



POLICY BRIEF

**The Center for Opportunity Urbanism (COU)
Standard of Living Index
3rd Annual Edition**

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2018 COU STANDARD OF LIVING INDEX

The [Center for Opportunity Urbanism](#) (COU) has developed a measure (the COU Standard of Living Index¹) that estimates the purchasing power of real average pay in metropolitan areas compared to that of the average employee who moves to a new residence.¹ We have found that the places that return the most for median pay are varied. Some, like leader San Jose, Boston and Seattle come from the ranks of high-priced places that deliver even better pay. But most are decidedly in the Heartland, led by Durham, North Carolina, Houston, Detroit, Atlanta and Charlotte, where lower costs meet relatively pay. Similarly the bottom of the list is varied, including at the bottom perennially challenged places like Youngstown, OH, Scranton, and Lancaster, Pennsylvania but also expensive coastal areas like San Diego, Los Angeles, and Honolulu.

1: Background

The United States is a mobile country. From a population base concentrated along the Atlantic coast in the late 18th century, Americans have moved across the continent and beyond. This movement was facilitated by improved transportation, especially the railroads, and then by the interstate highways and airlines. In the decades that followed World War II, the nation became a relatively integrated product and service market from coast to coast. Generally, the cost of living between metropolitan areas varied only modestly. Income differentials between metropolitan areas (cities²) were reliable indicators of relative standards of living, with few exceptions.

However in recent years, large differences have emerged in cost of living between metropolitan areas, and it has become clear that income differences are less reliable as an indicator of the standard of living in metropolitan areas. Significantly, about a decade ago (2008), the US Department of Commerce Bureau of Economic Analysis (BEA) began issuing a cost of living index for states and metropolitan areas, called Regional Price Parities (RPPs).

¹ This is in contrast to employees that have lived in their current residences more than a year, and for whom the cost of living will tend to be lower.

² Metropolitan areas are the functional definition of cities (without regard to municipal jurisdictions). They are labor and housing markets, as designated by the US Office of Management and Budget.

In the latest edition of the RPPs (2016) the cost of living difference between the lowest and highest metropolitan areas was 61 percent (from a low of 78.8 to a high of 127.1). By 2011 the differences had become so great that the Census Bureau began issuing poverty measures intended to account for cost of living differences, based on housing cost differentials. Differences in housing costs are the principal driver of the cost of living in the most expensive metropolitan areas.

The BEA RPPs use rents in estimating housing costs, ignoring the costs of owned housing. Yet, there are nearly twice as many homeowners as renters.³ Moreover, in some metropolitan areas ownership costs have increased significantly more than those of renting. Americans routinely aspire to improved lifestyles and periodically “move up” to more preferred housing, which typically requires higher expenditures (whether owned or rented).

2: COU Standard of Living Index

The need for a standard of living index arises from the significant cost of living difference between metropolitan areas. Simply put, the value of an earned dollar is considerably less in some metropolitan areas than others due to cost of living differences. An effective standard of living comparison would adjust nominal incomes for metropolitan area costs (“real” income),⁴ just as real international economic output is estimated for nations by adjusting nominal currency measures (usually dollars) by purchasing power.⁵

The COU Standard of Living Index, relies on a “Composite Cost of Living Index” that estimates expenditures for average households that move to new housing. This report focuses on the 107 metropolitan areas with more than 500,000 residents. It uses BEA RPP data for two cost categories, (1) goods and (2) services other than rents, with the housing costs estimated by substituting average ownership and rental expenditures⁶ for the rent expenditures⁷ in the RPPs.

The “COU Standard of Living Index” estimates the relationship between the real average pay per job in a metropolitan area and the pay required for the average standard of living. The national average Standard of Living Index is set at a base 100.0, with higher cost of living adjusted income metropolitan areas having indexes above the base and those with lower incomes having indexes below the base. The Standard of Living Index estimates the sufficiency of the real pay per job in a metropolitan area to afford the national standard of living for the average employee.

The methodology for estimating the COU Composite Cost of Living Index and the COU Standard of Living Index is outlined in the Appendix.

³BEA intends to include home power costs in RPPs in the future. See: Bettina Aten, Eric Figueroa and Troy Martin, “How can the American Community Survey (ACS) be used to improve the imputation of Owner-Occupied Rent Expenditures?,” United States Department of Commerce, Bureau of Economic Analysis, 2011, http://www.bea.gov/papers/pdf/WP_ACS_OORE_020112.pdf.

⁴ It is recognized that there is more to the standard of living than economics. However, there are no generally accepted objective measures of the standard of living besides real income.

⁵ The COU Standard of Living Index is based on average employee earnings. A standard of living index could also be based on other income measures, such as average household income or median household income. There could be considerable variation between such standard of living indexes.

⁶ Weighted to reflect the national distribution of home owning and renting households.

⁷ Rents are the third BEA category.

3: Metropolitan Areas and the Standard of Living Index

Overall, the average pay per job in the United States was \$55,400 in 2017. When adjusted by the COU Composite Cost of Living Index, the national real pay per job is estimated at \$49,200.⁸ This figure is used as the base for the average standard of living measured by real earnings. The COU Standard of Living Index and related data are shown in Tables 1 and 2.

Metropolitan Areas with Highest COU Standard of Living Index: For the third year in a row, the San Jose metropolitan area has the highest standard of living among the 107 metropolitan areas, at 138.1. San Jose’s real pay per job is \$67,900 (Figure 1).

San Jose holds the top position by a 20 percentage point margin or \$15,700 over the second place metropolitan area. This is the largest difference among the 107 metropolitan areas. San Jose has a strong economy, anchored by much of the Silicon Valley, the world’s leading information technology hub. San Jose also has the highest nominal average pay of \$125,500 and the highest Composite Cost of Living. San Jose’s cost of living reduces the value of a dollar by \$0.39, to \$0.61.⁹

Durham, NC ranks second, with average real pay of \$58,300 and a Standard of Living Index of 118.4. Durham’s high Standard of Living Index is the result of a slightly below average Composite Cost of Living Index, and higher than average nominal pay. In Durham, the value of a dollar for aspiring households is \$1.07 cents based on Durham’s low cost of living.

Third ranked Houston has an average real pay per job of \$57,300, with a Standard of Living Index 17 percent above the national average. Detroit, Atlanta, Charlotte, Seattle and Boston follow, all with Standard of Living Indexes exceeding 10 percent above average. Dallas-Fort Worth and Hartford round out the top ten.

At 6th, Charlotte, NC-SC has the highest Standard of Living Index, 19 places better than its 25th rank in nominal income. Atlanta and Detroit¹⁰ follow closely, ranking 16 and 15 places better in the Standard of Living Index than in nominal income.

