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Recession and Recovery: The Critical Role of Housing Assistance in Promoting Economic Security for Low-Income Households

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As the nation confronts its greatest economic downturn since the Great Depression, concerns related to housing affordability and stability loom large. An estimated 12–15 million renters are likely to be immediately affected by job or income losses from the COVID-19 pandemic.[1] Although not news to the 20 million renters who have long faced housing insecurity owing to high housing costs,[2] the pandemic and resulting job losses have raised concerns about the lack of housing rental subsidies, particularly for lower-income households.

Research has shown that housing security and affordability promote economic stability. It is hard to find or keep a job when you face eviction or involuntary moves.[3] In addition, high housing costs and housing instability can limit opportunities for economic advancement, negatively affect children's ability to do well in school,[4] and contribute to poor health.[5] Government support for subsidized housing—including the construction of new units and tenant-based subsidies—is therefore critical to building a platform for household financial stability and well-being. However, evidence for how affordable housing influences economic mobility is still limited, and most studies focus on public housing residents or on recipients of Housing Choice Vouchers (HCV), a key housing subsidy for low-income families.[6] Missing is evidence for how residents living in properties funded by the Low-Income Housing Tax Credit (LIHTC) fare over time,[7] despite LIHTC units composing the largest share of the subsidized housing stock in the United States today.[8]

In this research brief we explore the factors that influence renters' economic circumstances over time by analyzing longitudinal data on California families living in subsidized housing managed by Eden Housing, a nonprofit affordable housing developer. The data span households who moved into a subsidized unit between 2003 and 2019 and represent two different types of housing subsidies: LIHTC rental units and units subsidized by the Department of Housing and Urban Development (HUD), such as Housing Choice Vouchers or public housing (e.g., project-based Section 8 units).

The analysis provides a unique window into how lower-income households fare in times of economic growth and decline and underscores the importance of housing subsidies in stabilizing households who are either unable to work or who are working in lower-wage jobs. The findings are particularly important given that lower-income households are likely to experience the current recession more profoundly (and for a longer time) than higher-income households, as their jobs and incomes are inherently less secure and they are less likely to have the necessary savings to fall back on.[9]

The analysis points to three important findings. First, housing assistance is critical to stabilizing low-income households, especially those who are unlikely to ever see their incomes match market rents. In particular, seniors, people with disabilities living on fixed incomes, and very low-income workers need greater subsidies than LIHTC alone can provide. The research lends support for expanding housing vouchers and preserving and expanding the public housing stock to secure against evictions and homelessness, particularly in high-cost states like California where market rents far outstrip monthly incomes.

Second, for working households, housing stability is associated with household income growth over time. The number of years in an Eden property is positively associated with increased income, even after controlling for other factors. We find that from 2004 to 2019, employed residents living in subsidized housing saw their household incomes rise substantially, from $37,693 in 2004 to

$47,969 in 2019, or just over 20 percent in real terms. These gains occurred across housing subsidy types and racial-ethnic groups and are influenced by household composition (e.g., a second adult going to work), labor market factors (such as whether the economy was growing or shrinking), and neighborhood conditions. Although more research is needed to assess the causal effect of affordable housing on these income gains, the data nevertheless demonstrate an association between housing security and income growth. This stands in stark contrast to the narrative that housing subsidies create a disincentive to work and depress earnings.[10]

However, the analysis also shows that these potential gains are constrained by labor and housing market conditions. Almost all income gains accrue to those households making more than $40,000. For households earning $25,000 or less, incomes since 2003 remained largely flat, and many households have yet to recover from the last recession. Of particular relevance for the current moment, low-income households are particularly vulnerable to income losses during economic downturns. During the Great Recession, more than one in three Eden households saw their incomes decline by more than 10 percent from one year to the next, and one in four saw their incomes decline by more than 30 percent.

Third, the tenuous economic circumstances of lower-wage workers are exacerbated when viewed alongside local housing costs. In 2019, even Eden residents with higher incomes would find market-rate apartments unaffordable. California's continued failure to build enough housing—especially for moderate-income households—means that even when households do see sustained income gains, leaving subsidized housing likely entails trading an affordable, high-quality home for a substandard or overcrowded home at a significantly higher cost, undermining households' ability to move up the housing ladder.

These findings, while limited to only a segment of California's subsidized rental households, are particularly relevant given the likely long-term impact that COVID-19 will have on lower-income renters. Even as the labor market shows modest improvements in jobless claims, the path to recovery for lower-income households and households of color will likely be significantly longer.[11] The cumulative impact of not investing enough in affordable housing production and preservation, coupled with the continued lack of a bold federal response to COVID-19's disruptions in the rental market, will exacerbate housing insecurity among lower-income renters and potentially push more into homelessness.

The evidence presented here demonstrates the value of subsidized housing in ensuring that lower-income families can stay in their homes even during economic crises and in providing a much needed hedge against the lack of mobility at the lower end of the labor market.

Data and Methods

Before discussing the findings in detail and offering policy recommendations, we first describe our data and methods. This report draws on data provided by Eden Housing, which manages more than 10,000 units in 100 properties across California. One of the largest mission-driven, affordable housing developers in the state, Eden Housing serves approximately 22,000 low-income residents. In addition to developing housing, Eden Housing manages its own properties and provides resident services.

Eden's resident property management database includes all the existing records for properties from 1982 until 2019. The data used here are structured as a monthly panel at the housing unit level. At least once a year, the administrative data are updated to reflect any changes in household composition, income, or rent levels. These annual re-certifications are required to ensure compliance with housing subsidy program rules, though they can occur at different points during the year. The database is also updated when a resident moves in or out or when resident elect to notify Eden of a change to their status. In addition to time-series data on changes to resident incomes, the data set includes the resident's age, race and ethnicity, gender, information about the subsidy source attached to the unit, income sources, and rent paid.

One of the advantages of the Eden data set is that it includes residents living in units covered by different types of housing subsidies, including HUD's HOME Investment Partnerships Program, project-based Section 8 units, USDA Rural Development, and the LIHTC program. Rent calculations in LIHTC units operate differently from those in the other programs. Under the LIHTC program, rents are set at the unit level (most commonly at a level that would be affordable to a household at either 50 or 60 percent of the area's median income) and do not change with household income. In other words, the subsidy is calculated based on the unit rather than the income of the resident. In other government-subsidized programs, in contrast, rents are generally set at 30 percent of the tenant's income and rise or fall in sync with that income. In addition, some residents living in a LIHTC unit also have a Housing Choice Voucher (HCV) to help offset rents. In this case, the voucher pays the difference between the LIHTC rent and 30 percent of the household income.

