



Emeritus Professor John Adams

Biggest weaknesses in Minnesota housing are on demand side

A Minnesota Housing Policy Interview

November 2, 2018

John Adams speaks about the seven parts of the housing issues facing the Twin Cities and the state of Minnesota. He believes the biggest weaknesses in Minnesota's housing market are on the demand side, pointing out the number of people who can't enter the market successfully. He says our greatest liability today is smugness about the nature of housing problems for these people and others and notes the ongoing challenge of what to do about people who are unable to achieve enough earning power to pay for housing and other needs.

Present

John Adams, John Cairns, Audrey Clay, Janis Clay (executive director), Pat Davies, Paul Gilje, Randy Johnson, Paul Ostrow (chair), Dana Schroeder (associate director), Clarence Shallbetter, T Williams. By phone: Dan Lortz.

Summary

University of Minnesota Emeritus Professor John Adams lays out seven parts to the housing issues and questions facing the Twin Cities and the state of Minnesota: (1) the supply side; (2) the demand side; (3) housing submarkets in the Twin Cities area; (4) government agencies trying to help; (5) organizations promoting and/or creating varying

housing options; (6) institutional frameworks within which the housing process operates in the metro area and in Greater Minnesota; and (7) subsidies that since World War II have promoted low-density housing development in suburban areas.

Adams says the biggest weaknesses in the housing market are on the demand side, pointing out that there are a number of people who can't enter the market successfully. Many of them move from place to place and move their kids to a number of different schools within one school year. He says these are people who can't deal successfully with life in a big city.

Adams says our greatest liability today is smugness about the nature of housing problems for these people and others, with a tendency to blame the victims. There is an ongoing challenge, he says, of what to do about people who are unable to achieve enough earning power to pay for housing and other needs. He points to the students graduating from Minneapolis high schools unable to read, leaving them unlikely to ever achieve the earning power they need.

On the supply side, Adams says an outstanding strength here is the first-class housing inventory in the Twin Cities area compared with some metro areas in other parts of the country. Another strength is that Minneapolis has built public-housing towers around the city for the elderly.

Biography

John S. Adams is an emeritus faculty member at the University of Minnesota, both in the Humphrey School of Public Affairs and the geography department. He researches issues relating to North American cities, urban housing markets and housing policy, and regional economic development in the United States and the former Soviet Union. He has been a National Science Foundation Research Fellow at the Institute of Urban and Regional Development, University of California at Berkeley, and economic geographer in residence at the Bank of America world headquarters in San Francisco.

Adams was senior Fulbright Lecturer at the Institute for Raumordnung at the Economic University in Vienna and served on the geography faculty of Moscow State University. He has taught at Pennsylvania State University, the University of Wisconsin and the U.S. Military Academy at West Point. His most recent book, *Minneapolis-St. Paul: People, Place and Public Life*, looks at the region's growth and at what factors may affect the metropolitan area's future.

Adams holds a doctorate in urban geography from the University of Minnesota and two degrees in economics.

Background

The Civic Caucus is undertaking a new focus on the issue of affordable housing in Minnesota. The Civic Caucus interviewed John Adams to get an overview of housing issues facing the Twin Cities and the state of Minnesota. The Civic Caucus has interviewed Adams earlier three times: [May 5, 2017, "Minnesota can and must improve higher education"](#) ; [January 30, 2015, "Higher education institutions could strengthen state's human capital by refocusing on their missions"](#) ; and [August 16, 2013, "Healthiest metro economies employ creativity, entrepreneurship, hard work."](#)

Discussion

University of Minnesota Emeritus Professor John Adams divided his overview of housing issues and questions facing the Twin Cities and the state of Minnesota into seven parts:

1. The supply side.
2. The demand side.
3. Housing submarkets in the Twin Cities area.
4. Government agencies trying to help.
5. Organizations promoting/creating varying housing options.
6. Institutional frameworks within which the housing process operates in the metro area and in Greater Minnesota.
7. Subsidies that-since World War II-have promoted low-density housing development in suburban areas.

1.The supply side.

Based on size and value of housing units, there are five housing types in the Minneapolis-Saint Paul metro area. Adams presented the following chart, comparing five sizes of housing units with the value of those units and showing five housing types, A through E.

