Pandemic Relief Measures had Few Lingering Effects on Renters

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Abstract

The COVID-19 pandemic sparked a rush of policymaking to ensure that low-income renters could remain housed amid the crisis. Most notably, this included both federal- and state-level moratoria on evictions for nonpayment of rent, which marked the first time in United States history such a policy had ever been attempted. This study aims to evaluate whether eviction moratoria and other pandemic-era relief measures had any lasting effect on rental housing vulnerability that persisted in the years after the measures themselves had ceased to be implemented. Ultimately, we found little evidence that the studied policies had any statistically significant impact on rental housing vulnerability post-pandemic.

Introduction

One of the most dramatic and closely watched economic impacts of the COVID-19 pandemic was that on renters. As pandemic lockdowns caused mounting job and income losses that were concentrated among low-income workers who could not work from home, experts warned of an impending "eviction cliff" if the most affected renters did not receive adequate support (Cunningham, Hariharan, and Fiol 2021). In response to the growing crisis, both the federal and state governments enacted measures to provide targeted aid to help renters stay in their homes, as well as measures that benefited low-income households overall, for the duration of the pandemic emergency. Undoubtedly, these measures provided highly meaningful support during the years they were in effect. However, it is unclear whether pandemic aid made a difference in the longer term—if renters' overall housing vulnerability improved in a way that persisted after the relevant measures were no longer being implemented. Specifically, this study aims to investigate whether the pandemic-era policies improved the ability of households to pay rent in 2022–2023, the two full years after the COVID-19 public health emergency was largely over.

This study therefore falls within the extensive literature on the long-term effects of temporary economic policies. One of the most famous US examples of this type of policy is the G.I. Bill, which was passed just after World War II. The federal government provided generous funding for veterans to attend college, receive vocational training, and purchase homes, farms, and businesses. Over two million veterans used it to go to college and over five million received professional training. The long-term effects on human capital, new business formation, home ownership, and even civic engagement seem to have been significant (Mettler 2005). Another example is the 2008 Troubled Asset Relief Program (TARP). The bill provided $700 billion to stabilize the US banking system. Though it accomplished its immediate goal, research suggests that moral hazard considerations also encouraged banks to make riskier loans up to nine years later

(Gao and Ghosh 2024). On the other hand, there are many instances where temporary government programs had only temporary effects. The Obama Administration's 2009 Cash for Clunkers program provided subsidies of up to $4,500 for consumers who traded in their old cars for newer and more fuel-efficient models. One of the program's goals was to boost vehicle sales, which was accomplished while funds lasted. However, as soon as the program's funds were exhausted and the program ended, auto sales fell so sharply that the long-term effects on auto purchases were minimal (Mian and Sufi 2012). With such a mixed historical record, we were curious to investigate how persistent the effects of several pandemic policies on renters might have been.

Our research was also motivated by recent scholarship on the short-term impacts of pandemic-era policies enacted to support renters. These studies found that at least some policy interventions had positive effects during the period they were active; however, these studies were conducted too early to permit any conclusions about these policies' post-pandemic impacts (Hepburn et al. 2023; Fusaro, Coley, and Carey 2023; Reina and Lee 2023). These studies are explored in more detail in the Discussion section of this paper. In light of their findings, we wanted to take the next step of analyzing whether the impacts that had been observed during the pandemic persisted in subsequent years.

This study compares the effects of different pandemic relief measures at the state level, since there was wide variation in the extent that aid was utilized by recipients in each state. Out of several measures, eviction moratoria are of interest because COVID-19 marks the first time in US history that this policy has been enacted. An eviction moratorium can be defined as a policy that prohibits the eviction of tenants for the duration of the moratorium, even if they are unable to pay rent. (Though this study examines pandemic-era moratoria that at a minimum barred evictions for nonpayment of rent, some states also had moratoria on evictions for other reasons.) As shown in Appendix A, almost every state instituted an eviction moratorium that was active for some interval in 2020–2022 (Benfer and Koehler 2023). Although some states had multiple overlapping moratoria enacted by different branches of government, this study simply considers the total number of days that any moratorium was in effect in a given state, regardless of its source. It should also be noted that many renters in states that never had a moratorium would still have been protected by a federal moratorium that began in March 2020 and was ended by the Supreme Court in August 2021 (Williams 2021). This moratorium was first instituted by Congress via the Coronavirus Aid, Relief, and Economic Security (CARES) Act, and then extended to areas with substantial viral transmission under the authority of the Center for Disease Control as a measure to reduce the spread of COVID-19 (National Low Income Housing Coalition 2021).

Crucially, as much as they were a critical lifeline during the pandemic, eviction moratoria have the potential to be a double-edged sword. Even if one is protected from eviction in the near term, one still owes any rent that goes unpaid while the moratorium is effective. An eviction moratorium runs the risk of incentivizing renters to skip payments and accumulate rental debt, since they know they cannot be evicted while the moratorium lasts. Consequently, renters might feel comfortable spending more on other goods and services. Once the moratorium expires, however, such renters have to pay back all their debt or face eviction, as well as keep up on all new rent payments. Thus, upon the end of a moratorium, renters might have more rental debt than they would have had otherwise, increasing their likelihood of falling behind on rent.

