

AUTO \$\$\$\$
REPAIRS
%
utilities \$\$\$
\$
MORTGAGE

LOSING GROUND

car payments \$\$\$\$
TIRES
FARE RENT GAS \$\$\$\$
insurance
property taxes
\$\$\$\$\$

The Struggle of Moderate-Income Households to Afford the Rising Costs of Housing and Transportation

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About the Center for Housing Policy

The Center for Housing Policy is the research affiliate of the National Housing Conference (NHC) and specializes in developing solutions through research. In partnership with NHC and its members, the Center works to broaden understanding of the nation's housing challenges and to examine the impact of policies and programs developed to address these needs. Combining research and practical, real-world expertise, the Center helps to develop effective policy solutions at the national, state, and local levels that increase the availability of affordable homes.

Since 1931, NHC has been dedicated to ensuring safe, decent, and affordable housing for all Americans. NHC has earned its strong reputation as the United Voice for Housing by actively engaging and convening its membership in nonpartisan advocacy for effective housing policy solutions at the local, state, and national levels. More information about NHC and the Center is available at www.nhc.org.

About the Center for Neighborhood Technology

The Center for Neighborhood Technology (CNT) is an award-winning innovations laboratory for urban sustainability. Since 1978, CNT has been working to show urban communities in Chicago and across the country how to develop more sustainably. CNT promotes the better and more efficient use of the undervalued resources and inherent advantages of the built and natural systems that comprise the urban environment.

As a creative think-and-do tank, we research, promote, and implement innovative solutions to improve the economy and the environment; make good use of existing resources and community assets; and restore the health of natural systems and increase the wealth and well-being of people – now and in the future. CNT's unique approach combines cutting edge research and analysis, public policy advocacy, the creation of web-based information tools for transparency and accountability, and the advancement of economic development social ventures to address those problems in innovative ways.

CNT works in four areas: transportation and community development, water, energy, and climate. CNT has two affiliates, IGO™ CarSharing and CNT Energy. More information about CNT is available at www.cnt.org.

Both the Center for Neighborhood Technology and the Center for Housing Policy/National Housing Conference were recipients of the 2009 MacArthur Award for Creative and Effective Institutions.



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Executive Summary

IN 2006, THE CENTER FOR HOUSING POLICY released *A Heavy Load: The Combined Housing and Transportation Burdens of Working Families* in partnership with the Center for Neighborhood Technology (CNT) and the Institute of Transportation Studies at UC-Berkeley. By documenting the trade-offs that moderate-income households make between their housing and transportation costs, *A Heavy Load* encouraged practitioners and policymakers to take a more comprehensive view of housing affordability. This broader approach adds the costs of travel to daily destinations to the traditional components of housing costs – rent or mortgage payments and utilities – to compute a combined cost that better reflects the full costs associated with selecting one housing unit, and its location, over another.

Six years later, the idea that housing and transportation costs need to be examined together has gained considerable traction. A growing number of localities and states are considering the combined costs in their planning decisions and the U.S. Department of Housing and Urban Development is preparing its own version of a housing and transportation cost index to encourage its widespread use. Many policymakers and practitioners have recognized that placing lower-cost housing in areas located far from job centers and public transit may not provide a truly “affordable” housing solution. To reduce the combined costs of housing and transportation, many communities are working to preserve affordable housing near existing and planned transit stations, job centers, and other places where transportation costs are low and to include affordable housing within new development in these areas.

In this new report, the Center for Housing Policy and CNT have partnered again to gauge the housing and transportation cost burdens of moderate-income households living in the 25 largest metro areas at the end of the decade. Newly available data give us an opportunity to assess the impact on combined costs of the rapid rise and fall of home prices during the 2000s, the recent rebound in rents, and the nation’s increased suburbanization over the past decade.

Here’s what we found:

The problem is getting worse. Housing and transportation costs rose faster than income during the 2000s, increasing the burden that these costs placed on already stretched budgets. This held true for each of the 25 largest metropolitan areas, though the disparity was greater in some areas than others. For all households, including homeowners who have paid off their mortgage, housing and transportation together consumed an average of 48 percent of the median household’s income by decade’s end.

Moderate-income households pay a disproportionate share.

For households earning 50 to 100 percent of the median income of their metropolitan area, nearly three-fifths (59 percent) of income goes to housing and transportation costs. For these households, the growing costs of place¹ are particularly burdensome, leaving relatively little left over for expenses such as food, education, and health care, not to mention savings.

The combined burden of housing and transportation costs is greatest where costs are out of sync with local incomes; these are not always the places with the highest absolute costs.

In some metro areas, such as Washington, DC, Boston, and San Francisco, high costs are matched by relatively high incomes, helping moderate-income households better afford their housing and transportation costs. But other regions, such as Riverside-San Bernardino, CA, Miami, and Los Angeles, have moderate or even high housing and transportation costs in spite of relatively low median incomes. In these metro areas, combined cost burdens for moderate-income households are very high, with average burdens ranging from 65 to 72 percent of household income.

¹In this report, we use “costs of place” and “housing and transportation costs” interchangeably. In both cases, utilities are included.

Transportation costs still shape differences in the overall affordability of metro areas. Six years later, it remains as important as ever to consider transportation costs along with housing prices in measuring overall affordability. The inclusion of transportation costs affects the relative affordability of many metro areas. For example, housing costs in the Houston region are comparatively affordable as a share of income, ranking eighth out of the 25 regions examined. When transportation costs are included, however, Houston drops into 17th place, as one of the less affordable regions for the combined costs of housing and transportation. In contrast, metro areas such as San Francisco, Boston, and New York are some of the least affordable regions for local moderate-income households when just housing is considered, but are among the most affordable when housing and transportation costs are considered together.

Moderate-income homeowners carry heavier cost burdens than renters. For the typical moderate-income renter, housing and transportation costs consume an average of 55 percent of income. Moderate-income homeowners carrying a mortgage face average costs of nearly 72 percent of income.

Cost burdens for moderate-income households vary substantially within metro areas. Even in metro areas where average cost burdens are relatively affordable, there are many neighborhoods that are out of reach for moderate-income households. In the Philadelphia region, for example, moderate-income households are faced with average housing and transportation costs exceeding 90 percent of their income in some neighborhoods.

Despite lower burdens than homeowners, moderate-income renters are still barely making ends meet in many metro areas. In the Los Angeles metro area, where average housing and transportation costs consume 61 percent of income for moderate-income renters, a typical renter household would not have enough left over at the end of the month to pay for food, health care, and other basic necessities. This would suggest these households are either cutting corners on essentials, or accruing debt.

We can make things better. There are multiple, promising approaches available to local and state governments to help reduce the combined costs of place to more manageable levels for moderate-income households. These include:

- ▶ Preservation of existing affordable homes near job centers, public transit stations, and other places where transportation costs are low (“location-efficient areas”);
- ▶ Regulatory reforms that reduce the cost of creating new housing in location-efficient areas;
- ▶ Incentives or requirements to include affordable housing within new development in location-efficient areas;
- ▶ Land acquisition assistance to facilitate the development of affordable homes in location-efficient areas;
- ▶ Mechanisms for ensuring long-term affordability;
- ▶ Policies that capture a portion of the value generated by public investments in location efficiency to support affordable homes in these areas;
- ▶ Improvements to transit service and walkability for compact areas where housing prices are already relatively affordable so residents can rely less on autos.

By creating and preserving affordable living options in location-efficient areas, and improving the location efficiency of compact communities where housing costs are relatively low, local and state governments can reduce the combined costs of place that have become so burdensome for moderate-income households over the past decade.

Updated Methodology

This report includes a number of innovations in methodology that provide new insight into the housing and transportation challenges of moderate-income households. Because of these methodological changes, the results of this report should not be compared directly to those of *A Heavy Load*.

Inclusion of All Owners and Renters. *A Heavy Load* calculated housing and transportation cost burdens for renters and homeowners with a mortgage, but excluded homeowners who have paid off their mortgage. By contrast, this report includes all homeowners and renters when reporting housing and transportation cost burdens for moderate-income households. The inclusion of homeowners without mortgages has the effect of reducing the overall housing cost burdens reported for all households, but gives a more complete snapshot of the burdens facing moderate-income households.

Metro-Specific Income Ranges. *A Heavy Load* examined the housing and transportation cost burdens for households within a single national income range. To provide results that are more tailored to local incomes, this report focuses instead on **households earning between 50 and 100 percent of each metro area's median income** (starting on page 7). The income brackets studied here vary from one metro area to the next, ranging from a low of \$23,956 to \$47,912 in the Tampa metro area to a high of \$44,531 to \$89,063 in Washington, DC. (For a full listing, see Appendix 1.)

Changes in Boundaries. Most of the 25 metro areas included in this analysis cover a greater area than similarly named regions featured in *A Heavy Load*, due to changes in geographic boundaries made by the U.S. Office of Management and Budget since 2000.

For a full description, see Methodology on page 22.



Adam Gault/Digital Vision/Getty Images

What Is Included in Housing Costs?

In this report, housing costs for renters include rent and utilities. For homeowners, housing costs include mortgage payments, property taxes, home insurance, utilities, and, where applicable, payments for home equity loans, condominium fees, or mobile home costs.

What Is Included in Transportation Costs?

Transportation costs encompass all the trips that households make as part of their daily routine, including commuting, errands, and other travel. For car owners this includes the full costs of auto ownership, such as car payments, insurance, maintenance, and gas. For transit riders it includes the price of transit.

A WORD ABOUT THE DATA

This report analyzes data from the American Community Survey (ACS) – a survey conducted by the U.S. Census Bureau that replaces the long form of the Census. The ACS file analyzed for this report reflects a five-year average of data from 2006 to 2010 – the most recent and robust data available. Whenever we speak of “2010” data in this report, we refer to the data from this file, which represents the average of data collected from 2006 to 2010, adjusted to 2010 dollars.

Report Roadmap

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Appendix 2. Cost Burdens of Moderate-Income Renters (by MSA) **Page 26**

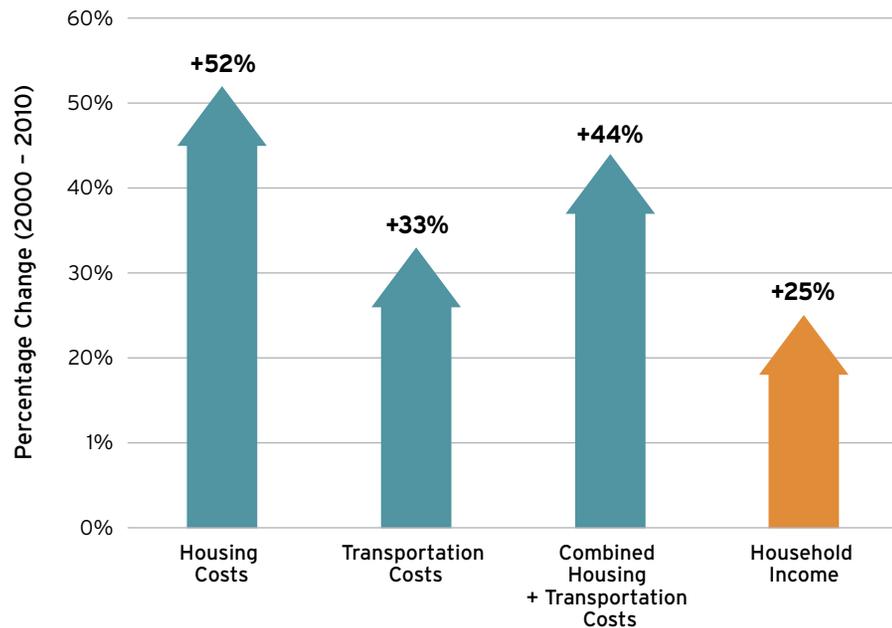
Appendix 3. Cost Burdens of Moderate-Income Homeowners (by MSA) **Page 27**



Housing and Transportation Costs Outpaced Incomes from 2000 to 2010

Despite the major housing market downturn that began in 2006, housing expenses in the 2006 to 2010 period were 52 percent higher for the typical household living in the 25 largest U.S. metro areas than they had been in 2000.² And as gas prices rose over the past decade, and development favored suburban locations over primary cities,³ transportation expenses increased 33 percent as well. As a result, the combined housing and transportation expenses for households in the largest metro areas rose 44 percent between 2000 and 2010 – about 1.75 times the growth of income over this time period.⁴

Rising Housing and Transportation Costs vs. Incomes for the Median-Income Household in the Largest 25 Metro Areas (costs and income are not adjusted for inflation)



NOTE: Households in this figure include renters and homeowners carrying a mortgage. On subsequent pages, our analysis focuses on all renters and owners, including homeowners who own their home outright.