COU Standard of Living Index: Highest 20 METROPOLITAN AREAS OVER 500,000: 2017

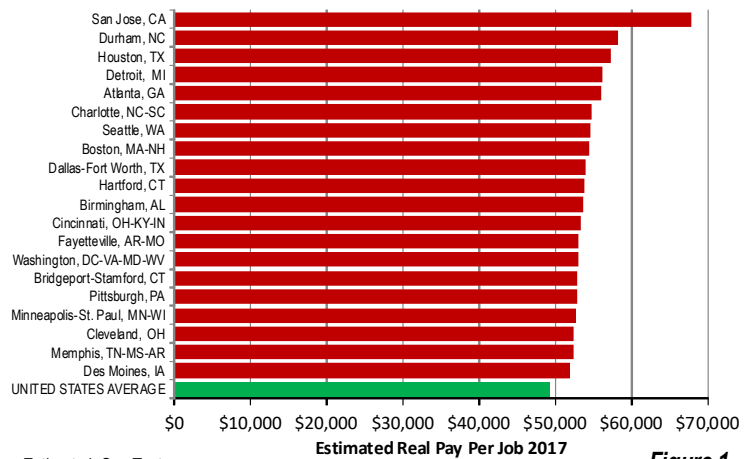


Figure 1

⁸The base (100) of the Composite Cost of Living Index is the BEA RPP.

⁹ The San Jose Composite Cost of Living Index is 184.8, which is compared to the national Composite Cost of Living Index of 112.4 (calculated in relation to the BEA RPP average, which relates to only to renters).

¹⁰ Detroit has developed a reputation for economic depression, largely due to the municipality of Detroit’s large population and manufacturing job losses. The metropolitan area, however (which like the other 106 metropolitan areas is the subject of this report) has had far more positive trends.

Nominal income rankings are not reliable predictors of Standard of Living Index rankings. The 20 metropolitan areas with the highest COU Standard of Living Indexes average 25 places different than their nominal pay ranking (plus or minus). Two metropolitan areas match their nominal pay ranking, San Jose (#1) and Seattle (#7). Two metropolitan areas are tied for the greatest positive ranking gap between their nominal pay and their Standard of Living Index. Fayetteville, AR-MO (home of Wal-Mart’s headquarters) and Birmingham, AL have Standard of Living Index rankings 34 places above nominal pay rankings. Memphis reaches a similar level, with a Standard of Living Index 32 places above its nominal pay ranking.

The highest standards of living are dominated by the major metropolitan areas (over 1,000,000 population), which occupy 15 of the top 20 positions. There are only four metropolitan areas between 500,000 and 1,000,000 population in the top 20, including second ranked Durham, NC, Fayetteville, AR-MO, Bridgeport-Stamford, CT and Des Moines, IA.

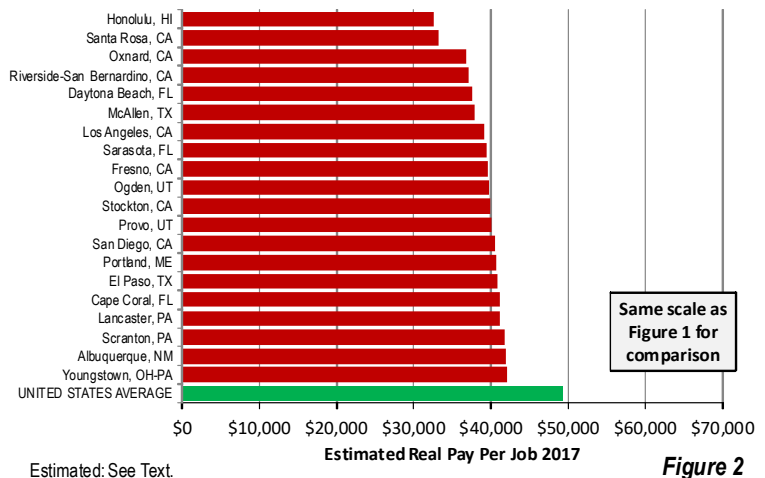
Metropolitan Areas with the Lowest Standard of Living: The Honolulu metropolitan area has the lowest Standard of Living Index, with a real \$32,600 per job and a Standard of Living Index of 66.2 (Figure 2). Honolulu has held last position in for each of the three years that the COU Standard of Living Index has been published. In Honolulu, the value of a dollar for aspiring households is only \$0.71, 29 cents less in purchasing power than the national average.

Also for the third year in a row, Santa Rosa (located in the San Francisco Bay CSA¹¹) has the second lowest Standard of Living Index, at 67.6, with a real average pay of \$33,200. In Santa Rosa, the value of a dollar for aspiring households is \$0.72, 28 cents less in purchasing power than the national average. Both Honolulu and Santa Rosa have Standards of Living approximately one-third below the national average.

Oxnard, CA, and Riverside-San Bernardino, (both in the Los Angeles CSA) rank third and fourth lowest, with Standard of Living Indexes of 74.8 and 75.3 respectively. Riverside-San Bernardino has the lowest Standard of Living Index of any major metropolitan area. Beach, FL (76.4) and McAllen, TX (77.0) have the fifth and sixth lowest Standard of Living Indexes.

Despite its considerably higher than average nominal earnings, Los Angeles, the nation’s second largest metropolitan area, has the 7th lowest Standard of Living Index, at 79.5, with real earnings of \$39,200. This is the result of Los Angeles’ very high cost of living. In Los Angeles, the value of a dollar for aspiring households is \$0.70, 30 cents less in purchasing power than the national average.

COU Standard of Living Index: Lowest 20 METROPOLITAN AREAS OVER 500,000: 2017



Same scale as Figure 1 for comparison

Figure 2

¹¹ Combined Statistical Area.

Sarasota, FL, Fresno, CA and Ogden, UT (Salt Lake City CSA) rank have the 8th, 9th and 10th lowest Standard of Living Indexes among the 107 metropolitan areas.

The 20 metropolitan areas with the lowest COU Standard of Living Indexes average 25 places different than that of their nominal pay ranking (plus or minus). Youngstown, OH has the higher Standard of Living Index ranking compared to its nominal pay ranking, 16 places higher. El Paso, TX has a positive Standard of Living Index ranking 13 places higher, while Scranton, PA has a Standard of Living Index ranking 11 places higher. In contrast, Los Angeles, CA has a Standard of Living Index that is 90 places below its nominal pay ranking. The other largest negative Standard of Living Index to nominal pay differentials are in San Diego, CA (78 places), Oxnard, CA (77 places), Santa Rosa, CA (66 places) and Honolulu, HI (60 places).