In addition to eviction moratoria, this study analyzes the impacts of several other measures including Economic Impact Payments, Emergency Rental Assistance, federal funding to state and local governments, and unemployment insurance. Of principal interest to this study was the three rounds of Economic Impact Payments, colloquially known as stimulus checks, that Congress authorized for qualifying recipients by three separate acts in 2020–2021. As of February 2023, over $800 billion had been paid out in total. The first payment, enacted in March 2020 by the CARES Act, was $1,200 per person with an added $500 per child. The second, enacted in December 2020 by the Consolidated Appropriations Act, was $600 per person with an added $600 per child. The third, enacted in March 2021 by the American Rescue Plan Act, was $1,400 per person with an added $1,400 per child (Pandemic Oversight 2023).

Other pandemic relief measures included Emergency Rental Assistance, which consisted of two tranches of aid funding for the states to distribute to qualifying applicants. The first tranche of funding consisted of $25 billion authorized by Congress through the Consolidated Appropriations Act, and the second consisted of $21.55 billion authorized by the American Rescue Plan Act (US Treasury 2024). To be eligible for Emergency Rental Assistance, households had to make 80 percent or less of area median income, among other requirements. Recipients could use the money to cover rent or other housing-related expenses (National Low Income Housing Coalition 2022).

This study also examines the amount of federal funding distributed to state and local governments during the pandemic. While not given directly to households, this funding played an essential role in protecting millions of public jobs and keeping critical services functioning and thus was an indispensable part of the federal response to the pandemic. This funding was distributed through two tranches authorized by Congress: $150 billion from the CARES Act and $350 billion from the American Rescue Plan Act (Walczak 2020; Walczak 2021). The final policy measure analyzed is the maximum amount of weekly unemployment insurance benefits available in each state, which proved to be a crucial support for the many households that faced pandemic-related job loss. This study excludes the contribution of any federal supplements to the maximum weekly benefits, which Congress uniformly added to state maximums during the pandemic, because some states stopped giving federal supplements earlier than others.

To put the impact of policy measures in perspective, this study also included other metrics associated with renters' ability to pay rent after the pandemic. The variables can be seen in Appendix B and are explained in the Results section below.

Methods

For this study, the independent variables fell broadly into three categories: policy variables, economic variables, and housing burden variables. Sources of data for each are given in Appendix B. Policy variables are defined as measures instituted during the pandemic to alleviate its economic impact, with particular (though not exclusive) focus on measures aimed at ensuring renters could remain housed. Policy variables include the duration of eviction moratoria instituted by various states, measured in the number of days between 3/1/2020 and 1/1/2022 that a moratorium was in effect (labeled EM Duration). Appendix A gives the duration of each state's eviction moratorium. Other policy variables are the total per capita amount paid to residents of each state in Economic Impact Payments; total per capita amount of Emergency Rental Assistance distributed by each state to renters; total per capita amount of federal aid to state and local governments received by each state; and maximum weekly unemployment insurance available in each state (excluding pandemic-era federal supplements). Per capita figures were calculated using 2020 state population estimates (US Census Bureau 2021). The sum total that each state received from the three federal cash programs (not including unemployment insurance), divided by that state's 2020 population, is labeled Total Aid Per Capita.[1] The unemployment insurance variable is labeled Maximum Weekly UI.

Economic variables are included to control for state-specific factors during the pandemic period that could have affected the percentage of households behind on their rent in 2022–2023. The variables included were the unemployment rate, median household income (in chained 2023 dollars), and the fair market rent required to afford a two-bedroom apartment; all are expressed as averages for each state over 2020–2022.

Finally, housing burden variables measure the financial burden on renters in each state, reflecting the structural dynamics affecting renters in each state that preceded the pandemic. The two metrics in this category include the percentage of a state's renter households that were severely rent burdened (defined as spending over 50 percent of their household income on housing) and the percentage of the state population living in high-poverty neighborhoods (census tracts with a poverty rate of 30 percent or higher). These are respectively labeled as Severely Rent Burdened and High Poverty. Both of these variables are expressed as averages of the years 2016–2020.[2]

A political variable is separately evaluated to reflect the fact that the adoption and length of eviction moratoria were closely correlated with states' party affiliation. The longest durations were almost all in "blue" states that lean Democratic, while the shortest were mostly in "red" states that lean Republican. To control for those effects, we added a variable that measures the share of the vote going to Joe Biden in the 2020 presidential election.

We could not find reliable data on filed or completed evictions at the state level. Therefore, this study uses the percentage of each state's households that were behind on rent payments, expressed as the average percentage in each state over the post-pandemic years of 2022–2023 (henceforth called APB for average percentage behind), as a dependent variable. APB acts as a proxy for the overall housing vulnerability of renters. This average was calculated using raw data from the Census Bureau's Household Pulse Survey of renter households, conducted roughly every two weeks since the start of the pandemic (U.S. Census Bureau 2024). For each issue of the survey conducted in 2022–2023, the number of households in a given state who answered "no" to the question of whether they were caught up on rent payments at the time of the survey was divided by the total number of surveyed renter households in that state, to obtain the percentage behind in each state for that week. The percentages for each included survey week were then averaged to calculate APB for each state.

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[1] We considered adding the Census Bureau's Supplemental Poverty Measure (SPM) to the list but omitted it because we had another poverty measure in our model.

