

**2007 AMERICAN COMMUNITY SURVEY:  
A COMPARISON TO SELECTED HOUSING AND FINANCIAL  
CHARACTERISTICS FOR THE UNITED STATES FROM THE  
2007 AMERICAN HOUSING SURVEY**

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**OVERVIEW AND PURPOSE**

The American Community Survey (ACS) is a new approach to collecting reliable, timely information needed by local communities. It collects much of the same data previously collected in the decennial census sample and is a critical element in the U.S. Census Bureau's 2010 Decennial Census Program. The ACS is a major innovative step designed to meet the nation's need for the kind of information that has previously been available only once every ten years from the decennial census sample.

The ACS was fully implemented in 2005. It is the largest household survey in the United States, with an initial sample size of about 3 million housing unit addresses throughout the country. Release of annual estimates for the fully implemented sample from the ACS began in 2006 for geographic areas with populations of 65,000 or more. In 2006, group quarters, although not relevant to this comparison report as the estimates compared here are for households only, were added to the ACS sample. In 2008, the ACS began producing estimates for all geographic areas and subpopulations of at least 20,000. In 2010, release of 5-year period estimates will start for all areas down to block groups. All estimates, including 3-year and 5-year period estimates, will be updated every year.

Following the 1970 census, the Subcommittee on Construction Statistics of the Cabinet Committee on Construction recommended that the Department of Housing and Urban Development (HUD) sponsor a yearly housing survey, to be conducted by the Bureau of the Census. In 1972, HUD received money that paved the way for the Annual Housing Survey. The Annual Housing Survey consisted of two parts: a national sample of housing units from urban and rural areas to be examined every year, and metropolitan area samples from 60 selected Standard Metropolitan Statistical Areas (SMSAs), including the largest and many of the smaller, fast growing, with one-third of them to be examined in detail every third year. The Census Bureau began collecting the national data in 1973 and continued annually until 1981. Beginning in 1982, because of budget restrictions at HUD, the national sample was interviewed only in odd numbered years and the survey was appropriately renamed the American Housing Survey (AHS) in 1984. It is still this way today. Over time, the sample size has remained relatively stable; and in 2007 out of the approximately 60,000 housing units sampled, 52,850 were eligible to be interviewed.

The Census Bureau began collecting metropolitan area data in this survey in 1974 and continued data collection annually through 1996. Beginning in 1997, because of budget restrictions at HUD, the metropolitan sample was interviewed only in even-numbered years. In a cost containment measure in 1985, the number of metropolitan areas was reduced to 44 (interviewed on a rotating basis every six years) and the sample sizes were reduced from 5,000 (smaller metropolitan areas) and 15,000 (larger metropolitan areas) to around 4,250 for all metropolitan areas. In 1999, in another cost containment measure, the AHS began producing estimates for six metropolitan areas for which data were

particularly robust in the national sample in every other year in which the national survey was done, that is, in every other odd-numbered year. Thus, the national sample was supplemented by several thousand cases - just enough to produce reliable estimates for New York, Northern New Jersey, Philadelphia, Chicago, Detroit, and Los Angeles in 1999 and 2003. For example, in 2003, the national sample was supplemented by 7,700 cases (for a total size of 63,400 sampled housing units) in order to produce reliable estimates for the six areas.

The year 2006 marked another landmark in the metropolitan areas produced by the AHS. The metropolitan areas would be interviewed on the same schedule as the national sample, so 2004 marked the last even numbered year for any AHS estimates. Also, the number of metropolitan areas surveyed in 2007 was reduced to seven: Baltimore, MD; Boston, MA; Houston, TX; Miami, FL; Minneapolis, MN; Tampa, FL; and Washington, DC.

The purpose for taking each of the surveys is different. The ACS is a national survey that collects basic demographic, socioeconomic, and housing information that has traditionally been collected once every ten years in the decennial census. The ACS collects this information on a continuous basis throughout the decade and provides it at various levels of geography depending on population size. Additionally, the ACS draws a new sample every year; therefore, the ACS is not a longitudinal survey measuring changes to the housing units and the households living in them over time.

Federal agencies rely on the data to administer and evaluate government programs. For example, HUD uses the ACS data to set income limits to determine whether a household is eligible for housing assistance under various housing programs. HUD also uses data on rents to set the maximum that a landlord can charge in order to participate in low-income housing programs, like Section 8. The US Department of Veterans Affairs uses ACS data on characteristics of veterans to evaluate the need for educational, employment, and health care programs for those who served in the military. Local governments' planning for new roads, hospitals, schools, senior centers, and affordable housing depend on the timely information provided by the ACS. (See *A Compass for Understanding and Using American Community Survey Data*, October 2008 at the following link: [http://www.census.gov/acs/www/UseData/Compass/handbook\\_def.html](http://www.census.gov/acs/www/UseData/Compass/handbook_def.html) for more detail.)