All of the bottom 20 have populations under 1,000,000 population, except for Riverside-San Bernardino, ranked 104th, Los Angeles, ranked 101st and San Diego, ranked 95th.

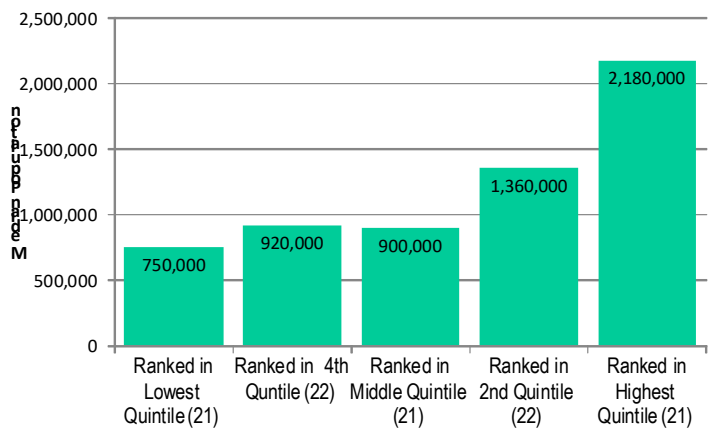
2: ANALYSIS

Nominal dollar income is not a reliable measure of its purchasing power in metropolitan areas. The average difference in rank is 19, indicating that the average metropolitan area has cost of living adjusted pay that ranks it 19 places higher or lower than its rank in nominal income. The largest ranking improvement in real versus nominal incomes is 45, in Augusta, GA-SC, which ranks 81st in nominal income and 36th in real income. The largest ranking drop is 90, in Los Angeles, which ranks 11th in nominal income and 101st in real income.

Larger metropolitan areas tend to have higher Standard of Living Indexes (Figure 3). The highest quintile (20 percent) of metropolitan areas have an median population of 2.2 million residents. The second quintile has an median population of 1.4 million and the third quintile slightly below 0.9 million (the lowest).¹² The fourth quintile slightly more a median population of slightly more than 0.9 million and the lowest quintile 700,000.

However, a more detailed analysis indicates that there are significant exceptions to the relationship between higher Standard of Living Indexes and larger populations (Figure 4). The largest metropolitan areas have the lowest Standard of Living Indexes. New York, the nation's largest metropolitan area ranks 51st in the Standard of Living Index, below its 5th ranking in nominal pay. Los Angeles ranks 101st in the Standard of Living Index, even further below its 11th ranking in nominal incomes. In both metropolitan areas, the higher cost of living erodes much of the value of higher average pay. Four of the 10 metropolitan areas with the

Population by Standard of Living Ranking
107 METROPOLITAN AREAS OVER 500,000: 2017



Based on COU Standard of Living Index

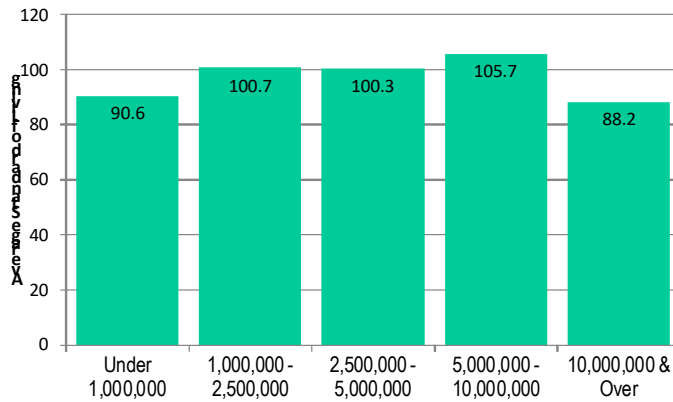
Figure 3

¹² Because 107 is not evenly divisible by 5, the size of the quintiles have been set at 21, 22, 21, 22 and 21.

highest nominal pay per job are not in the top 10 in the Standard of Living Index. These include #2 income San Francisco (31st in the Standard of Living Index), #3 income Bridgeport-Stamford (15th in the Standard of Living Index, #5 income New York (51st in the Standard of Living Index) and #10 Denver (23rd in the Standard of Living Index).

The highest average COU Standard of Living is in the metropolitan areas with from 5 to 10 million population, the second highest population category. The Standard of Living Index for these “less than largest” metropolitan areas is 17 percent higher than in the largest. After the largest metropolitan areas, the lowest Standard of Living Index is among the smallest metropolitan areas.

Average Standard of Living by Population
107 METROPOLITAN AREAS OVER 500,000: 2017



Based on COU Standard of Living Index

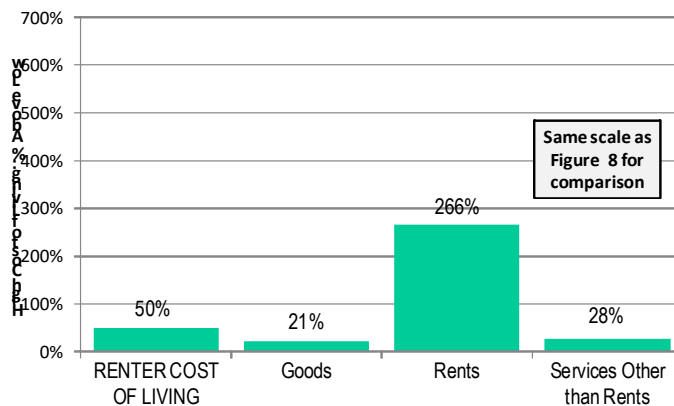
Figure 4

2.1: The Standard of Living Index and Housing

The cost of housing largely determines cost of living differences between metropolitan areas and thus has an inordinate influence on the standard of living. This is shown by the cost ranges of the major expenditure categories used by BEA (goods, services and rents [housing]¹³). In 2016, the overall cost of living range among the 107 metropolitan areas was 50 percent. Among goods, the range was 21 percent, and among services 28 percent. The housing cost range, however, was 260 percent approximately 10 times (1,000 percent) as great as the differences in goods and services (Figure 5).

Housing costs are even more dominant in the COU Composite Cost of Living Index, which estimates expenditure levels for households changing residences. There is a 135 percent variation in the overall cost of living between the lowest and highest cost metropolitan areas. The difference in housing costs is over 600 percent, which is nearly 30 times (3,000 percent) times the difference in goods and 20 times (2,000 percent) the difference in services (Figure 6).

Cost of Living Range: 2017 Renter
107 METROPOLITAN AREAS OVER 500,000



Estimated from Bureau of Economic Analysis data.