[2] We also looked at the percentage of households that were rent burdened (spending over 30 percent of household income on housing), but not severely rent burdened. However, the two variables were almost perfectly correlated, so there was no reason to include them both.

It should be noted that APB is not a reliable proxy measure for the pandemic years of 2020–2021, when both federal and state eviction moratoria were in effect. If renters knew they were protected from nonpayment evictions for the immediate future, it stands to reason they would be more likely to report being behind on rent payments, with households instead spending the aid they were receiving on other expenses. Thus, APB for the pandemic years might overstate renter households' actual financial precarity. For this reason, the study is confined to the period when the federal moratorium and almost all state-level moratoria (exceptions are given in Appendix A) had expired.

The data in this study came from a wide range of government agencies and nonprofit organizations, with sources for all variables given in Appendix B. Summary statistics for all variables are provided in Table 1. The average number of days eviction moratoria were in effect consisted of almost two-thirds of a year, and about 12 percent of households were behind on their rent in the post-pandemic period. One new variable is included: Total Aid Per Capita. This variable consists of the sum of Economic Impact Payments, Emergency Rental Assistance and federal aid to state and local governments. It is therefore a compact measure of all federal assistance to households during the pandemic.

Table 1. Summary Statistics of Data

Variable	Number of Observations	Mean	Standard Deviation
APB	50	11.85	2.70
EM Duration	50	223.16	228.19
Economic Impact Payments per capita	50	2,500.26	140.93
Emergency Rental Assistance expended per capita	50	109.80	82.86
Federal Aid to State and Local Governments per capita	50	1690.33	734.19
Total Aid Per Capita	50	4,300.39	829.14
Maximum Weekly UI	50	477.04	143.73
Unemployment Rate	50	5.17	1.21
Median Household Income	50	79,152.27	13018.99
Fair Market Rent	50	956.65	256.22
Severely Rent Burdened	50	22.84	2.71
High Poverty	50	6.73	3.85
Presidential Vote for Biden	50	47.76	10.42

Results

Our first pass at the data was to plot the three policy variables of EM Duration, Total Aid Per Capita, and Maximum Weekly UI against APB to get a rough idea of how the three variables related to our dependent variable. Without controlling for other factors that may influence APB, the results are only suggestive. Figures 1, 2, and 3 present the results along with a linear regression line.