To construct the longitudinal data set, we created a unique ID for each resident based on their household ID, name, and birth date. This allowed us to track residents and households even when they changed units. The rolling nature of rent re-certifications, coupled with data entry errors often found in administrative data, required that we make some assumptions when using the data. Where possible, we imputed missing information for race-ethnicity and gender using data from either previous or subsequent years. In addition, rather than focusing our analysis on the monthly panel, we simplified the data set by averaging incomes and rents for each calendar year.[12] We also matched each property to its corresponding census tract and merged in information from the U.S. Census and American Community Survey based on the observation year.[13]

Table 1 provides basic characteristics of Eden residents for the year they moved into the property (baseline). The sample includes 9,864 unique households with 26,452 residents across 126 properties. There is significant racial and ethnic diversity across the sample. The sample has a greater share of Latinx (40.3 percent) and Black (23.5 percent) residents than for LIHTC projects statewide. The percentage of non-Hispanic White residents more closely mirrors the state.[14] Approximately 58 percent of Eden's residents are female. Only 13.4 percent of the population is over age 70, consistent with Eden's focus on family housing. Thirteen percent of residents have a disability or receive Supplemental Security

Table 1: Descriptive Characteristics (at move in) of Eden Residents

Race-Ethnicity	**No.**	**%**	**Unit Subsidy**	**No.**	**%**
Non-Hispanic White	4,066	16.7	HUD Subsidized	1,856	18.8
Black	5,719	23.5	LIHTC	6,405	64.9
Latinx	9,831	40.3	LIHTC + HUD	1,603	16.3
Asian and Pacific Islander	4,066	16.7			
Other	930	3.8			
Age			**Move in Date**		
Child (under 18)	10,086	38.1	Before 2000	225	2.3
Young Adult (18-25)	3,459	13.1	2000–2006	616	6.2
Adult (25-70)	9,361	35.4	2007–2011	3,333	33.8
Senior (over 70)	3,546	13.4	After 2012	5,690	57.7
Has a Disability	3,504	13.3			
Gender			**Number of Individuals**		26,452
Female	15,371	58.1	**Number of Households**		9,864
Male	11,036	41.7			
No response	42	0.2			

Income (SSI), though Eden staff believe this is likely an underestimate of those with a disability. Nearly 98 percent of households in the data set moved in after 2000, the result of both resident attrition and the expansion of Eden's portfolio of new properties.

The LIHTC program funds approximately 65 percent of the units in Eden's portfolio, while HUD and rural development subsidy programs cover 19 percent. For simplicity, we refer to these HUD and rural development units—which as noted above set rents based on household income—as "HUD subsidized" units. Another 16 percent of units include layered subsidies, which means that the unit was financed by the LIHTC program but the household also uses an HCV or other source of HUD funds to cover the difference between household income and LIHTC rents. We refer to these as "LIHTC + HUD" units.

The data reveal significant differences in the population living in LIHTC-subsidized units versus other forms of subsidized housing. Table 2 presents descriptive characteristics for residents across the three subsidy types. Consistent with O'Regan and Horn, we find that the average income of LITHC residents is significantly higher than those living in other forms of subsidized housing.[15] This is largely because the deeper subsidy available in the other programs allows developers to house lower-income households and, as a result, average rents are significantly lower. In addition, we find that residents living in HUD-subsidized units are older, have fewer household members, and are more likely to have a disability than those living in LIHTC units. Employment rates also differ substantially: 68.6 percent of households in a LIHTC unit are employed compared with just 16.2 percent of those living in a HUD-subsidized unit. The majority of residents in HUD-subsidized units are either retired or receiving SSI.

Table 2: Differences in Eden Resident Characteristics Across Subsidy Types (at move in)

	LIHTC	**HUD Subsidized**	**LIHTC+HUD**
Race-Ethnicity			
Non-Hispanic White	15.8%	17.0%	21.9%
Black	21.6%	17.2%	42.1%
Hispanic	46.0%	27.2%	17.9%
Asian and Pacific Islander	12.7%	34.9%	14.9%
Other	3.9%	3.8%	3.2%
Age			
Child (under 18)	42.3%	20.6%	28.7%
Young adult (18-25)	14.9%	6.6%	8.1%
Adult (25-70)	36.5%	27.0%	36.6%
Senior (over 70)	6.4%	45.8%	26.6%
Has a Disability	8.4%	32.6%	25.5%
Primary Income Source			
Employment	68.6%	16.2%	22.6%
Receives TANF/ Unemployment	4.8%	5.9%	5.6%
Social Security/Pension	14.5%	40.3%	45.5%
SSI	5.4%	25.8%	18.6%
Other/Unspecified	6.7%	11.7%	7.9%
Average Household Income	$35,873	$15,785	$17,866
Average Rent	$995	$333	$346
Average Household Size	2.4	1.6	1.6

Findings

We first present descriptive data on trends in income for Eden residents over time. We then turn to a regression model that can help explain which factors influence both household income and the likelihood that a household's income changes over time. A number of factors influence income changes, including composition of the household (for example, if a teenager graduates and enters the workforce), the age of the resident (as wages increase with years of experience), or neighborhood characteristics. A regression model allows us to control for those differences and highlight the conditions associated with better economic outcomes for lower-income households living in subsidized housing.

Residents' circumstances vary by different types of subsidized housing.

Among employed households (defined as a household with at least one adult in the labor force), residents living in LIHTC units have significantly higher incomes than those living in a HUD-subsidized unit (Table 3). This is true for households receiving SSI or retirement benefits as well. This demonstrates a significant limitation of the LIHTC program: especially in a high-cost area, LIHTC rents are often too high to be affordable to households earning less than 50 percent of the area median income (AMI). In addition, while on average employed households saw an increase in their incomes, retired and SSI households' real income remained flat overall or even declined. The analysis shows the importance of the income-based subsidies that HCV and project-based Section 8 programs provide, especially for households who are unlikely to experience wage gains over time.

For employed households, the Great Recession dampened incomes significantly; however, California's economic expansion after 2013 led to significant household income growth.