Figure 5

¹³ Services excluding rents, which are used in the BEA RPPs as the indicator of housing costs)

Housing costs represent approximately three-quarters of the higher costs of living in metropolitan areas that have a 10 percent higher than average cost of living as estimated in the BEA RPPs. Housing costs account for an even greater 87 percent of the difference in the COU Composite Cost of Living Index (Figure 7).

The cost differentials in housing are overwhelming compared to the differences in the costs of goods and services. Unlike the huge differences in housing costs, there are only minimal differences between metropolitan areas in the costs of food, apparel, transportation (such as purchasing and driving cars) and virtually every other major expense.

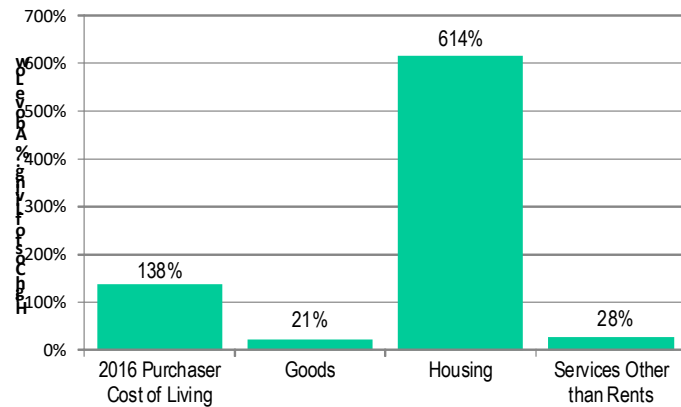
Further, the costs of owned housing have risen more quickly than rents, which is the principal reason that rental based or incumbent cost of living indexes are unable to characterize the cost differences between metropolitan areas. In 1969, the highest rents were 107 percent above the lowest among the major metropolitan areas. By 2016, this difference had risen to 134 percent, a rise of one-quarter since 1969. In 1969 the highest median house prices were 168 percent above those in the lowest cost metropolitan area. By 2016, the difference had climbed to 557 percent, more than four times the range in rents (Figure 8).

2.2: Competitiveness and the Standard of Living

Metropolitan areas with higher standards of living tend to be more competitive, attracting residents from those with lower standards of living (Figure 9).¹⁴

¹⁴ This conclusion is consistent with economic findings associating outward net domestic migration with higher costs of living and higher housing costs. See, for example, Edward L Glaeser and Joseph Gyourko (2017), “The Economic Implications of Housing Supply, Samuel Zell and Robert Lurie Real Estate Center, University of Pennsylvania. <http://realestate.wharton.upenn.edu/research/papers.php?paper=802> and Peter Ganong and Daniel Shoag, “Why Has Regional Income Convergence in the U.S. Declined?” HKS Working Paper No. RWP12-028,

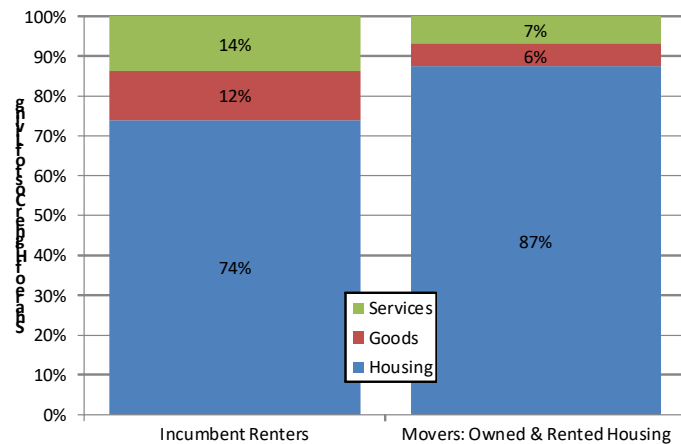
Cost of Living Range: 2017: Movers
107 METROPOLITAN AREAS OVER 500,000



Derived from Bureau of Economic Analysis & American Community Survey

Figure 6

Housing Share of Higher Cost of Living
10% OR HIGHER EXCESS COST OF LIVING (OF 381 MSA'S)

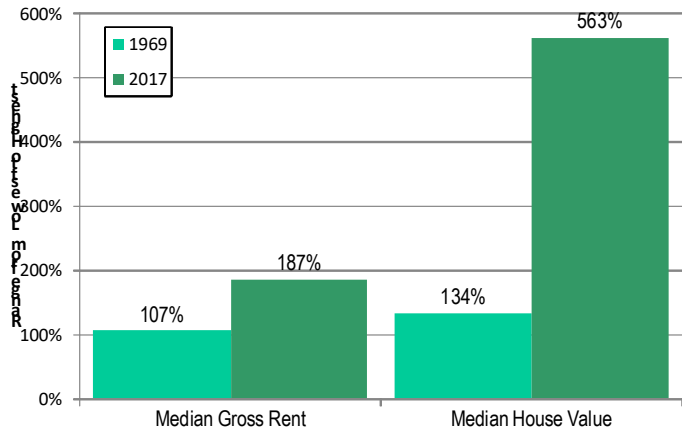


Estimated from BEA and COU data

Figure 7

Overall, from 2010 to 2017, there was net domestic migration of 534,000 into the 107 metropolitan areas from elsewhere in the United States. This was strongly concentrated in the metropolitan areas with the highest Standard of Living Indexes, which attracted 517,000 net domestic migrants. There were 8 such metropolitan areas, with five gaining domestic migrants, including Houston, Atlanta, Charlotte and Seattle. Each of these metropolitan areas had an average or lower COU Composite Cost of Living Index, except for high-cost Seattle. Two of the three losing higher standard of living metropolitan areas had the highest Composite Cost of Living Index (San Jose and Boston). Detroit, with a low cost of living, lost domestic migrants, reflecting the long-standing trend in the Rust Belt of the Midwest.

Change in Housing Cost Range 1969-2017
53 MAJOR METROPOLITAN AREAS

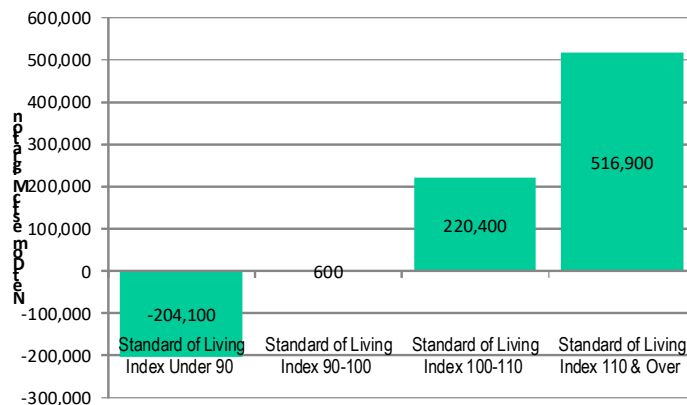


Derived from 1970 Census & 2017 American Community Survey

Figure 8

Metropolitan areas with a Standard of Living Index from 100 to 110 gained 220,000 net domestic migrants. The result was that a net 737,000 domestic migrants moved to metropolitan areas with a higher than average Standard of Living.