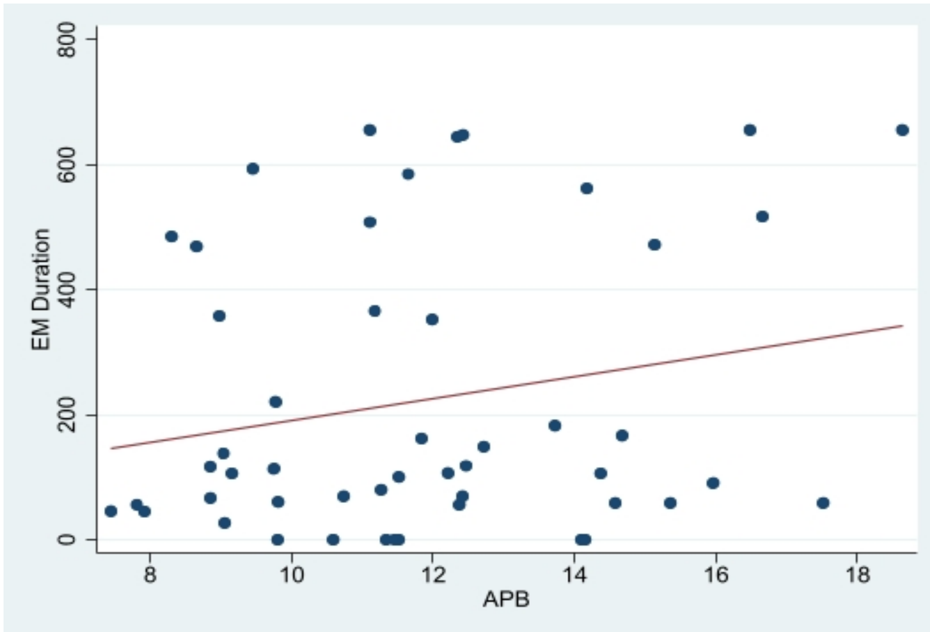

Figure 1: Eviction Moratorium Duration vs. APB

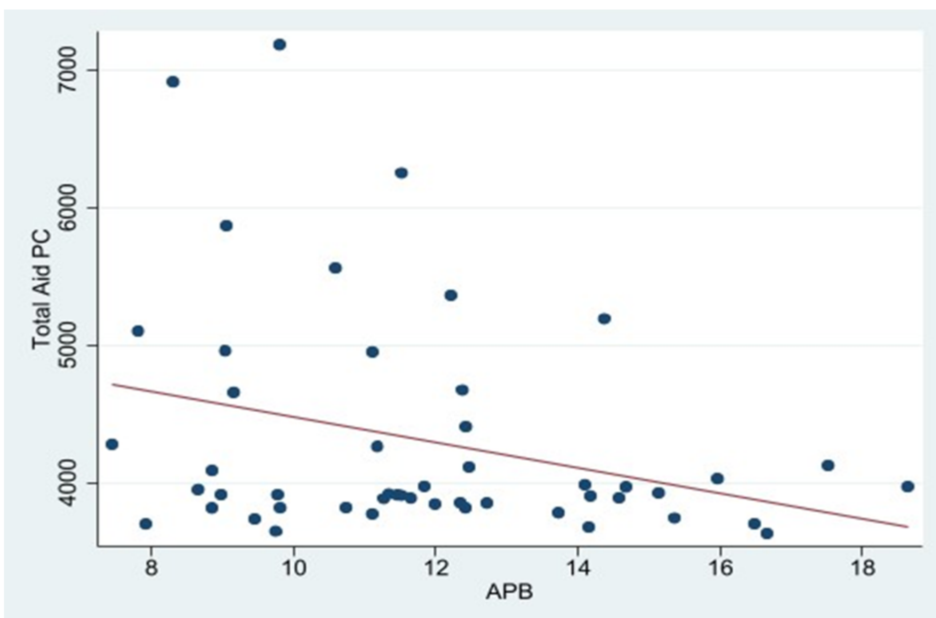

Figure 2: Total Aid Per Capita vs. APB

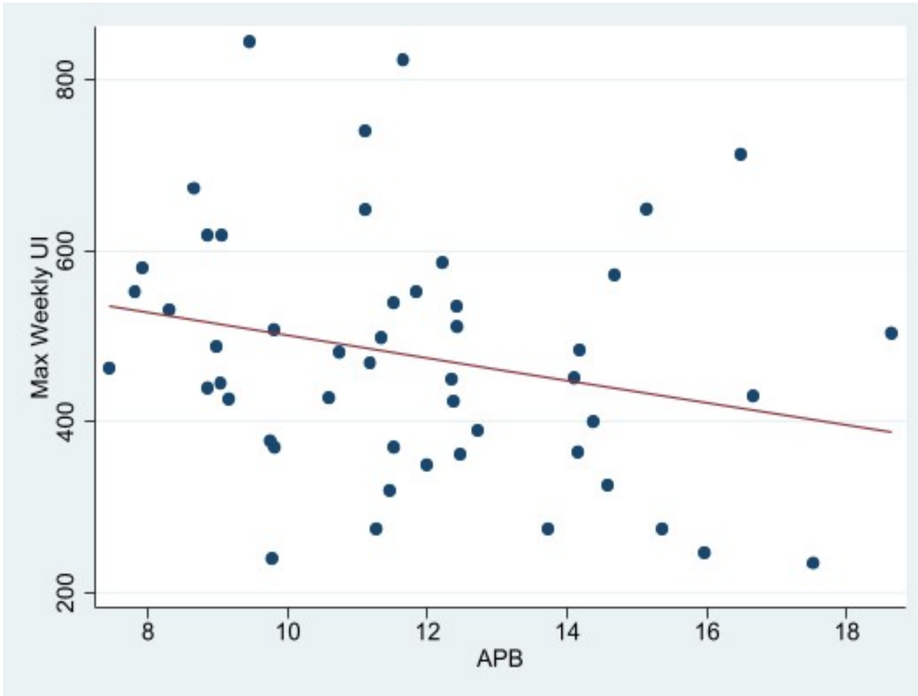

Figure 3: Maximum Weekly UI vs. APB

Figure 1 suggests a positive relationship between the duration of eviction moratoria and the fraction of renters that fell behind after the moratoria expired. That could imply that eviction moratoria ultimately left renters in worse shape to pay their rent. Figure 2 suggests that federal aid left renters in better shape. Figure 3 suggests that more generous unemployment insurance also assisted renters after the pandemic.

We then ran a multiple regression of our complete model. By including all the variables that might have affected post-pandemic renting, we hoped to minimize the chances of omitted variable bias. Running a regression with all variables in it is akin to a horse race where the independent variables compete with each other to explain the variation in our dependent variable. In the interest of parsimony, we only included Total Aid Per Capita instead of all three of its components.[3] Table 2 displays the results of our multiple regression analysis.

Table 2. Multiple Regression of Average Percentage of Households Behind on Rent in 2022–2023 (APB)

Variable	Coefficient	Standard Error	p-value
Constant	-2.7597	6.9325	0.6927
EM Duration	0.0008	0.0022	0.7171
Total Aid Per Capita	-0.0001	0.0004	0.7878
Maximum Weekly UI	-0.0033	0.0028	0.2399

[3] With a relatively small sample of 50 observations, reducing the number of estimated coefficients has certain statistical advantages, including lowering the risk of multicollinearity and increasing the chances our estimates are normally distributed.

Unemployment Rate	0.1632	0.3668	0.6588
Median Household Income	6.4820E-05	5.4091E-05	0.2378
Fair Market Rent	0.0003	0.0025	0.8875
Severely Rent Burdened	0.4087	0.2043	0.0523
High Poverty*	0.3850*	0.1319*	0.0058*
Presidential Vote for Biden	-0.0364	0.0539	0.5034
R^2		0.5487	

*=estimates with p-value ≤ 0.05

As a whole, the complete model fit the data fairly well, explaining 55 percent of the variation in our APB variable according to the R^2 statistic. However, none of the three policy variables came close to being statistically significant, so we couldn't reject the assumption that they had no effect on the percentage of renters behind on their rent in 2022–2023. In fact, none of the explanatory variables passed the standard threshold for statistical significance except High Poverty.[4] So, the only factor that we could confidently assert affected the ability of renters to pay rent post-pandemic was the fraction of a state's population living in high poverty neighborhoods during the years 2016–2020.