Housing types in the metro area

Value of Units:

| | | | | | |
|---|---|---|---|------------------------------------|--|
| Expensive | | | A | A | A |
| Above average | | | B | B | |
| Median value of owner-occupied housing: \$254,800 (2017); Med. Rent: \$898 | | C | C | C | |
| Cheaper | D | D | D | | |
| Cheapest | E | E | | | |
| | SROs; very small efficiency apartments | Small apartments; small older houses | Average-size apartments, condos and houses * | Large apartments and houses | Houses & condos 4,000 ft² - and up |

<< **Size of Housing Units** >>

>> Total metro area housing units in 2015: 1,372,300. Owner occupied: 70%; renter-occupied: 25%; vacant: 5% in 2017

>> Owner-occupied Median owner costs (w/ mortgage loan): \$1,600; w/o loan: \$586. Median gross rent for rental units: \$898. Gross rent is the contract rent plus the estimated average monthly cost of utilities (electricity, gas, and water and sewer) and fuels (oil, coal, kerosene, wood, etc.). [2012-16 data]

*Owner-occupied housing units average size: 2,000 ft² Renter occupied units ave. size. 900 ft²

>>> Unit size and unit price are generally highly correlated

<https://censusreporter.org/profiles/31000US33460-minneapolis-st-paul-bloomington-mn-wi-metro-area/>

In a typical year, the housing supply is augmented by new construction. Adams said the new housing is usually focused on the expensive, large side, because that's what's most profitable for the construction and development industry.

He said there are three types of developers/builders: (1) for-profit merchant builders; (2) for-profit custom builders; and (3) nonprofit developers/builders.

These developer/builders must decide what to build, how to build, where to build, and what size and kind of units to build.

Adams said the fact that the larger the housing unit built, the cheaper the interior per-square-foot cost, motivates developers to build big units. "They're in business to make money," he said. "They make more money if they build big units in places people want to live." He said it's very expensive per square foot of living space to build small, cheap housing.

He said developers tend to repeat their successes and noted that state and federal tax law and the federal Department of Housing and Urban Development (HUD) affect what developers do on the ground.

He noted that every year, units are removed and units are added. In addition to the housing inventory, Adams said developers/builders face the following decisions:

- **What to build:** singles, doubles, larger; apartments, condominiums.
- **How to build:** This is subject to housing occupancy codes, building codes, neighborhood sentiments, off-street parking requirements and density rules, with no manufactured houses or mobile homes permitted—a consequence of state tax laws.
- **Where to build:** vacant lots, suburban edges, replacement of existing housing, replacement of nonresidential land uses (e.g., at century-old and obsolete corner transit intersections).
- **What size and kind of units to build:** The larger the housing unit built, the cheaper the interior per-square-foot cost. This motivates builders to build larger units, rather than smaller units, which are more expensive to build per square foot of interior living space.

Adams noted that there are federal tax issues facing investors in rental properties. There are also issues facing owners of rental property and condos, including long-term liabilities. Public housing managers, he said, face the issues of occupancy, rent payment and tenant behaviors, which private owners of rental properties also face.

2. The demand side.

Household size and life course mean that households have different needs at different stages. Adams presented the following graph of household types arrayed by household size and household resources. Household resources include income, wealth and access to credit (socio-economic status) that determine a household's ability to pay for housing.

Household Types providing most markets for housing in the metro area

| | | | | | |
|---------------------------------|--------------------------------|---------------------------|---------------------------|----------------------|----------------------|
| Elite | A₁ | A₂ | A₃ | A₃ | A₃ |
| Upper Middle | B | B | B | | Rare |
| Middle Class * | | C | C | C | Rare |
| Lower Middle | | D | D | D | Rare |
| Working Class & Poor | E | E | E | E | Uncommon |
| | Single person household | 2-person household | 3-person household | 4-5 person | 6-plus |

*The Census ACS 1-year survey reports that the **median household income** for the Minneapolis-St Paul-Bloomington Minnesota metro area was **\$76,856** in 2017, the latest figures available.

There were 1,376,557 households in the metro area in 2017.

A₁: Upper-income, upper-wealth singles – living alone in condos or apartments, plus older singles/widows/widowers in single unit houses throughout the metro area. **A₂**: Professional & retired couples; **A₃**: upper-income, upper-wealth families in prosperous suburbs and select Mpls. and St. Paul neighborhoods.

B: Professional singles or couples

C & D: the *modal* group of households in both the cities and suburbs. Merchant builders aim their output at these households. They want good housing (new or used) and have access to the resources to buy or rent it.