Source: Housing + Transportation (H+T®) Affordability Index applied to 2000 Census data and 2006-2010 American Community Survey data (Center for Neighborhood Technology and Center for Housing Policy).



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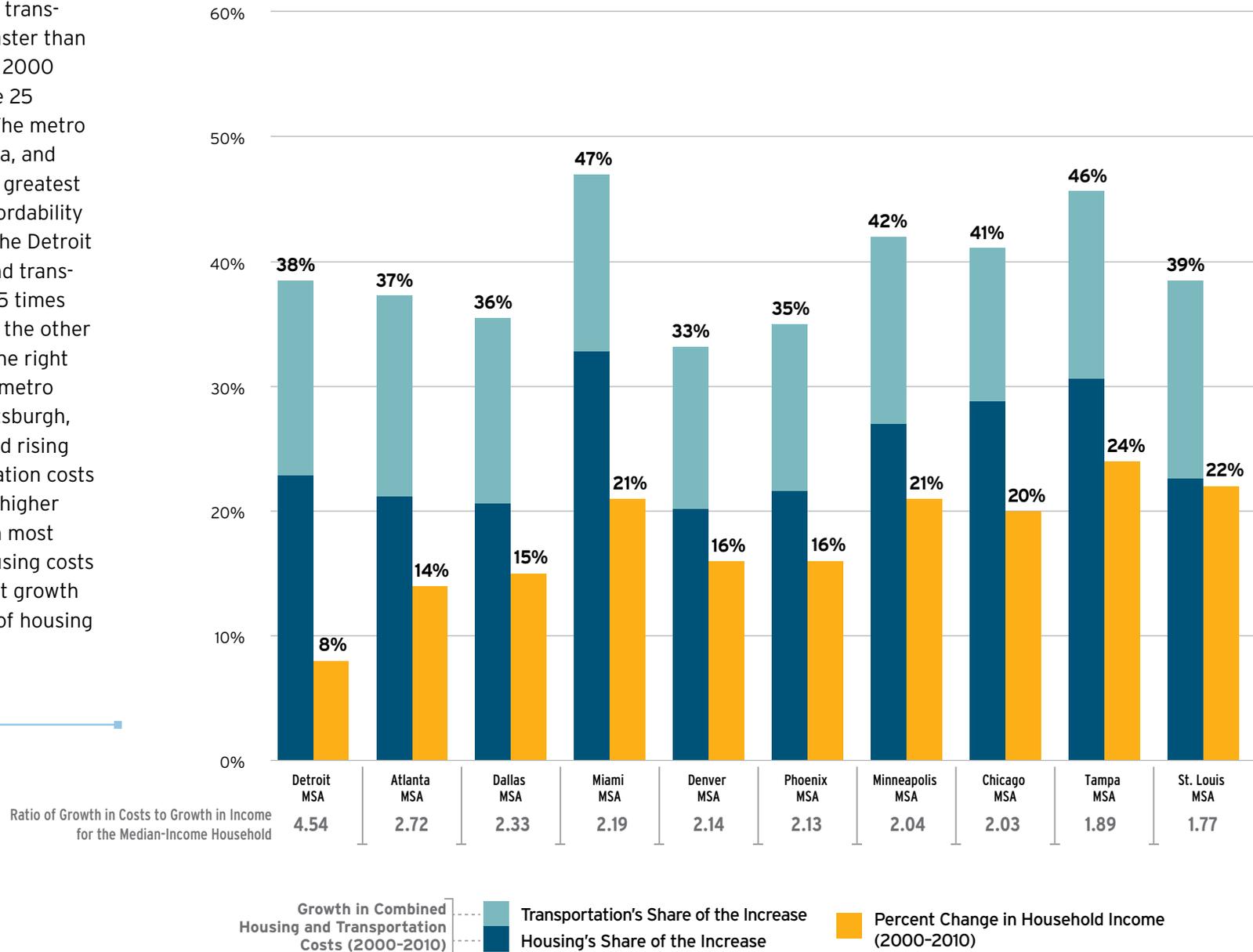
²The official boundary definitions for many of the metropolitan areas in this analysis changed between 2000 and 2010. To draw valid comparisons over time for the 25 largest metro areas, the analysis summarized here focuses only on the census tracts that were present in each metro area in both 2000 and 2010. These tailored geographies are special to the analyses showing change over time. In subsequent sections, our analysis focuses on the most recent data from the Census Bureau – rather than a comparison across time – and thus uses the latest metropolitan boundaries defined by the U.S. Office of Management and Budget.

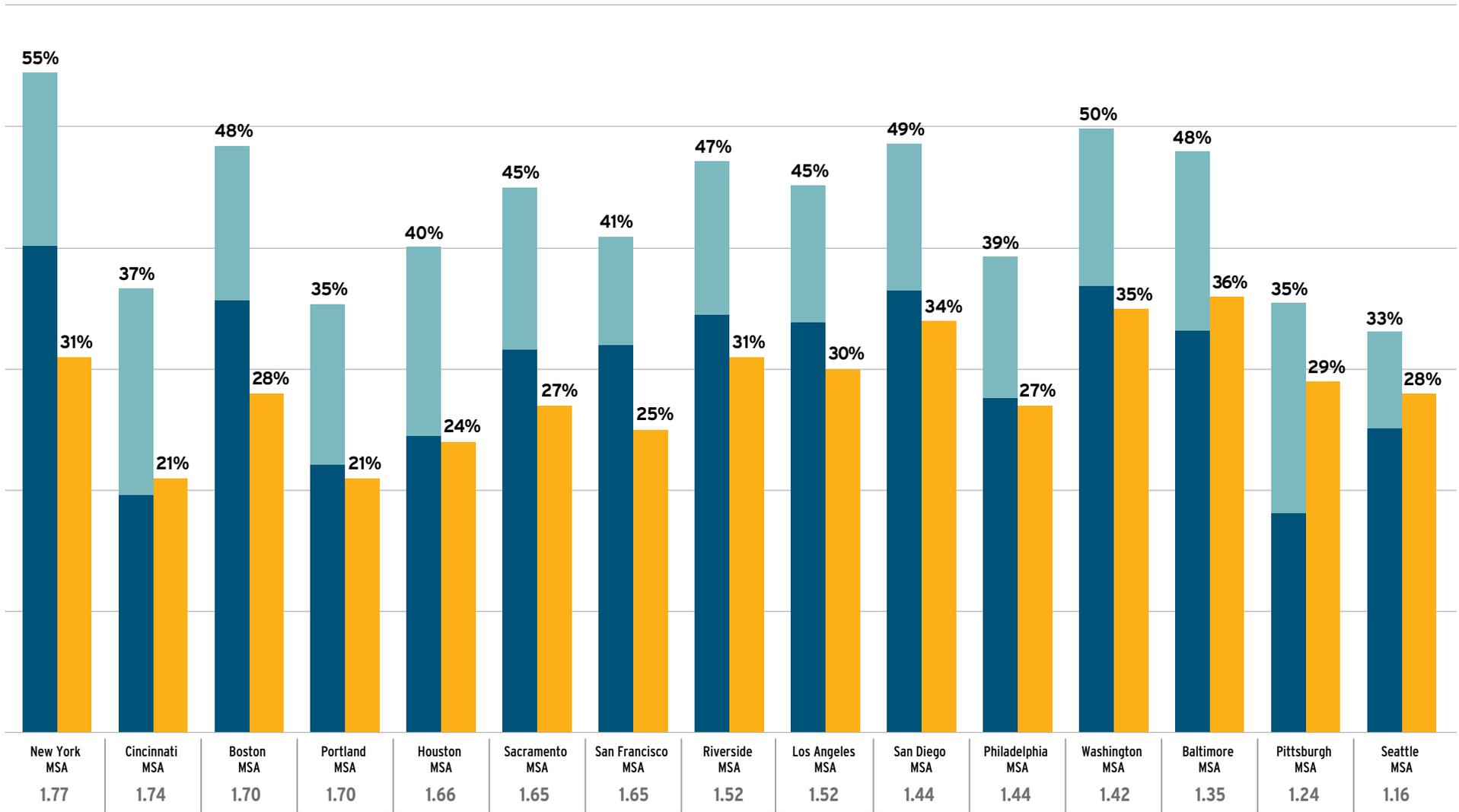
³See: <http://www.brookings.edu/research/papers/2012/03/20-population-frey>.

⁴To facilitate a comparison of growth in incomes with the growth in housing and transportation costs, all figures are presented in nominal terms. We believe this is the clearest and most straightforward way to examine whether incomes have kept pace with housing and transportation costs since 2000. Controlling for inflation, household income slipped 1 percent between 2000 and 2010 for the average household in the largest 25 metro areas, while the combined expense of housing and transportation increased 14 percent.

Rising Costs vs. Incomes by Metro Area

Combined housing and transportation costs grew faster than local incomes between 2000 and 2010 in each of the 25 metro areas studied. The metro areas of Detroit, Atlanta, and Dallas experienced the greatest pressure on overall affordability during this period. In the Detroit metro area, housing and transportation costs rose 4.5 times faster than income. At the other end of the spectrum (the right side of the graph), the metro areas of Baltimore, Pittsburgh, and Seattle experienced rising housing and transportation costs that were only slightly higher than rising incomes. In most metro areas, rising housing costs drove the relatively fast growth in the combined costs of housing and transportation.





NOTE: Metro areas are ordered from left to right based on the degree to which combined costs in each metro area grew faster than income. The graph compares changes in median income and median housing plus transportation costs for renters and homeowners with a mortgage. All figures are shown in nominal dollars; see note 4 on p.5.

Source: Housing + Transportation (H+T[®]) Affordability Index applied to 2000 Census data and 2006-2010 American Community Survey data (Center for Neighborhood Technology and Center for Housing Policy).

Moderate-Income Households Carry a Heavier-than-Average Cost Burden

Housing and transportation cost burdens vary significantly by income. The remainder of this report takes a closer look at the impacts of housing and transportation on moderate-income households. This income group represents a bit more than one-fourth of all households living in the 25 metro areas studied and includes many of the workers who are essential to community life, including teachers, nurses, police officers, and many other occupations.⁵

As shown in the chart on the facing page, the combined costs of housing and transportation consumed 59 percent of the income of moderate-income households in 2010, 11 percentage points more than the combined cost burden of a median-income household.

