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Key Findings

- Since the start of the COVID-19 pandemic, about 12% of mortgage holder households and 18% of renter households have missed their mortgage or rent payments in the past month. This stands in sharp contrast with the 4% and 7% respective missed or late payment rates in the last three months of 2017.
- Even for households that did not miss their mortgage/rent payments in the past month, they did not always maintain high confidence in making their next housing payments on time.
- Renter households are at higher risk of housing insecurity when compared with homeowners.
- Deferral programs designed for addressing the housing insecurity problem incurred by the COVID-19 crisis were generally less successful for renter households.
- Housing insecurity amid the pandemic exhibited strong spatial heterogeneity. The Riverside-San Bernardino-Ontario CA MSA underperformed in housing security across multiple dimensions for both owner and renter households. Particularly, the Inland Counties ranked near the bottom among 15 MSAs in terms of high confidence of making mortgage and rent payments in the next month. Only 52.8% of mortgage-holding households were highly confident in their ability to continue payment in the next month, and only 35.5% of renter households expressed a similar level of confidence.
- The Riverside-San Bernardino-Ontario CA MSA was generally better equipped to help renters to continue to participate in deferral programs. Out of renter households who deferred the past month's rent, 28.1% expected another deferred payment, which doubled the national average.
- The COVID-19 pandemic has been disproportionately exacerbating housing insecurity across racial groups. Nationally, Non-Hispanic White owner households had the highest percentage of making their payments (91.1%) and lowest percentage of failing (5.3%), while Non-Hispanic Black renter households had the lowest percentage of making payment (72.4%) and highest percentage of failing (25.5%). The disadvantaged status of the latter group was more severe in some metropolitan areas (e.g. in the Los Angeles-Long Beach-Anaheim CA MSA, where only 63.7% Non-Hispanic Black renter households paid the past month's rent on time while 31.5% failed to do so).
- A positive relationship between income insecurity and housing insecurity is established. The two most populous metropolitan areas in Southern California experienced a higher level of income insecurity compared with the national average.
- The continuation of local, state and federal policies, like deferral or anti-eviction legislations, catered towards well-being and housing security are especially vital during this time of uncertainty. An expansion of the CARES Act or the passage of the Protecting Renters from Evictions and Fees Act would likely provide invaluable security and order to many vulnerable populations.
- As the housing insecurity has been greatly intensified by the pandemic, which is more extreme for renters and minority groups, we recommend collaborations between the government, developers, businesses, and non-profit organizations to enact innovative solutions to house families, revitalize businesses, and fight housing and income insecurity.

Introduction

Housing insecurity is an umbrella term used to encompass several dimensions of housing problems including affordability, safety, quality, insecurity, and loss of housing.³ It is often considered a jarring but ubiquitous reality for households experiencing poverty and/or social marginalization (Cox et al. 2019). Now, due to the severe economic downturn brought about by the COVID-19 pandemic, what was once only a reality for the marginalized, is now a troubling reality for middle-class households across the U.S. The COVID-19 pandemic is rapidly emerging as a housing emergency throughout the U.S. (Rogers and Power 2020; Wagner 2020).

On the other hand, the nature of the COVID-19 pandemic makes housing an absolutely essential asset for all households. In the past several months, most U.S. states have executed stay-at-home orders in an attempt to keep residents safe and flatten the infection curve to slow down the spread of the virus. This reality makes housing the key site through which COVID-19 is experienced by most people⁴, and is likely to impact people's experiences of homes and experiences in homes.