E: Almost all of these households occupy used, older housing with a few in public housing (owned and operated by public housing authorities) or in housing provided by non-profit builder/managers (e.g., Common Bond Properties).

3. Housing Submarkets.

Housing submarkets affect where people move. Adams recalled talking to a developer who, in 1973 or 1974, had built a project of 300 single-family housing units in Burnsville. The developer held open houses and sold all the homes before they were done being built.

The same developer then bought another parcel of land, this time in Coon Rapids. But this time, the company had to discount the price of the same type of houses it had built in Burnsville in order to get rid of them, Adams said. "Why?" he asked.

He said the University of Minnesota did a research project in which researchers talked to people in new housing and asked where they used to live and then went to that address and asked the people there where they used to live and so on. The study helped identify 14 historic Twin Cities geographic submarkets. A map of the submarkets showed a strong movement from central and south Minneapolis to the southern suburbs, including Burnsville. But the movement from central and north Minneapolis to the far northern suburbs, including Coon Rapids, was much weaker.

Adams said these identified vacancy chains were set in motion mainly by merchant builders in the suburbs from 1946 into the 1980s. The new homes in the suburbs attracted city dwellers, creating vacancies in the central city and inner suburbs, which then became very soft markets. He said that made it possible, for example, for low-income households to move into the Phillips neighborhood in near-south Minneapolis. In the same way, he said, new housing in Robbinsdale, Golden Valley and Crystal created vacancies in near-north Minneapolis for low-income households.

"People want to live by people like themselves," Adams said.

4. Government agencies trying to help.

There are a number of government agencies trying to provide housing for low-income households. Adams said they include:

- Public housing authorities owning and operating housing, such as the Minneapolis Public Housing Authority, the Saint Paul Public Housing Agency, the Bloomington Housing and Redevelopment Agency (HRA), other suburban HRAs and the Metropolitan Council.
- Minnesota Housing Finance Agency.
- City councils.

5. Organizations promoting/creating varying housing options.

Adams said these organizations include both those representing for-profit actors (e.g., BATC-Housing First Minnesota) and those representing nonprofit actors (e.g., Catholic

Charities, Presbyterian Homes, Greater Minnesota Housing Fund, Minnesota Housing Partnership, Housing Justice Center, Common Bond Communities, Beacon Interfaith Housing Collaborative).

6. Institutional frameworks within which the housing process operates in the metro area and in Greater Minnesota.

Adams said these frameworks include the following:

- The federal Internal Revenue Code, which changed for tax year 2018 and subsequent years. The mortgage-interest tax deduction and the savings and loan associations' tax deduction gave homebuyers a double benefit, Adams said. "People don't pay the full price for housing," he said. "The bigger the house, the bigger the subsidy. The subsidies get capitalized into the value of the house."
- State of Minnesota tax law, which influences what kinds of housing will be allowed inside cities and what will be discouraged. Adams said Minnesota tax law allows cities and counties to tax in certain way, leaving them heavily reliant on property taxes. "That leads to a tendency for them to zone for revenue," he said. "They don't allow cheap mobile homes or cheap manufactured housing on temporary foundations, because they can't levy property taxes on them."
- The Federal Housing Administration (FHA) mortgage-loan insurance program, which requires that houses be built according to FHA standards.
- Mortgage-loan underwriting and the secondary mortgage market, which is made up of institutional investors. Adams said banks won't loan money for a house purchase if the mortgage won't sell on the secondary market.

7. Subsidies that, since WWII, have promoted low-density housing development in suburban areas.

Adams noted the following subsidies:

- Deductibility of mortgage-loan interest from taxable income.
- Deductibility of property taxes.
- Untaxed capital gains on residential real estate sales.
- Pre-1980 banking regulations that separated commercial banking (loans for things like cars or business inventory) from residential housing finance (e.g., Farmers & Mechanics and savings and loan associations) in ways that lowered the cost of mortgage loans to homebuyers. Adams said savings and loan associations were set

up so they could offer higher interest on deposits and lower interest rates on mortgages. Savings and loan associations covered over 80 percent of housing loans. Eventually, Adams said, commercial banks lobbied successfully to get rid of savings and loan associations at the federal level. "Now housing had to compete with every other use of money," he said. "That raised the price of money for housing."