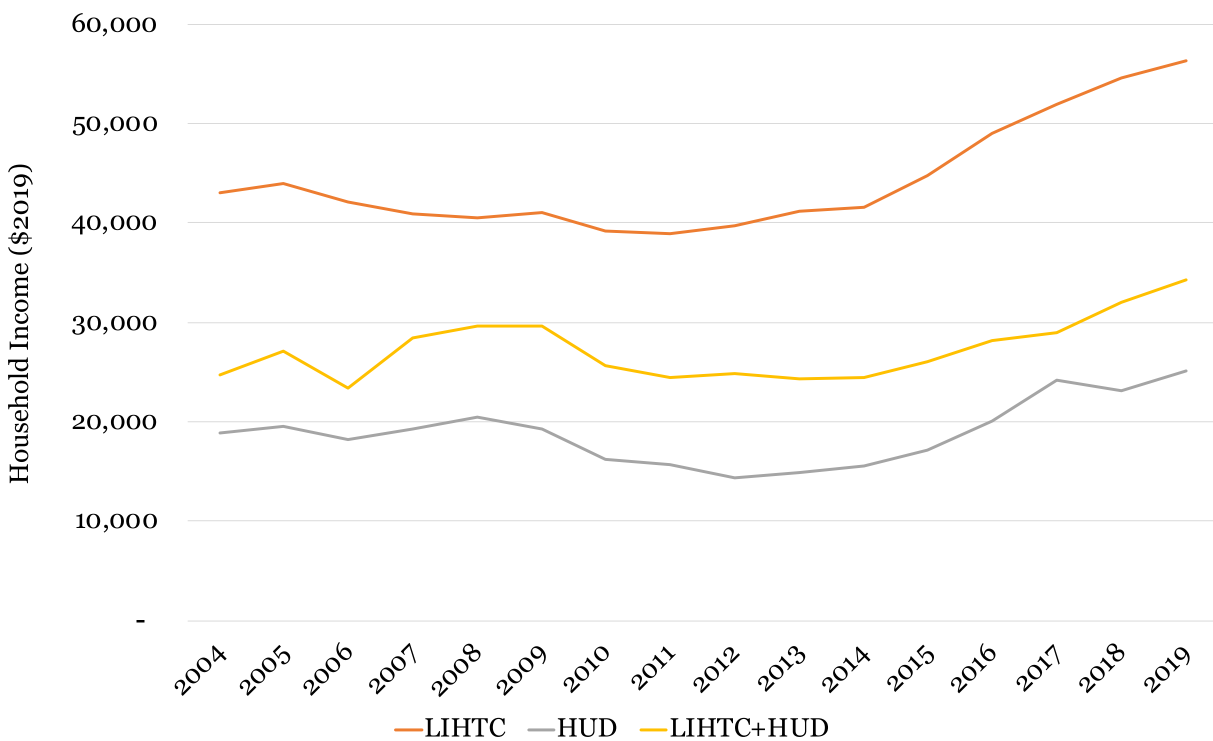
Figure 1 shows the importance of macroeconomic conditions to financial well-being. Between 2009 and 2013, Eden residents on average saw flat or declining household incomes. However, all households with at least one employed adult saw increases in income after 2014. Average LIHTC incomes rose from $41,649 in 2014 to $56,275 in 2019, a nearly 30 percent increase in just five years. Employed residents living in HUD-subsidized units also have experienced income gains in recent years, but their incomes were more negatively affected by the recession, such that the uptick after 2014 did not lead to as visible gains as for LIHTC households.

Table 3: Differences in Average Household Income by Subsidy and Income Type, Based on Move In/Last Observation

	LIHTC		HUD Subsidized		LIHTC+HUD	
	Move In	Move Out/Last Observation	Move In	Move Out/Last Observation	Move In	Move Out/Last Observation
Employed	$40,458	$46,997	$26,200	$29,571	$28,083	$34,323
Retired	$24,535	$22,867	$16,003	$15,223	$16,650	$17,042
SSI	$21,021	$19,640	$13,869	$13,006	$14,918	$14,136
Other	$27,680	$24,344	$9,204	$9,913	$11,233	$11,229

Notes: Dollar values adjusted for inflation.

Figure 1: Household Income Trends, Employed Households, 2004–2019



Note: Analysis only includes households with at least one working adult.

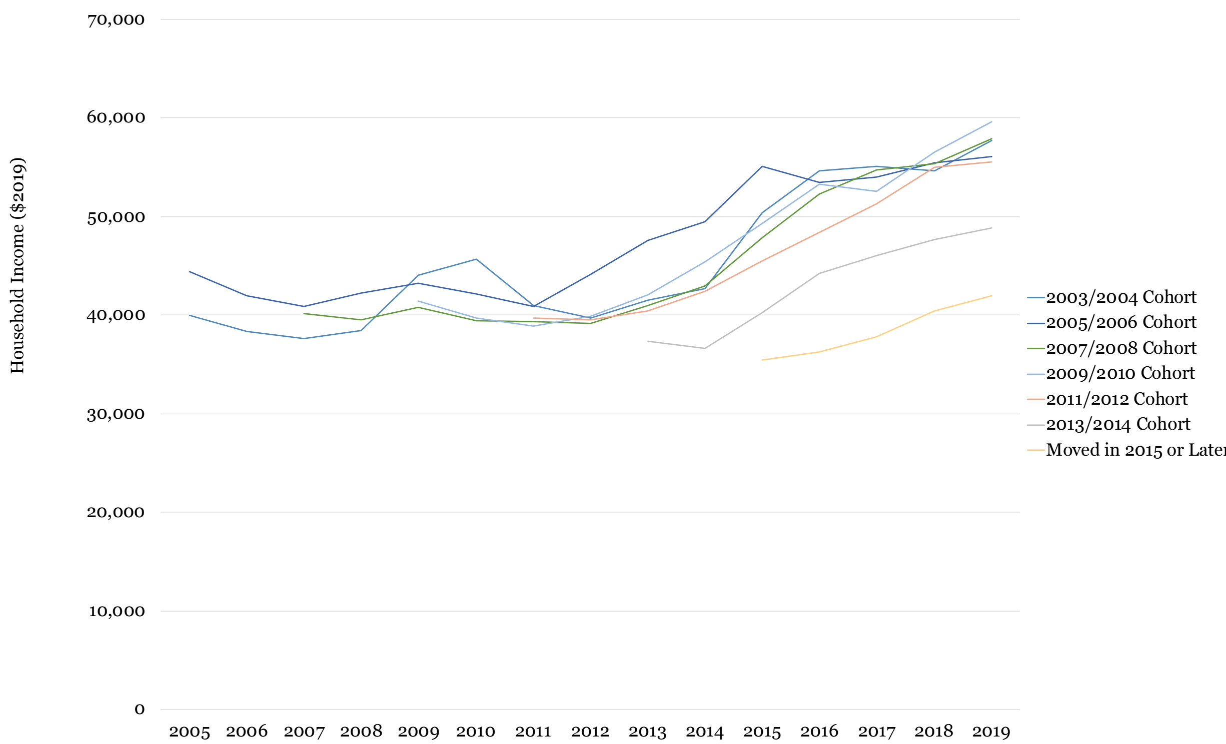
Income gains are not just from new households with higher incomes moving in.