The U.S. government at the federal, state, and local levels have adopted various policy levers to combat housing insecurity and instability amid the pandemic. A myriad of deferral options based on financing type, location and outstanding rental/mortgage amount are available, although typically catered toward the needs of homeowners.⁵ At the federal level, the Coronavirus Aid, Relief, and Economic Security (CARES) Act⁶ put in place a 360-day forbearance program and a moratorium on foreclosures for all federally backed home mortgages. The CARES Act also instituted a moratorium on evictions until July 25, 2020 for rental properties with federally backed mortgages, or that participate in various federal housing subsidy programs. However, the eviction moratorium is estimated to cover less than 30% of renters. Some states took further steps of protecting renters from losing their homes. For instance, on April 6, 2020, the Judicial Council of California issued an emergency rule suspending all eviction actions unless the court finds that the eviction is necessary to protect public health and safety. The rule applies until 90 days after Gov. Newsom lifts the state of emergency or the Judicial Council amends or repeals the rule. At the local level, renters in the City of Los Angeles who cannot pay rent due to the negative impacts of COVID-19 will have up to 12 months following the expiration of the local emergency in response to the pandemic to repay any back rent due. On June 15, 2020, the County of Riverside announced a rental assistance program, "United Lift", which provides \$33 million in rental assistance to Riverside County residents between the months of June and November 2020.8 The assistance will cover 100% of total past due rent for up to \$3,500 per renter household. The coverage includes renters in Riverside County with a current lease agreement who are either individuals or families earning 80% or below of the area's median income, or who can document a loss of income due to COVID-19 economic impacts, leaving them unable to make their rent.

^{3 &}quot;Measuring Housing Insecurity in the American Housing Survey." HUD. Retrieved June 30, 2020, from https://www.huduser.gov/portal/pdredge/pdr-edge-frm-asst-sec-111918.html

^{4 &}quot;Homes actually need to be practical now: One of the ironies of social distancing is that it can put privacy in short supply." The Atlantic. (March 29, 2020). Retrieved June 30, 2020, from https://www.theatlantic.com/culture/archive/2020/03/finding-privacy-during-pandem-ic/608944/

^{5 &}quot;Learn about Mortgage Relief Options and Protections," Consumer Finance Protection Bureau. Retrieved July 1, 2020, from https://www.consumerfinance.gov/coronavirus/mortgage-and-housing-assistance/mortgage-relief/

^{6 &}quot;Coronavirus Aid, Relief, and Economic Security (CARES) Act." Investopedia. Retrieved June 30, 2020, from https://www.investopedia.com/coronavirus-aid-relief-and-economic-security-cares-act-4800707

^{7 &}quot;Coronavirus: What You Need to Know about L.A.'s Renter Protections." Retrieved July 1, 2020, from https://hcidla2.lacity.org/covid-19-renter-protections

^{8 &}quot;United Lift." Retrieved June 30, 2020, from https://www.unitedlift.org/

It is clear that states and local jurisdictions vary greatly in the enacted housing policies and programs for fighting housing insecurity amid the pandemic. It remains to be seen to what extent these policies are effective and efficient in abating housing insecurity for households and increasing health security amid the pandemic. Because these programs and the pandemic are rapidly developing, it is premature to rigorously evaluate the programs. However, it is still important to obtain a general picture of where we are in this battle. In this report, we intend to shed some light on this question by providing useful information and insights on the status of housing insecurity at the subnational level during the COVID-19 pandemic for informing effective and targeted (and potentially place-based) housing policy responses in a timely fashion.

For the rest of the report, we first introduce our data source and methodology. We then present results and findings on various dimensions of housing insecurity based on near real-time household survey conducted by U.S. Census Bureau. We look at how owner and renter households have been capable of making mortgage/ rent payments on time and whether they have been confident in continuing on-time payments. We also delve into the experiences of different racial and ethnic groups and those who have lost employment incomes since the start of the pandemic. For each dimension, we compare stories from 15 metropolitan areas. We discuss the findings and conclude the report in the last section.

Data and Methodology

Our main data source is the Household Pulse Survey (HPS)⁹, a weekly survey designed for providing near real-time data on the socioeconomic impacts of the COVID-19 crisis on U.S. households. The HPS is one of the U.S. Census Bureau's experimental data products and is specifically designed in response to COVID-19 in collaboration with five federal agencies to ask a wide range of questions spanning from employment status, to food security, consumption, health, and education disruption. The survey started on April 23, 2020 and is expected to collect data for 12 weeks. Aggregate statistics are disseminated at both national and state levels, while they are also produced for the 15 most populous Metropolitan Statistical Area (MSAs). The Census Bureau also releases microdata files (as Public Use File (PUF)) containing individual responses on a weekly basis, allowing users to delve further into the rich details provided by the survey and address specific research questions.