The AHS is designed specifically to address housing policy issues, like housing affordability or discrimination in housing and mortgage markets, and differences in the effectiveness in housing and mortgage delivery systems based on race, age, household type, or so forth. The AHS collects data on the Nation's housing, including apartments, single-family homes, mobile homes, vacant housing units, household characteristics, income, housing and neighborhood quality, housing costs, equipment and fuels, size of housing unit, and recent movers. Also, the AHS is a longitudinal survey measuring the changes to particular housing units over time. In fact, many of the homes in the AHS have been in sample since 1985, although new construction is added to the sample with each survey.

Since the ACS was designed to look at the cross section of the population and how we are housed, the ACS provides reliable estimates for 35 housing-related variables for nearly all geographic areas and subpopulations as small as 20,000 in 2007 (and even smaller in 2010). In contrast, the AHS provides estimates for a nearly 500 housing-

related variables but only for larger areas. The smallest areas for which data are available are “zones” (population of 100,000 or more) within select, and increasingly fewer, metropolitan areas.

The two surveys attempt to measure many of the same concepts and characteristics. Indeed, interest in the user community for comparing results from these surveys has been growing. This report will attempt to address many of the data users’ concerns. However, differences in emphasis, sample design, collection techniques, and processing methods described later, may make the comparison of results from these two surveys more difficult to explain.

While the AHS metropolitan area sample design provided estimates in 2007, there are only seven metro areas available. Since the ACS provides estimates for all metropolitan areas, a comparison of the estimates of these seven areas between the ACS and the AHS would be possible. However, this report is limited to a comparison of results at the national level.

## **THE 2007 ACS SAMPLE DESIGN FOR HOUSING UNITS**

The 2007 ACS is a continuous survey of housing unit addresses and group quarter addresses throughout the United States and Puerto Rico. The sample frame for both housing units and group quarters is the Master Address File (MAF), a database maintained by the Census Bureau containing residential and commercial addresses throughout the United States and Puerto Rico. The MAF is updated twice a year from information provided by the U.S. Postal Service and from various Census Bureau field operations. As noted, this report only addresses the housing side of the ACS. Therefore, the discussion of the sample design below is limited to the sampling of housing units from the MAF.

The ACS employs a two-stage sample selection with the first stage consisting of two separate samples, main sample and supplemental sample, chosen at different points in time. The main sample for 2007 was selected during August and September 2006, with each selected address randomly assigned to one of the 12 months of the sample year. Approximately 99 percent of the sample addresses were selected at this time. The supplemental sample, accounting for about 1 percent of the total sample, was selected in January and February of 2007. These addresses were randomly allocated to the last 9 months of the sample year.

The second stage sample selection consisted of all selected addresses determined to be unmailable and all addresses that did not respond to the mailout or computer-assisted telephone interview (CATI) phase of data collection (discussed later in DATA COLLECTION IN THE 2007 ACS). The unmailable addresses were sampled at a rate of 2-in-3 and the non-responding addresses at a rate based on the expected rate of mail and CATI response at the tract level. These addresses were assigned to the computer-assisted personal interview (CAPI) phase of data collection.

There were 1,937,659 completed interviews conducted in United States in the 2007 ACS. For more technical information on the ACS sample design refer to *Accuracy of the Data 2007* at <http://www.census.gov/acs/www/Downloads/ACS/accuracy2007.pdf>.

## THE 2007 AHS SAMPLE DESIGN

First, the United States was divided into areas made up of counties or groups of counties and independent cities known as primary sampling units (PSUs). A sample of these PSUs was selected. Then, a sample of housing units was selected within these PSUs.

**Selection of sample areas.** The sample for AHS is spread over 394 PSUs. These PSUs cover 878 counties and independent cities with coverage in all 50 states and the District of Columbia.

If there were over 100,000 housing units in a PSU at the time of selection, the PSU is known as a self-representing PSU because it was removed from the probability sampling operation. It was in sample with certainty. The sample from the PSU represents only that PSU. There are 170 self-representing PSUs.

The Census Bureau grouped the remaining PSUs and selected one PSU per group, proportional to the number of housing units in the PSU, to represent all PSUs in the group. These selected PSUs are referred to as nonself-representing PSUs. The sample of nonself-representing PSUs for AHS is a subsample of the Current Population Survey (CPS) sample areas based on the 1980 census.