In Figure 2, we present data on household income changes over time, stratified by the year that the household moved into an Eden property. One hypothesis is that because AMIs have risen in many parts of California, the average income of households in subsidized housing might rise when new households with higher incomes move in. We find the opposite: in recent years, the average income at move-in for employed households has been somewhat lower than for previous cohorts, and all cohorts saw meaningful increases in their household incomes over time. Interestingly, the gains appear to be higher for households who have lived in Eden properties for a longer period of time, suggesting that housing stability may play an important role in economic advancement.

All racial-ethnic groups saw income gains over time, although African-American residents have the lowest household incomes on average.

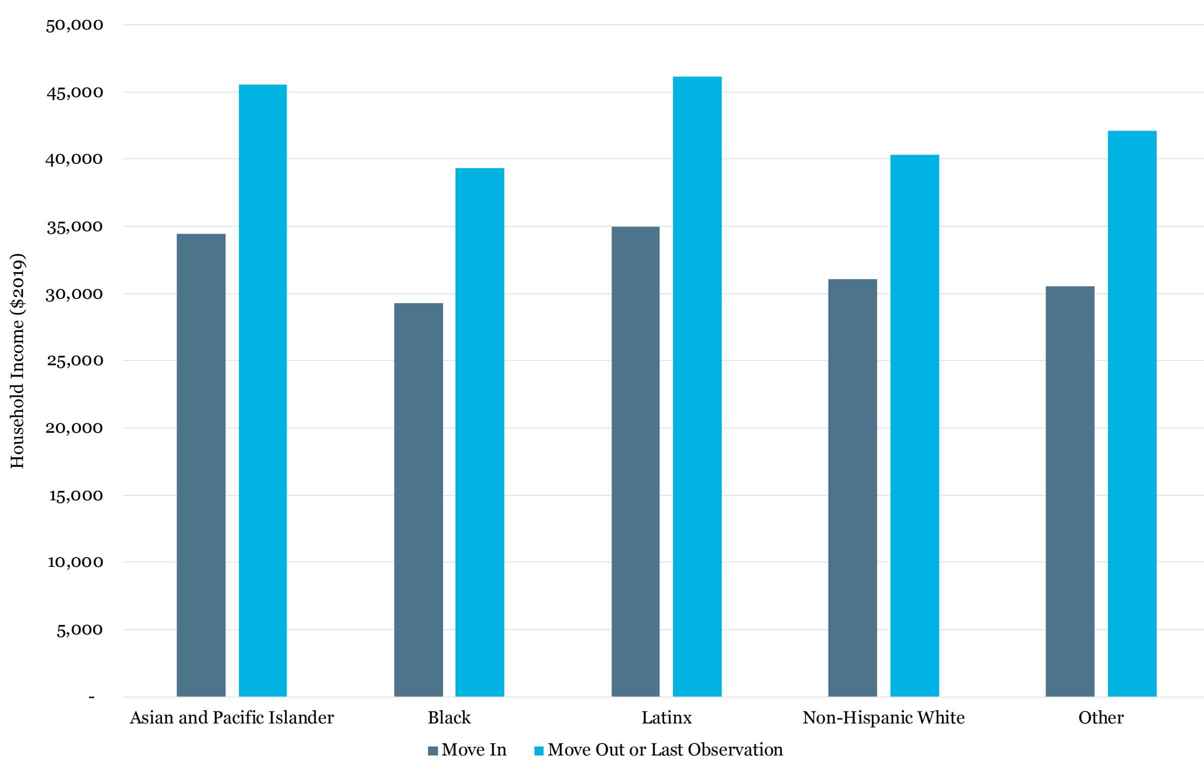
Figure 3 presents data on the difference in average household income by race-ethnicity of the household head between when a resident moved in and either moved out or at last observation. On average, household incomes rose by approximately 30 percent. Black and "Other" households saw the greatest gains (34 and 38 percent, respectively). Non-Hispanic Whites saw the smallest gains (30 percent). However, Black households still had the lowest incomes of any racial-ethnic group, though some of this can be explained by smaller households and fewer earners.

Figure 2: Income Trends for Eden Households by Year Moved In, 2005–2019



Note: Analysis only includes households that moved into a property after 2002 and that include at least one working adult.

Figure 3: Average Household Incomes for Residents at Move-In and Last Observation, by Race-Ethnicity



Note: Analysis only includes households with at least one working adult.

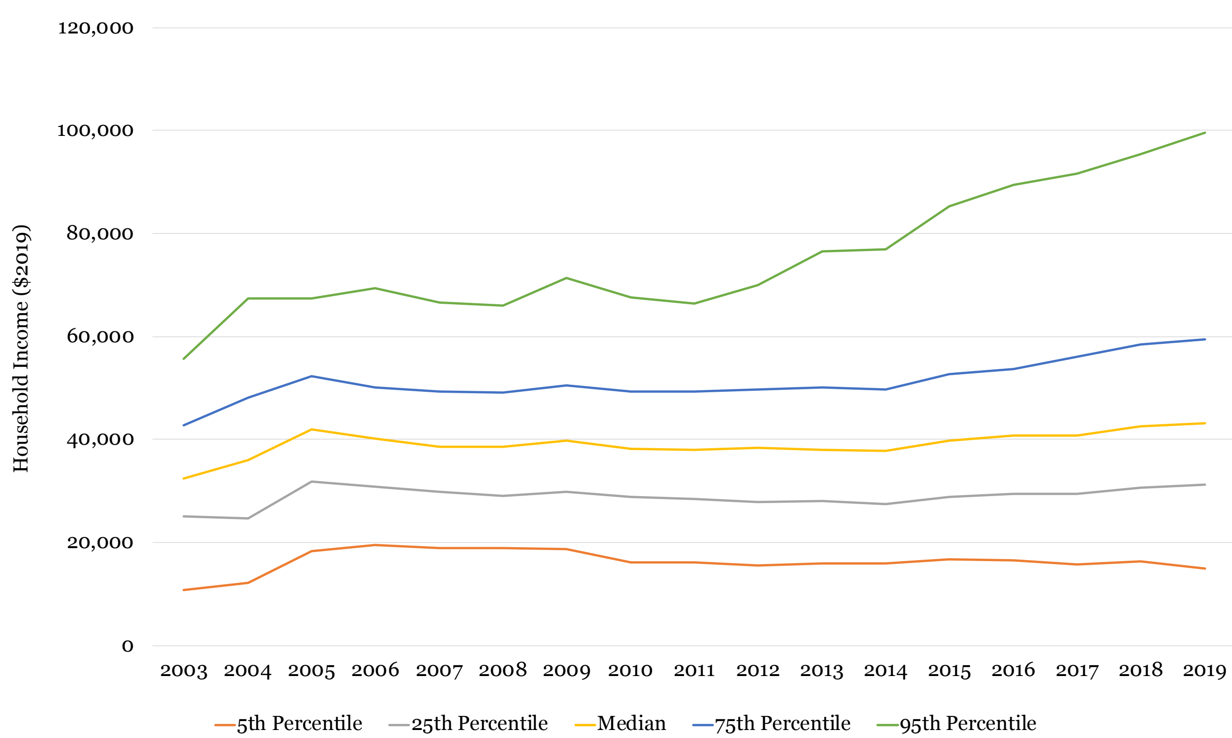
California's labor market provides very little upward income mobility for working households in lower-wage jobs.