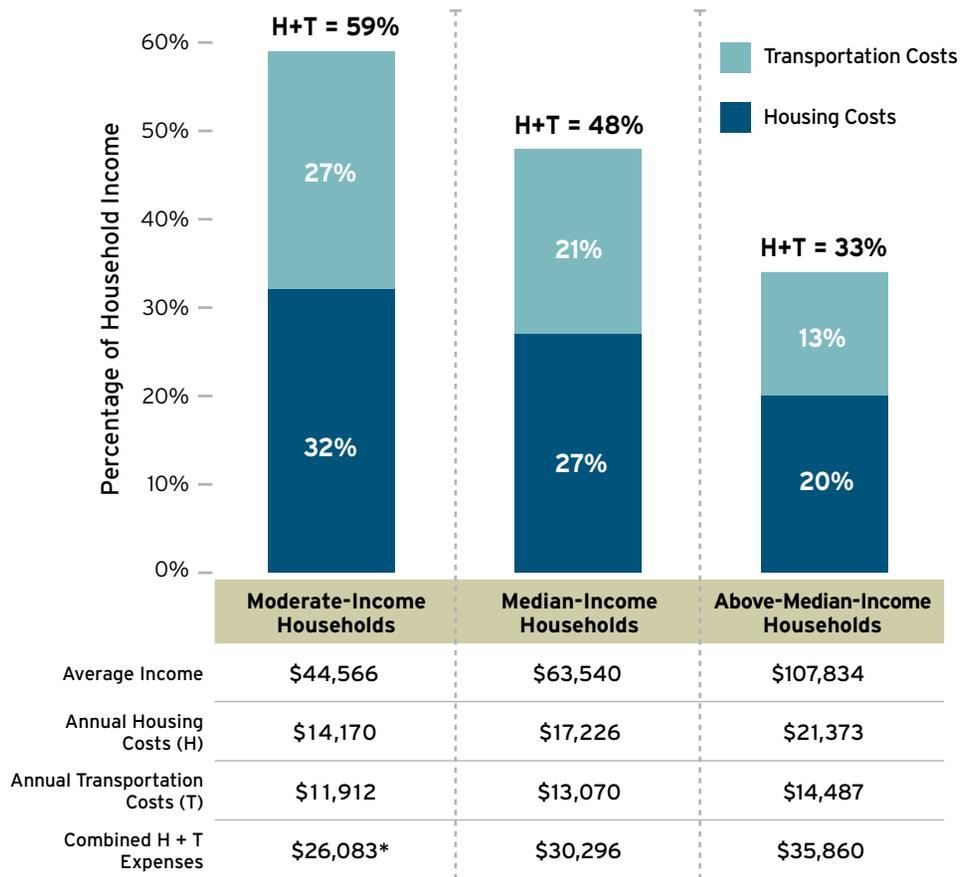
⁵Paycheck to Paycheck, Center for Housing Policy, 2012. <http://www.nhc.org/paycheck>.

Moderate-Income Households Defined

This report defines “moderate-income households” to mean households with incomes between 50 and 100 percent of each metro area’s median income. This approach to defining the population studied in the balance of this report allows us to understand local cost burdens in the context of local earnings. Indeed, incomes vary significantly from metro area to metro area. In the Tampa metropolitan area, moderate-income households earn between \$23,956 and \$47,912 annually. In the Washington, DC metro area, at the other end of the spectrum, moderate-income households have annual earnings between \$44,531 and \$89,063. The average moderate-income household for the 25-metro-area study group has an annual income of \$44,566. The income ranges used for all 25 metro areas can be found in Appendix 1.



Combined Cost Burdens for Moderate-Income Households vs. Other Income Brackets (25 Largest Metro Areas)



NOTE: Households in this analysis include renters, homeowners carrying a mortgage, and homeowners without a mortgage.

Source: Housing + Transportation (H+T[®]) Affordability Index applied to 2006-2010 American Community Survey data (Center for Neighborhood Technology and Center for Housing Policy).

*Numbers do not add up due to rounding.

In absolute terms, moderate-income households spend 18 percent less on housing and 9 percent less on transportation than a median-income household. But with incomes 30 percent below that of the median income household, moderate-income households spend a much larger share of their incomes on housing and transportation expenses.

With housing and transportation consuming 59 percent of household income, moderate-income households have relatively little left over for expenses such as food, education, and health care, not to mention savings to cushion unexpected financial hardships.⁶

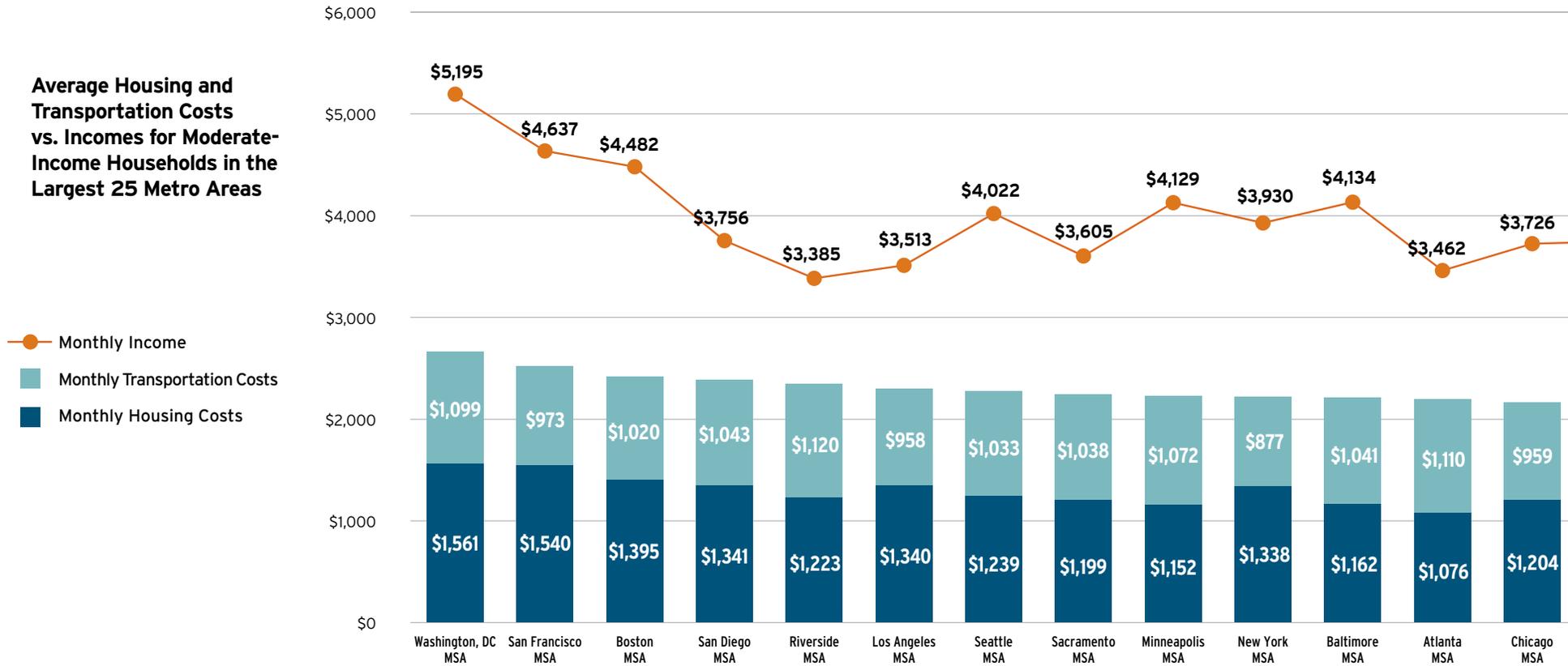
⁶The 59 percent housing and transportation cost burden calculated in this report includes homeowners who have paid off their mortgages. Because these households have relatively low housing cost burdens compared to those of other tenure types, the analysis presented in this report is more conservative than previous analyses of housing and transportation cost burdens.

What About the Lowest Income Households?

In a subsequent Research Note, we will explore the impacts of housing and transportation costs on the lowest income households – those earning 0 to 50 percent of the area median income. The Research Note format will allow for greater exploration of the deeply burdensome impacts of housing and transportation on households in this income bracket as well as the methodological challenges associated with estimating housing and transportation cost burdens for these households.

Housing + Transportation Costs Do Not Always Track Incomes

Average Housing and Transportation Costs vs. Incomes for Moderate-Income Households in the Largest 25 Metro Areas



The metro areas where moderate-income households spend the greatest share of their income for housing and transportation costs are not where we might expect. This is because higher incomes help offset the high costs of housing and transportation expenses in some (but not all) high-cost areas.

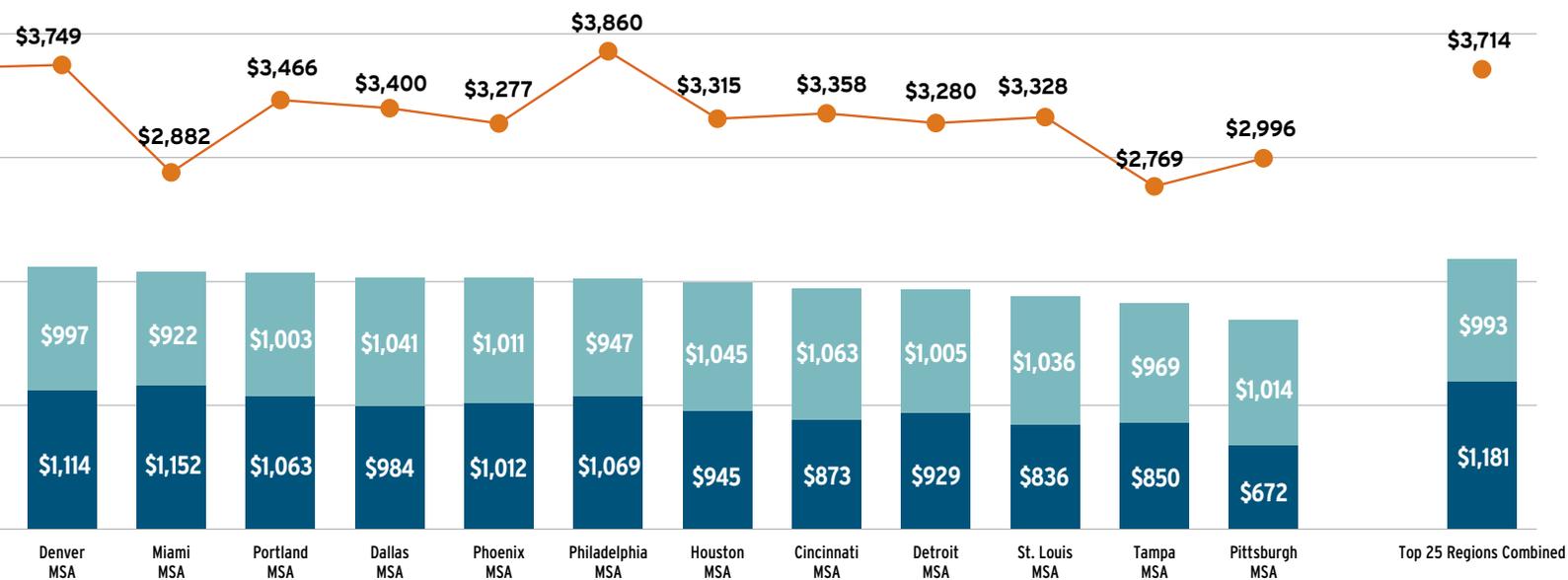
If we examine housing costs – without considering income – the five most expensive metro areas for moderate-income households in

our analysis are Washington, DC, San Francisco, Boston, San Diego, and Los Angeles.