Migration & Standard of Living Index
107 METROPOLITAN AREAS OVER 500,000: 2010-2017



Derived from Census Bureau data & COU Standard of Living Index

Figure 9

There was net domestic migration of less than 1,000 to the metropolitan areas with a Standard of Living Index between 90 and 100. Metropolitan areas with a Standard of Living Index of less than 90 lost 204,000 net domestic migrants. Overall, metropolitan areas with a Standard of Living Index below the national average (100) lost 203,000 net domestic migrants.

2.3: The Threat to Middle-Income Households

For much of the period after World War II, US households enjoyed rising standards of living and improving opportunities. In recent years, there has been concern that this has deteriorated. Notably, there are increasing financial challenges for middle-income households, a cohort that is shrinking,

2013.

http://papers.ssrn.com/sol3/Delivery.cfm/SSRN_ID2241069_code1638787.pdf?abstractid=2081216&mirid=5.

especially in the highest cost metropolitan areas.¹⁵ Moreover, there has been considerable concern about widening gaps in wealth and income. Research indicates that the increased inequality largely reflects an acceleration of inequality in housing wealth.¹⁶

The short term prospects could worsen, with 30-year mortgage rates projected to reach 5.6 percent by 2020,¹⁷ 1.6 percent above the 2017 average mortgage rate. This could be expected to increase the national cost of living, with a seven percent increase in expensive housing markets, such as San Jose and San Francisco.

APPENDIX: METHODOLOGY

The COU Standard of Living Index rates the nation's 107 metropolitan areas (cities) with more than 500,000 population based on real average pay per job.

Pay per Job data is from the US Department of Labor Bureau of Labor Statistics for 2016, which is adjusted for metropolitan area cost of living differences using the COU Composite Cost of Living Index, as follows.

(a) Cost of living for renters: The cost of living for renters is based on the US Department of Commerce Bureau of Economic Analysis (BEA) Regional Price Parities for 2016. Relative weights are modeled for the three components (goods, rents and services other than rents) The rent component is adjusted in each metropolitan area for the change relative to the national average between 2015 and 2016 using rents (average gross rents), using American Community Survey data. In this calculation, the national rent weight is held constant, as are the weights for goods and other services.

(b) Cost of living for home buyers: The cost of living for current (2017) home buyers is estimated by substituting ownership costs for the cost of renting, using American Community Survey data. It is assumed that the current home purchase involves an average priced house, with a down payment of 10 percent, financed by a 30-year fixed rate mortgage at 3.99 percent¹⁸ interest with mortgage insurance. Other current home purchase costs such as insurance, real estate taxes and homeowner association or condominium fees are estimated from the American Community Survey.

(c) The cost of living for renters (BEA RPPs and the cost of living for home buyers are weighted based on the national distribution of 63.9 percent homeowners and 36.1 percent renters,¹⁹ to estimate the COU Composite Cost of Living Index.²⁰

¹⁵ See Joel Kotkin and Marshall Toplansky (2018), *California Feudalism: The Squeeze on the Middle-Class*, Chapman University, Center for Demographics and Policy (http://www.newgeography.com/files/Feudalism_Web.pdf).

¹⁶ See, for example Matthew Rognlie (2014). "A Note on Piketty and Diminishing Returns to Capital," <http://gabriel-zucman.eu/files/teaching/Rognlie14.pdf>.

¹⁷ FreddieMac, *Economic Growth Slows in Third Quarter*, http://www.freddie.mac.com/research/forecast/20181029_economic_growth.html.

¹⁸ 2017 annual rate from *30-Year Fixed-Rate Mortgages Since 1971*, Freddie Mac, <http://www.freddie.mac.com/pmms/pmms30.html>.

¹⁹ Calculated from the American Community Survey, 2017.

(d) Real pay per job is obtained by dividing the nominal pay per job by the COU Composite Cost of Living Index. The national real pay per job is the national standard of living average.

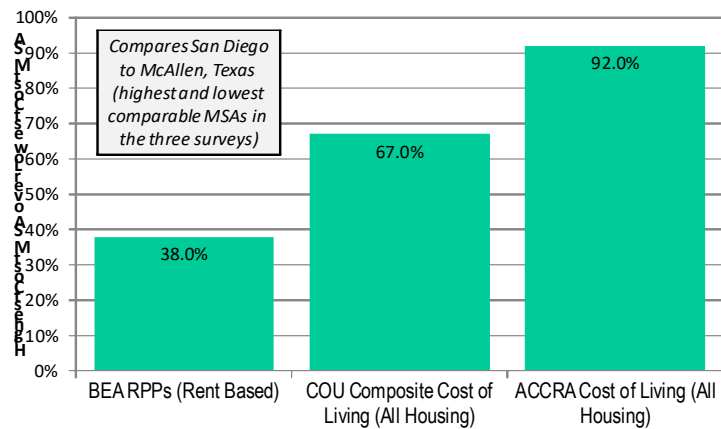
(e) The COU Standard of Living Index is obtained by dividing the real pay per job by the national real pay per job.

Caveats and Considerations: The COU Standard of Living Index is based on the COU Composite Cost of Living Index. The COU composite cost of living index is thus not a general cost of living index, but rather is focused on the need to comprehensively compare costs of living between metropolitan areas by households considering a change in housing.

It is likely that the COU Composite Cost of Living Index *underestimates* the cost of living in some more expensive metropolitan areas. For example, the widely used C2ER cost of living index²¹ has a *greater* range than the COU Composite Cost of Living Index (Figure 10).

Further, neither BEA's cost of living index (RPPs) nor the COU Composite Cost of Living Index includes personal taxes, such as federal, state and local income taxes.²² The federal income tax is progressive, such that higher rates are paid with higher incomes. This is also true of some state and local income taxes. As a result, residents in metropolitan areas with higher nominal average pay and prohibitive costs of living are likely to pay more in taxes, further discounting the value of their earnings.

Cost of Living Comparisons LOW & HIGH AMONG 107 METROPOLITAN AREAS



Based on COU Standard of Living Index

Figure 10

²⁰ The COU Composite Cost of Living estimates costs for housings that move residences in the current year (rent or buy on typical terms). An index indicating overall costs of homeownership, regardless of the home purchase date would indicate lower values and does not currently exist.