We draw from the first five weeks' (April 23 – June 2) HPS PUFs¹⁰: Week 1 (April 23 – May 5), Week 2 (May 7 – May 12), Week 3 (May 14 – May 19), Week 4 (May 21 – May 26), and Week 5 (May 28 – June 2). For each week, we estimate the national percentage of an outcome of interest (e.g. mortgage payment on time in the past month), which could potentially link to other outcomes (e.g. loss of employment incomes since March 13, 2020) or demographic characteristics (e.g. race/ethnicity). Correspondent weekly estimates are also produced for the 15 most populous MSAs. For each statistic, we use replication methods recommended by the Census Bureau for estimating the standard error.

We look into the potentially heterogeneous impacts of COVID-19 on housing security in 15 most populous MSAs with a special focus on the Riverside-San Bernardino-Ontario CA MSA, whose population ranks 13th. Housing security is measured by the percentage of rental/mortgage payments on time for the past month; the percentage of high confidence in timely payments for the next month is adopted to shed light on another dimension of housing security (the higher the housing security, the lower the housing insecurity). We also link these two measures to understand whether households which have made housing payments on time were worried about future payments, and whether households which failed to make timely payments were hopeless about future payments. Households are also differentiated by ethnicity and race for investigating whether they are at disparate risks of housing insecurity. Further, we connect the housing insecurity with employment insecurity by looking at how the loss of employment income since March 13, 2020 is related to the failure of timely housing payments.

^{9 &}quot;Measuring Household Experiences during the Coronavirus (COVID-19) Pandemic." U.S. Census Bureau. (June 6, 2020). Retrieved June 30, 2020, from https://www.census.gov/householdpulsedata

¹⁰ Data sets were retrieved from https://www.census.gov/programs-surveys/household-pulse-survey/datasets.html on June 22, 2020.

Results and Findings

Housing Insecurity as Failing to Fulfil Last Month's Mortgage/Rent Payments

In this section, we reflect on the results of on-time housing payments for the past month. In our five-week analysis, the temporal differences are insignificant at the national and the MSA level. Therefore, we use the averages across the five weeks for all the statistics in the following analysis.

At the national scale, 88.3% of owner households with a mortgage successfully paid the past month's mortgage on time, while 7.3% failed and 4.3% deferred the payment. In contrast, renter households were less likely to succeed in paying their mortgage on time – only 81.6% of renter households successfully made their payments on time. Additionally, fewer renter households who could not pay their rent on time for the past month successfully received a deferral - while 2.3% deferred the payment, 16.1% failed altogether to make their payments. Those who deferred or failed to make their rental payments are likely faced with high housing instability, which is contingent on their localities' specific pandemic related housing policies. Renters residing in jurisdictions with more forgiving housing policies are likely to obtain a longer grace period after the pandemic to repay any back rent due.

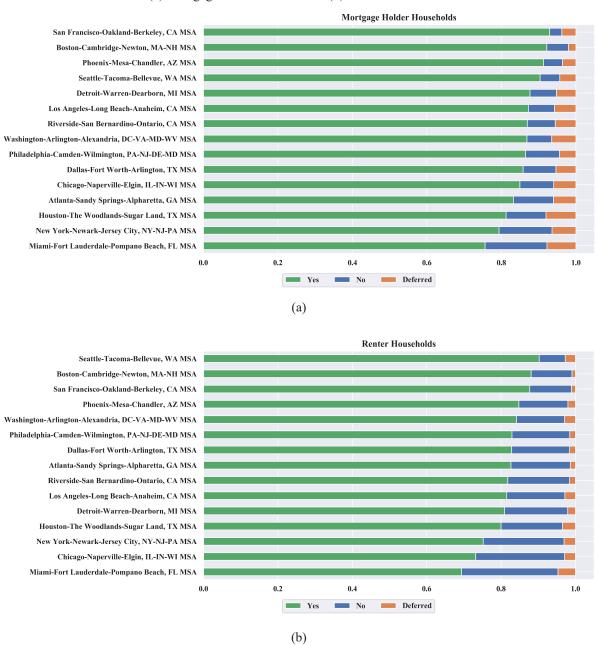
We turn to the MSA-level statistics to explore whether and how stories in different places have been unfolding in different fashions. As shown in Figure 1, large variation exists. While the San Francisco-Oakland-Berkeley, CA MSA had the highest percentage of on-time mortgage payments, with 93% of owners making mortgage payments in the past month, only 87% of owners succeeded in making payments in the Miami-Fort Lauderdale-Pompano Beach, FL MSA. The range of success rates was even larger for renter households - while the Seattle-Tacoma-Bellevue, WA MSA ranked had the highest percentage of on-time rental payments - 90%, the Miami-Fort Lauderdale-Pompano Beach, FL MSA ranked 15th with a 69% success rate.

