



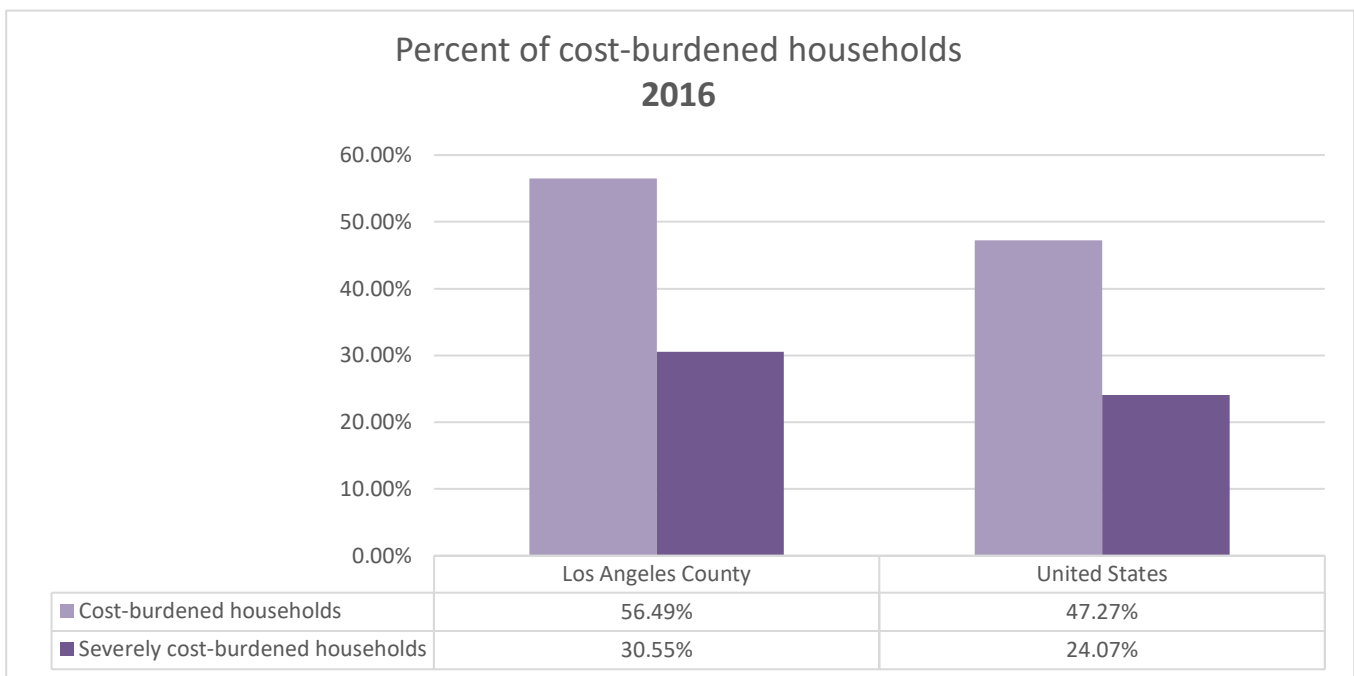
## HOUSING AFFORDABILITY STANDARDS

### Background

The housing affordability problem in Los Angeles and the rest of the country is widespread and its severity is clear. **Over half of Los Angeles renters are cost-burdened by housing and over 20 million renters nationwide spent more than 30% of their income on housing in 2016** (JCHS, 2017). Determining the proper benchmark for what “affordability” means will greatly shape how researchers and policymakers choose to address soaring housing costs, which has significant real-world impacts on individual, family, and community health and well-being.

### Affordability in the US and LA County

Affordability is defined by HUD as households spending 30% or less of their pre-tax income on total housing costs. Households spending more than 30% of their income on housing are considered cost-burdened, and those spending more than 50% of their income on housing are considered severely cost-burdened.



Source: American Community Survey

### Key Takeaways

- Affordable housing is most commonly measured by the share of income that a household spends on housing.
- Conventional measures and common indices of affordability provide a strong foundational understanding of the affordability problem, however they lack a nuanced and accurate description of the true issue.
- Alternative measures to determining affordability includes:
  - The Residual Income Approach which focuses on whether households can meet non-housing needs after housing at some basic adequacy after paying housing costs.
  - The H+T Index which provides an estimate of typical housing and transportation costs in a neighborhood and compares the estimate to a typical household income.