**Selection of sample housing units.** The AHS sample consists of the following types of units in the sampled PSUs:

- Housing units selected from the 1980 census
- New construction in areas requiring building permits
- Housing units missed in the 1980 census
- Other housing units added since the 1980 census
- Housing units selected from the 2000 census

For more details, refer to Appendix B in *American Housing Survey for the United States: 2007* at <http://www.census.gov/prod/2008pubs/h150-07.pdf>.

## DATA COLLECTION IN THE 2007 ACS

The ACS is designed to employ three modes of data collection for housing units over a three-month period for each independent sample begun in a given month.

- Month 1: Mailout/Mailback – Addresses determined to be mailable are sent a questionnaire via the U.S. Postal Service.
- Month 2: Computer Assisted Telephone Interview – All non-responding mail addresses from month 1 with an available telephone number are sent to CATI.
- Month 3: Computer Assisted Personal Interview using an electronic questionnaire on a laptop computer – A subsample of (a) non-responding mail addresses without a phone number from month 1, (b) month 2 CATI non-responses, and (c) unmailable month 1 addresses are selected and sent to CAPI.

The 2007 ACS used these three data collection methods for each independent monthly sample of addresses. Each month a unique sample of addresses was sent a questionnaire. Addresses that did not respond were sent a second questionnaire. Addresses not responding to either mailing were telephoned during the second month of data collection if a phone number was available (CATI). Personal visits were conducted during the third and final month of data collection on a subsample of addresses still not interviewed (CAPI). Both follow-up operations were conducted by trained, permanent Census Bureau telephone and Field Representatives (FRs) under close supervision at one of three Census Bureau telephone centers and the Census Bureau's 12 regional offices across the country. CATI and CAPI interviewers were instructed to conduct interviews only with knowledgeable household respondents for occupied housing units, and proxy interviews were not accepted. For vacant units, the interviewer could accept answers from knowledgeable respondents like landlords, rental or sales agents, and neighbors. Approximately 63 percent of the interviews completed in the 2007 ACS were obtained by mail, 14 percent were by CATI, and 23 percent were by CAPI.

During each month of the year, all three phases of data collection were occurring, each on a different monthly sample of housing units. Thus, units interviewed in any one particular month will include mail return questionnaires, CATI interviews, and CAPI interviews. This structure tends to ensure that a similar number of interviews will be completed in each month of the year.

## **DATA COLLECTION IN THE 2007 AHS**

The AHS is conducted by the FRs from the Census Bureau's 12 regional offices using telephone and personal visit interviews. FRs make personal visits if the housing unit is new to the AHS sample, if the household living in the sampled unit has changed since the previous interview, or if the period between the interviews exceeds several years, which is the case for the metropolitan areas. Prior to 1997, the FRs conducted the AHS using paper questionnaires. Beginning in 1997, however, the FRs began using a CAPI instrument to address the unwieldiness of the paper questionnaire resulting from the large number of housing questions and the complexity of skip patterns.

Initial interviewing began in April 2007, and all interviewing for the 2007 survey was completed by the end of September. The FRs for the 2007 AHS were comprised of a mix of new hires selected to work specifically on the AHS and interviewers with previous Census Bureau current surveys experience. At its peak, approximately 2,321 interviewers worked on the survey. Interviewers were instructed to accept interviews only from knowledgeable household respondents for occupied housing units and from landlords, rental agents, or neighbors for vacant housing units.

The completed interviews showed the following workload completion pattern:

- April - 0 percent
- May - 41 percent
- June - 23 percent
- July - 17 percent
- August - 13 percent
- September - 6 percent

## OTHER IMPORTANT DIFFERENCES BETWEEN THE ACS AND AHS

This section focuses on some of the other methodological and procedural differences between the ACS and the AHS, beyond the differences in survey purpose, sample design, and data collection mentioned above.

**Residence rules** - The ACS uses different residence rules than the AHS. The ACS “current residence” rule considers a housing unit occupied at the time of interview if at least one person in the unit is staying there for more than two months. The AHS uses the more traditional “usual residence” rule to assign an occupancy status to sample housing units based on where people live most of the time, regardless of where they are currently living. The extent of the effect of different residency rules on the distributions of population and housing characteristics is not yet known, but it is likely that the greatest effects would occur in states or areas that have a sizeable seasonal population, like Florida and Vermont.

**Questionnaire design** – One of the most significant areas of difference is in the design of the survey instruments used in the two surveys.