The house security levels measured as payment success rates have been relatively consistent for owner and renter households across the 15 MSAs - we detect a high correlation of 0.853. In other words, metropolitan areas with higher housing insecurity for owner households tended to have higher housing insecurity for renter households, which is likely to be a joint result of inherent spatial heterogeneity in demographics, institutions, economic structure, as well as the pandemic related policies. The MSAs which had the most on-time rental payments, Seattle, Boston and San Francisco, all have high per capita incomes (all over \$70,000 as of 2018)¹¹ as well as high proportions of college graduates (all over 42% as of 2018). This indicates, perhaps obviously, that the overall wealth of an MSA is an important factor in making on-time housing payments. We also note that consistent with the national trend, deferral rates were lower for renter households in all MSAs, which could be the result of housing policy that are predominantly catered towards owner households.

The Riverside-San Bernardino-Ontario CA MSA ranked in the middle positions for both on-time rental and mortgage payments in the past month. It ranked 7th for on-time mortgage payments, with 86.9% of owner households making their payments on time; the area additionally ranked 9th for on-time rental payments, with 81.8% of renters making on-time payments. The region's coastal neighbor, the Los Angeles-Long Beach-Anaheim MSA performed quite similarly for both on-time rental and mortgage payments. In this area, 87.2% of mortgage payments were made on time, and 81.5% of rents were paid in a timely manner. However, for both MSAs, owner and renter households performed below the national average.

^{11 &}quot;Personal Income by County, Metro, and Other Areas." Bureau of Economic Analysis (BEA). Retrieved June 30, 2020, from https://www.bea.gov/data/income-saving/personal-income-county-metro-and-other-areas

Figure 1 Housing Payment Status for the Past Month for the 15 Most Populous MSAs:
(a) Mortgage Holder Households (b) Renter Households



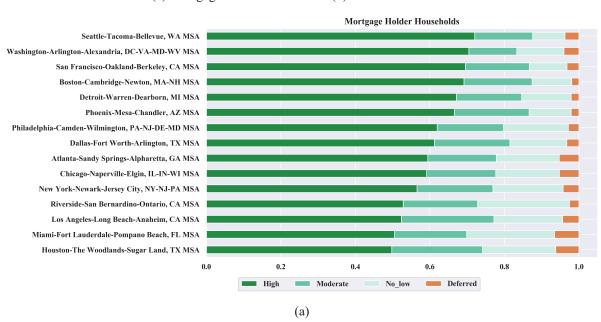
Housing Insecurity as Low Confidence in Making Mortgage/Rent Payments in the Next Month

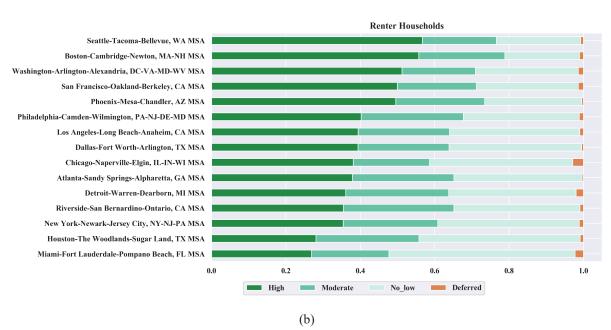
Generally, many households were worried about paying next month's mortgage or rent on time. This is especially true for renter households. Nationally, only 41.5% renter households had high confidence in making their next rental payments on time. A comparatively higher proportion of owner households with a mortgage, 63.4%, had high confidence in fulfilling the housing cost in the coming month. These proportions are both much lower than the proportions of timely payments in the past month. This indicates a growing housing insecurity across the country. Unfortunately, this insecure feeling is caused by a pandemic that has made housing an exceptionally essential need.