The combination of a high R^2 statistic and few statistically significant explanatory variables suggested that our data suffered from multicollinearity. Multicollinearity occurs when the explanatory variables are so highly correlated with each other that the regression cannot measure their separate effects on the dependent variable. Consequently, the standard errors blow up to reflect that greater uncertainty and the p-values go way down.

To account for this, we calculated the correlations between all of our explanatory variables. Many were highly correlated, especially with our EM Duration variable. Several expressed correlations of 0.45 or higher. We then regressed EM Duration against our other explanatory variables and got an R^2 statistic of 0.66. Thus, two-thirds of the variation in that key policy variable was explained by the variation in the other independent variables. On the other hand, Total Aid Per Capita was much less highly correlated with the regressors. Maximum Weekly UI was in the middle, though it was highly correlated with EM Duration.

To address this collinearity problem, we dropped five explanatory variables that all had correlation coefficients with EM Duration close to or above 0.50: unemployment rate, median household income, fair market rate for a two-bedroom apartment, Maximum Weekly UI, and Biden's vote share in the 2020 presidential election. Because of the high correlation between EM Duration and Maximum Weekly UI, we had to choose between them. We chose to drop the latter because we were more interested in the effects of eviction moratoria.[5] Dropping these five variables reduced the R^2 of regressing the remaining explanatory variables against EM Duration to only 0.32, about half of what it was before.

[4] Severely Rent Burdened was close to that threshold, with a p-value of 0.0523.
[5] We experimented with dropping EM Duration instead, and Maximum Weekly UI did not enter significantly.

The results for this more compact model are displayed in Table 3. The standard errors of our estimates were now considerably smaller, reflecting the fact that this regression was much better at measuring the separate effects of our explanatory variables. The R^2 of the regression, however, hardly changed, falling from 0.55 to 0.51. Therefore, this model still did a good job of explaining the variation in APB over 2022–2023.

Table 3. Multiple Regression of Average Percentage of Households Behind on Rent (APB) in 2022–2023—Compact Model to Address Multicollinearity

Variable	Coefficient	Standard Error	p-value
Constant	0.6374	3.4647	0.8549
EM Duration	0.0004	0.0015	0.7702
Total Aid Per Capita	-0.0002	0.0004	0.5636
Severely Rent Burdened*	0.4408*	0.1314*	0.0016*
High Poverty*	0.2901*	0.0811*	0.0008*
R^2		0.5111	

*=estimates with p-value ≤ 0.05

These more precise estimates suggested that neither eviction moratoria nor federal monetary aid significantly affected the ability of post-pandemic renters to stay current on their monthly payments. But the other two explanatory variables, Severely Rent Burdened and High Poverty, entered highly significantly. Both had p-values far below the five percent cutoff, suggesting they clearly affected renters in 2022–2023. Both reflect factors that are more permanent than temporary pandemic-era policy interventions, suggesting that structural factors had the largest influence on the long-term ability of households to pay their rent.

Discussion

Ultimately, this paper contributes to the public debate on the costs and benefits of pandemic-era policies instituted to support renters. Prior research has found that various measures had a strongly beneficial impact on renters' housing vulnerability during the pandemic. Hepburn and co-authors examined pandemic policies' cumulative effect on evictions at the municipal level and found that eviction filings in the 31 cities studied declined by over 57 percent in 2020–2021, with reductions being higher in areas that previously had the highest eviction filing rates (Hepburn et al. 2023). Another study found that eviction moratoria were associated with a 32 percent decline in eviction filings at the census tract level during the pandemic, including in communities that previously had economic and demographic risk factors for high eviction rates (Fusaro, Coley, and Carey 2023). Nationwide, federal and state eviction moratoria are estimated to have prevented over 1.5 million evictions while they were in effect (Batko and Rogin 2021). Another study that focused on the federally supported Emergency Rental Assistance program in Philadelphia found that recipient households had lower unpaid rent and rental debt, though it noted that "housing affordability challenges that predated the pandemic cannot be addressed by an emergency rental assistance program created in response to a pandemic" (Reina and Lee 2023).

Interestingly, studies examining the effects of pandemic-era Economic Impact Payments and unemployment insurance suggested middling impacts, at best, on renters. In a survey by the Bureau of Labor Statistics, 28 percent of recipients of the first Economic Impact Payment reported spending or planning to spend at least some of their check on rent, the fourth most commonly named category, with food being first (Garner, Safir, and Schild 2020). A 2021 study found that, while Economic Impact Payments and unemployment insurance had increased renters' savings in the previous year, this was not enough to compensate for the dramatic decrease in overall income and savings that many households experienced due to pandemic pressures (Greig, Zhao, and Lefevre 2021). By the end of 2020, around 25 percent of renters had seen their savings decrease, and over 20 percent of renters saw their total incomes (including from aid) decrease by more than ten percent. Federally supplemented unemployment insurance was associated with a doubling of unemployed people's liquid savings while the federal supplement was in effect, but these accumulated savings declined by as much as two-thirds after it expired (Farrell et al. 2020). Closely related work on the impact of short-term emergency rental assistance programs implemented by local governments during the pandemic (distinct from the federal Emergency Rental Assistance that was a policy variable in this study) came to the same conclusion (Collinson et al. 2025). That paper found that these programs did reduce rental arrears in the short term but had "little detectable short- or longer-run effect on broader measures of financial security, including evictions, homelessness, residential mobility, credit scores, indebtedness, or delinquency."