The 2007 ACS employed a paper questionnaire for mailout/mailback respondents (<http://www.census.gov/acs/www/Downloads/Squest07.pdf>) and computerized instruments for the CATI and CAPI operations. The ACS instruments placed the rostering and the collection of the basic person demographics in the first section followed by a clearly identified housing section. Finally, each person in the household had a separate section covering detailed population questions. In total, there were 97 questions for occupied units (including all parts) and 9 asked for vacant units. The estimated time for an interview at an occupied unit was 38 minutes. The flow of the ACS data collection focusing primarily on occupied units was as follows:

- Determine occupancy status of the sample unit.
- If occupied, determine household membership and make a list of household members.
- Collect basic demographic information (sex, age, relationship to householder, marital status, Hispanic origin, and race) for everyone in the household.
- Collect all housing information (tenure, value, rent, mortgage payments, rooms, etc.).
- Collect detailed population information (labor force, industry, occupation, income, etc.) for everyone in the household, one person at a time.

The computerized CATI and CAPI instruments followed the same general pattern as the paper questionnaire used in the mailout/mailback operation.

The 2007 AHS used only a CAPI divided into 16 modules: Demographics, Inventory, Equipment, Breakdown (in equipment), Home Improvements, Neighborhood Quality, Journey to Work, Real Estate Transaction (value, purchase price, downpayment and so forth), Mortgage, Taxes and Fees (rent, condo fees, mobile home fees, insurance, real estate taxes and so forth), Income, Utilities (electricity, gas, fuel oil, kerosene, coal, solar, water and sewer, garbage and trash collection, etc.), Subsidized Rent (availability and amount of government rent subsidies), Rating (home and neighborhood rating), and Observation (information about the surroundings of the home formerly provided by the FR rather than the respondent) . The instrument made an initial determination of the

occupancy status of the sample unit and then went to questions relevant for the particular occupancy/vacancy status. There were nearly 500 questions for occupied units (assuming the longest path through the instrument) and one-sixth of that for vacant units. The estimated time to complete an average interview at an occupied unit was 45 minutes. The flow of the interview was generally the same as that for the ACS except that the detailed population information only includes income and journey to work information, but there is no industry, occupation, or veteran status information as there is in the ACS situation.

**Question wording** - Another difference between the 2007 ACS and the AHS was in question wording. In general, the ACS used questions and response options similar to those used in Census 2000. Since both the census and the ACS begin as mailout/mailback surveys, the question wording on the ACS paper questionnaire was designed to be appropriate for respondents reading the questions.<sup>1</sup>

The 2007 AHS question wording was designed to work in a personal, face-to-face interview situation with the interviewer reading the questions to the respondent.

**Reference periods** – The 2007 ACS yearly sample, spread over 12 months, collected information anchored to the day on which the sampled units were interviewed, whether it was the day that a mail questionnaire was completed or the day an interview was conducted by CATI or CAPI. Questions with time references such as “last week” or “last 12 months” use the reference period as of the interview date. Even questions like “What is the annual payment for fire, hazard, and flood insurance on this property?”, “What is the annual payment for real estate taxes on this property?” and “What is the monthly rent for this house, apartment, or mobile home?” are relative to the date of interview. In practice, however, the annual payment for fire, hazard, and flood insurance is likely from the previous year which was 2006 since many respondents may not know them for the current year, particularly those respondents interviewed early in 2007. To the extent then that the respondents are answering with “last” year’s real estate taxes or fire, hazard, and flood insurance, the reference period is still as of the date of interview; however, the “last year” is constant for all respondents regardless of the month of interview because all interviews took place in 2007. So the only inconsistency would be between those respondents providing annual payment for fire, hazard, and flood insurance or real estate taxes in 2006 and those providing the annual payment in 2007. ACS interviews were conducted almost every day of the year and most of the yearly estimates produced by the 2007 ACS are considered to be averages for the 12-month time frame.

All income in the 2007 ACS was adjusted to reflect calendar year 2007 dollars. That is, the 12 different reference periods were adjusted to reflect a fixed reference period, in this case January 2007 through December 2007, using the Consumer Price Index (CPI-U-RS).<sup>2</sup> (For more information, go to *Income in the American Community Survey: Comparisons to Census 2000*, August 2003 at the following URL: [http://www.census.gov/acs/www/Downloads/ACS/ASA\\_nelson.pdf](http://www.census.gov/acs/www/Downloads/ACS/ASA_nelson.pdf).)

Like the 2007 ACS, for most questions in the 2007 AHS, the day of interview is the reference period. However, the AHS interview period is only one-half the length of the

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<sup>1</sup> The wording for the ACS CATI and CAPI instruments was modified to be appropriate for those modes of interviewing.

<sup>2</sup> This resulted in a total income time span covering 23 months.



yearlong ACS interview period. Questions with time references such as “last week” or “last two years” all began the reference period as of the date of interview.