- Veterans Administration (VA) Mortgage Guarantee and FHA Mortgage Insurance programs.
- Average-cost versus full marginal-cost pricing of utility extensions into developing areas.
- 1986 IRS Code, which permits borrowing on home equity for consumption, with the interest deductible as mortgage-loan interest.
- 1986 IRS Code, which cut tax benefits for builders and owners of rental housing. Adams said this expanded the demand for owner-occupied housing.
- For years, Minnesota rental housing paid higher real estate tax than owner-occupied housing of the same value.
- Government subsidizes local roads and highways serving new areas, rather than adding the extra costs to the new housing through development impact fees. Such fees are not authorized in Minnesota as they are in over 20 other states. Adams explained that if a developer buys a parcel of land in Wright County and puts up 150 houses, the cost of things like extra police and new roads gets passed on to the existing community. He said in states like Colorado that have development impact fees, the developer pays those costs. Adams said that in Colorado, there was a lot of opposition to new developments until development impact fees were imposed. He noted that developers pass on these fees to the house buyers, so the fees raise the cost of housing.

The history of the federal government's involvement in housing goes back to the depression years. It was then, Adams said, that the federal government made provisions for housing for people in need by building public housing. He said in the 1960s or 1970s the *New York Times* reported that in New York City, it cost more to build and operate a public housing unit than it would have to buy a house in Queens and give it to a low-income household.

Then the federal government began providing money for multi-unit housing through interest subsidies, Adams said. Section 8 was added to the federal Housing Act in 1974 in order to

help low-income tenants reduce the percentage of their earnings they spent on housing. He noted that the housing vouchers provided through Section 8 enhance low-income renters' purchasing power. The federal government has a limited number of these vouchers.

Every household makes decisions on how to allocate its resources. Adams said people decide where to live, how much to spend on transportation and how much to spend on everything else. He noted that some people don't know how to manage their money. And, he said, there is an ongoing challenge of what to do about people who are unable to achieve enough earning power to pay for housing and other needs.

"We're spending over \$20,000 per student each year in the Minneapolis schools," Adams said. "But we graduate kids who can't read and they likely won't have enough money for housing and other needs.

An outstanding strength here is the first-class housing inventory in the Twin Cities area. In comparison, Adams said, the housing stock looks "pretty bad" in some metro areas in other parts of country. "This metro area has been pretty prosperous for so long," he said. "We didn't have big problems here and didn't have large immigration after the 1920s. We didn't have a history of newcomers here; they stopped somewhere else. It gave the area a sense of comfort and homogeneity. There were shades of differences between political parties, but not the polarized differences we see today."

Another strength, he said, is that Minneapolis has built public-housing towers around the city for the elderly.

Our greatest liability today is smugness about the nature of these problems. Adams said there is a tendency to blame the victim and say, "You create your own life and why is that my problem?"

He said the biggest weaknesses in the housing market are on the demand side. "There are a number of folks who can't enter the market successfully," he said. "They move from place to place and their kids are in a number of different schools during one school year. These are people who can't deal successfully with life in a big city. The housing situation is a symptom of a deeper malaise-not just in the central city, but also with kids from Edina. They've got problems, too, including smugness and unrealistic goals."

ADDENDUM: Minnesota Housing Characteristics and Financial Data

Following are two tables with housing characteristics and income data about Minnesota, Minneapolis and Saint Paul, the seven-county metro area suburbs and Greater Minnesota (or non-metro, as it's referred to in the tables). Civic Caucus Interview Group member Paul Gilje compiled the tables, using the 2017 U.S. Census American Community Survey.