Despite these positive findings, income gains are almost entirely concentrated among households earning more than $40,000 when they moved in. The findings are stark: for households earning less than $40,000 (the median for the sample), income growth has been flat, demonstrating the lack of an economic ladder for workers in lower-paid jobs (Figure 4). In particular, for households earning less than $25,000 a year, incomes declined during the recession and never fully recovered. In contrast, households earning above the median saw their incomes rise significantly. Households earning approximately $40,000 when they moved into a subsidized unit saw little growth during the recession, but during the recovery their incomes rose to just under $60,000. Households earning an average of $65,000 in 2010—which represents the top one-fifth of Eden residents—saw even stronger growth, with average household incomes rising to nearly $100,000 by 2019.

Lower-income workers experienced significant wage volatility.

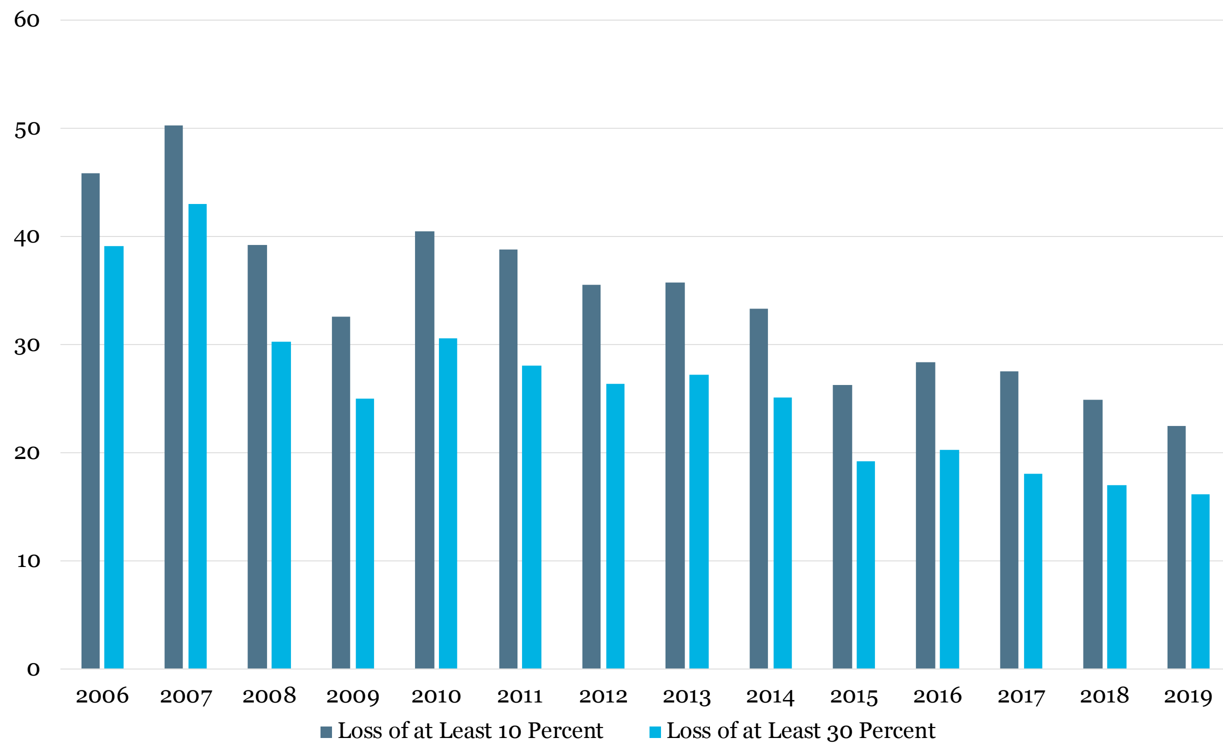
Qualitative research with LIHTC residents revealed another downside to contemporary labor markets. Not only are incomes often low with no pathways to economic advancement, but the jobs are also often short-term and uncertain.[16] The Eden data confirm this volatility. Between 2010 and 2013, more than 35 percent of households living in Eden properties experienced a year-over-year decline of more than 10 percent in their incomes (Figure 5), and one-quarter of households experienced a drop of more than 30 percent. Yet income volatility is not limited to economic downturns. Even during California's strong economic recovery between 2014 and 2019,

Figure 4: Average Annual Household Income for Employed Households by Income Percentile



Note: Analysis only includes households with at least one working adult.

Figure 5: Percent of Employed Households Whose Income Declined from the Prior Year, 2009–2019



Note: Analysis only includes households with at least one working adult.

more than 25 percent of employed households experienced income losses of greater than 10 percent from one year to the next.

This level of income volatility is one of the factors that makes low-income families in the private market vulnerable to eviction, and provides evidence that housing affordability and income are inextricably linked. Although affordable housing providers do evict tenants (e.g., for nonpayment of rent or violating lease terms), we find no differences in eviction rates by subsidy type for Eden residents, nor do we find that eviction rates rose during the recession. For residents with a HUD-subsidy, their rents will also go down if they experience sustained declines in their household income, ensuring that their rents remain affordable. For LIHTC residents, mission-driven affordable housing owners like Eden often work with residents to ensure that any income declines do not lead to eviction, for example, reducing rent or establishing a repayment plan to help households get back on their feet.[17]

However, a prolonged recession could put these households at risk.