Like the 2007 ACS, the 2007 AHS asks some questions which, while the reference period depends on the year of interview, the reference period is constant for all respondents regardless of month of interview because last year will always be 2006 since all interviewing was done in 2007. The primary question of this type is: “What were the real estate taxes last year?” AHS also has some questions about costs that are unrelated to the date of interview altogether. These include: “In a typical year, about how much does your household spend for routine repairs and maintenance, such as painting, plumbing, roofing, or other minor repairs?” and “What is the average cost for condominium fees each year?” Unlike the ACS, which does adjust its income based on the month of interview, no dollar amounts were inflation-adjusted as a regular part of the AHS.

**Collection periods** - The ACS data collection methods mean that estimates from the 2007 survey describe conditions during the entire 12-month survey year. Estimates from the 2007 AHS reflect a 5 month timeframe, primarily May, June, July, August, and September. Comparisons of estimates, particularly estimates for financial characteristics like income, between the ACS the AHS may be affected by this difference.

## **ADDITIONAL FACTORS TO CONSIDER**

The section above discussed some of the broad differences between the 2007 ACS and the 2007 AHS. The section below focuses on several other factors that should be considered when reviewing the results of the comparisons.

**Level of occupancy and vacancy** – The ACS 3-month data collection design, where vacant units are mostly identified in the third phase of data collection (CAPI, when an interviewer visits the unit and can determine the status) and thus have an opportunity to change status between months one and three, is often implicated as a factor in the difference between the number of vacant units between the ACS and the AHS. One study suggests that the direction of change in occupancy/vacancy status over the 3-month data collection period is from vacant to occupied which would support the ACS’ lower vacancy rate which has persisted over the years. The study showed that the vacancy rate using the 3-month ACS collection design could be 1.0 to 1.5 percentage points lower than using a more traditional design like the one used by the AHS.<sup>3</sup> However, it is important to consider that the change in occupancy/vacancy status between the first and third month can be in the opposite direction as well with units that were occupied in month one becoming vacant in month three.

**Unit nonresponse and weighting** – Unit nonresponse is the failure to obtain the minimum required information from a sample housing unit. It occurs when respondents are unable or unwilling to participate, interviewers are unable to locate a knowledgeable respondent after repeated tries, or other barriers prevent a completed interview. Unit nonresponse has a direct effect on data quality. If the unit nonresponse rate is high, it increases the chance that the final survey estimates may be biased if the characteristics of the nonresponding units differ from those of responding units.

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<sup>3</sup> See the report by Peter Fronczek and Howard Savage, “Vacancies and Vacancy Rates in the ACS,” presented at the 1998 American Community Survey Conference.

Both the 2007 ACS and the 2007 AHS had relatively low levels of unit nonresponse with nonresponse for both surveys being eleven percent or less.

Both surveys adjust for nonresponse in the same general way, by applying one or more noninterview adjustment factors during the weighting process. To learn more about the specifics of how each survey adjusted for unit nonresponse in the weighting, go to <http://www.census.gov/acs/www/Downloads/ACS/accuracy2007.pdf> for the ACS and Appendix B of the American Housing Survey for the United States: 2007 at <http://www.census.gov/prod/2008pubs/h150-07.pdf>.

**Item nonresponse and allocation** – Item nonresponse occurs when a respondent fails to provide complete and usable information for a data item. This may happen when an otherwise willing respondent declines to provide what he/she considers to be sensitive information, such as income or when a self-respondent in the ACS inadvertently omits an item that should be answered. (If programmed correctly, the checks and “soft edits” built into the AHS CAPI and ACS CATI and CAPI nearly eliminate item nonresponse due to inadvertent omissions.) Item nonresponse is important because estimates can be adversely impacted when nonresponse is high and bias can be introduced if the characteristics of the nonrespondents differ from those reported by respondents.

Most item nonresponse in the 2007 ACS and the 2007 AHS was corrected through the use of two imputation methods. Assignment involves logical imputation where a response to one question implies the value for a missing response to another question. For example, the answer to several questions about mortgages or rent in the ACS can often be used to assign a value to the tenure question.

Allocation involves using statistical procedures to impute for missing values. Allocation of housing characteristics usually occurs when a missing value is supplied from responses for other sample units with similar reported characteristics that are relatively close geographically. Allocation of household population characteristics usually occurs when a missing value is supplied from responses for others in the household, or from responses from people not in the household with similar reported characteristics.

From the beginning, the ACS adopted the assignment and allocation procedures used in the decennial census. During the testing phase, improvements were made to these procedures based on the unique characteristics of the ACS and lessons learned during this period. For example, in the census, rooms and bedrooms have always been edited together and, primarily because, prior to Census 2000, data on rooms were collected for all housing units and bedrooms for only a sample of units, responses to rooms tended to take precedence over responses to bedrooms if the two were in conflict. The ACS initially adopted this approach, but over time changed to give precedence to the bedrooms response under the theory that respondents are likely to know how many bedrooms they have but might get confused about whether a certain area in their home meets the definition of a room.

