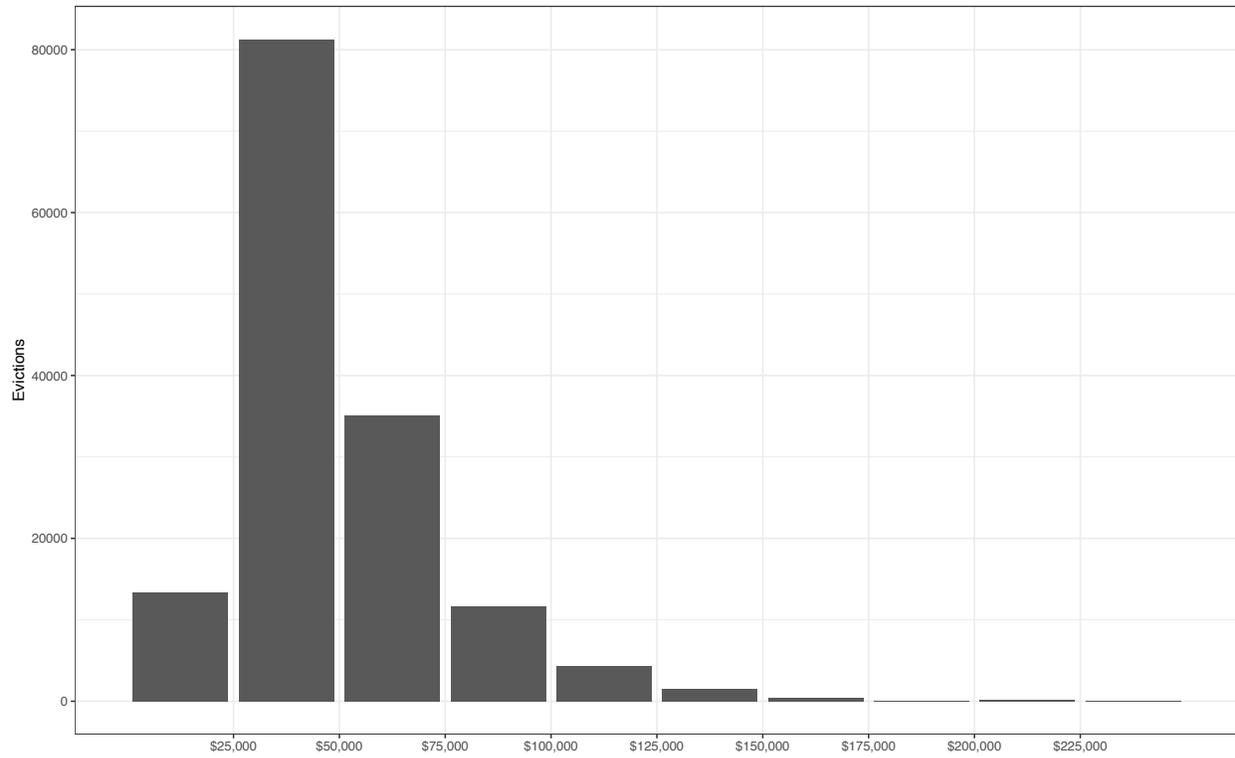
We observe a similar gap when considering the percentage of a tract that is white or Black.

Figure 2 shows that the number of evictions in a census tract tends to rise with the percent of its population that is Black and tends to fall with the percent of its population that is white when considering all data from 2019 through 2020.



Evictions are also not evenly distributed across income. Figure 3a shows that most of the evictions in our data set were filed against renters in census tracts where the median household income is under \$50,000; relatively few were filed in tracts with higher median incomes. Note that median income in the tracts in our dataset is negatively correlated with the population of the tract that is Black ( $R = -0.576$ ) and positively correlated with the percent of the population that is white ( $R = 0.697$ ). Figure 3b, additionally, shows the interaction between race, income and eviction volume. Notably, while the relationship between the volume of evictions and household income is negative across all census tracts, it is weakly positive in majority Black neighborhoods. Note further that the distribution of evictions across census tracts appears to be right-skewed, a pattern that holds both before and during the CARES Act moratorium. Figure 4 shows that during the CARES Act moratorium, the variance of eviction volume across census tracts decreases with overall eviction volume.