2017 Minnesota Housing Characteristics

Source: 2017 American Community Survey, U.S. Census

| | Minnesota | | Minneapolis-St. Paul | | 7-County Suburbs | | Non-metro | |
|---|-----------|---------|----------------------|---------|------------------|---------|-----------|---------|
| | units | percent | units | percent | units | percent | units | percent |
| Occupied housing units | 2,162,211 | | 288,883 | | 895,939 | | 977,389 | |
| 1, detached | 1,447,330 | 66.90% | 133,176 | 46.1% | 572,471 | 63.9% | 741,683 | 75.9% |
| 1, attached | 164,852 | 7.60% | 11,634 | 4.0% | 117,192 | 13.1% | 36,026 | 3.7% |
| 2 apartments | 43,578 | 2.00% | 21,891 | 7.6% | 6,110 | 0.7% | 15,577 | 1.6% |
| 3 or 4 apartments | 46,619 | 2.20% | 11,266 | 3.9% | 13,254 | 1.5% | 22,099 | 2.3% |
| 5 to 9 apartments | 49,041 | 2.30% | 10,141 | 3.5% | 16,152 | 1.8% | 22,748 | 2.3% |
| 10 or more apartments | 356,353 | 16.50% | 99,898 | 34.6% | 157,092 | 17.5% | 99,363 | 10.2% |
| Mobile home or other type of housing | 54,438 | 2.50% | 877 | 0.3% | 13,668 | 1.5% | 39,893 | 4.1% |
| 2014 or later | 49,446 | 2.30% | 6,093 | 2.1% | 22,110 | 2.5% | 21,243 | 2.2% |
| 2010 to 2013 | 58,148 | 2.70% | 7,266 | 2.5% | 26,145 | 2.9% | 24,737 | 2.5% |
| 2000 to 2009 | 314,032 | 14.50% | 19,171 | 6.6% | 125,479 | 14.0% | 169,382 | 17.3% |
| 1980 to 1999 | 559,667 | 25.90% | 27,836 | 9.6% | 305,791 | 34.1% | 226,040 | 23.1% |
| 1960 to 1979 | 530,655 | 24.50% | 51,374 | 17.8% | 253,038 | 28.2% | 226,243 | 23.1% |
| 1940 to 1959 | 308,279 | 14.30% | 52,509 | 18.2% | 121,810 | 13.6% | 133,960 | 13.7% |

| | | | | | | | | |
|--|-----------|--------|---------|-------|---------|-------|---------|-------|
| 1939 or earlier | 341,984 | 15.80% | 124,634 | 43.1% | 41,566 | 4.6% | 175,784 | 18.0% |
| 1 room | 39,950 | 1.80% | 14,931 | 5.2% | 10,610 | 1.2% | 14,409 | 1.5% |
| 2 or 3 rooms | 232,566 | 10.80% | 61,418 | 21.3% | 82,296 | 9.2% | 88,852 | 9.1% |
| 4 or 5 rooms | 590,746 | 27.30% | 89,507 | 31.0% | 224,591 | 25.1% | 276,648 | 28.3% |
| 6 or 7 rooms | 597,064 | 27.60% | 72,929 | 25.2% | 237,207 | 26.5% | 286,928 | 29.4% |
| 8 or more rooms | 701,885 | 32.50% | 50,098 | 17.3% | 341,235 | 38.1% | 310,552 | 31.8% |
| No bedroom | 45,199 | 2.10% | 17,653 | 6.1% | 11,857 | 1.3% | 15,689 | 1.6% |
| 1 bedroom | 239,153 | 11.10% | 69,053 | 23.9% | 85,707 | 9.6% | 84,393 | 8.6% |
| 2 or 3 bedrooms | 1,249,142 | 57.80% | 158,506 | 54.9% | 492,403 | 55.0% | 598,233 | 61.2% |
| 4 or more bedrooms | 628,717 | 29.10% | 43,671 | 15.1% | 305,972 | 34.2% | 279,074 | 28.6% |
| With complete plumbing facilities | 2,154,775 | 99.70% | 288,108 | 99.7% | 894,075 | 99.8% | 972,592 | 99.5% |
| With complete kitchen facilities | 2,145,572 | 99.20% | 286,637 | 99.2% | 890,760 | 99.4% | 968,175 | 99.1% |
| No vehicle available | 145,566 | 6.70% | 45,370 | 15.7% | 43,530 | 4.9% | 56,666 | 5.8% |
| 1 vehicle available | 636,021 | 29.40% | 117,657 | 40.7% | 254,554 | 28.4% | 263,810 | 27.0% |
| 2 vehicles available | 876,369 | 40.50% | 95,913 | 33.2% | 395,092 | 44.1% | 385,364 | 39.4% |
| 3 or more vehicles available | 504,255 | 23.30% | 29,943 | 10.4% | 202,763 | 22.6% | 271,549 | 27.8% |
| With telephone service | 2,135,734 | 98.80% | 284,247 | 98.4% | 887,782 | 99.1% | 963,705 | 98.6% |
| HOUSE HEATING FUEL | | | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |

| | | | | | | | | |
|---------------------------------|-----------|--------|---------|-------|---------|-------|---------|-------|
| Utility gas | 1,432,941 | 66.30% | 209,385 | 72.5% | 730,355 | 81.5% | 493,201 | 50.5% |
| Bottled, tank, or LP gas | 221,643 | 10.30% | 3,982 | 1.4% | 18,989 | 2.1% | 198,672 | 20.3% |
| Electricity | 386,925 | 17.90% | 66,432 | 23.0% | 127,471 | 14.2% | 193,022 | 19.7% |
| Fuel oil, kerosene, etc. | 35,786 | 1.70% | 795 | 0.3% | 3,559 | 0.4% | 31,432 | 3.2% |
| Coal or coke | 676 | 0.00% | 320 | 0.1% | 124 | 0.0% | 232 | 0.0% |
| All other fuels | 67,376 | 3.10% | 4,046 | 1.4% | 9,433 | 1.1% | 53,897 | 5.5% |
| No fuel used | 16,864 | 0.80% | 3,923 | 1.4% | 6,008 | 0.7% | 6,933 | 0.7% |

2017 Minnesota Housing Financial Data

Source: 2017 American Community Survey, U.S. Census

| | Minnesota | | Minneapolis-St. Paul | | 7-County Suburbs | | Non-metro | |
|--|-----------|---------|----------------------|---------|------------------|---------|-----------|---------|
| | units | percent | units | percent | units | percent | units | percent |
| Occupied housing units | 2,162,211 | | 288,883 | | 895,939 | | 977,389 | |
| HOUSEHOLD INCOME IN THE PAST 12 MONTHS (IN 2017 INFLATION-ADJUSTED DOLLARS) | | | | | | | | |
| Less than \$5,000 | 44,433 | 2.10% | 10,259 | 3.6% | 12,609 | 1.4% | 21,565 | 2.2% |
| \$5,000 to \$9,999 | 52,261 | 2.40% | 12,089 | 4.2% | 12,641 | 1.4% | 27,531 | 2.8% |
| \$10,000 to \$14,999 | 78,536 | 3.60% | 14,010 | 4.8% | 20,647 | 2.3% | 43,879 | 4.5% |
| \$15,000 to \$19,999 | 77,881 | 3.60% | 12,738 | 4.4% | 23,687 | 2.6% | 41,456 | 4.2% |
| \$20,000 to \$24,999 | 87,273 | 4.00% | 13,099 | 4.5% | 26,243 | 2.9% | 47,931 | 4.9% |
| \$25,000 to \$34,999 | 172,293 | 8.00% | 27,026 | 9.4% | 56,292 | 6.3% | 88,975 | 9.1% |
| \$35,000 to \$49,999 | 264,090 | 12.20% | 38,297 | 13.3% | 93,168 | 10.4% | 132,625 | 13.6% |
| \$50,000 to \$74,999 | 399,946 | 18.50% | 50,178 | 17.4% | 155,762 | 17.4% | 194,006 | 19.8% |
| \$75,000 to \$99,999 | 302,058 | 14.00% | 35,803 | 12.4% | 128,960 | 14.4% | 137,295 | 14.0% |
| \$100,000 to \$149,999 | 369,795 | 17.10% | 36,637 | 12.7% | 177,639 | 19.8% | 155,519 | 15.9% |