A lack of long-term benefits from these policies would affect any cost-benefit analysis of similar policies. This lack of long-term impact would have to be weighed against any short-term benefit to renters. One would also want to take into consideration the monetary cost of these policies to the government and to landlords. On the other hand, eviction moratoria are credited with slowing the spread of COVID-19, so those effects would need to be considered too (Nande et al. 2021).

One limitation of this study is the use of APB as opposed to a more direct measure of housing vulnerability, such as the actual number of evictions at the state level. Since it is derived from household surveys, APB is subject to the usual problems that arise with self-reported data, such as households possibly misrepresenting their status for various reasons. However, data on evictions both nationally and at the state level is highly incomplete and using it would pose its own problems. In particular, total eviction figures often fail to discriminate between evictions for nonpayment of rent (which can be said to best reflect a household's housing vulnerability) and evictions on other grounds. Tenant protections, which determine how easy it is for a landlord to evict a tenant, vary widely from state to state, and would also presumably impact state-level eviction figures.

More generally, the focus of this study is restricted to housing vulnerability, so it cannot provide conclusions on other economic burdens experienced by low-income households. Undoubtedly, many households that pay their rent on time have other financial obligations that nonetheless leave them in a financially precarious position. The pandemic and associated relief measures surely affected these obligations—such as food, childcare, healthcare, and education—in myriad ways. Further research into these pressures is needed to form a clear picture of the economic legacy of COVID-19 at the household level.

References

Batko, Samantha, and Amy Rogin. 2021. "The End of the National Eviction Moratorium Will Be Costly for Everyone." *Urban Wire.* The Urban Institute. https://www.urban.org/urban-wire/end-national-eviction-moratorium-will-be-costly-everyone.

Benfer, Emily, and Robert Koehler. 2023. Data from "Eviction Moratoria & Housing Policy: Federal, State, Commonwealth, and Territory." Inter-university Consortium for Political and Social Research. https://www.openicpsr.org/openicpsr/project/157201/version/V2/view.

CNN Politics. 2020. "Presidential Results." https://www.cnn.com/election/2020/results/president.

Collinson, Robert, Anthony DeFusco, John Humphries, et al. 2025. "The Effects of Emergency Rental Assistance During the Pandemic: Evidence from Four Cities." NBER Working Paper 32463. National Bureau of Economic Research, Cambridge, MA. http://www.nber.org/papers/w32463.

Cunningham, Mary K., Ananya Hariharan, and Olivia Fiol. 2021. "The Looming Eviction Cliff: Findings from the Urban Institute Coronavirus Tracking Survey." The Urban Institute. https://www.urban.org/research/publication/looming-eviction-cliff.

Farrell, Diana, Peter Ganong, Fiona Greig, et al. 2020. "The Unemployment Benefit Boost: Trends in Spending and Saving when the $600 Supplement Ended." JP Morgan Chase Institute. https://www.jpmorganchase.com/content/dam/jpmc/jpmorgan-chase-and-co/institute/pdf/Institute-UI-Benefits-Boost-Policy-Brief_ADA.pdf.

Federal Reserve Bank of St. Louis. 2024. "Real Median Household Income by State, Annual." https://fred.stlouisfed.org/release/tables?rid=249&eid=259515&od=2022-01-01.

Fusaro, Vincent, Rebekah Levine Coley, and Naoka Carey. 2023. "Shelter from the Storm: State Eviction Moratoria, Implementation Context, and Eviction Filings During the First Two Years of the COVID-19 Pandemic." *Housing Policy Debate* 33 (6): 1415–1442. https://doi.org/10.1080/10511482.2023.2218840.

Gao, Jiequiong, and Chinmoy Ghosh. 2024. "The Longer-Term Impact of TARP on Bank's Default Risk." *The Quarterly Review of Economics and Finance* 95: 346–357. https://doi.org/10.1016/j.qref.2023.10.001.

Garner, Thesia I., Adam Safir, and Jake Schild. 2020. "Receipt and Use of Stimulus Payments in the Time of the COVID-19 Pandemic." *Beyond the Numbers: Prices and Spending* 9 (10). U.S. Bureau of Labor Statistics. https://www.bls.gov/opub/btn/volume-9/pdf/receipt-and-use-of-stimulus-payments-in-the-time-of-the-covid-19-pandemic.pdf.

Greig, Fiona, Chen Zhao, and Alexandra Lefevre. 2021. “Renters vs. Homeowners: Income and Liquid Asset Trends during COVID-19.” JP Morgan Chase Institute. http://dx.doi.org/10.2139/ssrn.3807563.

Hepburn, Peter, Jacob Haas, Nick Graetz, et al. 2023. “Protecting the Most Vulnerable: Policy Response and Eviction Filing Patterns During the COVID-19 Pandemic.” *The Russell Sage Foundation Journal of the Social Sciences* 9 (3): 186-207. https://doi.org/10.7758/RSF.2023.9.3.08.

Mettler, Suzanne. 2005. *Soldiers to Citizens: The G.I. Bill and the Making of the Greatest Generation*. Oxford University Press.