²¹ See: "C2ER Cost of Living Index," <http://coli.org/>

²² Bureau of Economic Analysis, *Frequently Asked Questions: What is included in personal taxes?* http://www.bea.gov/faq/index.cfm?faq_id=550

Table 1
COU Standard of Living Index: 2017
Ranked by Highest Standard of Living
 Metropolitan Areas over 500,000 Population

Rank (Out of 107)	Metropolitan Area	Real Pay per Job Adjusted by COU Composite Cost of Living Index (Table 2)	COU Standard of Living Index (Relative to National Average Standard of Living)
1	San Jose, CA	\$67,901	138.1
2	Durham, NC	\$58,233	118.4
3	Houston, TX	\$57,310	116.5
4	Detroit, MI	\$56,156	114.2
5	Atlanta, GA	\$55,940	113.8
6	Charlotte, NC-SC	\$54,699	111.2
7	Seattle, WA	\$54,525	110.9
8	Boston, MA-NH	\$54,436	110.7
9	Dallas-Fort Worth, TX	\$53,980	109.8
10	Hartford, CT	\$53,859	109.5
11	Birmingham, AL	\$53,656	109.1
12	Cincinnati, OH-KY-IN	\$53,423	108.6
13	Fayetteville, AR-MO	\$53,094	108.0
14	Washington, DC-VA-MD-WV	\$52,994	107.8
15	Bridgeport-Stamford, CT	\$52,906	107.6
16	Pittsburgh, PA	\$52,842	107.5
17	Minneapolis-St. Paul, MN-WI	\$52,727	107.2
18	Cleveland, OH	\$52,495	106.8
19	Memphis, TN-MS-AR	\$52,471	106.7
20	Des Moines, IA	\$51,844	105.4
21	Austin, TX	\$51,823	105.4
22	St. Louis,, MO-IL	\$51,678	105.1
23	Denver, CO	\$51,622	105.0
24	Raleigh, NC	\$51,604	104.9
25	Columbus, OH	\$51,362	104.5
26	Nashville, TN	\$51,089	103.9
27	Kansas City, MO-KS	\$51,054	103.8
28	Chicago, IL-IN-WI	\$50,925	103.6
29	Indianapolis. IN	\$50,869	103.4
30	Knoxville, TN	\$50,376	102.4
31	San Francisco, CA	\$50,285	102.3
32	Baton Rouge, LA	\$50,221	102.1
33	Philadelphia, PA-NJ-DE-MD	\$50,122	101.9
34	Louisville, KY-IN	\$49,477	100.6
35	Winston-Salem, NC	\$49,397	100.5
36	Augusta, GA-SC	\$49,033	99.7
37	Richmond, VA	\$49,023	99.7
38	Harrisburg, PA	\$48,964	99.6
39	Phoenix, AZ	\$48,923	99.5

40	Akron, OH	\$48,634	98.9
41	Oklahoma City, OK	\$48,606	98.8
42	Tulsa, OK	\$48,599	98.8
43	Dayton, OH	\$48,495	98.6
44	Baltimore, MD	\$48,401	98.4
45	Portland, OR-WA	\$48,308	98.2
46	New Orleans, LA	\$48,058	97.7
47	Albany, NY	\$47,955	97.5
48	Sacramento, CA	\$47,905	97.4
49	Toledo, OH	\$47,844	97.3
50	Chattanooga, TN-GA	\$47,732	97.1
51	New York, NY-NJ-PA	\$47,695	97.0
52	Omaha, NE-IA	\$47,458	96.5
53	Melbourne, FL	\$47,423	96.4
54	Milwaukee, WI	\$47,315	96.2
55	Little Rock, AR	\$47,106	95.8
56	Madison, WI	\$46,934	95.4
57	San Antonio, TX	\$46,884	95.3
58	Greenville, SC	\$46,879	95.3
59	Jacksonville, FL	\$46,842	95.3
60	Greensboro, NC	\$46,814	95.2
61	Syracuse, NY	\$46,800	95.2
62	Wichita, KS	\$46,751	95.1
63	Lexington-Fayette, KY	\$46,352	94.3
64	Salt Lake City, UT	\$46,187	93.9
65	Grand Rapids, MI	\$46,151	93.9
66	Buffalo, NY	\$46,084	93.7
67	Rochester, NY	\$45,706	92.9
68	Tampa-St. Petersburg, FL	\$45,658	92.9
69	Columbia, SC	\$45,627	92.8
70	Colorado Springs, CO	\$44,738	91.0
71	Allentown, PA-NJ	\$44,364	90.2
72	Las Vegas, NV	\$44,303	90.1
73	Jackson, MS	\$44,210	89.9
74	Spokane, WA	\$43,945	89.4
75	Orlando, FL	\$43,911	89.3
76	New Haven CT	\$43,832	89.1
77	Tucson, AZ	\$43,777	89.0
78	Charleston, SC	\$43,775	89.0
79	Boise, ID	\$43,674	88.8
80	Worcester, MA-CT	\$43,376	88.2
81	Springfield, MA	\$43,147	87.7
82	Virginia Beach-Norfolk, VA-NC	\$43,012	87.5
83	Bakersfield, CA	\$42,958	87.4
84	Providence, RI-MA	\$42,780	87.0
85	Lakeland, FL	\$42,642	86.7
86	Miami, FL	\$42,572	86.6
87	Modesto, CA	\$42,352	86.1
88	Youngstown, OH-PA	\$42,019	85.4

89	Albuquerque, NM	\$41,847	85.1
90	Scranton, PA	\$41,730	84.9
91	Lancaster, PA	\$41,127	83.6
92	Cape Coral, FL	\$41,102	83.6
93	El Paso, TX	\$40,790	83.0
94	Portland, ME	\$40,649	82.7
95	San Diego, CA	\$40,455	82.3
96	Provo, UT	\$40,111	81.6
97	Stockton, CA	\$39,880	81.1
98	Ogden, UT	\$39,718	80.8
99	Fresno, CA	\$39,581	80.5
100	Sarasota, FL	\$39,340	80.0
101	Los Angeles, CA	\$39,090	79.5
102	McAllen, TX	\$37,844	77.0
103	Daytona Beach, FL	\$37,584	76.4
104	Riverside-San Bernardino, CA	\$37,035	75.3
105	Oxnard, CA	\$36,803	74.8
106	Santa Rosa, CA	\$33,233	67.6
107	Honolulu, HI	\$32,550	66.2
	NATIONAL AVERAGE	\$49,174	100.0