Figure 3a: Total evictions by median household income, 2019 to 2020



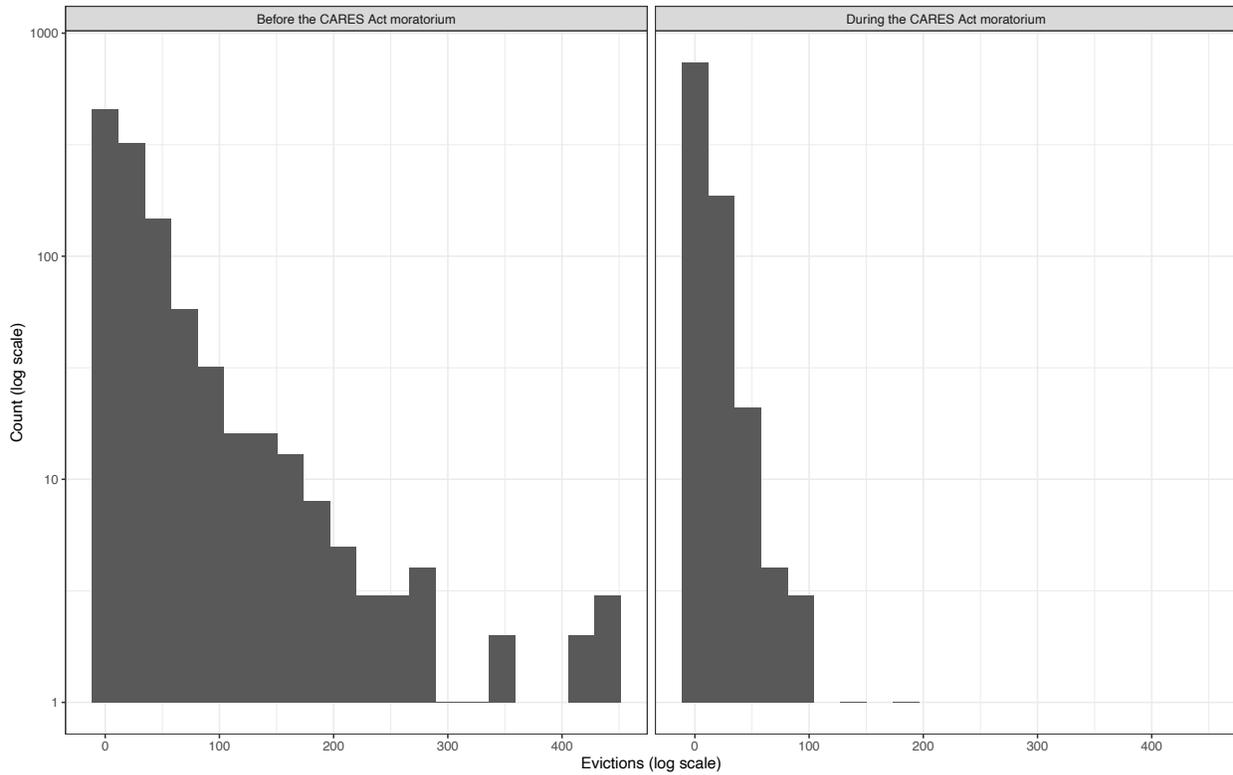
Source: The Howard Center for Investigative Journalism, Big Local News, Census Bureau

Figure 3b: Total evictions by median household income and race, 2019 to 2020



Source: The Howard Center for Investigative Journalism, Big Local News, Census Bureau

Figure 4: Number of evictions per Census tract



## Analysis

### Bootstrap analysis

The original reporting by the Howard Center – which used a different, non-public version of the data analyzed here – claims that eviction filings in white neighborhoods declined more in Memphis (Shelby County), Atlanta (DeKalb and Fulton counties), Tampa Bay (Hillsborough County) after the CARES Act moratorium than in nonwhite neighborhoods in the same counties. The original analysis compares a three month period of 2020 when the CARES Act moratorium was in effect to the previous three months of 2020. In order to take the seasonality of eviction filings into account, we instead compare the effective dates of the CARES Act moratorium to the same period a year prior. *Table 1* contains point estimates showing the percent change in evictions for each of five counties for which data is available, by majority white or majority nonwhite tract. It also shows the difference in decline in filings across the neighborhoods and normal bootstrapped confidence intervals for these difference estimates. Though not shown here, the size and direction of the difference in percent change across majority white and majority Black neighborhoods in these counties is similar. The results of using pivotal bootstrapped confidence intervals are also roughly comparable to those presented here.