When transportation costs are added to form an overall picture of the complete costs of place – housing plus transportation plus utility costs (included in housing costs) – the relative expense of the largest 25 metro areas begins to shift. Some metro areas become less costly than other metro areas because lower transportation costs help offset higher housing costs

(for example New York and Chicago). Other areas become relatively expensive because of higher than average transportation costs (for example Riverside, Minneapolis, and Atlanta).

Variations in income among metro areas have a profound effect on the affordability of housing and transportation costs. Incomes often track costs, but not always, as shown by the orange line. In regions such as Washington, DC, Boston, and San Francisco, high costs



Source: Housing + Transportation (H+T[®]) Affordability Index applied to 2006-2010 American Community Survey data (Center for Neighborhood Technology and Center for Housing Policy).

are matched by relatively high incomes, helping moderate-income households better afford their housing and transportation costs. But other regions, such as Riverside, Miami, and Los Angeles, have moderate or even high housing and transportation costs in spite of relatively low median incomes. This varying relationship between costs and local incomes explains why moderate-income households have higher cost burdens in some high-cost regions than in others – as shown on the next page.

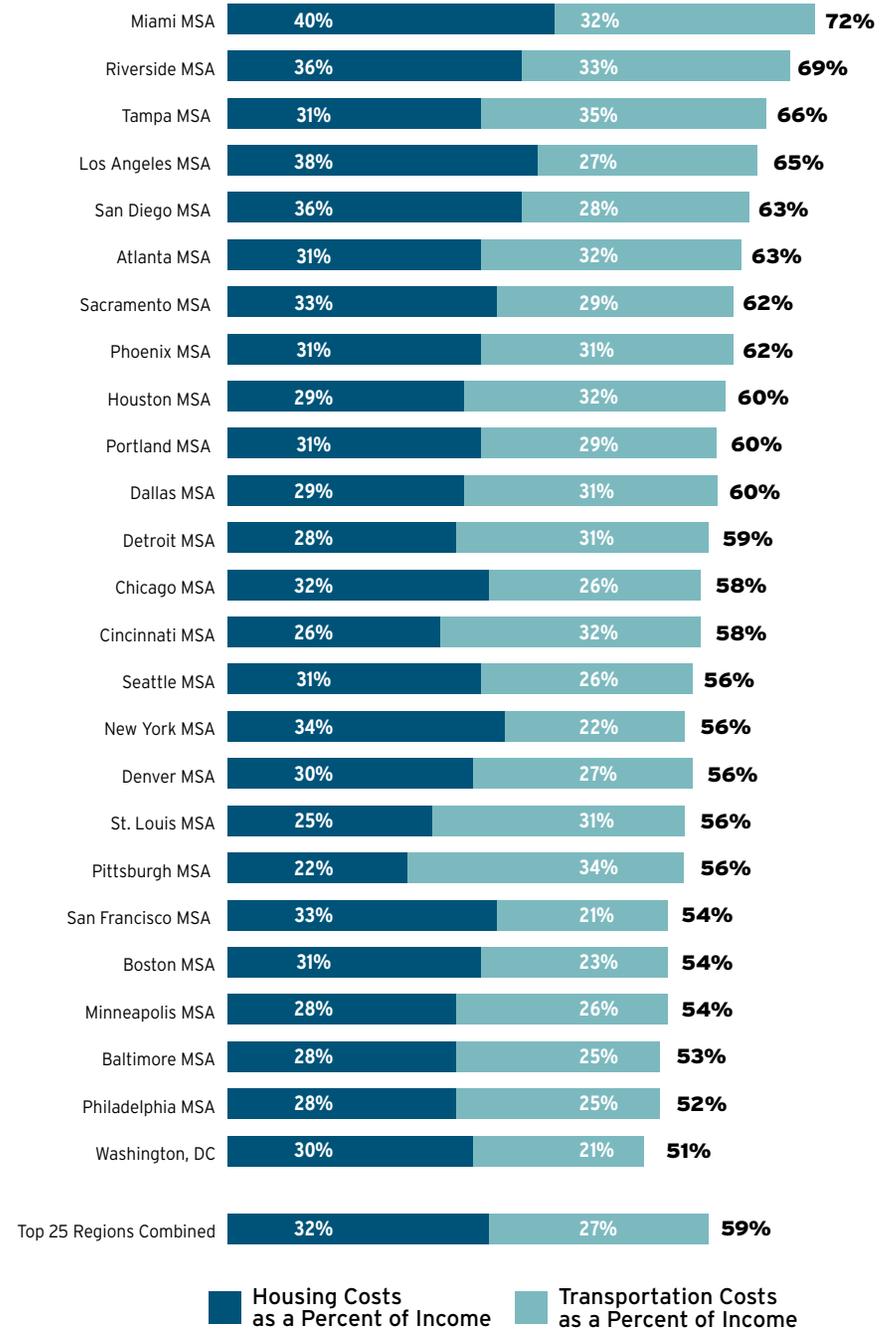
Not All Households Benefit from Higher Median Incomes

While moderate-income residents in some metro areas have comparatively high incomes that help them afford their regions' high housing and transportation costs, there are households in each metro area earning far less, living in poverty, and paying much higher percentages of income on housing and transportation. While a useful tool for this analysis, "area median income" does not tell the whole story. For example, in the Washington, DC, metro area, where the incomes of moderate-income households ranged from \$44,531 to \$89,063 in 2010, 11 percent of households still earned less than \$25,000. As described more fully in our forthcoming Research Note, such households face high housing and transportation costs without benefitting from the region's relatively high incomes.

Cost Burdens of Moderate-Income Households by Metro Area

When we compare *cost burden* – the share of a household budget spent on housing plus transportation expenses – we see a much different picture of affordability than when just comparing expenses. As shown here, housing and transportation consumes 72 percent of the income of moderate-income households in the Miami metro area (a staggering amount) – in spite of roughly average housing and transportation expenses – because these expenses are so out of sync with the local median income, which is one of the lowest in the nation. A similar dynamic exists in areas such as San Diego, Riverside, and Los Angeles, where combined housing and transportation costs are high despite relatively low incomes.

On the other end of the spectrum, the Washington, DC, area has the lightest overall cost burden (51 percent) – despite being the most expensive – because relatively high costs are matched by relatively high incomes for moderate-income households.



Trading Off Between Housing and Transportation Costs

The Cincinnati and Chicago metro areas illustrate the trade-offs that moderate-income households often make between housing and transportation costs. In Cincinnati, moderate-income households experience lower-than-average housing costs, but higher-than-average transportation costs. As a result, their combined burden of 58 percent of income is roughly the same as that of Chicago where housing and transportation cost breakdowns are more in line with the overall averages.

David Gould/Photographer's Choice RF/Getty Images

Source: Housing + Transportation (H+T[®]) Affordability Index applied to 2006-2010 American Community Survey data (Center for Neighborhood Technology and Center for Housing Policy).

NOTE: Numbers may not add up due to rounding.

The Impact of Transportation Costs on Overall Affordability

Transportation costs as a share of income vary widely across metro areas – from a low of 21 percent in the San Francisco metro area, to a high of 35 percent in the Tampa area. This variation impacts the overall affordability of many metro areas, as illuminated in the table to the right.

Consider the Houston metro area, which has the eighth most affordable housing costs (as a percentage of income), but drops nine positions to 17th when combined housing and transportation costs are compared to income. The Tampa metro area experiences a similar drop in affordability when transportation expenses are incorporated. In contrast, metro areas such as San Francisco, Boston, and New York are some of the least affordable regions for local moderate-income households when considering just housing cost burdens. But each moves to the top half of affordability when a household’s transportation cost burdens are also included.

An important contributor to differences in transportation cost burdens among metro areas is the limited impact that income levels have on transportation costs. Costs are relatively rigid compared to income because other factors have a greater impact on costs, including differences in the built environment that require higher rates of car ownership and more driving in one metro area than another. Riverside and Atlanta, for example, are the two most expensive metro areas for transportation, in spite of incomes in the bottom half of the 25 metro areas studied, leading to above-average transportation cost burdens. Elsewhere, transportation costs are low despite relatively high incomes, as in the New York, Chicago, Philadelphia, and San Francisco metro areas.

The Washington, DC, metro area provides another illustration of this principle. Transportation costs in that region are the third highest in the country. But because incomes are so high, transportation costs consume a very low share of incomes, leading to dramatic improvements in overall affordability. The Washington, DC, area ranks 11th in affordability when housing alone is compared to income. But the region improves to first overall – the most affordable region in the country – when comparing housing and transportation costs to local income (H+T equals 51 percent of income).

How Transportation Affects Affordability Rankings for Moderate-Income Households

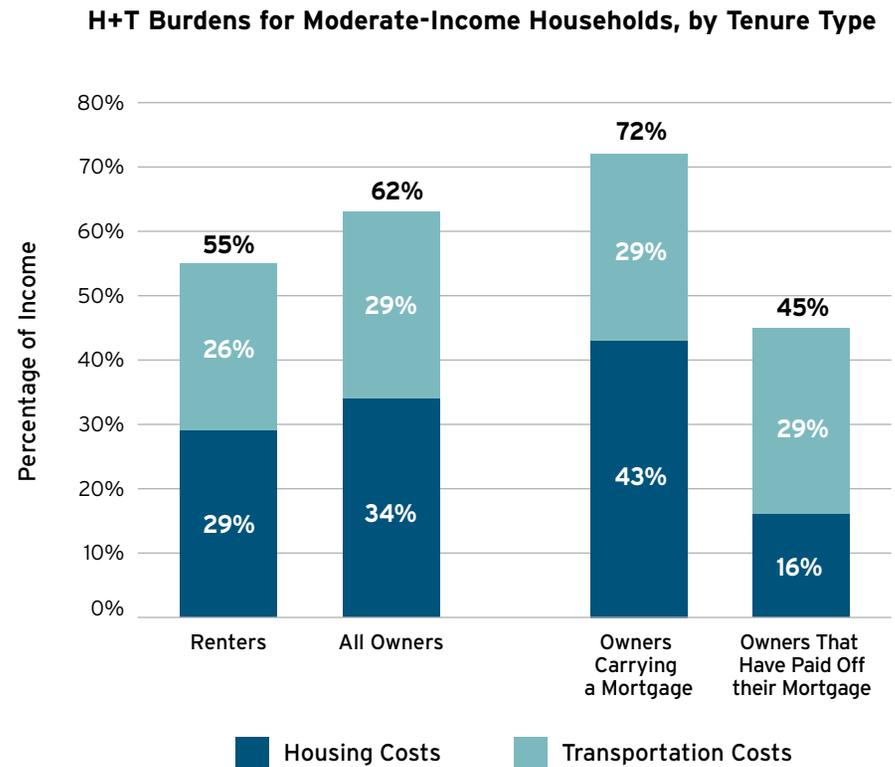
	Rank (1=most affordable)		
	H as % of Income	H+T as % of Income	Change in Rank After Adding Transportation
Washington MSA	11	1	-10
Philadelphia MSA	4	2	-2
Baltimore MSA	6	3	-3
Minneapolis MSA	5	4	-1
Boston MSA	17	5	-12
San Francisco MSA	19	6	-13
Pittsburgh MSA	1	7	+6
St. Louis MSA	2	8	+6
Denver MSA	10	9	-1
New York MSA	21	10	-11
Seattle MSA	14	11	-3
Cincinnati MSA	3	12	+9
Chicago MSA	18	13	-5
Detroit MSA	7	14	+7
Dallas MSA	9	15	+6
Portland MSA	12	16	+4
Houston MSA	8	17	+9
Phoenix MSA	15	18	+3
Sacramento MSA	20	19	-1
Atlanta MSA	16	20	+4
San Diego MSA	22	21	-1
Los Angeles MSA	24	22	-2
Tampa MSA	13	23	+10
Riverside MSA	23	24	+1
Miami MSA	25	25	0

Source: Housing + Transportation (H+T[®]) Affordability Index applied to 2006-2010 American Community Survey data (Center for Neighborhood Technology and Center for Housing Policy).