## Literature Review

---

### **The Classic Housing Affordability Benchmarks**

#### *The 30% Precedent*

Affordable Housing is most commonly measured by the share of income that a household spends on housing. Today's standard benchmark of "affordable" housing is generally accepted as a household that spends 30% or less of their pre-tax income on total housing costs. For households that rent, the total housing cost includes the cost of rent and utilities. Households that spend more than 30% are considered cost-burdened and those spending more than 50% are considered severely cost-burdened (Belsky, Goodman, & Drew, 2005). This approach implies that if a household is paying more for housing than the 30% benchmark, the household will not have enough income leftover to afford other necessities (Stone, 2006). Most studies on affordable housing focus on the relationship between housing cost and household income as the sole indicator of affordability (Hamidi, Ewin, & Renne, 2016). Similarly, the most widely used housing affordability indices rely upon this ratio of housing costs and incomes.

#### *Supply-Based Variations*

Variations on the share of income approach try to highlight slightly different aspects of the affordability problem. The most common include the supply-demand mismatch approach, the housing wage approach, and the median ratios comparison approach, which all have their own share of strengths and weaknesses (Belsky, Goodman, & Drew, 2005). The mismatch approach looks at the number of households with incomes at or below a particular level and compares this number with the number of rental units that are affordable at 30% of the threshold income (Belsky, Goodman, & Drew, 2005). Typical thresholds are area median family income, income quartiles or quintiles, or some multiple of the minimum wage. The housing wage approach, introduced by the National Low Income Housing Coalition (NLIHC), looks at the rent of a standard, modest quality 1- or 2-bedroom rental in an area and compares it to the amount of full-time minimum wage work it requires to afford that apartment at 30% of income (Belsky, Goodman, & Drew, 2005). The median ratios comparison approach creates a ratio between the rent at some point in a rent distribution and the corresponding point in an income distribution (Belsky, Goodman, & Drew, 2005). For example, the median rent in Los Angeles county could be compared to the county's median household income. The share of income that the median household would have to spend on the median rental would illustrate the affordability of the housing stock in the Los Angeles county housing market. While these conventional benchmarks are not perfect, they shape the way researchers and policy makers view the affordability problem— creating a fairly comprehensive understanding of who it affects, to what extent, and how to solve it.

### **The Three Major Housing Affordability Indices**

#### *Uses and Strengths*

The three major housing affordability indices include the U.S. Department of Housing and Urban Development's (HUD) housing affordability measure, NLIHC Housing Wage Measure, and the National Association of Realtors (NAR) Measure (Jewkes & Delgadillo, 2010). HUD's housing affordability measure is the most conventional and widely used among researchers (Hamidi, Ewin, & Renne, 2016). It uses a simple percentage of income to define affordability – households spending more than 30% of its gross annual income on total housing costs have a housing cost burden and those spending more than 50% have a severe housing cost burden. This measure is simple to compute, and all raw data is easily accessible through numerous sources (Bogdon & Can, 1997). The data can be easily tied to geographic areas such as states, counties, metropolitan areas, or census tracts (Jewkes & Delgadillo, 2010). And as a ratio, it is easy to compare over time (Bogdon &



Can, 1997; Stone, 2006). The HUD measure is also recognized as the legislative standard and is used to administer rental housing subsidies, such as Section 8 housing vouchers, and as a method to allocate other subsidy dollars (Bogdon & Can, 1997; Hamidi, Ewin, & Renne, 2016; Hulchanski, 1995).

The NLIHC Housing Wage Measure calculates the fair market rent (FMR) and the needed hourly wage to afford the FMR in a given area (Jewkes & Delgadillo, 2010). This measure, which focuses solely on renters, is important as renters are likely to make up more than a third of household growth and will increase by nearly 500,000 annually over the ten years from 2015 to 2025 (JCHS, 2017). The strengths of NLIHC's measures are like HUD's strengths, with the added benefit of highlighting local discrepancies in wages and housing costs (Jewkes & Delgadillo, 2010).

The National Association of Realtors Measure analyzes whether a family earning the median gross family income can qualify for a mortgage loan on an existing single-family home priced at the national median (Jewkes & Delgadillo, 2010). This measure is an example of the median ratios comparison but used for homeowners rather than renters. The NAR measure can be used in just about any housing market where the median house price and median family income are known (HUD, 2006) Requiring only two variables, the measure is also very easy to compute. It also allows for analysis over time, as data from previous years are available on both national and metropolitan levels (Jewkes & Delgadillo, 2010). Additionally, unlike other measures, mortgage interest rates are considered, which is an important factor in housing affordability for homeowners because of its impact on monthly mortgage payments and total loan interests (Linneman & Megbolugbe, 1992).