One of the concerns flagged in earlier reports on LIHTC subsidies is that precisely because rents are set at the unit level and not by household income, LIHTC residents may be cost-burdened despite living in "affordable" housing. We find that in 2019, approximately 40 percent of LIHTC households were cost-burdened—paying more than 30 percent of their income on rent—and 13.5 percent were severely cost-burdened, paying more than 50 percent of their income on rent. In contrast, fewer than 3 percent of residents in HUD-subsidized units were cost-burdened (Figure 6). The higher cost burdens for LIHTC residents could lead to higher eviction rates if they lost a job owing to COVID-19. The structure of the LIHTC subsidy obligates the developer to repay debt on the property, and the financial viability of the property can be at risk if residents cannot pay their rent. Without

Figure 6: Cost Burden by Subsidy Type, 2019

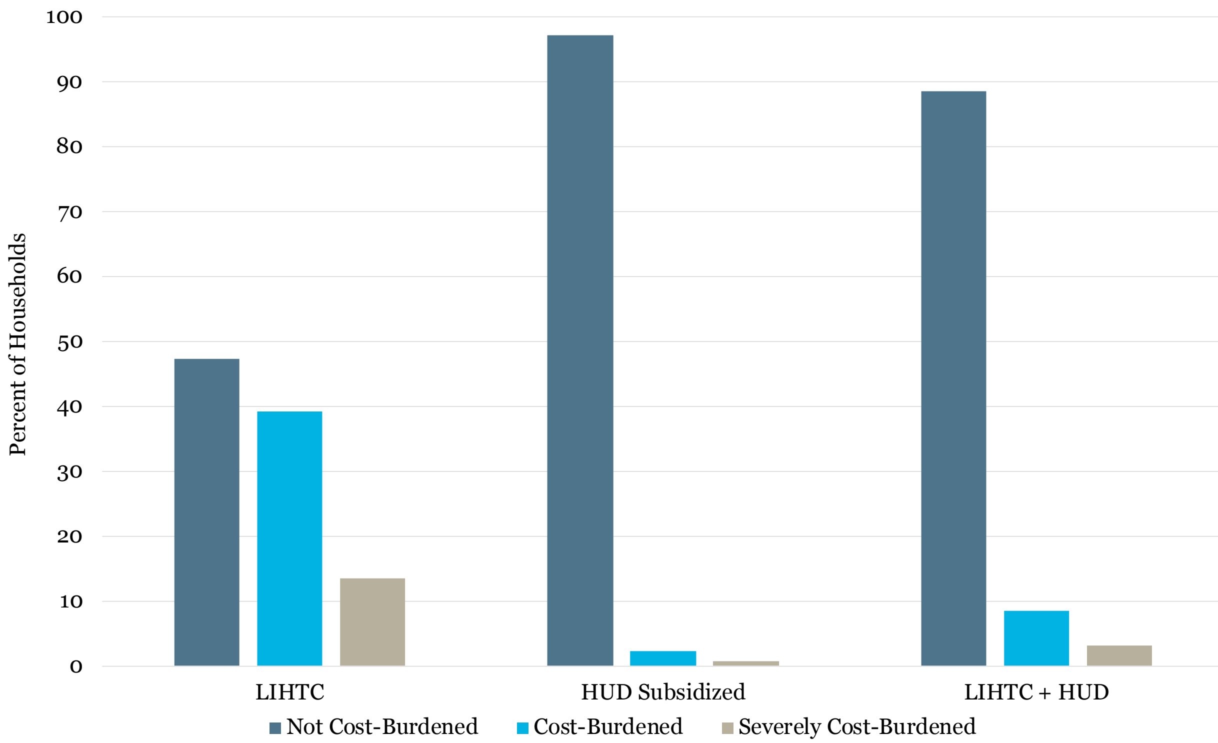
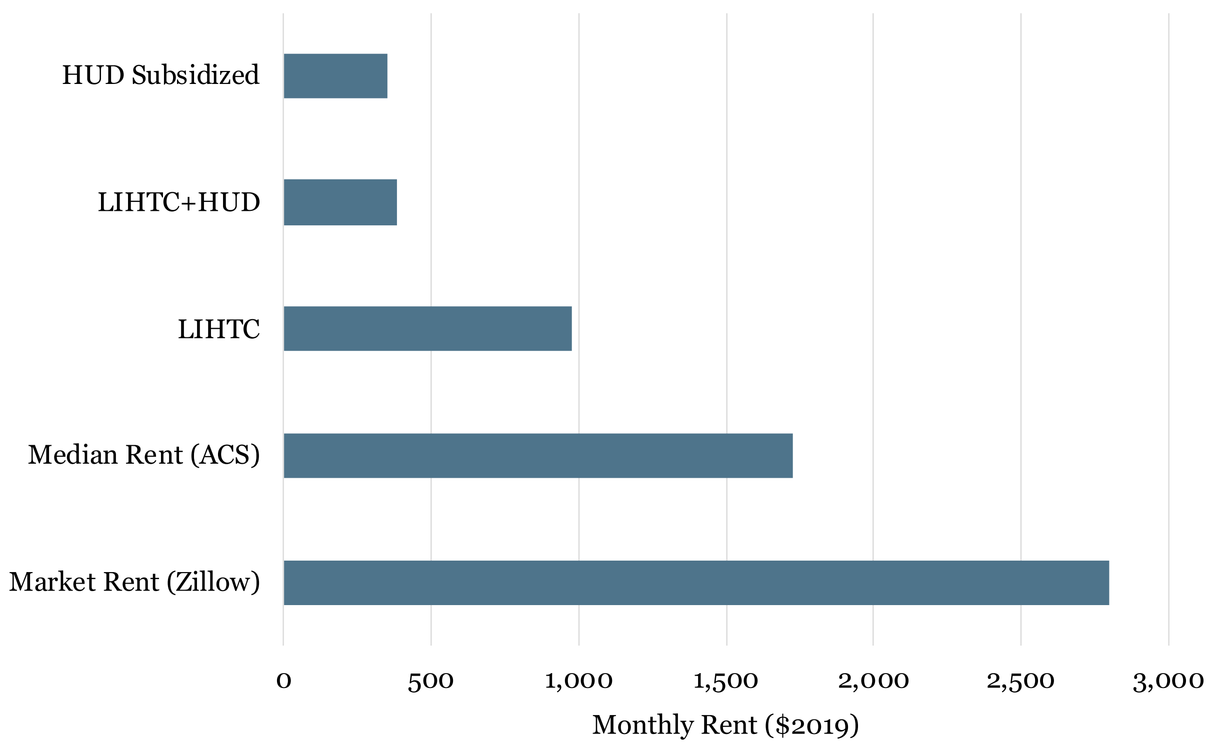


Figure 7: Comparison Between Eden Residents' Rents and Market Rents, 2019



other forms of subsidy, significant economic downturns (like that anticipated as a result of COVID-19) could lead to higher eviction rates even for residents in LIHTC-subsidized units.

However, households' circumstances would be significantly worse if they were renting in the private market. Figure 7 illustrates the difference between the monthly rents that residents in our sample pay (in 2019) and typical market rents in those same cities. In the cities where Eden properties are located, average rents (based on a five-year rolling average for all rented units) are approximately $1,700, while new rental properties on the market are, on average, $2,800 a month.

While the results point to the clear benefits of subsidized housing, they also show the failures of California's broader housing market to provide sufficient housing options for families at different income levels.

Despite significant economic advancement among the top 25 percent of Eden's households, high market rents in California mean there is little incentive—or opportunity—to leave a subsidized unit for the private market. For those Eden residents with a listed reason for moving, only 4 percent were able to move into the private rental market or buy a home. Table 4 shows the median and average length of tenure for Eden households, as well as what percentage of households in each cohort was still present in 2019. Although we see variation across cohorts, a significant share of households remains in subsidized housing.