Moderate-Income Homeowners Have Higher Cost Burdens than Renters

A surprising finding is that the combined burdens of housing and transportation are greater for moderate-income homeowners than for renters. This is the reverse of what is found when looking at all incomes combined, due to the extremely high cost burdens of renters with incomes below 50 percent of the area median income. (The combined costs of housing and transportation for households with incomes between 0 and 50 percent of AMI will be explored in a subsequent Research Note.)

For the typical moderate-income homeowner carrying a mortgage, combined housing and transportation expenses consume an average of 72 percent of income. When owners who have paid off their mortgage are included in the calculations, the average burden for all moderate-income homeowners drops to 62 percent. This still exceeds the typical moderate-income renter burden of 55 percent.



Source: Housing + Transportation (H+T[®]) Affordability Index applied to 2006-2010 American Community Survey data (Center for Neighborhood Technology and Center for Housing Policy).

NOTE: Numbers may not add up due to rounding.

For the typical moderate-income homeowner carrying a mortgage, combined housing and transportation expenses consume an average of 72 percent of income.



Photo: mondo/Digital Vision/Getty Images



Moderate-income homeowners in Pittsburgh and Tampa actually pay less of their income for housing than moderate-income renters, but pay sufficiently more for transportation that combined expenses consume a higher overall share of their household income.

MOST AND LEAST AFFORDABLE AREAS

Moderate-Income Renters

Most Burdened		Least Burdened	
Metro Area	Share of Income Spent on H+T	Metro Area	Share of Income Spent on H+T
Miami	69%	DC	48%
Tampa	65%	Minneapolis	49%
Riverside	64%	Boston	49%
LA	61%	San Francisco	49%
San Diego	60%	Philadelphia	50%

Moderate-Income Homeowners

Most Burdened		Least Burdened	
Metro Area	Share of Income Spent on H+T	Metro Area	Share of Income Spent on H+T
Miami	75%	DC	54%
Riverside	73%	Philadelphia	54%
LA	71%	Baltimore	55%
San Diego	67%	Minneapolis	57%
Atlanta	66%	Pittsburgh	57%

Moderate-income owners carry heavier combined housing and transportation cost burdens than renters in each of the 25 largest metro areas. The difference between the burdens of owners and renters is greatest in Chicago (H+T of 63 percent for moderate-income owners vs. 51 percent for renters) and Los Angeles (71 percent vs. 61 percent).

The distinction between renters and owners is much less significant in areas like Tampa and Pittsburgh, where combined housing and transportation cost burdens for renters and owners are nearly identical. Moderate-income homeowners in Pittsburgh and Tampa actually pay less of their income for housing than moderate-income renters, but pay sufficiently more for transportation that combined expenses consume a higher overall share of their household income. (Readers can find housing and transportation cost burdens listed by tenure for all metro areas in Appendices 2 and 3.)

As shown to the left, many of the least overall affordable metro areas for renters are similarly burdensome for homeowners, with some exceptions.

Source: Housing + Transportation (H+T[®]) Affordability Index applied to 2006-2010 American Community Survey data (Center for Neighborhood Technology and Center for Housing Policy).

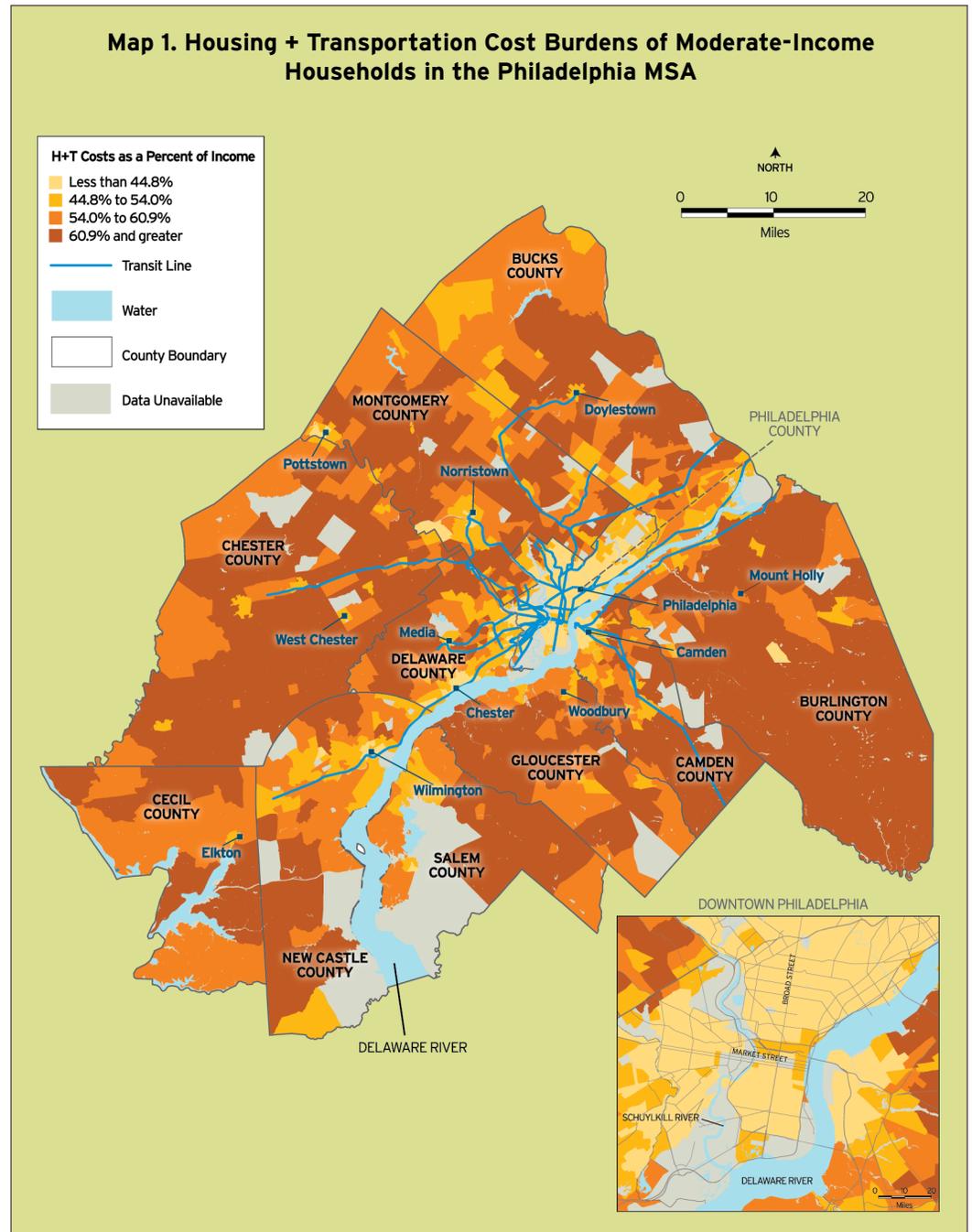
Cost Burdens Vary Substantially by Neighborhood

CASE STUDY: PHILADELPHIA MSA

In most metro areas, average cost burdens vary widely across the region. Even in metro areas where average cost burdens are relatively affordable, there can be many neighborhoods that are out of reach for moderate-income households. Conversely, in metro areas that are relatively unaffordable, housing and transportation costs may consume a more manageable share of income in particular neighborhoods.

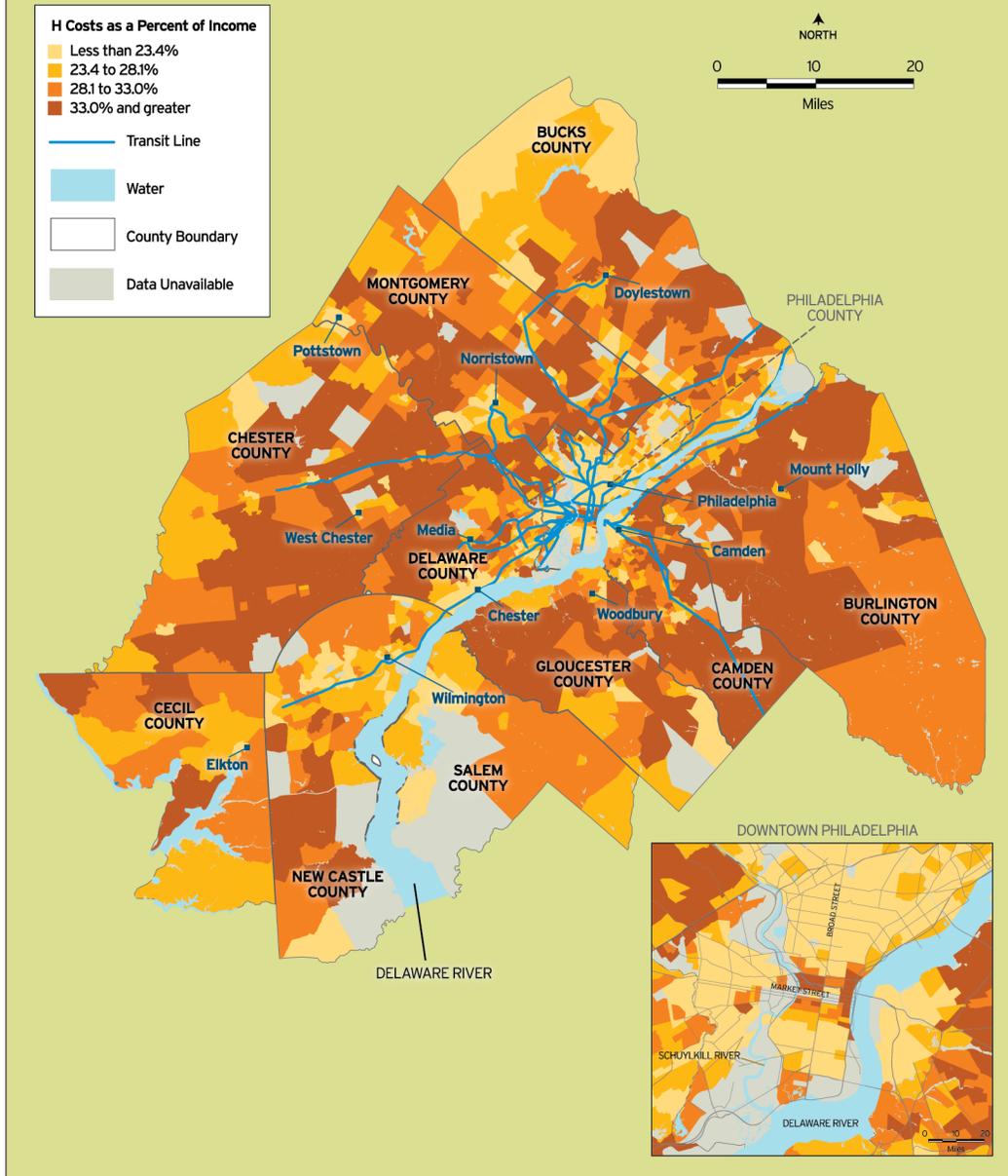
The Philadelphia metro area is a good example of the degree to which combined cost burdens can vary within a region. The average cost burden for moderate-income households in the metro area is 52 percent – the second lowest of the 25 metro areas studied. But in some of the region’s neighborhoods, moderate-income households are faced with average housing and transportation costs exceeding 90 percent of their income, while in other neighborhoods, combined cost burdens are less than 25 percent of income.