Mian, Atif, and Amir Sufi. 2012. "The Effects of Fiscal Stimulus: Evidence from the 2009 Cash for Clunkers Program." *The Quarterly Journal of Economics* 127 (3): 1107-1142. https://doi.org/10.1093/qje/qjs024.

Nande, Anjalika, Justin Sheen, Emma L. Waters, et al. 2021. “The Effect of Eviction Moratoria on the Transmission of SARS-CoV-2.” *Nature Communications* 12: 2274. https://doi.org/10.1038/s41467-021-22521-5.

National Equity Atlas. 2020. “Housing Burden.” https://www.nationalequityatlas.org/indicators/housing-burden?breakdown=map.

National Equity Atlas. 2020. “Neighborhood Poverty.” https://www.nationalequityatlas.org/indicators/neighborhood-poverty?breakdown=map.

National Low-Income Housing Coalition. 2021. “Federal Moratorium on Evictions for Nonpayment of Rent.” https://nlihc.org/sites/default/files/Overview-of-National-Eviction-Moratorium.pdf.

National Low-Income Housing Coalition. 2022. “Frequently Asked Questions: Treasury’s Emergency Rental Assistance (ERA) Program.” https://nlihc.org/sites/default/files/FAQs_Emergency-Rental-Assistance.pdf.

National Low-Income Housing Coalition. 2023. “Treasury Emergency Rental Assistance (ERA) Dashboard.” https://nlihc.org/era-dashboard.

Pandemic Oversight. 2023. “Update: Three Rounds of Stimulus Checks. See How Many Went Out and For How Much.” https://www.pandemicoversight.gov/data-interactive-tools/data-stories/update-three-rounds-stimulus-checks-see-how-many-went-out-and.

Reina, Vincent J., and Yeonhwa Lee. 2023. “COVID-19 and Emergency Rental Assistance: Impact on Rent Arrears, Debt, and the Well-Being of Renters in Philadelphia.” *The Russell Sage Foundation Journal of the Social Sciences* 9 (3): 208-229. https://doi.org/10.7758/RSF.2023.9.3.09.

RentData.org. 2020. “2020 Rent Data by State.” https://www.rentdata.org/states/2020.

RentData.org. 2021. “2021 Rent Data by State.” https://www.rentdata.org/states/2021.

RentData.org. 2022. “2022 Rent Data by State.” https://www.rentdata.org/states/2022.

U.S. Bureau of Labor Statistics. 2020. “Unemployment Rates for States.” https://www.bls.gov/lau/lastrk20.htm.

U.S. Bureau of Labor Statistics. 2021. “Unemployment Rates for States.” https://www.bls.gov/lau/lastrk21.htm.

U.S. Bureau of Labor Statistics. 2022. “Unemployment Rates for States.” https://www.bls.gov/lau/lastrk22.htm.

U.S. Census Bureau. 2021. “2020 Population and Housing State Data.” https://www.census.gov/library/visualizations/interactive/2020-population-and-housing-state-data.html.

U.S. Census Bureau. 2024. “Household Pulse Survey Data Tables.” https://www.census.gov/programs-surveys/household-pulse-survey/data/tables.html.

U.S. Department of the Treasury. 2024. “Emergency Rental Assistance Program.” https://home.treasury.gov/policy-issues/coronavirus/assistance-for-state-local-and-tribal-governments/emergency-rental-assistance-program.

U.S. Internal Revenue Service. 2025. “SOI Tax Stats–Coronavirus Aid, Relief and Economic Security Act (CARES Act) Statistics.” https://www.irs.gov/statistics/soi-tax-stats-coronavirus-aid-relief-and-economic-security-act-cares-act-statistics.

Walczak, Jared. 2020. “State and Local Funding Totals Under the CARES Act.” Tax Foundation. https://taxfoundation.org/blog/federal-coronavirus-aid-to-states-under-cares-act/.

Walczak, Jared. 2021. “State Aid in American Rescue Plan Act Is 116 Times States’ Revenue Losses.” Tax Foundation. https://taxfoundation.org/blog/state-and-local-aid-american-rescue-plan/.

Williams, Pete. 2021. “Supreme Court Blocks Biden Administration's Eviction Moratorium.” *NBC News*, August 26. https://www.nbcnews.com/politics/supreme-court/supreme-court-blocks-biden-administration-s-eviction-moratorium-n1277765.

ZipRecruiter. 2021. “A Guide to COVID-19 Unemployment Benefits by State.” https://www.ziprecruiter.com/blog/unemployment-benefits-by-state/.

Appendix A

Eviction Moratorium Duration by State, in Days Between 3/1/2020 and 1/1/2022.