County	%D White	%D Nonwhite	Difference	Lower bound	Upper bound
Dekalb, GA	-91.9%	-86.51%	-5.41%	-7.32%	-3.5%
Fulton, GA	-88.2%	-85.77%	-2.39%	-3.91%	-0.9%
Hillsborough, FL	-74.9%	-77.31%	2.41%	-1.70%	6.5%
Milwaukee, WI	-45.0%	-47.10%	2.08%	-5.41%	9.6%
Shelby, TN	-68.9%	-65.30%	-3.63%	-7.93%	0.7%

We define **Difference** in *Table 1* as the percent change in eviction filings in majority white census tracts minus the percent change in eviction filings in predominantly nonwhite tracts. This means that a negative figure indicates a steeper decline in majority white tracts than in majority nonwhite tracts. We note that the direction and amplitude of **Difference** is inconsistent across counties. Our point estimates and confidence intervals for Dekalb, GA and Fulton, GA suggest that eviction volume declined more in predominantly white neighborhoods than in nonwhite neighborhoods. The picture is less certain in the remaining three counties, where the bootstrap confidence intervals contain zero, meaning that there is some ambiguity about whether **Difference** is positive or negative.

## Regression analysis

We also use regression to describe the relationships among race, median household income and percent change in eviction volume. In order to scale median income so that it is easier to interpret, we divide it by 1,000. (Another option would be to log-transform median income, which is right-skewed. This transformation would help to overcome a shortcoming of our model under which it is possible, though obviously wrong, to predict that a tract has *negative* median household income. The trade off is that this transformation makes it harder to interpret the model.) We use a variable intercept model such that we produce different intercepts for each `majority_flag` term, the variable identifying the demographic majority in each tract.

Table 2:  $\text{percent\_change} \sim -1 + \text{majority\_flag} + I(\text{median\_income}/1000)$

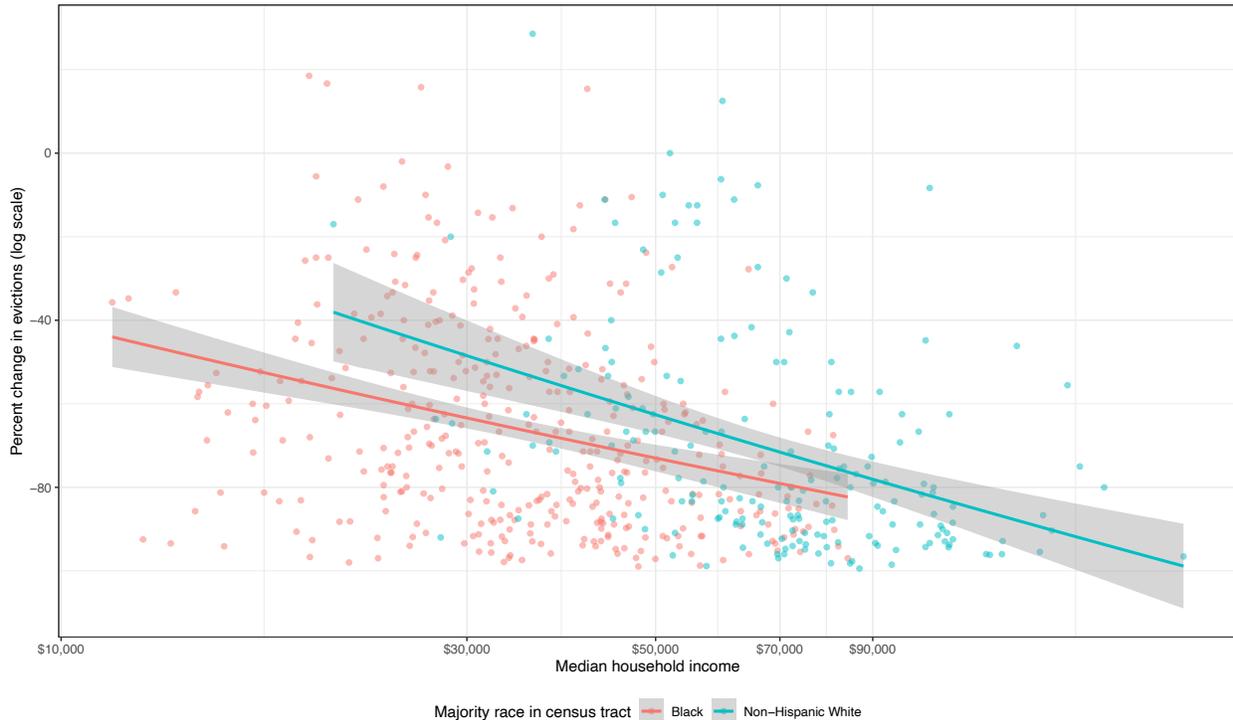
term	estimate	std.error	statistic	p.value
majority_flagBlack	-56.811	2.857	-19.89	0
majority_flagHispanic	-33.573	5.323	-6.31	0
majority_flagNon-Hispanic White	-31.891	4.768	-6.69	0
majority_flagOther	-58.015	4.474	-12.97	0
I(median_income/1000)	-0.225	0.056	-4.05	0