Map 1 illustrates this variation in the combined costs of housing and transportation. Relatively low cost burdens for moderate-income households are centered around Philadelphia and in other communities along the Delaware River, including Wilmington and Chester. Pockets of below-average cost burdens are also found in places such as inner Camden County, lower Bucks County, and older county seats including Norristown, Elkton, Media, and West Chester. On the other end of the spectrum, large portions of Burlington County, Chester County, Gloucester County, and Camden County have housing and transportation costs that exceed 60 percent of income for moderate-income households.



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Map 2. Housing Cost Burdens of Moderate-Income Households in the Philadelphia MSA



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Maps 2 and 3 help unpack this variation in cost burdens and illuminate the role that transportation costs play in altering the affordability landscape in the Philadelphia metro area.

Map 2 shows that housing costs are affordable to moderate-income households in various places scattered throughout the metro area – particularly in Pennsylvania and Delaware. But Map 3 reveals that many communities along the edges of the region that have relatively affordable housing costs (Map 2) are considerably less affordable for transportation. This is particularly true in areas situated far from transit. On the other hand, many parts of Philadelphia, Wilmington, and other compact communities close to fixed rail lines improve in overall affordability when transportation costs are included together with housing, because of low transportation cost burdens. In these neighborhoods, households are able to meet many of their daily needs with shorter car trips and even without the use of automobiles, thereby enabling them to own fewer vehicles and significantly reduce their transportation burdens.

These neighborhood to neighborhood differences in transportation cost burdens – both in the outer ring and in compact communities closer to transit – are significant enough to affect the overall affordability of housing and transportation for many of the region's communities.



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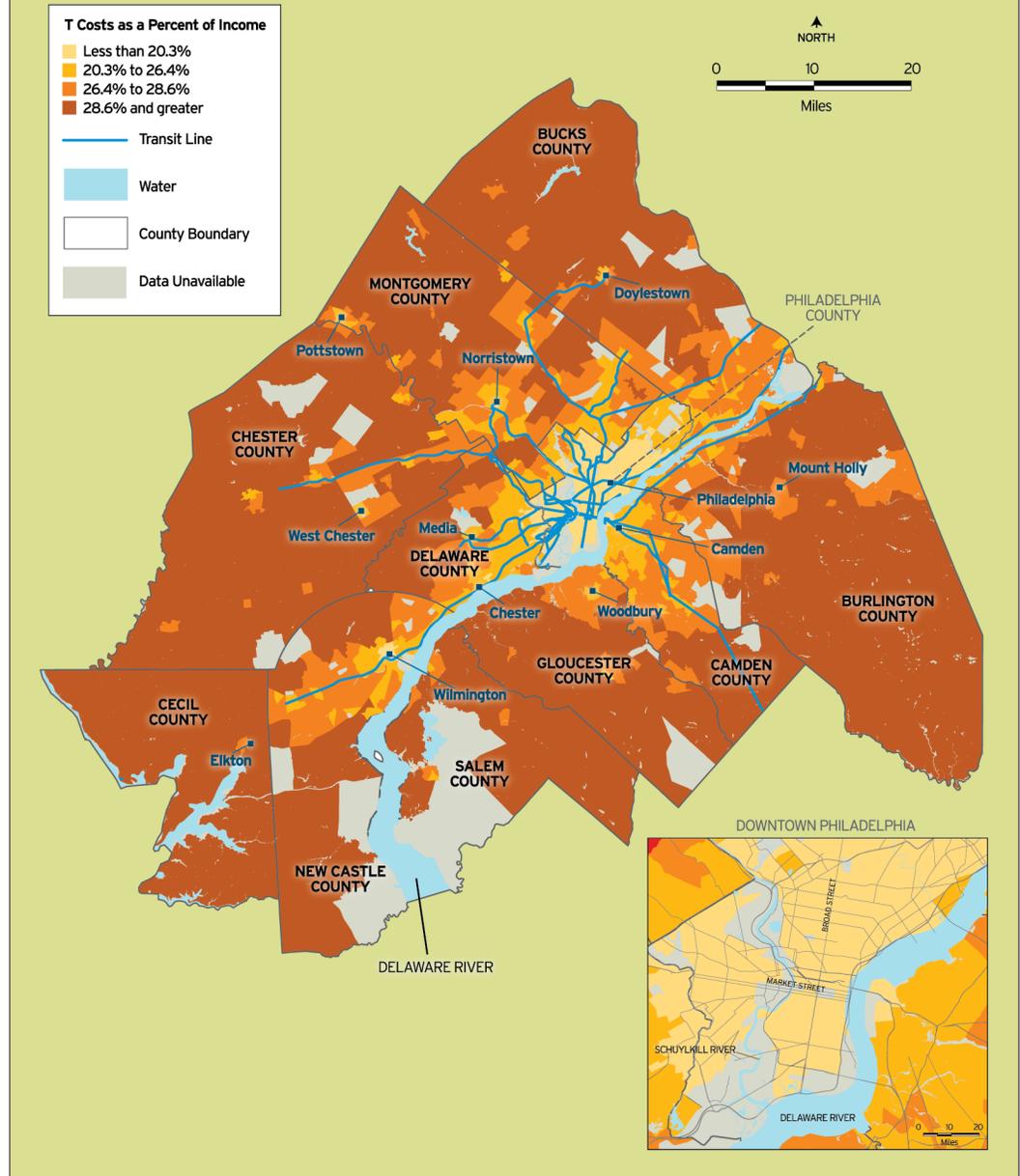
NOTE: These maps show the projected housing and transportation cost burdens that moderate-income households earning approximately \$46,000 per year would face if they were to move to any of the region's neighborhoods. For neighborhoods where moderate-income households are already present, these maps offer good estimates of "felt" burdens. Elsewhere, the maps illustrate the high (or low) costs of place that would confront a moderate-income household considering a move.

In practice, many of the most affordable neighborhoods for moderate-income households (for example, North Philadelphia or Camden, NJ) are in reality not occupied by moderate-income households but are instead home to very low income households paying well over 50 percent of their income towards housing and transportation.



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Map 3. Transportation Cost Burdens of Moderate-Income Households in the Philadelphia MSA



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The Impact on the Household Budget

CASE STUDY: LOS ANGELES

What is the impact on household budgets of housing and transportation expenses that consume large shares of household income? The Los Angeles metro area provides a useful case study.



A typical, moderate-income renter household in the L.A. metro area has three household members and an annual income of \$41,202, which falls in the middle of the income spectrum for the 25 metro areas. Monthly housing and transportation expenses average \$1,204 and \$885 respectively, totaling 61 percent of monthly income.

The table here shows what it would cost this household to maintain *minimum* levels of food, health care, and other basic necessities, using data collected by Dr. Diana Pearce and the Insight Center for Economic Development. The household modeled here consists of two parents and one teenager. This household type has lower costs than many three-person households because it does not incur child care expenses, which can represent a large share of family income.

With housing and transportation consuming 61 percent of monthly income, this family would be short roughly \$328 each month, forcing it to either cut corners on food, health care, or other basic necessities, or go into debt. Adding in savings for college or retirement would place this family further into debt.

Household Budget for a Moderate-Income Family of Two Parents and One Teenager Renting in the LA Metro Area

Annual Income	\$41,202
Monthly Income	\$3,434
Expenses:	
Housing	\$1,204
Transportation	\$885
Taxes ^(a)	\$395
Food ^(b)	\$665
Out-of-Pocket Health Care ^(c)	\$330
Miscellaneous Necessities ^(d)	\$283
Monthly Income Less Expenses	-\$328

^(a) Includes the child tax credit. This figure was derived by taking the effective tax rate determined by the Insight Center for a household earning \$41,562 in 2008 (11.5 percent), and applying it to the income of our renter household earning \$41,202 in 2010.

^(b) Food excludes take-out and restaurant meals.

^(c) Health care includes copayments and the portion of insurance premiums not covered by a worker's employer. (In California, employers of full-time workers pay an average of 78 percent of the insurance premium for the employee and 72 percent for the family.)

^(d) Includes other essential items, including clothing, shoes, paper products, nonprescription medicines, cleaning products, household items, personal hygiene items, and landline telephone service.

Sources: Data on taxes, food, health care, and miscellaneous expenses provided by the Insight Center for Community Economic Development. [See: *The Self-Sufficiency Standard for Los Angeles County, 2008* (figures adjusted to 2010 dollars) and http://www.insightcced.org/uploads/cfes/2011/MethodologyAppendix_2011.pdf] Housing, transportation, and income data derived from cross tabulations of the 2006-2010 American Community Survey and application of the Housing + Transportation (H+T[®]) Affordability Index by the Center for Neighborhood Technology and Center for Housing Policy.

Policy Implications

There are many steps that communities can take to reduce the combined costs of housing and transportation for low- and moderate-income households.

One important approach is to protect and expand affordable housing opportunities in neighborhoods where: (a) transportation costs are already low or where public investments will make transportation more affordable in the future (“location-efficient areas”), and (b) the demand for new development is significant. The following are promising tools for achieving this objective:

▶ **Preservation of existing affordable homes in location-efficient areas.**

Large-scale investments in transit and other infrastructure often lead to increases in property values that threaten the continued affordability of existing rental homes, and lead to property tax increases that make it difficult for low-income homeowners to afford their housing costs. States and localities can prevent the loss of affordable rental and homeownership properties in these hot-market areas through strategies such as: (a) creating a “preservation catalog” to identify and track subsidized housing near transit stations that is in danger of being lost; (b) prioritizing the use of funding sources (such as the federal Low-Income Housing Tax Credit, the HOME and CDBG programs, and state loans, grants, and tax credits) to recapitalize and modernize well-located affordable homes; and (c) “circuit breakers” to protect low-income homeowners from sudden spikes in property taxes.

▶ **Regulatory reforms that reduce the cost of creating new housing in location-efficient areas.**

In some location-efficient areas, restrictive land use regulations and drawn-out permitting procedures make it very challenging to develop non-luxury housing (much less below-market-rate housing). Regulatory reforms that allow for more compact development, reduce unnecessary parking requirements, and speed up the permitting process can help improve the feasibility of new housing in these areas while helping neigh-

borhoods accommodate enough residents to support a mix of uses and public transit service. By taking the further step of authorizing compact, mixed-use development to occur “by right” in designated districts, communities can reduce the risks associated with acquiring land for development and shorten the development process, lowering overall production costs.