State	Eviction moratorium date of effect	Eviction moratorium expiration date	Total days under eviction moratorium between 3/1/2020 and 1/1/2022
AL	4/3/2020	6/1/2020	59
AK	3/23/2020	7/1/2020	100
AZ	3/24/2020	10/31/2020	221
AR	No state-level order		0
CA*	3/27/2020*	7/1/2022*	645*
CO	4/30/2020 (1st) 10/21/2020 (2nd)	6/14/2020 (1st) 1/1/2021 (2nd)	117
CT	3/16/2020	7/1/2021	472
DE	3/17/2020	7/1/2020	106
FL	4/2/2020	10/1/2020	182
GA	No state-level order		0
HI	3/17/2020	8/7/2021	508
ID	3/16/2020	5/1/2020	46
IL	3/21/2020	10/4/2021	562
IN	3/19/2020	8/15/2020	149
IA	3/19/2020	5/28/2020	70
KS	3/17/2020 (1st) 8/19/2020 (2nd)	6/1/2020 (1st) 5/28/2021 (2nd)	358
KY	3/16/2020	8/25/2020	162
LA	3/17/2020	6/16/2020	91
ME	3/18/2020	8/3/2020	138
MD	3/16/2020	8/15/2021	517
MA*	3/13/20 (1st)* 12/31/20 (2nd)*	10/18/20 (1st)* 4/1/23 (2nd)*	585*
MI	3/20/2020	7/16/2020	118
MN*	3/16/2020*	6/1/2022*	656*
MS	4/3/2020	6/1/2020	59
MO	No state-level order		0
MT	3/30/2020	5/25/2020	56
NE	3/25/2020	5/31/2020	67
NV	3/30/2020 (1st) 12/15/2020 (2nd)	10/15/2020 (1st) 5/31/2021 (2nd)	366
NH	3/17/2020	7/1/2020	106
NJ	3/16/2020	1/1/2022	656
NM*	3/24/2020*	2/1/2022*	648*
NY*	3/16/2020*	1/16/2022*	656*

NC	3/16/2020 (1st) 10/28/2020 (2nd)	6/30/2020 (1st) 7/1/2021 (2nd)	352
ND	3/26/2020	4/22/2020	27
OH	No state-level order		0
OK	No state-level order		0
OR	3/19/2020	7/1/2021	469
PA	3/19/2020	9/1/2020	166
RI	3/17/2020	7/2/2020	107
SC	3/17/2020	5/15/2020	59
SD	No state-level order		0
TN	3/13/2020	6/1/2020	80
TX	3/19/2020	5/28/2020	70
UT	4/1/2020	5/16/2020	45
VT	3/17/2020	7/15/2021	485
VA	3/16/2020 (1st) 6/8/2020 (2nd) 8/10/2020 (3rd)	5/18/2020 (1st) 6/29/2020 (2nd) 9/8/2020 (3rd)	113
WA	3/18/2020	11/1/2021	593
WV	3/23/2020	5/18/2020	56
WI	3/27/2020	5/26/2020	60
WY	No state-level order		0

*=states where moratorium was still in effect after 1/1/2022.

Appendix B

Variables and Sources of Data Used in This Study.

	Variable	Data source
Policy variables	Days that eviction moratorium was in effect between 3/1/2020 and 1/1/2022 (EM Duration)	Inter-university Consortium for Political and Social Research: https://www.openicpsr.org/openicpsr/project/157201/version/V2/view
	Economic Impact Payments per capita (component in Total Aid Per Capita)	Internal Revenue Service: https://www.irs.gov/statistics/soi-tax-stats-coronavirus-aid-relief-and-economic-security-act-cares-act-statistics (see Table 2 for each round)
	Emergency Rental Assistance expended per capita, as of October 2023 (component in Total Aid Per Capita)	National Low-Income Housing Coalition (under "NLIHC ERA Spending Tracking"): https://nlihc.org/era-dashboard
	Federal aid to state and local governments per capita (component in Total Aid Per Capita)	Tax Foundation: https://taxfoundation.org/blog/federal-coronavirus-aid-to-states-under-cares-act/ (CARES Act); https://taxfoundation.org/blog/state-and-local-aid-american-rescue-plan/ (American Rescue Plan Act)
	Maximum weekly unemployment insurance	Collected by ZipRecruiter: https://www.ziprecruiter.com/blog/unemployment-benefits-by-state/
	State populations (2020) (for calculating per capita variables)	US Census Bureau: https://www.census.gov/library/visualizations/interactive/2020-population-and-housing-state-data.html
Economic variables	Percentage unemployment rate (average 2020–2022)	Bureau of Labor Statistics: https://www.bls.gov/lau/lastrk20.htm (2020) https://www.bls.gov/lau/lastrk21.htm (2021) https://www.bls.gov/lau/lastrk22.htm (2022)
	Median household income (average 2020–2022)	Federal Reserve Bank of St. Louis: https://fred.stlouisfed.org/release/tables?rid=249&eid=259515&od=2022-01-01

	Fair market rent for a two-bedroom apartment (average 2020–2022)	US Department of Housing and Urban Development: https://www.rentdata.org/states/2020 (2020) https://www.rentdata.org/states/2021 (2021) https://www.rentdata.org/states/2022 (2022)
Housing burden variables	Percentage severely rent-burdened (average 2016–2020)	National Equity Atlas: https://www.nationalequityatlas.org/indicators/housing-burden?breakdown=map
	Percentage living in high-poverty neighborhoods (average 2016–2020)	National Equity Atlas: https://www.nationalequityatlas.org/indicators/neighborhood-poverty?breakdown=map
Political variable	Percentage voting for Joe Biden in 2020 presidential election	CNN: https://www.cnn.com/election/2020/results/president
Dependent variable	Percentage of households behind on rent (APB; average 2022–2023)	US Census Bureau: https://www.census.gov/programs-surveys/household-pulse-survey/data/tables.html (weeks 41-63; see Housing Tables, Table 1b)