The model coefficients shown in *Table 2* suggest that, on average, majority Black census tracts experienced a larger decline in evictions relative to census tracts where the population was predominantly non-Hispanic White or Hispanic. Being in a majority Black neighborhood

is associated with a 57% reduction in evictions during the CARES Act moratorium relative to the same period a year earlier; being in a majority non-Hispanic white neighborhood is associated with a 32% reduction in evictions during the pandemic. The effect of income is comparatively small relative to the effect of race in this model. On average, every additional \$1,000 in median household income is associated with a reduction of 0.23% in eviction volume. The model has *RMSE* of 38.581. We note there is some uncertainty in whether the percent decline in eviction filings is predicted to be greater in tracts labeled “Other” or majority Black tracts because their standard error bands overlap. Similarly, the standard errors on the coefficients for Non-Hispanic white and Hispanic overlap. Additionally, we note that, because of the correlation between majority race of tract and median income of tract, adding an interaction term reduces the RMSE slightly.

Figure 6 illustrates the relationships among majority race of census tract, median household income and percent change in evictions for majority white and majority Black tracts with at least 5 evictions in the pre-pandemic period.

Figure 6: Percent change in evictions, year-over-year  
 On average, majority Black tracts experienced a greater decline in eviction filings during the CARES Act moratorium relative to the same period in 2019 than majority white tracts.



Source: The Howard Center for Investigative Journalism, Big Local News, Census Bureau

Secondly, we fit a model predicting the percent change in evictions using the percent of the census tract’s population that is Non-Hispanic white, Black and Hispanic, as well as the median income (in thousands of dollars) in the tract.

Table 3:  $\text{percent\_change} \sim -1 + \text{pop\_pct\_white\_nh} + \text{pop\_pct\_black} + \text{pop\_pct\_hispanic} + I(\text{median\_income}/1000)$

term	estimate	std.error	statistic	p.value
pop_pct_white_nh	-0.155	0.068	-2.27	0.024
pop_pct_black	-0.604	0.031	-19.42	0.000
pop_pct_hispanic	-0.435	0.067	-6.51	0.000
I(median_income/1000)	-0.374	0.058	-6.39	0.000

Our results in *Table 3* are similar in direction and magnitude to our previous model. Every 1% increase in the Black population of the tract is associated with a 0.6% decrease in the percent change of evictions in the tract, a larger decrease relative to the decreases that result from a 1% increase in the white population of a tract. The model has an *RMSE* of 39.18.

## Discussion & future work

In this paper, we have examined whether the decline in eviction filings observed during the Covid-19 pandemic and subsequent federal eviction moratorium was more acute in predominantly white tracts or predominantly nonwhite tracts, focusing especially on possible differences between majority Black tracts and majority Non-Hispanic white tracts. While regression analysis suggests a larger decline in eviction filings in majority Black and “Other” tracts than in majority white tracts, the direction of the difference between majority white and majority Hispanic tracts is less certain. The picture is similarly nuanced at the county level. It appears that the decline in eviction filings observed in majority nonwhite neighborhoods in two Georgia counties is smaller than the decline in majority white neighborhoods. However, our bootstrapping results suggest that the difference between majority nonwhite and majority white tracts in the remaining three counties covered by our data is more narrow.

A major limitation of our data set is the absence of variables describing the causes and outcomes of eviction filings. Our data set does not describe the cause of an eviction filing: A failure to pay rent, a breach of contract or no cause at all [9]. Nor do we know whether defendants were ultimately served with an eviction judgment and whether they were forced to leave their homes. For these reasons, it is impossible to derive the *threshold* at which a landlord decides to file an eviction case. We, therefore, cannot see whether landlords apply different thresholds to renters in predominantly white and nonwhite neighborhoods. Similarly, we do not analyze the outcomes of the eviction cases in our data, and do not know which filings were ultimately dismissed (if, for example, a renter negotiated with their landlord to pay their back rent) nor which filings resulted in judgments.

We would be remiss not to acknowledge the long history of housing discrimination faced by Black Americans, including red-lining and lending practices that disadvantage Black borrowers.[10] While our analysis is merely descriptive and does not address causality, one of

our most striking results suggests a persistent gap between majority Black and majority white census tracts. Even in the near absence of new eviction filings following court closures and the federal eviction moratorium, we find that the number of evictions in predominantly Black census tracts still exceeded the number of eviction filings in each of the other demographic groups we tracked. Further work could investigate the robustness of this finding, which illustrates the ongoing challenge for policymakers seeking to foster housing equity.

## Citations

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