While multiple factors are associated with household income and changes over time, the strength of the labor market is a critical determinant of economic well-being.

Table 5 presents the results of two separate regression models, each structured as a random effects linear regression. The first model, in Panel A, examines the factors associated with how much a household earns in any given year. The second model, in Panel B, examines the factors associated with how much a household's income changes over time, measured as the change between when a household moves into an Eden property and when they leave (or 2019, if they are still living in an Eden unit). We exclude households with only retired adults or adults receiving SSI.

Table 4: Length of Tenure of Eden Households by Move-In Date

	Total	Median Years	Average Years	Percent Still in Unit
Moved in Prior to 2003	234	19	17	48.7%
2003/2004 Cohort	182	10	10	40.7%
2005/2006 Cohort	502	4	6	23.3%
2007/2008 Cohort	865	4	6	27.8%
2009/2010 Cohort	802	5	5	36.4%
2011/2012 Cohort	941	7	5	50.6%
2013/2014 Cohort	1,156	5	4	66.4%
Moved in 2015 or Later	2,395	2	2	88.9%

Notes: Dollar values adjusted for inflation.

Table 5: Household Income and Changes in Household Income Over Time

Panel A: Household Income			**Panel B: Change in Household Income Over Time**		
	Estimate			**Estimate**	
Household Head			**Household Head**		
Age	214.46	***	Age	-167.1	
Age Squared	-2.31	***	Age Squared	1.2	
Race/Ethnicity (comparison: Non-Hispanic White)			**Race/Ethnicity** (comparison: Non-Hispanic White)		
Black	90.20		Black	230.24	
Latinx	1,038.42		Latinx	-725.69	
Asian	-1,028.09		Asian	109.14	
Household Composition			**Household Composition**		
Household Size	1,289.36	***	Household Size	980.51	***
Number of Working Adults	9,099.21	***	Added Working Adult	13,904.00	***
			Lost Working Adult	-9,552.77	***
Subsidy (comparison: HUD Subsidized)			**Subsidy** (comparison: HUD Subsidized)		
LIHTC	13,349.74	***	LIHTC	1,880.34	
LIHTC+HUD	2,952.77		LIHTC+HUD	-1,931.17	
Number of Years in Eden Property	601.35	***	Number of Years in Eden Property	1,098.73	***
Neighborhood Characteristics			**Neighborhood Characteristics**		
Poverty Rate	-51.98	***	Poverty Rate	-60.77	
Unemployment Rate	39.26		Unemployment Rate	-69.31	
Percent People of Color	71.42	***	Percent People of Color	-19.12	
Percent Homeowners	66.75	***	Percent Homeowners	-32.84	
			Poverty Rate Increased	-1,906.19	*
Economic Expansion (post 2013)	2,914.62	***	**Economic Expansion (post 2013)**	5,200.72	***

Note: Analysis only includes households with at least one working adult. *** p-value < .0001, ** < .001, * < .01.

The results in Table 5 point to the factors that are associated with household income for residents living in subsidized housing. Household composition, in particular, plays a critical role in both household income and change over time. Not surprisingly, larger households and households with more employed adults have higher household incomes. We also find that the most important factor in rising incomes is adding an earner to the household—for example, when a child grows up and enters the workforce or a nonworking adult gets a job. In contrast, losing an earner (e.g., from retirement or divorce) leads to a significant loss of household income.

Age is also associated with higher household incomes (the older the household head the greater the probability of higher incomes), though as residents get older the effect of age is lessened (age squared). Age is not statistically significant in the model for change over time.[18] We do not find any statistically significant differences in either household income or the likelihood of household income gains over time for Black or Latinx households compared with non-Hispanic White households. When we do not control for household size, Latinx households see higher income gains over time, and Blacks and Asians see lower gains, reinforcing the importance of multiple earners to household income.

While LIHTC household incomes are substantially higher than for HUD-subsidized and HUD+LIHTC units, the subsidy type is not associated with whether a household's income increases over time. This suggests that even when rents rise in tandem with increased incomes, households living in subsidized housing do not necessarily decrease work effort. We also find that length of tenure is associated with increased household incomes and the likelihood that a household's income increases over time, all things being equal. While significantly more research is needed in this area—including the possibility of "threshold" effects and whether the subsidy type influences how many household members enter the workforce or stay in subsidized housing—the model results nevertheless support the idea that affordable and stable housing can serve as a platform for economic mobility for working-age households.

The model also examines to what extent neighborhood and macro-economic factors influence household income. Clearly, overall economic conditions matter; in both models, incomes and income change are both higher post-2013 during a period of strong job growth and economic expansion.[19] Residents living in neighborhoods with higher poverty rates have lower household incomes, while those living neighborhoods with a higher percentage of homeowners have higher incomes, after controlling for the other factors in the model. However, the percentage of people of color in a neighborhood is associated with a higher household income for Eden residents, and the neighborhood unemployment rate is not significant, suggesting that more research is needed to determine the best approach to measuring opportunity neighborhoods. In the model for income change, none of the neighborhood factors have an influence on how much earnings rise, with one exception. Residents in neighborhoods where poverty rates have increased see less income growth than those in neighborhoods with stable or decreasing poverty rates. Again, more research is needed to understand the interactions between neighborhood conditions and economic mobility, but the findings point to complex relationships between local conditions and household incomes. They also point to the need to take into account the role of neighborhood changes over time in shaping economic outcomes for lower-income households.

Conclusion

As far as we know, this is the first study that has compared changes in LIHTC resident incomes with residents living in HUD-subsidized units over time. Although the research is limited in important ways—it only focuses on a subset of rental properties in California, and the data are missing some key variables such as residents' educational attainment—the analysis nevertheless surfaces findings with important implications for public policy.

First, the need for expanded access to rental subsidies—particularly in light of the economic disruptions caused by the COVID-19 pandemic—is clear. Among employed Eden residents, we find evidence of significant income volatility during the last recession, with a significant share experiencing income losses of 10-30 percent or more. Without increased access to rental subsidies, households in both LIHTC units and in the private market will face increased evictions, which in turn will increase their risk of homelessness and long-term financial instability. The single most important focus for policy-makers right now should be on providing benefits for those who have lost income due to COVID-19, be it by extending emergency vouchers or offering property owners long-term subordinate loans through the U.S. Treasury to help cover forgone rents. Regardless of the delivery mechanism, policymakers must focus on subsidies to ensure rental affordability and sustainability through the crisis and recovery.[20]

Second, and building on the first, the findings suggest the need to develop a more targeted and streamlined system for providing housing subsidies going forward. For too long, the field has relied on the LIHTC program to build and manage new affordable housing units, but the lack of other tools to produce new affordable stock means that LIHTC is increasingly being asked to serve extremely low-income households. However, the costs of building and operating these units are high,[21] and the financial structure of the program means that it is not well suited for meeting the needs of those households who are at lower income thresholds. The findings of this analysis show that the incomes of lower-earning households as well as those on fixed incomes have remained relatively flat over time, suggesting that these renters will likely need access to deep housing subsidies over the long-term. For households at 30 percent of AMI and below, it is time to strengthen HUD's subsidy programs and extend housing assistance as an entitlement, given that these households are likely to be those most vulnerable to eviction and homelessness.