The AHS has also generally adopted the various traditional assignment and allocation procedures, and then has adapted them to take advantage of the greater detail available from the survey. For example, research has shown that respondents tend to overestimate housing expenditures, in particular utility costs. Therefore, the AHS uses data available from the US Department of Energy, Energy Information Administration’s Residential Energy Consumption Survey (RECS) in conjunction with respondent-provided information on electricity and gas costs. That is, the AHS employs statistical procedures

(regression estimates) to combine the monthly amounts into an annual average, and to benchmark the data to independent estimates of utility costs.

Since the allocation methods between the two surveys are very different, a given household which had not provided information on wage, salary, commission, and bonus income, for example, may be allocated a very different amount by the two different surveys.

Item nonresponse can be measured in the ACS and the AHS through the calculation of allocation rates. While the ACS publishes allocation rates for many variables, the AHS does not publish allocation rates for any. The users from both surveys, however, can calculate allocation rates for most variables using the public use file (the Public Use Microdata Sample (PUMS) for ACS and Public Use File (PUF) for AHS).

An AHS PUF data user can calculate nonresponse for an item by using the variable and its associated “j” variable (edit / allocation flag). Take, for example, the question on salaries. If the data user was interested in the allocation rate for a person’s salary, the data user would look at the variable SAL (salaries, wages, bonuses, and commissions) which is collected for each person 15 years or older who earned salary, wages, bonuses, or commissions. The user would also look at the corresponding variable JSAL. If JSAL = 0, then it means that the value for SAL was provided by the respondent and not changed through the edit or allocation process. If JSAL = 1, then it means that the value for SAL provided by a respondent was edited, including assigning a value to be consistent with other information about the person. If JSAL = 2, then it means that the value for SAL was allocated because an eligible respondent did not provide an answer. The details of how to use the “j” variables from the AHS PUF are documented in the *Codebook for the American Housing Survey, Public Use File: 1997 and Later*, found at [http://www.huduser.org/Datasets/AHS/AHS\\_Codebook.pdf](http://www.huduser.org/Datasets/AHS/AHS_Codebook.pdf).

Similarly, the ACS data user can calculate nonresponse for any item by using the variable and its associated “f” variable (assignment / allocation flag). For example, the data user could determine whether the value for the variable WAGP (salaries, wages, bonuses, and commissions) was respondent-provided or allocated by using the variable FWAGP. If the FWAGP = 0, then the WAGP was not allocated; if FWAGP = 1, then WAGP was allocated. Unlike the AHS, the ACS public use file does not provide a value for the associated “f” variable that tells what variables have been assigned to be consistent with other data. (Census Bureau staff can identify which values have been assigned for consistency by using a file that is not available to the public.)

Data users wanting to use or compare allocation rates between the two surveys should be cautious because it is difficult to decide what the appropriate comparison should be. That is, should only allocated values be compared or should values that have been edited or assigned be included since they are not purely respondent provided? For example, the AHS documentation says that INS (homeowners insurance) is not allocated. This doesn’t mean, however, that INS was not substantially edited. Although INS is not a variable that is allocated, in the 2007 AHS, homeowner’s insurance was edited 30.9 percent of the time. This 30.9 percent included cases on which missing homeowner’s insurance is assigned a value equal to .003 times the home value. Furthermore, the home value on which the assignment is made can be allocated, and a data user may want to check to see if the underlying home value was edited or allocated. ACS’ unpublished allocation rate for homeowners insurance is 22.8 percent and does not include cases that have been

assigned by internal consistency checks. Given the differences, the 30.9 percent allocation rate for homeowners insurance in the AHS cannot be compared to the 22.8 percent allocation rate in the ACS.

**Failed edit follow-up** - Two ACS procedures help to reduce item nonresponse – the use of computer-assisted instruments in the CATI and CAPI data collection modes and the telephone failed edit follow-up (FEFU) operation for missing information from mail returns. The FEFU program contacts mail return households again whose questionnaires lack required responses. A strict set of rules developed by subject matter experts that identify which critical questions need follow-up is applied to the mail return data. A questionnaire with data that fails these rules is “sent” to FEFU and a household member is contacted to get the required information. Trained staff in one of the three Census Bureau Telephone Centers does the follow-up.