At the MSA level, as shown in Figure 2, the Riverside-San Bernardino-Ontario CA MSA ranked near the bottom among the 15 MSAs in terms of high confidence in making mortgage or rent payments in the next

month. Levels of high confidence for owner and renter households were below the national average and both ranked 12th. Only 52.8% of mortgage-holding households were highly confident in their ability to continue payments in the next month, and only 35.5% of renter households expressed a similar level of confidence. The region's coastal neighbor, the Los Angeles-Long Beach-Anaheim MSA, also performed below the national average on the confidence measure for owner households (52.4%, 13th) and renter households (39.4%, 7th). Similar to what we observed earlier about housing payments for the past month, there is also a high correlation (0.877) between owner and renter households across MSAs in terms of high confidence in making payments on time for the next month. This corroborates the hypothesis of spatial heterogeneity in housing insecurity which deserves further research.

Figure 2 Confidence of Housing Payment for the next Month for the 15 Most Populous MSAs:
(a) Mortgage Holder Households (b) Renter Households



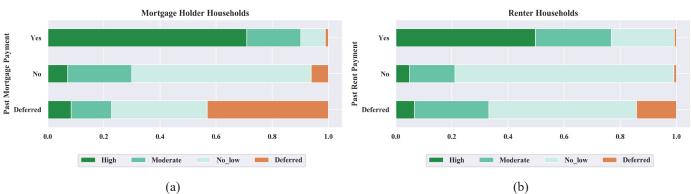


Connecting Housing Payments in the Past and Future Months

We further examine households' confidence of next month's housing payment differentiated by the payment status for the past month. As shown in Figure 3, nationally, owner households that have made on-time payments for the past month were more likely to have a high level of confidence in the timely payment for the coming month. However, nevertheless, only 70.9% of these "successful" households had continuing high confidence, while 8.7% had low or no confidence. For owner households that did not make on time payments for the past month and thus were at risk of foreclosure and losing their homes, 64% had low or no confidence in making next month's mortgage. This staggering low/no confidence rate further indicates exacerbated housing insecurity, especially because only 6.1% of these households expected to receive a mortgage deferral. For 4.3% of owner households who deferred their mortgage payment in the past month, 43.2% successfully obtained a deferral for the next month, while only 8.3% had high confidence in making their payment.

In contrast, more renter households were at risk of housing insecurity. For 16.1% of renter households who failed to pay their rent on time in the past month, less than 1% of them expected a deferral for the next month, and 78% had low or no confidence of paying rent on time. Out of the 2.3% renter households who deferred the past month's payments, a much smaller proportion (14.2%) received a deferral for the next month. The greater housing insecurity among renter households compared with owner households has long been observed in the past, which calls for more progressive policies to protect renters. Greater housing insecurity among renter households, compared with owner households, is likely due to differences in demographics. When compared with owner households, renters typically have little savings, lower incomes and less general wealth.¹²

Figure 3 National Trend: Confidence of Housing Payment for the Next Month Differentiated by Payment Status for the Past Month



Both of the two largest MSAs (the Los Angeles and Riverside Metropolitan Areas) in Southern California had a below-average proportion of "competent" owner and renter households. We define "competent" households as those who made mortgage or rent payments on time in the past month and had high confidence in continuing to do so in the next month. These below-average statistics indicate a high level of housing insecurity in these two areas. The good news is that the Riverside area seemed to be better equipped to help renters stay in the deferral program - out of all renter households that have deferred the past month's rent, 28.1% expected another deferred payment, which doubled the national average. The Los Angeles area is more accommodating to owner households that continue to need deferrals - the deferral rate (21.9%) was much higher than the national average (6.1%).

^{12 &}quot;America's Rental Housing 2020." Joint Center for Housing Studies of Harvard University. (2020). Retrieved June 30, 2020, from https://www.jchs.harvard.edu/americas-rental-housing-2020

Figure 4 Riverside-San Bernardino-Ontario MSA: Confidence of Housing Payment for the Next Month Differentiated by Payment Status for the Past Month