Third, as long as California fails to build sufficient housing at multiple price points, the supply of new LIHTC properties will never keep up with demand for affordable units. If renters living in LIHTC units cannot translate their income gains into affordable rents or homeownership in the private market, they will continue to remain in those LIHTC units over the long-term, and those units cannot cycle back to other low-income households. Policymakers should focus on expanding the supply of market-rate housing for households earning between 80 and 120 percent of AMI. This can be done both through zoning reforms that allow for more housing types to be built on a parcel, property tax or density bonus incentives, and through innovations in construction that can lower the costs of development.

The findings that neighborhood conditions—and in particular, lower poverty and higher homeownership rates—positively influence household income reinforce California's efforts to expand the development of LIHTC properties in higher opportunity neighborhoods.[22] Only 5 percent of LIHTC family units built between 2003 and 2015 were located in the state's most opportunity-rich neighborhoods, even though such neighborhoods account for one-fifth of the state's census tracts. The state should continue to pursue proactive policies to ensure that higher-income cities are adequately identifying land and zoning for multifamily housing.

The models also point to the need for more research that untangles the relationships between neighborhood conditions and economic outcomes. Critically, the finding that changes in neighborhood poverty changes are associated with household economic mobility points to the need to take into account the dynamic nature of neighborhoods when discussing where to build affordable housing, particularly as poverty rates rise in suburban areas.[23] Although it is critical to expand access to affordable housing in higher opportunity neighborhoods, the findings also suggest that affordable housing may also play an important stabilizing force that allows residents to stay in and benefit from neighborhoods that are experiencing gentrification pressures.

Fourth, it is also clear that California's affordability crisis is not just a function of the housing market. It is also the result of stagnant wages at the lower end of the labor market. In addition to expanded funding for and coordination with workforce development as a part of resident services, policy-makers and the private sector need to develop a pipeline of job opportunities that pay a living wage for lower-skilled workers. This also means building more housing—both subsidized and lower-cost market rate—in higher opportunity cities with significant job growth so residents have access to both housing and labor market ladders. In addition, developing programs that could help LIHTC residents save to buy a home (e.g., through the HUD Family Self-Sufficiency program) could create more opportunities for higher-earning households to move out of LIHTC properties, opening up access to subsidized units for others.

This study also highlights the importance of longitudinal research on lower-income households, and the need to address critical knowledge gaps in how housing subsidy types and economic conditions influence economic mobility for lower-income households. Although preliminary, this research shows the value of disaggregating the analysis by housing subsidy type, and it also reveals important differences in whom the different housing subsidy types serve. Given the importance of LIHTC in constructing and preserving affordable housing, we need more research that specifically explores the experiences of LIHTC residents. For example, HUD could work with the Treasury Department and state housing finance agencies to create a longitudinal database of LIHTC residents at the national level, replicating the Eden data at a larger scale and allowing for this type of research to be expanded beyond California.

In conclusion, this research both affirms the benefits of affordable housing and provides evidence for expanding and improving on the ways the country meets the housing needs of lower-income households. The COVID-19 crisis has revealed the existing holes in the housing safety net, and the data presented here demonstrate the vulnerabilities that lower-income households face in labor markets during economic downturns. Although the pandemic requires that federal, state, and local policymakers take assertive action to keep renters in their homes now, this report also speaks to the longer-term need to build a policy framework that provides stability and upward mobility in both housing and labor markets.

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7. Data on LIHTC residents are limited. HUD publishes summary tables of tenant characteristics in LIHTC properties, the most recent of which was released in May 2018, which researchers have used to provide some insights into the incomes and rent burdens among LIHTC residents.

8. Since it was established by the Tax Reform Act of 1986, the LIHTC program has produced nearly 3 million housing units, making it the most important source of funding for new affordable housing. HUD Office of Policy Development and Research. "Low-Income Housing Tax Credits," July 1, 2017. https://www.huduser.gov/portal/datasets/lihtc.html.

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10. This argument is particularly salient for HUD-subsidized units because rents are based on 30 percent of adjusted income, meaning that 30 cents of every additional dollar earned goes to increased rent before work-related expenses and deductions in other social benefit programs are considered. Edgar O. Olsen et al., "The Effects of Different Types of Housing Assistance on Earnings and Employment," *Cityscape* 8, no. 2 (2005): 163–87, https://doi.org/10.2139/ssrn.653201; William M. Rohe, Michael D. Webb, and Kirstin P. Frescoln, "Work Requirements in Public Housing: Impacts on Tenant Employment and Evictions," *Housing Policy Debate* 26, no. 6 (November 1, 2016): 909–27, https://doi.org/10.1080/10511482.2015.1137967.

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12. This averaging precludes us from analyzing month-to-month income volatility.

13. To match neighborhood level variables to Eden properties, the following data sets were used: years 2000–2004 were matched to the 2000 Census; years 2005–2009 were matched to the 2009 5-year American Community Survey; years 2010–2013 were matched to the 2013 5-year American Community Survey; and years 2014–2018 were matched to the 2018 5-year American Community Survey.

14. HUD data in 2015 for California suggest that 31.1 percent of LIHTC residents were Hispanic, 20.3 percent were white, 13.9 percent were African American, and 10.8 percent were Asian. U.S. Department of Housing and Urban Development. "Understanding Whom the LIHTC Serves: Data on Tenants in LIHTC Units as of December 31, 2015." Washington D.C.: U.S. Department of Housing and Urban Development, March 2018.

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17. Ibid.

18. This is largely explained by the fact that we are also controlling for each additional year in an Eden property, which is measuring the same thing (each additional year in the data also means the household head has aged a year).

19. We also tested whether changes in minimum wages in some California cities affected household incomes over time, but we did not find any significant effects (though this may be due to the small sample).

20. Ben Metcalf and David Garcia, “A Plan to Keep Renters Housed through the COVID-19 Recovery” (Berkeley, CA: Terner Center for Housing Innovation, May 4, 2020), https://ternercenter.berkeley.edu/blog/keeping-renters-housed-through-covid-19-recovery.

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