#### *Weaknesses/Limitations to Conventional Measures*

While the HUD, NLIHC, and NAR indices are the most widely used affordability measures, all three inadequately address issues such as cost of living variabilities, quality of housing over time, differences between market affordability and individual affordability, sustainability of housing payments and non-housing necessities, and the tradeoff between housing costs and transportation (Bogdon & Can, 1997; Jewkes & Delgadillo, 2010; Linneman & Megbolugbe, 1992). These measures also result in undercounting problems and fail to capture differences in neighborhood and housing quality as well as proximity to jobs and shopping (Belsky, Goodman, & Drew, 2005). Stone (2006) argues that the ratio approach creates a belief that a household can meet its nonshelter needs if it has a certain percentage of income left after paying for housing. This notion implies that "the lower the income of a household, the lower the amount it requires for nonshelter needs, with no minimum whatsoever, or that the normative ratio must diminish with income, all the way to zero below certain incomes" (Stone, 2006, p.163). Clearly, this assumption falls apart because the cost of living does not necessarily decrease in proportion with income. Despite these shortcomings in creating a precise picture, the conventional measures capture important statistics about how widespread the housing affordability problem is today.

#### **Alternative Approaches:**

##### *Residual Income Approach*

The Residual Income Approach to affordability attempts to address some of the weaknesses presented by the conventional ratio measures presented above. Instead of looking solely at the ratio between housing and income, this approach focuses on whether a household can meet its nonhousing needs at some basic adequacy after paying for housing (Stone, 2006). The indicator becomes the difference between housing costs and incomes rather than the ratio. The Residual Income Approach acts more as a sliding scale of affordability, with the maximum affordable amount and fraction of income varying between household size, type, and income





(Stone, 2006). However, scholars arguing for this approach are still determining how to best measure nonhousing needs and how to deal with personal taxes (Stone, 2006). Some scholars argue for adopting a fraction of the federal poverty threshold as the standard (Budding, 1980; Dolbeare, 1966; Kutty 2005), while others have argued for using nonhousing, nontax items of a family budget standard (Grigsby & Rosenberg 1975; Leonard, Dolbeare, & Lazare 1989; Stone 1975, 1983, 1990, 1993, 2006). Additionally, while the residual income approach was meant to apply to after tax-income, many data sources such as the decennial census, Current Population Survey, the American Housing Survey, and the American Community Survey only gather pre-tax income (Stone, 2006). Thus, computing taxes is necessary to reflect an accurate residual income standard but makes the operationalization of such a standard more complicated than conventional measures.

#### *Housing and Transportation Affordability Index And Location Affordability Index*

The Housing plus Transportation Affordability Index (H+T Index), developed by the Center for Neighborhood Technology, incorporates transportation costs into measures of affordability and maps these relationships across US metropolitan areas (Guerra & Kirschen, 2016). The relationship between housing cost and transportation is essential to the development patterns of urban form, suburbanization, and housing markets (Alonso 1960, 1964, Muth 1969, Mills 1972, Brueckner 1987). Households must make trade-offs on how much they spend on housing and how much they spend on transportation (Guerra & Kirschen, 2016). Supporters of this type of index claim that the failure of conventional measures to incorporate transportation costs into neighborhood affordability has led to the exacerbation of sprawl and the location of households in areas far from civic, social, and economic opportunity. The H+T Index provides an estimate of the typical cost of housing and transportation in different neighborhoods and compares this estimate to a typical household's income. A neighborhood is considered affordable if a given household would spend less than 45% of its income on housing and transportation costs (Guerra & Kirschen, 2016). Essentially, this approach is another version of the conventional ratio measures that includes transportation costs in the equation. Therefore, many of the pitfalls affecting the conventional ratio measures apply to this method as well.

The LAI was an attempt to update the H+T Index, by using an updated methodology and more recent and accurate data (Guerra & Kirschen, 2016). However, while it represented a vast improvement from H+T, it was severely limited due to the data models and calculations used to calculate household vehicle miles traveled and vehicle ownership (Hamidi, Ewing, and Renne, 2016).

*For questions about the Homelessness Policy Research Institute,  
please contact Elly Schoen at [eschoen@price.usc.edu](mailto:eschoen@price.usc.edu)*