| | | | | | | | | |
|---|---------|--------|---------|-------|---------|-------|----------|--------|
| \$150,000 or more | 313,645 | 14.50% | 38,747 | 13.4% | 188,291 | 21.0% | 86,607 | 8.9% |
| Median household income (dollars) | 68,388 | 68,388 | 115,079 | 39.8% | 473,151 | 52.8% | -519,842 | -53.2% |
| Housing expense less than \$300/month | 100,932 | 4.70% | 14,539 | 5.0% | 16,909 | 1.9% | 69,484 | 7.1% |
| Housing expense \$300-\$499/month | 242,508 | 11.20% | 18,196 | 6.3% | 66,123 | 7.4% | 158,189 | 16.2% |
| Housing expense \$500/\$799/month | 390,028 | 18.00% | 46,713 | 16.2% | 126,190 | 14.1% | 217,125 | 22.2% |
| Housing expense \$800 to \$999/month | 258,333 | 11.90% | 43,628 | 15.1% | 92,617 | 10.3% | 122,088 | 12.5% |
| Housing expense \$1,000 to \$1,499/month | 529,561 | 24.50% | 82,023 | 28.4% | 234,383 | 26.2% | 213,155 | 21.8% |
| Housing expense \$1,500 to \$1,999/month | 327,866 | 15.20% | 44,441 | 15.4% | 174,753 | 19.5% | 108,672 | 11.1% |
| Housing expense \$2,000 to \$2,499/month | 148,707 | 6.90% | 17,839 | 6.2% | 90,131 | 10.1% | 40,737 | 4.2% |
| Housing expense \$2,500 to \$2,999/month | 66,343 | 3.10% | 8,880 | 3.1% | 40,746 | 4.5% | 16,717 | 1.7% |
| Housing expense \$3,000 or more/month | 73,868 | 3.40% | 9,681 | 3.4% | 48,750 | 5.4% | 15,437 | 1.6% |
| No cash rent | 24,065 | 1.10% | 2,943 | 1.0% | 5,337 | 0.6% | 15,785 | 1.6% |
| Median housing expense per month | 1,070 | 1,070 | 2,214 | 0.8% | 7,147 | 0.8% | -8,291 | -0.8% |
| Income less than \$20,000 | 232,498 | 10.80% | 44,993 | 15.6% | 64,223 | 7.2% | 123,282 | 12.6% |
| Expense less than 20 percent of income | 12,593 | 0.60% | 1,672 | 0.6% | 2,017 | 0.2% | 8,904 | 0.9% |
| Expense 20-29 percent of income | 31,224 | 1.40% | 6,206 | 2.1% | 5,999 | 0.7% | 19,019 | 1.9% |
| Expense 30 percent or more of income | 188,681 | 8.70% | 37,115 | 12.8% | 56,207 | 6.3% | 95,359 | 9.8% |
| income \$20,000-\$34,999 | 253,957 | 11.70% | 39,549 | 13.7% | 81,581 | 9.1% | 132,827 | 13.6% |

| | | | | | | | | |
|---|---------|--------|---------|-------|---------|-------|---------|-------|
| Expense less than 20 percent of income | 47,787 | 2.20% | 3,937 | 1.4% | 9,081 | 1.0% | 34,769 | 3.6% |
| Expense 20-29 percent of income | 56,030 | 2.60% | 7,203 | 2.5% | 14,776 | 1.6% | 34,051 | 3.5% |
| Expense 30 percent or more of income | 150,140 | 6.90% | 28,409 | 9.8% | 57,724 | 6.4% | 64,007 | 6.5% |
| income \$35,000-49,999 | 260,081 | 12.00% | 37,889 | 13.1% | 92,370 | 10.3% | 129,822 | 13.3% |
| Expense less than 20 percent of income | 89,882 | 4.20% | 7,234 | 2.5% | 23,663 | 2.6% | 58,985 | 6.0% |
| Expense 20-29 percent of income | 74,667 | 3.50% | 13,253 | 4.6% | 24,220 | 2.7% | 37,194 | 3.8% |
| Expense 30 percent or more of income | 95,532 | 4.40% | 17,402 | 6.0% | 44,487 | 5.0% | 33,643 | 3.4% |
| income \$50,000-\$74,999 | 396,234 | 18.30% | 49,844 | 17.3% | 154,783 | 17.3% | 191,607 | 19.6% |
| Expense less than 20 percent of income | 188,229 | 8.70% | 18,116 | 6.3% | 58,029 | 6.5% | 112,084 | 11.5% |
| Expense 20-29 percent of income | 132,524 | 6.10% | 19,797 | 6.9% | 58,434 | 6.5% | 54,293 | 5.6% |
| Expense 30 percent or more of income | 75,481 | 3.50% | 11,931 | 4.1% | 38,320 | 4.3% | 25,230 | 2.6% |
| income \$75,000 or more | 981,276 | 45.40% | 110,689 | 38.3% | 493,712 | 55.1% | 376,875 | 38.6% |
| Expense less than 20 percent of income | 756,839 | 35.00% | 84,533 | 29.3% | 365,865 | 40.8% | 306,441 | 31.4% |
| Expense 20-29 percent of income | 187,181 | 8.70% | 21,795 | 7.5% | 105,805 | 11.8% | 59,581 | 6.1% |
| Expense 30 percent or more of income | 37,256 | 1.70% | 4,361 | 1.5% | 22,042 | 2.5% | 10,853 | 1.1% |
| Zero or negative income | 14,100 | 0.70% | 2,976 | 1.0% | 3,933 | 0.4% | 7,191 | 0.7% |
| No cash rent | 24,065 | 1.10% | 2,943 | 1.0% | 5,337 | 0.6% | 15,785 | 1.6% |