Addittional details in Table 2

Table 2

COU Standard of Living Index: 2017
Alphabetical Listing

Rank (Out of 107)	Rank out of 53 with More Than 1,000,000 Population	Metropolitan Area	In Combined Statistical Area?	Real Pay per Job Adjusted by COU Composite Cost of Living Index	COU Standard of Living Index (Relative to National Average Standard of Living)	2017 COU Composite Cost of Living Index	Net Domestic Migration	BLS Nominal Pay per Job 2017	Rank: Nominal Pay	Exhibit: BEA RPP
40		Akron, OH		\$ 48,634	98.9	97.5	(13,400)	\$ 47,412	72	90.0
47		Albany, NY		\$ 47,955	97.5	112.9	(12,100)	\$ 54,132	30	100.4
89		Albuquerque, NM		\$ 41,847	85.1	107.5	(9,400)	\$ 44,978	92	96.3
71		Allentown, PA-NJ	New York	\$ 44,364	90.2	112.9	(5,700)	\$ 50,102	54	100.8
5	4	Atlanta, GA		\$ 55,940	113.8	104.7	188,200	\$ 58,546	21	96.3
36		Augusta, GA-SC		\$ 49,033	99.7	94.0	13,600	\$ 46,081	81	88.3
21	17	Austin, TX		\$ 51,823	105.4	115.3	224,400	\$ 59,740	18	100.0
83		Bakersfield, CA		\$ 42,958	87.4	104.9	(20,000)	\$ 45,060	89	96.7
44	32	Baltimore, MD	Washington	\$ 48,401	98.4	121.1	(37,600)	\$ 58,600	20	107.2
32		Baton Rouge, LA		\$ 50,221	102.1	100.8	(9,300)	\$ 50,610	52	93.0
11	10	Birmingham, AL		\$ 53,656	109.1	96.5	(6,300)	\$ 51,762	45	88.8
79		Boise, ID		\$ 43,674	88.8	104.0	56,300	\$ 45,413	87	94.8
8	7	Boston, MA-NH		\$ 54,436	110.7	139.5	(55,700)	\$ 75,938	4	111.1
15		Bridgeport-Stamford, CT	New York	\$ 52,906	107.6	160.6	(34,100)	\$ 84,987	3	120.1
66	42	Buffalo, NY		\$ 46,084	93.7	103.8	(25,100)	\$ 47,820	68	94.4
92		Cape Coral, FL		\$ 41,102	83.6	105.8	99,100	\$ 43,501	98	95.9
78		Charleston, SC		\$ 43,775	89.0	108.8	74,500	\$ 47,626	70	96.2
6	5	Charlotte, NC-SC		\$ 54,699	111.2	102.0	177,500	\$ 55,801	25	93.5
50		Chattanooga, TN-GA		\$ 47,732	97.1	97.8	18,500	\$ 46,697	77	89.3
28	24	Chicago, IL-IN-WI		\$ 50,925	103.6	119.9	(479,500)	\$ 61,037	13	103.8
12	11	Cincinnati, OH-KY-IN		\$ 53,423	108.6	99.2	(21,300)	\$ 53,006	33	89.6
18	15	Cleveland, OH		\$ 52,495	106.8	99.3	(64,400)	\$ 52,133	41	90.2
70		Colorado Springs, CO		\$ 44,738	91.0	108.8	29,600	\$ 48,659	60	99.6
69		Columbia, SC		\$ 45,627	92.8	98.3	25,600	\$ 44,841	95	91.8
25	21	Columbus, OH		\$ 51,362	104.5	102.3	42,900	\$ 52,545	36	93.0
9	8	Dallas-Fort Worth, TX		\$ 53,980	109.8	111.6	369,600	\$ 60,260	16	100.2
43		Dayton, OH		\$ 48,495	98.6	97.3	(16,900)	\$ 47,170	75	90.0
103		Daytona Beach, FL		\$ 37,584	76.4	102.3	63,600	\$ 38,452	105	95.4
23	19	Denver, CO		\$ 51,622	105.0	122.2	164,800	\$ 63,081	10	106.0
20		Des Moines, IA		\$ 51,844	105.4	105.1	32,000	\$ 54,474	27	94.5
4	3	Detroit, MI		\$ 56,156	114.2	104.6	(141,000)	\$ 58,751	19	95.9
2		Durham, NC	Raleigh	\$ 58,233	118.4	105.8	23,500	\$ 61,581	12	95.2
93		El Paso, TX		\$ 40,790	83.0	93.0	(42,500)	\$ 37,932	106	88.7
13		Fayetteville, AR-MO		\$ 53,094	108.0	97.1	37,900	\$ 51,532	47	89.5
99		Fresno, CA		\$ 39,581	80.5	108.3	(20,100)	\$ 42,886	99	96.3
65	41	Grand Rapids, MI		\$ 46,151	93.9	101.8	12,400	\$ 47,004	76	93.5
60		Greensboro, NC		\$ 46,814	95.2	96.2	11,100	\$ 45,055	90	89.8
58		Greenville, SC		\$ 46,879	95.3	96.0	43,500	\$ 44,992	91	89.6
38		Harrisburg, PA		\$ 48,964	99.6	104.6	200	\$ 51,238	49	96.6
10	9	Hartford, CT		\$ 53,859	109.5	118.8	(53,000)	\$ 63,969	9	101.5
107		Honolulu, HI		\$ 32,550	66.2	159.3	(48,000)	\$ 51,864	44	124.4
3	2	Houston, TX		\$ 57,310	116.5	113.3	273,000	\$ 64,954	8	101.6
29	25	Indianapolis, IN		\$ 50,869	103.4	100.0	30,800	\$ 50,868	51	92.8
73		Jackson, MS		\$ 44,210	89.9	96.2	(10,800)	\$ 42,509	100	90.1
59	39	Jacksonville, FL		\$ 46,842	95.3	105.0	87,000	\$ 49,193	57	95.8
27	23	Kansas City, MO-KS		\$ 51,054	103.8	102.1	16,800	\$ 52,120	42	93.7
30		Knoxville, TN		\$ 50,376	102.4	96.1	31,600	\$ 48,394	64	88.5
85		Lakeland, FL		\$ 42,642	86.7	97.1	55,900	\$ 41,387	103	92.9
91		Lancaster, PA		\$ 41,127	83.6	110.0	(3,300)	\$ 45,246	88	99.4
72	45	Las Vegas, NV		\$ 44,303	90.1	107.0	119,700	\$ 47,395	73	97.8
63		Lexington-Fayette, KY		\$ 46,352	94.3	101.8	11,500	\$ 47,203	74	91.3
55		Little Rock, AR		\$ 47,106	95.8	96.9	7,200	\$ 45,644	84	90.5
101	52	Los Angeles, CA		\$ 39,090	79.5	160.0	(502,500)	\$ 62,555	11	117.7
34	28	Louisville, KY-IN		\$ 49,477	100.6	100.4	12,200	\$ 49,687	55	91.0
56		Madison, WI		\$ 46,934	95.4	112.0	13,200	\$ 52,562	34	97.7
102		McAllen, TX		\$ 37,844	77.0	88.8	(16,400)	\$ 33,612	107	84.5
53		Melbourne, FL		\$ 47,423	96.4	102.2	47,400	\$ 48,469	62	95.6
19	16	Memphis, TN-MS-AR		\$ 52,471	106.7	97.2	(40,600)	\$ 51,007	50	91.0
86	50	Miami, FL		\$ 42,572	86.6	123.4	(63,600)	\$ 52,548	35	107.6
54	37	Milwaukee, WI		\$ 47,315	96.2	109.8	(50,600)	\$ 51,960	43	95.6
17	14	Minneapolis-St. Paul, MN-WI		\$ 52,727	107.2	115.6	400	\$ 60,940	14	102.3
87		Modesto, CA		\$ 42,352	86.1	108.5	(400)	\$ 45,970	82	97.8
26	22	Nashville, TN		\$ 51,089	103.9	105.4	126,100	\$ 53,868	31	94.4
76		New Haven CT		\$ 43,832	89.1	128.3	(39,600)	\$ 56,219	24	111.4
46	34	New Orleans, LA		\$ 48,058	97.7	105.0	24,700	\$ 50,458	53	95.2
51	36	New York, NY-NJ-PA		\$ 47,695	97.0	158.8	(1,089,500)	\$ 75,745	5	122.0
98		Ogden, UT	Salt Lake City	\$ 39,718	80.8	105.8	12,400	\$ 42,037	102	95.1
41	31	Oklahoma City, OK		\$ 48,606	98.8	99.3	52,200	\$ 48,258	66	91.6
52		Omaha, NE-IA		\$ 47,458	96.5	102.4	5,300	\$ 48,601	61	93.4