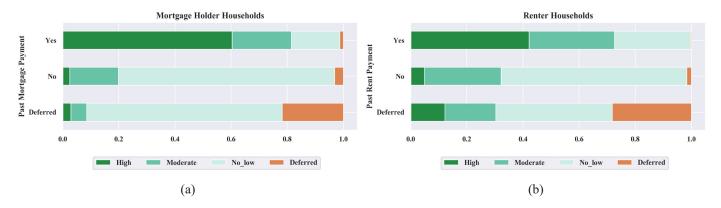
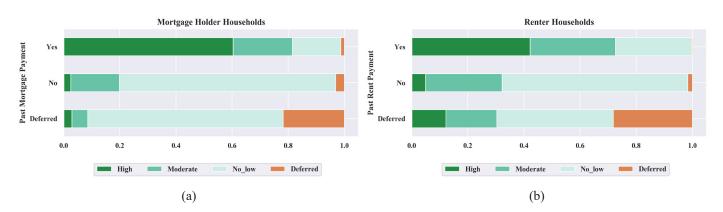


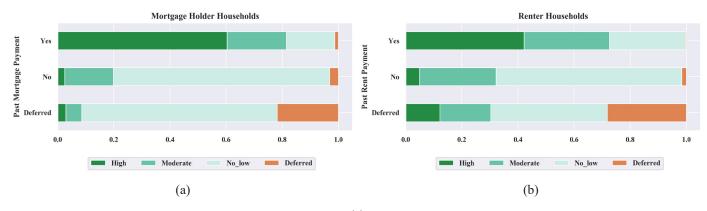
Figure 5 Los Angeles-Long Beach-Anaheim MSA:



Racial Disparities & Housing Insecurity

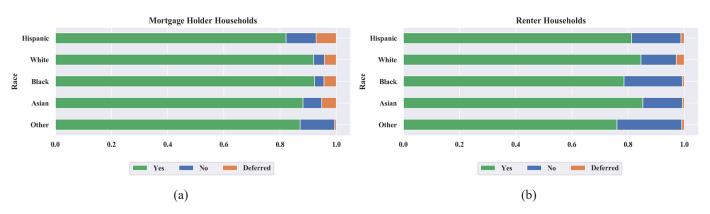
We differentiate five racial groups - Hispanic/Latino, Non-Hispanic White, Non-Hispanic Black, Non-Hispanic Asian, and Other, for an investigation of racial disparities in housing security. As displayed in Figure 6, nationally, minority groups had lower rates of on-time payments in the past month, with the exception of Non-Hispanic Asian renter households. Among all groups, Non-Hispanic White owner households had the highest percentage of making mortgage payments (91.1%) and lowest percentage of missing payments (5.3%). In contrast, Non-Hispanic Black renter households had the lowest percentage of making rent payments (72.4%) and the highest percentage of failing (25.5%). These statistics indicate a considerable level of racial disparity in housing insecurity amid the pandemic.

Figure 6 National Trend: Housing Payment Status for the Past Month for Five Racial Groups



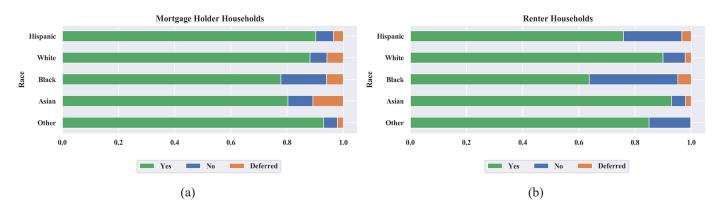
The two largest MSAs in Southern California exhibit patterns which are dissimilar in some aspects. As shown in Figure 7, in the Inland MSA, there was not a significant difference between White and Black owner/renter households. Renter households of the "Other" race category experienced the highest level of housing insecurity - 76% paid the rent on time and 23% did not.

Figure 7 Riverside-San Bernardino-Ontario MSA: Housing Payment Status for the Past Month for Five Racial Groups



The data from the coastal region (Los Angeles-Long Beach-Anaheim MS) tells a very different story as shown in Figure 8. A larger level of racial disparity is observed. In particular, there was a large divide between Non-Hispanic Black and White renter households. Only 63.7% Non-Hispanic Black renter households paid the past month's rent on time, and 31.5% failed to do so, which is in sharp contrast with 89.9% and 7.9% for Non-Hispanic White renter households. Another interesting pattern is that in this region, Non-Hispanic White households did not outperform every other racial group and possibly lagged behind some racial groups in making last month's payments.