Unlike the ACS which does not use a CAPI instrument until the third month, the AHS uses CAPI exclusively, which reduces item nonresponse considerably, from the beginning. Like the ACS, a strict set of rules is developed by subject matter experts that identify which questions need to be completed in order for the interview to be considered complete. If these items are missing, then the CAPI instrument assigns an incomplete/partial outcome code to the interview. Incomplete interviews cannot be transmitted to the master control system. So the FRs must either follow-up and obtain sufficient information to convert the outcome code from incomplete/partial to complete or the FR can make the record a Type A noninterview. (See Appendix A in the *American Housing Survey for the United States: 2007* at <http://www.census.gov/prod/2008pubs/h150-07.pdf>.)

**Weighting** – Both the 2007 ACS and 2007 AHS essentially employed a three-stage weighting process to produce survey estimates for housing units and household characteristics, like age of householder and year householder moved into unit. (The 2007 ACS also provides weights for people living in group quarters. While this report does not deal with estimates for group quarters, it is important to consider that the weighting of people living in households is related to the weighting of people living in group quarters since the weights for the group quarters population are done first and the total population is controlled to an independent estimate.) The first stage was based on the sampling rates used to select the housing unit sample in each survey. The second stage adjusted the weights of responding sample units to compensate for the loss of weights for non-responding units. The third stage controlled the survey estimates of housing units and the people living in them by selected characteristics to independent estimates. In 2006, the ACS introduced another stage that is done prior to the third stage. This Householder Equalization Raking Factor ensured that the total number of occupied housing units and householders were equal. (In 2006, the ACS also introduced another adjustment done prior to the third stage which ensured consistency between the total number of married couple and unmarried partner households and householders in married couple and unmarried partner households; this adjustment, however, is not relevant to this report as we do not compare any measure in the following section by household type.)

Although the basic stages in the weighting were similar between surveys, the steps involved in each stage differed. For example, the first stage of weighting assigned each housing unit a base weight as a function of its initial probability of selection. The ACS then took additional steps; the first was to adjust for the sampling of housing units prior to CAPI and the second was to adjust the weighting to account for seasonal variations in

monthly response pattern. Similarly, in the first stage the AHS took the step of adjusting its base housing weights to reflect the changed probabilities of selection due to taking eight percent of units out of sample because of budget constraints.

Although each survey controlled survey estimates to independent control estimates, the independent estimates, the detail of the characteristics used to control estimates, and the method of applying the controls differed in each survey. For example, the ACS controls its population estimates to the estimates of housing units and people by selected characteristics to estimates produced as part of the Census Bureau's Intercensal Population Estimates program. (For details on the ACS weighting, go to *Accuracy of the Data: 2007* at <http://www.census.gov/acs/www/Downloads/ACS/accuracy2007.pdf>.) The AHS does several adjustments to the base weights that rely on independent estimates. The 1990 Census of Population and Housing is used to adjust for differences in 1990 housing units estimated from the AHS sample of non self-representing PSUs and 1990 Census counts of housing units outside of self-representing PSUs. The Census Bureau's Survey of Construction and Survey of New Manufactured Home Placements is used to adjust for known deficiencies in sampling new construction. The Census Bureau's Current Population Survey was used to adjust the distribution of households within various demographic groups; and the CPS/Housing Vacancy Survey (HVS) is used to adjust the distribution of vacant housing units within different vacancy status categories (vacant, for rent; vacant, rented not yet occupied; vacant, for sale only; vacant, sold not yet occupied; seasonal, recreational and occasional use; migrant housing; and other vacant) and the distribution of occupied housing units between owner- and renter-occupied. Finally, the grand total number of housing units in the United States according to the 2007 AHS was benchmarked to the 2000 Census adjusted to account for new and lost housing units. (For details on the weighting used by the AHS, see Appendix B in the *American Housing Survey for the United States: 2007* at <http://www.census.gov/prod/2008pubs/h150-07.pdf>.)

## **METHODOLOGY FOR MAKING COMPARISONS**

This section describes the methods used to compare the 2007 ACS and the 2007 AHS results for the topics selected for this report. Comparisons consist primarily of simple percentage point differences between the two distributions of the characteristic under discussion. Medians for selected characteristics are also compared. Estimates of the margins of error for each estimate and the difference between estimates are shown at the 90-percent confidence level, and those differences that are beyond sampling error are identified. Due to large sample sizes for the United States, the variances are relatively small for many estimates, sometimes, however, resulting in statistically significant differences between estimates from the two surveys that are not analytically important.

This report compares published estimates or estimates that can be derived from published estimates almost exclusively. When unpublished data are compared, it will be noted. Limiting the comparison to published data enables the data user to validate the data user's own research by replicating the results here. For the 2007 ACS, these estimates are in or can be derived from estimates within the Detailed Tables and Data Profiles on the American Fact Finder, which can be accessed from the Census Bureau's home page at [www.census.gov](http://www.census.gov). In the 2007 AHS, these estimates are in or can be derived from estimates within its publication, *American Housing Survey for the United States: 2007*, also accessible from the Census Bureau's home page. Since AHS and ACS often publish

using different categories for estimates, this report reconciles the categories between the two surveys in a way that provides the data user with the narrowest category possible for comparing published estimates.