75	46	Orlando, FL		\$	43,911	89.3	105.1	155,500	\$	46,169	80	98.0
105		Oxnard, CA	Los Angeles	\$	36,803	74.8	147.9	(16,800)	\$	54,433	28	117.2
33	27	Philadelphia, PA-NJ-DE-MD		\$	50,122	101.9	121.3	(147,000)	\$	60,822	15	105.9
39	30	Phoenix, AZ		\$	48,923	99.5	106.8	263,900	\$	52,245	38	97.1
16	13	Pittsburgh, PA		\$	52,842	107.5	103.2	(24,400)	\$	54,518	26	94.3
94		Portland, ME		\$	40,649	82.7	119.2	10,900	\$	48,439	63	101.7
45	33	Portland, OR-WA		\$	48,308	98.2	119.2	106,800	\$	57,579	23	101.7
84	49	Providence, RI-MA		\$	42,780	87.0	120.0	(33,300)	\$	51,325	48	99.7
96		Provo, UT	Salt Lake City	\$	40,111	81.6	109.1	14,200	\$	43,757	96	96.8
24	20	Raleigh, NC		\$	51,604	104.9	105.4	111,000	\$	54,373	29	95.9
37	29	Richmond, VA		\$	49,023	99.7	106.5	27,300	\$	52,194	39	96.1
104	53	Riverside-San Bernardino, CA	Los Angeles	\$	37,035	75.3	121.2	78,500	\$	44,877	94	107.4
67	43	Rochester, NY		\$	45,706	92.9	107.0	(38,700)	\$	48,913	59	98.0
48	35	Sacramento, CA		\$	47,905	97.4	120.4	49,300	\$	57,692	22	102.0
64	40	Salt Lake City, UT		\$	46,187	93.9	113.5	5,100	\$	52,436	37	99.4
57	38	San Antonio, TX		\$	46,884	95.3	102.8	169,700	\$	48,194	67	94.4
95	51	San Diego, CA		\$	40,455	82.3	148.1	(36,000)	\$	59,901	17	116.3
31	26	San Francisco, CA	San Francisco Bay	\$	50,285	102.3	179.7	19,500	\$	90,377	2	124.7
1	1	San Jose, CA	San Francisco Bay	\$	67,901	138.1	184.8	(73,000)	\$	125,453	1	127.1
106		Santa Rosa, CA	San Francisco Bay	\$	33,233	67.6	157.0	7,800	\$	52,178	40	121.0
100		Sarasota, FL		\$	39,340	80.0	111.1	106,300	\$	43,716	97	99.0
90		Scranton, PA		\$	41,730	84.9	101.0	(8,800)	\$	42,127	101	92.3
7	6	Seattle, WA		\$	54,525	110.9	134.2	124,500	\$	73,178	7	110.5
74		Spokane, WA		\$	43,945	89.4	105.1	19,100	\$	46,191	79	95.2
81		Springfield, MA		\$	43,147	87.7	112.1	(21,600)	\$	48,361	65	97.4
22	18	St. Louis, MO-IL		\$	51,678	105.1	99.9	(67,600)	\$	51,643	46	90.8
97		Stockton, CA	San Francisco Bay	\$	39,880	81.1	114.2	13,500	\$	45,531	85	99.6
61		Syracuse, NY		\$	46,800	95.2	105.3	(32,200)	\$	49,295	56	96.7
68	44	Tampa-St. Petersburg, FL		\$	45,658	92.9	107.5	206,500	\$	49,094	58	99.8
49		Toledo, OH		\$	47,844	97.3	95.8	(23,100)	\$	45,839	83	88.7
77	47	Tucson, AZ		\$	43,777	89.0	103.9	7,400	\$	45,480	86	95.8
42		Tulsa, OK		\$	48,599	98.8	97.8	12,300	\$	47,533	71	90.7
82	48	Virginia Beach-Norfolk, VA-NC		\$	43,012	87.5	107.9	(51,900)	\$	46,425	78	97.9
14	12	Washington, DC-VA-MD-WV		\$	52,994	107.8	140.8	(66,100)	\$	74,613	6	119.1
62		Wichita, KS		\$	46,751	95.1	96.1	(18,500)	\$	44,923	93	90.2
35		Winston-Salem, NC		\$	49,397	100.5	96.8	13,800	\$	47,794	69	89.0
80		Worcester, MA-CT	Boston	\$	43,376	88.2	122.8	(17,400)	\$	53,252	32	103.6
88		Youngstown, OH-PA		\$	42,019	85.4	93.9	(16,200)	\$	39,452	104	87.5
		NATIONAL AVERAGE			\$49,174	100.0	112.6	\$55,390				