Figure 8 Los Angeles-Long Beach-Anaheim MSA: Housing Payment Status for the Past Month for Five Racial Groups



Income Insecurity & Housing Insecurity

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Housing insecurity will undoubtedly be intensified by COVID-19's economic downturn – an economic downturn that some speculate will push the world into a deep recession.¹³ We investigate the relationship

^{13 &}quot;COVID-19 to Plunge Global Economy into Worst Recession since World War II." The World Bank. (June 8, 2020). Retrieved July 1, 2020, from <a href="https://www.worldbank.org/en/news/press-release/2020/06/08/covid-19-to-plunge-global-economy-into-worst-recession-since-world-war-recession-since-world-wa

between households'housing insecurity and income insecurity in the form of experiencing losses of employment incomes since March 13, 2020. The national trend displayed in Figure 9 reveals a positive relationship between income insecurity and housing insecurity. More specifically, households who have experienced a loss of employment incomes were less likely to make mortgage/rent payments on time in the last month regardless of tenure. Renter households that have experienced losses of incomes had a higher level of housing insecurity compared with owner households.

The patterns for the two metropolitan areas in Southern California are quite similar to the national trend, as shown in Figures 10 and 11. However, it should be noted that a higher proportion of owner/renter households have experienced losses of employment incomes in these two regions compared with the national average. Nationally, 47.1% owner households and 57.2% renter households had such experience. By contrast, in Riverside-San Bernardino-Ontario MSA, the percentages are 57.9% and 65.7% respectively, while in the coastal region, they are 54.9% and 66.3%.

Figure 9 National Trend: Housing Payment Status for the Past Month Differentiated by Losses of Employment Incomes since Mar 13, 2020

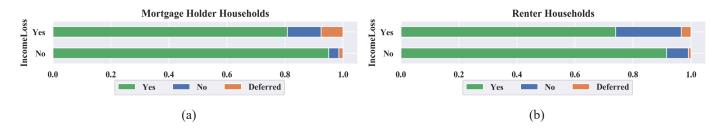


Figure 10 Riverside-San Bernardino-Ontario MSA: Housing Payment Status for the Past Month Differentiated by Losses of Employment Incomes since Mar 13, 2020

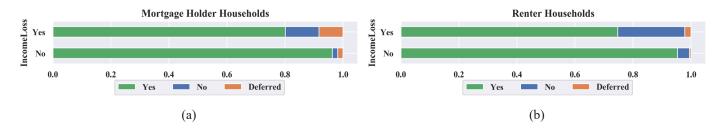
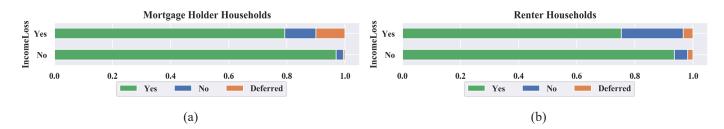


Figure 11 Los Angeles-Long Beach-Anaheim MSA:
Housing Payment Status for the Past Month Differentiated by Losses of Employment Incomes since Mar 13, 2020



Conclusion

The economic insecurity ushered in by the COVID-19 era has turned the U.S. housing unaffordability and unattainability problem into a crisis for the impoverished and middle class alike. In 2017, about 4% mortgage holder households and 7% renter households missed mortgage/rent payments in the last three months as indicated by the 2017 American Housing Survey (AHS). The numbers rose sharply to 12% and 18%, respectively, in 2020 (surveyed during April 23 – June 2) amid the COVID-19 pandemic when only considering the payment status in the past month. This staggering contrast indicates the extremely intensified housing issues across the U.S. for both homeowners and renters.

Actions have been taken to address housing issues at all governmental levels, including mortgage forbearance, foreclosure moratorium, eviction moratorium, rent protection, and rental assistance programs. Most of these actions are targeted at preventing households from losing their homes and reducing housing insecurity and instability. As these emergency measures vary greatly in form and degree of protection, especially at the local level, households residing in one place could have a very different experience from those living in another place in securing their homes. This report represents a first step to reveal the spatially heterogeneous experiences of housing insecurity across metropolitan U.S.