▶ **Incentives or requirements to include affordable housing within new development in location-efficient areas.**

In many communities, the demand for housing in location-efficient areas so far exceeds supply that reductions in the cost of developing housing in those areas do not necessarily lead to lower housing prices. To ensure that low- and moderate-income households can afford to live in location-efficient neighborhoods, many communities will therefore need to adopt explicit incentives or requirements designed to ensure that a share of newly developed housing is affordable. Policies such as inclusionary zoning, incentive zoning, and density bonuses are among the options for achieving this goal – often trading increased density and/or reduced parking requirements for some level of affordability.

▶ **Land acquisition assistance to facilitate affordable homes near transit stations, job centers, and other amenities.**

Gaining access to land can be the biggest challenge to providing affordable homes in desirable neighborhoods near transit stations, job centers, and other location-efficient areas. Land prices can be prohibitively high, and competition intense. Through land acquisition funds and land banking programs, local agencies can acquire (or help cooperating developers acquire) sites near existing or future transit stations before speculative pressures drive up land prices and make them available later when conditions are right for mixed-use development and affordable homes. Local government and transit agencies can also make publicly owned land available for development of affordable homes, including undeveloped, surplus, or underutilized land as well as land acquired as part of the process of transit station development.



Is Location-Efficiency the Only Criterion that Should be Considered in Choosing Locations for Affordable Homes?

No. There are many factors that should also be considered in determining where to develop affordable homes, including school quality, neighborhood safety, environmental justice and fair housing concerns, and proximity to jobs and other important amenities. The message of this report, however, is that in determining whether a home is truly affordable, the full costs of place – housing, transportation and utilities – should be considered. Ideally, assisted households would have access to all the essential amenities in a home whose full costs of place they could afford.

► **Mechanisms for ensuring long-term affordability.**

Because property values in location-efficient areas experiencing development pressure are likely to rise over time, investments in affordable housing should ensure long-term affordability. Tools such as long-term covenants, community land trusts, and shared-equity arrangements help ensure that a single investment in affordability can provide opportunities to multiple generations of renters and buyers. While some properties may need periodic infusions of capital to maintain their physical integrity, the long-term commitment to affordability helps ensure those properties remain available to low- and moderate-income households.

► **Policies that capture a portion of the value generated by public investments in location-efficiency to support affordable homes in these areas.**

Localities can use linkage fees and tax increment financing to capture a portion of the increase in property values associated with public transit and other investments to generate funding for affordable homes.

While these policy changes all require action at the local and state levels, the federal government can help by creating incentives to encourage the needed steps. For example, the Federal Transit Administration has proposed modifying its procedures for allocating the New Starts grants that help fund new and expanded public transit lines to create incentives

for communities to preserve existing affordable housing opportunities near planned transit stations and ensure the expansion of affordable housing near stations expected to see new residential development. These types of incentives can help foster the interagency dialogue and collaboration needed to make progress at the local level.

Another approach to reducing combined costs is to implement policies or programs that help reduce transportation costs where housing prices are already affordable. Investments in transit access, transit quality, pedestrian infrastructure, and bicycle safety can extend the availability of low-cost transportation options in these areas. Additionally, car-sharing programs can reduce the cost of auto ownership where driving is necessary for at least some trips. These investments are most effective if targeted to areas that are already compact and support a mix of uses, including rental housing. But for reasons mentioned above, investments in location-efficiency need to be coupled with measures that promote ongoing housing affordability. Otherwise these investments risk making housing more expensive, and undercutting transportation cost savings.

By promoting housing affordability where transportation costs are low, and expanding transportation options where housing prices are already affordable, communities can do a lot to reduce the combined costs of place that have become so burdensome for moderate-income households over the past decade.

Methodology

THE HOUSING + TRANSPORTATION COST MODEL

To provide a more comprehensive way of thinking about the cost of housing and true affordability, this report provides estimates of the combined costs of housing and transportation. For data on housing costs and income, the report relies on the 2006-2010 American Community Survey (ACS), with comparisons to the 2000 census to show change across time. The transportation cost data for this report are derived from the Housing + Transportation (H+T[®]) Affordability Index developed by the Center for Neighborhood Technology (CNT), updated to reflect 2006-2010 ACS data. This cost index has been applied to nearly 900 metropolitan and micropolitan areas in the United States, and is unique in that it measures joint transportation and housing affordability at a neighborhood level (see <http://htaindex.cnt.org/>).

TRANSPORTATION COSTS

The transportation costs estimated in this model and used in this report are more than the cost of commuting to and from work. They also include trips to and from school, errands, and all other travel that is part of the household daily routine. The methods for the cost model draw from peer-reviewed research findings on the factors that drive household transportation costs. The model assumptions, calculations, and methods have been reviewed through several iterations by practitioners at the Metropolitan Council in Minneapolis-St. Paul, fellows with the Brookings Institution, and academics from the University of Minnesota, Virginia Polytechnic Institute and State University, Temple University, and elsewhere, specializing in transportation modeling, household travel behavior, community indicators, and related topics.

Specifically, the transportation cost model incorporates seven neighborhood variables (residential density, gross density, average block size, intersection density, transit connectivity index, transit access shed, and job density) and four household variables (median household income, per capita income, household size, and commuters per household) as independent variables. These variables are used to predict, at a



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neighborhood level (census tract), three dependent variables – auto ownership, auto use, and public transit usage – that determine the total transportation costs.

HOUSING COSTS

Housing costs were determined using the variables Selected Monthly Owner Costs (SMOC) and Gross Rent (GR) from the American Community Survey. SMOC is defined as the sum of payments for mortgages, deeds of trust, contracts to purchase, or similar debts on the property (including payments for the first mortgage, second mortgage, home equity loans, and other junior mortgages); real estate taxes; fire, hazard, and flood insurance on the property; utilities (electricity, gas, water, and sewer); and fuels (oil, coal, kerosene, wood, etc.). It also includes, where appropriate, monthly condominium fees or mobile home costs (installment loan payments, personal property taxes, site rent, registration fees, and license fees).

Gross Rent (GR) is defined as the contract rent plus the estimated average monthly cost of utilities (electricity, gas, water, and sewer) and fuels (oil, coal, kerosene, wood, etc.) if these are paid by the renter (or paid for the renter by someone else). Using gross rent eliminates differentials that result from varying practices with respect to including utilities and fuels as part of the rental payment. The estimated costs of utilities and fuels are reported on an annual basis but are converted to monthly figures for the tabulations.

For a full description of the methods used in the original Housing + Transportation Affordability Index, see: <http://htaindex.cnt.org/about.php>.

UPDATING THE ORIGINAL MODEL TO 2006-2010

The original Housing + Transportation Affordability Index was based on data from the 2000 census collected at the block group level. For this report, the model was updated to incorporate data from the 2006-2010 ACS. Also, for the first time, housing costs, transportation costs, and income are assessed by tenure (renter vs. owner). This makes the use of block group data difficult, as many variables are suppressed in the ACS at this fine of a break out. To overcome this issue, we calculate some of the 2006-2010 estimates at the Public Use Microdata Area (PUMA) level and others at the census tract level, as described below.

Transportation costs were updated by applying new cost factors to the model's estimates of vehicle miles traveled and automobiles per household. These cost factors were based on the 2008 AAA estimates of costs for owning and operating a vehicle, which are estimated to be \$5,576 per auto and 17.0 cents per mile for fuel, maintenance, and tires with adjustments made regionally to account for varying fuel prices.

DEVELOPING TRANSPORTATION COST ESTIMATES FOR RENTERS AND OWNERS

For the first time, this research focuses on the variation in transportation costs for renters and owners separately. To do this, variables pertaining to household characteristics were obtained from the ACS by tenure. Therefore, two models were constructed for each dependent variable: one using renter-specific household characteristics, and one using owner-specific household characteristics. This enabled an estimation of transportation behavior specific to each household type.

ESTIMATING HOUSING AND TRANSPORTATION COSTS BY INCOME AND TENURE

In addition to estimating transportation costs separately for renters and owners, this research also assesses housing and transportation costs for

households at various income levels. This was accomplished through the use of the Public Use Microdata (PUMs) from the 2006-2010 ACS. Because these data are only available at the Public Use Microdata Area (PUMA) level, a geographic area much larger than census tracts, these data were used to adjust tract level estimates and to directly compute metropolitan-level estimates of housing costs.

Within each PUMA, households were grouped into four bins: those earning 0-50 percent of the regional Area Median Income (AMI); those earning 50-100 percent of AMI; those earning 100 percent of AMI and greater; and all households together. This was done separately for owners with a mortgage, owners without a mortgage, and renters. Median housing costs (GR for renter households and SMOC for owner households), median income, average household size, and average commuters per household were then calculated for each income bin and tenure group.

To estimate average housing costs at the metropolitan area level, median housing costs for each income bin were aggregated directly from the PUMAs to the metro areas. To estimate housing costs at the tract level (for purposes of the maps shown for Philadelphia), ratios were constructed of the median cost of housing in the given income bin to the bin for all households. This ratio was then applied to the median housing cost value for each tract within the PUMA to adjust the median to reflect costs for the given income group.

For transportation costs, the PUMA-level median income, average household size, and average commuters per household for each income bin were aggregated to the metropolitan areas. These provided the household characteristics on which to run each transportation model for each tenure and income bin.

Transportation costs for each income and tenure bin were then combined with the appropriate housing costs. The income used in the percent-of-income calculations is the averaged median income for each income bin, aggregated from the PUMA level to the metropolitan level.