## Works Cited

---

- Alonso, W. (1960). A theory of the urban land market. *Papers in Regional Science*, 6 (1), 149–157
- Alonso, W. (1964). *Location and land use. Toward a general theory of land rent*. Cambridge, MA: Harvard University Press.
- Baker, E., Mason, K., & Bentley, R. (2015). Measuring Housing Affordability: A Longitudinal Approach. *Urban Policy and Research*, 33(3), 1-16.
- Belsky, E. S., Goodman, J., & Drew, R. (2005, June). Measuring the nation's rental housing affordability problems. The Joint Center for Housing Studies, Harvard University. Retrieved from [http://www.jchs.harvard.edu/publications/rental/rd05-1\\_measuring\\_rental\\_affordability05.pdf](http://www.jchs.harvard.edu/publications/rental/rd05-1_measuring_rental_affordability05.pdf)
- Bogdon, A., & Can, A. (1997). Indicators of Local Housing Affordability: Comparative and Spatial Approaches. *Real Estate Economics*, 25(1), 43-80.
- Brueckner, J.K. (1987). The structure of urban equilibria: A unified treatment of the Muth-Mills model. In: E.S. Mills, ed. *Handbook of Regional and Urban Economics*. New York: Elsevier, 821–845.
- Grigsby, W., & Rosenberg, L. (1975). *Urban housing policy* / William G. Grigsby, Louis Rosenberg. New York: APS Publications.
- Guerra, E., & Kirschen, M. (2016). Housing plus transportation affordability indices: Uses, opportunities, and challenges: Technical paper on the Center for Neighborhood Technology's H T affordability index for OECD roundtable on income inequality, social inclusion, and mobility. *International Transport Forum Discussion Papers*, (2016-14), 1-4,6-24.
- Hamidi, S., Ewing, R., & Renne, J. (2016). How Affordable Is HUD Affordable Housing? *Housing Policy Debate*, 26(3), 1-19.
- Hulchanski, J. D. (1995) The concept of housing affordability: six contemporary uses of the housing expenditure to-income ratio, *Housing Studies*, 10(4), 471–491.
- Jewkes, M., & Delgadillo, L. (2010). Weaknesses of Housing Affordability Indices Used by Practitioners. *Journal of Financial Counseling and Planning*, 21(1), 43-52,77-78.



Joint Center for Housing Studies of Harvard. (2017). The State of the Nation's Housing 2017 (Report). Retrieved April 8, 2018, from Joint Center for Housing Studies of Harvard website: [http://www.jchs.harvard.edu/research/state\\_nations\\_housing](http://www.jchs.harvard.edu/research/state_nations_housing)

Joint Center for Housing Studies of Harvard. (2018). The State of the Nation's Housing 2018 (Report). Retrieved July 20, 2018, from Joint Center for Housing Studies of Harvard website: [http://www.jchs.harvard.edu/research/state\\_nations\\_housing](http://www.jchs.harvard.edu/research/state_nations_housing)

Kadi, J., & Ronald, R. (2016). Undermining housing affordability for New York's low-income households:

The role of policy reform and rental sector restructuring. *Critical Social Policy*, 36(2), 265-288.

Kutty, N. (2005). A new measure of housing affordability: Estimates and analytical results. *Housing Policy Debate*, 16(1), 113-142.

Leonard, Paul A., Cushing N. Dolbeare, and Edward A. Lazare. 1989. *A Place to Call Home: The Crisis in Housing for the Poor*. Washington, DC: Center on Budget and Policy Priorities and Low-Income Housing Information Service.

Mills, E.S. (1972). *Studies in the Structure of the Urban Economy*. Baltimore: The Johns Hopkins Press.

Muth, R.F. (1969). *Cities and Housing; The Spatial Pattern of Urban Residential Land Use*. Chicago: University of Chicago Press.

Napoli, G. (2017). Housing Affordability in Metropolitan Areas. The Application of a Combination of the Ratio Income and Residual Income Approaches to Two Case Studies in Sicily, Italy. *Buildings*, 7(4).

Sani, N. (2013). Residual Income Measure of Housing Affordability. *International Journal of Advances in Engineering & Technology*, 5(2), 1-8.

Stone, M. (1975). The Housing Crisis, Mortgage Lending, and Class Struggle. *Antipode* 7(2):22-37. Reprinted in *Radical Geography*, ed. Richard Peet, 144-79. Chicago and London: Maaroufa Press, 1978.

Stone, M. (1983). Housing and the Economic Crisis: An Analysis and Emergency Program. In *America's Housing Crisis: What Is to Be Done?* ed. Chester Hartman, 99-150. Boston and London: Routledge and Kegan Paul.

Stone, M. (1990). *One-Third of a Nation: A New Look at Housing Affordability in America*. Washington, DC: Economic Policy Institute.



Stone, M. (1993). Shelter Poverty: New Ideas on Housing Affordability. Philadelphia: Temple University Press.

Stone, M. (2006). What is housing affordability? The case for the residual income approach. Housing Policy Debate, 17(1), 151-184.

U.S. Department of Housing and Urban Development. (2006, January). Housing impact analysis. Washington, DC: U.S. Government Printing Office.