We analyzed five weeks (April 23, 2020 - June 2, 2020) of near real-time data from the HPS to shed light on the extent of the housing insecurity for owner and renter households amid COVID-19. We found evidence of strong spatial heterogeneity across 15 most populous MSAs. The proportion of failing to make mortgage payments in the past month varied from 7% in the San Francisco-Oakland-Berkeley, CA MSA and 13% in the Miami-Fort Lauderdale-Pompano Beach, FL MSA. The variation was even larger for renter households with the smallest being 10% in the Seattle-Tacoma-Bellevue, WA MSA, and largest being 31% in the Miami-Fort Lauderdale-Pompano Beach, FL MSA. The Riverside-San Bernardino-Ontario CA MSA underperformed in housing security across multiple dimensions for both owner and renter households. Further, we found evidence supporting disproportionate impacts of the COVID-19 pandemic on racial groups. While nationally, Non-Hispanic White owner households experienced the lowest housing insecurity and Non-Hispanic Black renter households experienced the highest housing insecurity, the trends at the national level are not replicated in the Riverside and Los Angeles Metropolitan Areas. These two areas clearly have their distinct stories, a result of differing geographies, demographics, policies, institutions, and economic structures.

The data also supports a positive relationship between income insecurity and housing insecurity. Unfortunately, as the pandemic continues, economic prosperity and housing security, or the lack thereof will increasingly become a part of American life. With the implementation of stay-at-home orders, housing has become a crucial protection from the virus, especially for vulnerable populations. Continued local and state policies, like deferral or anti-eviction legislation, catered towards well-being and security are especially vital during this time of uncertainty.

Looking forward, as several states have lifted eviction bans and reopened the housing courts, we expect that a large proportion of renter households who failed to make payments or deferred payments for the past several months will be faced with a high chance of losing their homes. This could be detrimental to their physical and mental health, especially when the country, as of early July 2020, is seeing substantial increases in infection cases in the southeast and southwest regions.

¹⁴ Statistics are estimated based on data from 2017 AHS Delinquent Payments and Notices Table.

There is exciting news at the federal level: expansions of protection of renters are under consideration. On June 29, 2020, Senator Elizabeth Warren filed a bill entitled "Protecting Renters from Evictions and Fees Act". This bill would extend eviction protections for one year, starting from March 27, 2020, and would also substantially expand the current federal eviction moratorium to include more renters. We are also intrigued by the innovative approaches to addressing the exacerbated housing crisis in several localities. For instance, New York City is seeking to convert commercial hotels into affordable housing to, as they say, "kill two birds with one stone" - to salvage the hard-hit tourism industry and to save on building affordable housing from ground up. Seattle is making similar efforts by redeveloping a mall into a 300-unit apartment complex. Finally, non-profit organizations in Asheville NC, one of the most gentrified cities in the country, have started a tiny-home program to promote affordable housing, equity and the fight against high COVID-19 infection rates. These local innovations in revitalizing the economy and increasing the affordable housing supply could be promising to fight the housing crisis amid the pandemic. We recommend localities pay particular attention to these efforts and how they might implement similar programs and foster collaborations between the government, developers, businesses, and non-profit organizations to enact innovative solutions to house families, revitalize businesses, and fight housing and income insecurity.

^{15 &}quot;Exclusive: Sen. Elizabeth Warren introduces nationwide eviction moratorium bill." Vox. (June 29, 2020). Retrieved June 30, 2020, from https://www.vox.com/2020/6/29/21306066/eviction-moratorium-senate-bill-elizabeth-warren-chuy-garcia

^{16 &}quot;Pandemic-Emptied Hotels Could Become Affordable Housing, City Officials Suggest." The City. (June 25, 2020). Retrieved June 29, 2020, from https://www.thecity.nyc/housing/2020/6/25/21303923/hotels-could-become-affordable-housing-in-nyc

^{17 &}quot;Pandemic-Emptied Hotels Could Become Affordable Housing, City Officials Suggest." The City. (June 25, 2020). Retrieved June 29, 2020, from https://www.thecity.nyc/housing/2020/6/25/21303923/hotels-could-become-affordable-housing-in-nyc

^{18 &}quot;Pandemic-Emptied Hotels Could Become Affordable Housing, City Officials Suggest." The City. (June 25, 2020). Retrieved June 29, 2020, from https://www.thecity.nyc/housing/2020/6/25/21303923/hotels-could-become-affordable-housing-in-nyc

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