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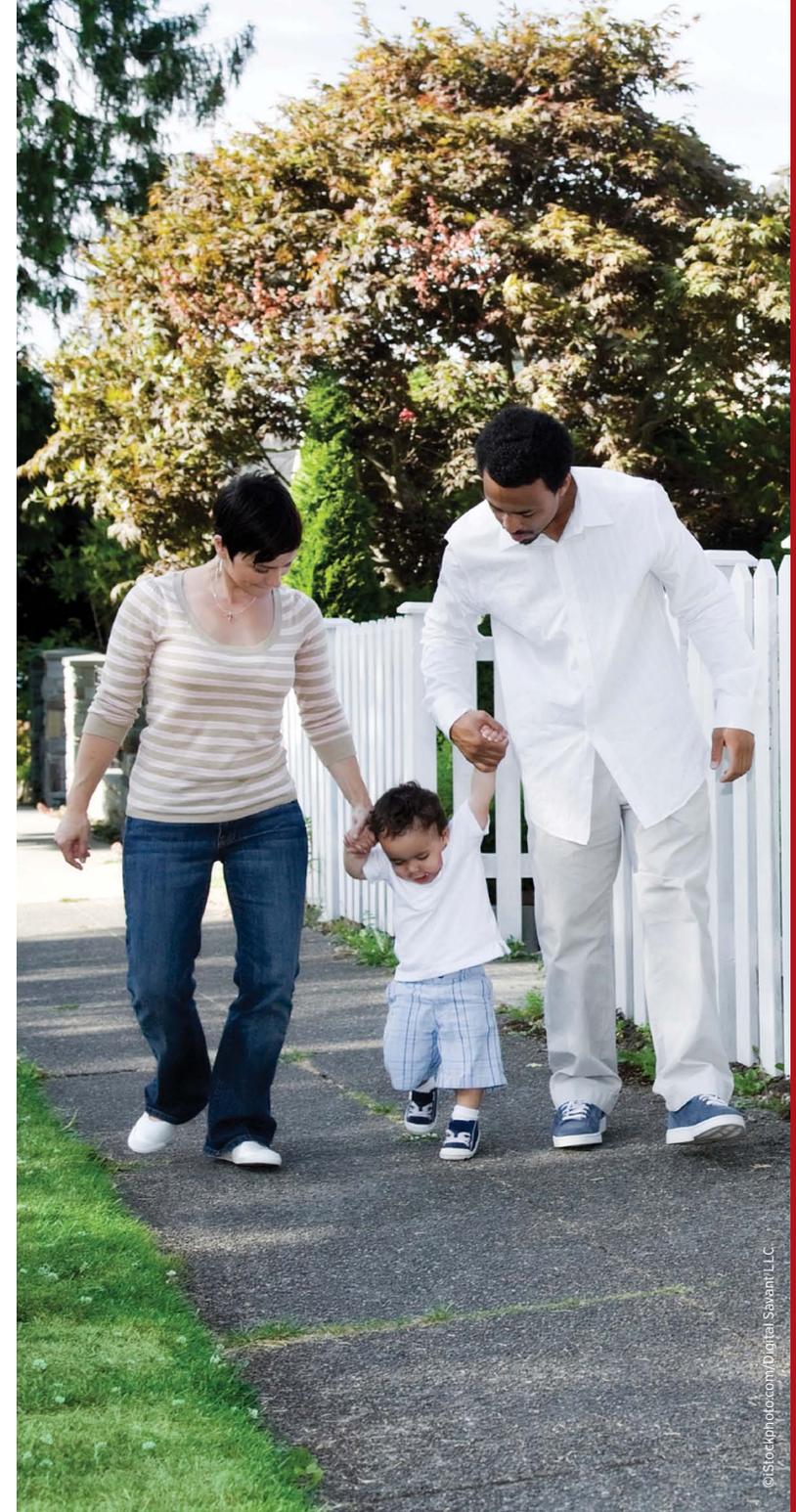
Appendices

APPENDIX 1: INCOME DEFINITIONS FOR MODERATE-INCOME HOUSEHOLDS IN EACH METRO AREA

Metro Area	Income Range	
	FROM	TO
Tampa-St. Petersburg-Clearwater, FL	\$23,956	\$47,912
Pittsburgh, PA	\$24,469	\$48,938
Miami-Fort Lauderdale-Pompano Beach, FL	\$25,444	\$50,888
Cincinnati-Middletown, OH-KY-IN	\$27,178	\$54,357
St. Louis, MO-IL	\$28,096	\$56,192
Detroit-Warren-Livonia, MI	\$28,131	\$56,261
Phoenix-Mesa-Glendale, AZ	\$28,461	\$56,922
Portland-Vancouver-Hillsboro, OR-WA	\$28,599	\$57,199
Houston-Sugar Land-Baytown, TX	\$28,944	\$57,888
Riverside-San Bernardino-Ontario, CA	\$29,320	\$58,640
Dallas-Fort Worth-Arlington, TX	\$29,528	\$59,056
Atlanta-Sandy Springs-Marietta, GA	\$29,926	\$59,852
Sacramento-Arden-Arcade-Roseville, CA	\$30,795	\$61,590
Denver-Aurora-Broomfield, CO	\$31,004	\$62,008
Chicago-Joliet-Naperville, IL-IN-WI	\$31,539	\$63,078
Los Angeles-Long Beach-Santa Ana, CA	\$31,642	\$63,285
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	\$31,921	\$63,843
San Diego-Carlsbad-San Marcos, CA	\$32,919	\$65,839
Minneapolis-St. Paul-Bloomington, MN-WI	\$33,073	\$66,147
Seattle-Tacoma-Bellevue, WA	\$33,452	\$66,904
New York-Northern New Jersey-Long Island, NY-NJ-PA	\$34,389	\$68,778
Baltimore-Towson, MD	\$34,758	\$69,517
Boston-Cambridge-Quincy, MA-NH	\$35,930	\$71,859
San Francisco-Oakland-Fremont, CA	\$39,091	\$78,181
Washington-Arlington-Alexandria, DC-VA-MD-WV	\$44,531	\$89,063

Source: Cross tabulations of the 2006-2010 American Community Survey data set (Center for Housing Policy and Center for Neighborhood Technology).

NOTE: These ranges represent 50-100 percent of the median income for each Metro Area.



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APPENDIX 2: COST BURDENS OF MODERATE-INCOME RENTERS, BY METRO AREA

Metro Area (MSA)	Median Household Income*	Average Monthly H Costs*	H Costs as a Percent of Income	Average Annual T Costs*	T Costs as a Percent of Income	H+T Costs as a Percent of Income
Largest 25 MSAs Combined	\$42,609	\$1,036	29%	\$10,793	26%	55%
Miami-Fort Lauderdale-Pompano Beach, FL	\$34,292	\$1,097	38%	\$10,352	30%	69%
Tampa-St. Petersburg-Clearwater, FL	\$32,743	\$892	33%	\$10,589	32%	65%
Riverside-San Bernardino-Ontario, CA	\$40,091	\$1,110	33%	\$12,402	31%	64%
Los Angeles-Long Beach-Santa Ana, CA	\$41,202	\$1,204	35%	\$10,621	26%	61%
San Diego-Carlsbad-San Marcos, CA	\$44,191	\$1,240	34%	\$11,671	26%	60%
Atlanta-Sandy Springs-Marietta, GA	\$39,473	\$936	28%	\$12,178	31%	59%
Phoenix-Mesa-Glendale, AZ	\$38,181	\$942	30%	\$11,143	29%	59%
Sacramento--Arden-Arcade--Roseville, CA	\$42,039	\$1,053	30%	\$11,428	27%	57%
Houston-Sugar Land-Baytown, TX	\$37,739	\$859	27%	\$11,253	30%	57%
Pittsburgh, PA	\$33,522	\$663	24%	\$10,768	32%	56%
Dallas-Fort Worth-Arlington, TX	\$38,739	\$860	27%	\$11,186	29%	56%
Detroit-Warren-Livonia, MI	\$37,159	\$821	27%	\$10,770	29%	55%
Cincinnati-Middletown, OH-KY-IN	\$37,918	\$751	24%	\$11,497	30%	54%
Portland-Vancouver-Hillsboro, OR-WA	\$39,757	\$881	27%	\$10,892	27%	54%
St. Louis, MO-IL	\$37,388	\$753	24%	\$11,048	30%	54%
New York-Northern New Jersey-Long Island, NY-NJ-PA	\$45,731	\$1,180	31%	\$9,720	21%	52%
Baltimore-Towson, MD	\$46,914	\$1,091	28%	\$11,302	24%	52%
Seattle-Tacoma-Bellevue, WA	\$45,315	\$1,014	27%	\$11,113	25%	51%
Denver-Aurora-Broomfield, CO	\$42,831	\$928	26%	\$10,780	25%	51%
Chicago-Joliet-Naperville, IL-IN-WI	\$42,213	\$931	26%	\$10,212	24%	51%
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	\$43,309	\$961	27%	\$9,979	23%	50%
San Francisco-Oakland-Fremont, CA	\$53,516	\$1,325	30%	\$10,552	20%	49%
Boston-Cambridge-Quincy, MA-NH	\$51,060	\$1,176	28%	\$10,959	21%	49%
Minneapolis-St. Paul-Bloomington, MN-WI	\$45,060	\$894	24%	\$11,314	25%	49%
Washington-Arlington-Alexandria, DC-VA-MD-WV	\$58,577	\$1,342	27%	\$11,823	20%	48%

Source: Housing + Transportation (H+T[®]) Affordability Index applied to 2006-2010 American Community Survey data (Center for Neighborhood Technology and Center for Housing Policy).

NOTE: Numbers may not add up due to rounding.

*Each figure is calculated for households with incomes between 50 and 100 percent of the metro area median.

APPENDIX 3: COST BURDENS OF MODERATE-INCOME HOMEOWNERS, BY METRO AREA

Metro Area (MSA)	Median Household Income*	Average Monthly H Costs*	H Costs as a Percent of Income	Average Annual T Costs*	T Costs as a Percent of Income	H+T Costs as a Percent of Income
Largest 25 MSAs Combined	\$46,036	\$1,290	34%	\$13,019	29%	62%
Miami-Fort Lauderdale-Pompano Beach, FL	\$34,856	\$1,189	41%	\$11,917	34%	75%
Riverside-San Bernardino-Ontario, CA	\$40,964	\$1,289	38%	\$14,434	35%	73%
Los Angeles-Long Beach-Santa Ana, CA	\$43,573	\$1,502	41%	\$13,036	30%	71%
San Diego-Carlsbad-San Marcos, CA	\$46,106	\$1,448	38%	\$13,630	30%	67%
Atlanta-Sandy Springs-Marietta, GA	\$42,770	\$1,164	33%	\$14,296	33%	66%
Sacramento--Arden-Arcade--Roseville, CA	\$44,390	\$1,318	36%	\$13,373	30%	66%
Tampa-St. Petersburg-Clearwater, FL	\$33,602	\$826	29%	\$12,108	36%	66%
Phoenix-Mesa-Glendale, AZ	\$40,006	\$1,058	32%	\$13,075	33%	64%
Portland-Vancouver-Hillsboro, OR-WA	\$43,187	\$1,209	34%	\$13,056	30%	64%
Houston-Sugar Land-Baytown, TX	\$41,421	\$1,012	29%	\$14,032	34%	63%
Dallas-Fort Worth-Arlington, TX	\$42,752	\$1,082	30%	\$13,940	33%	63%
Chicago-Joliet-Naperville, IL-IN-WI	\$46,234	\$1,355	35%	\$12,736	28%	63%
Detroit-Warren-Livonia, MI	\$40,270	\$972	29%	\$12,914	32%	61%
New York-Northern New Jersey-Long Island, NY-NJ-PA	\$48,797	\$1,501	37%	\$11,617	24%	61%
Seattle-Tacoma-Bellevue, WA	\$50,615	\$1,417	34%	\$13,495	27%	60%
Denver-Aurora-Broomfield, CO	\$46,544	\$1,242	32%	\$12,971	28%	60%
Cincinnati-Middletown, OH-KY-IN	\$41,679	\$939	27%	\$13,664	33%	60%
San Francisco-Oakland-Fremont, CA	\$57,922	\$1,734	36%	\$12,871	22%	58%
St. Louis, MO-IL	\$41,181	\$874	25%	\$13,239	32%	58%
Boston-Cambridge-Quincy, MA-NH	\$55,575	\$1,531	33%	\$13,316	24%	57%
Pittsburgh, PA	\$36,946	\$675	22%	\$12,822	35%	57%
Minneapolis-St. Paul-Bloomington, MN-WI	\$51,438	\$1,268	30%	\$13,906	27%	57%
Baltimore-Towson, MD	\$51,204	\$1,205	28%	\$13,474	26%	55%
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	\$48,094	\$1,124	28%	\$12,423	26%	54%
Washington-Arlington-Alexandria, DC-VA-MD-WV	\$64,937	\$1,702	31%	\$14,373	22%	54%

Source: Housing + Transportation (H+T[®]) Affordability Index applied to 2006-2010 American Community Survey data (Center for Neighborhood Technology and Center for Housing Policy).

NOTE: Numbers may not add up due to rounding.

*Each figure is calculated for households with incomes between 50 and 100 percent of the metro area median.



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