The first row of the analysis tables shows the universe from which the percentages in the table rows were based. In cases where the universe is total housing units, this estimate is controlled in both surveys to independent estimates of the housing inventory produced by the Census Bureau’s Population Division in its intercensal population estimates program for the 2007 ACS and to the 2000 Census adjusted to account for additions and losses to the housing stock between 2000 and 2007 for the 2007 AHS. The remaining rows represent the distributions of the various categories. An example of the boxhead columns is shown below:

| Characteristic<br>(1) | 2007 ACS Estimate (percent)<br>(2) | Margin of Error ACS Estimate (percent -age points)<br>(3) | 2007 AHS Estimate (percent)<br>(4) | Margin of Error AHS Estimate (percent-age points)<br>(5) | Diff. ACS – AHS (percent-age points)<br>(6) | Margin of Error of Diff. (percent-age points)<br>(7) | Diff. Statistically Significant?<br>(8) |
|-----------------------|------------------------------------|---|------------------------------------|--|---|--|---|
|-----------------------|------------------------------------|---|------------------------------------|--|---|--|---|

Column (2) of the table is the 2007 ACS percent estimates for the categories of the characteristic identified in column (1). The percents are calculated by dividing the number in each category by the universe total at the top of the column and rounding to tenths. Column (3) shows the margin of error for each of the estimates in column (2). The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by adding and subtracting the margin of error from the estimate contains the true value.

Columns (4) and (5) are the same information as in (2) and (3) for the estimates from the 2007 AHS. Column (6) is the result of the subtraction of the AHS estimate from the ACS estimate and column (7) is the margin of error for this difference. Positive responses indicate instances when the ACS estimate was greater than the AHS estimate. Because all estimates are rounded to tenths, a difference of  $\pm 0.0$  does not necessarily mean there was no difference – it only means that the actual difference was less than  $\pm 0.05$  percentage points.<sup>4</sup> The rounding to tenths was done to avoid over-emphasizing very small differences in the distributions. Finally, column (8) states whether the difference between the two estimates is statistically significant.

The following estimates derived from questions asked in both the 2007 ACS and the 2007 AHS are compared. They were selected specifically because they are measured in each survey and because they address the needs for information discussed below.

- Occupancy and vacancy status
- Tenure
- Type of vacant
- Mortgage status

<sup>4</sup> The same is true for all values of 0.0.

- Units in structure
- Year structure built
- Rooms in unit
- Bedrooms in unit
- Household income
- Monthly housing costs for renters (gross rent)
- Monthly housing costs for renters (gross rent) as a percentage of household income
- Monthly housing costs for owners (selected monthly owner costs)
- Monthly housing costs for owners (selected monthly owner costs) as a percentage of household income
- Value of owner occupied units
- Year householder moved into unit
- Age of householder

Each survey collects additional information, particularly in the case of the AHS, that will not be included in the report. For example, both the ACS and AHS collect information on lot size, telephone service, availability of vehicles, second mortgages, and journey to work but these items will not be compared in this report. The AHS has hundreds of additional housing questions that are not covered in the ACS.

## **RESULTS**

This section discusses the comparisons made of the distributions from the 2007 ACS and the 2007 AHS and documents the outcome of these comparisons. Differences between the estimates from the 2007 ACS and 2007 AHS may result from one or more of the different practices, methods, or processes employed by each survey and discussed earlier or for other reasons. However, because of the interdependencies between the various methods and processes it is difficult to determine the relative effects of each and this study does not attempt to do so.

### **Occupancy and Vacancy Status**

#### *Description*

Occupancy and vacancy status – whether a sample unit is occupied or vacant – is the basic delineation of housing units in most surveys. The ACS occupancy and vacancy status is established on the date of interview and is based on a “current residence” rule applied to people staying in the sample unit when it was visited. A sample unit is considered occupied if at least one person in the unit is living or staying there for more than two months, or if some or all residents of the unit are away for two months or less; otherwise the unit is classified as vacant.

The AHS occupancy and vacancy status is also determined on the date of interview, but is based on a “usual residence” rule. A sample unit is considered occupied if at least one person in the unit considers it to be their usual residence (they stay there more than any other place); otherwise it is classified as vacant.

Table 1 shows the distribution of housing units by whether they were occupied or vacant from both the 2007 ACS and the 2007 AHS, the differences between the two surveys,

and the results of the statistical tests on those differences. The 2007 ACS estimated a statistically higher percentage of occupied units than the 2007 AHS and a lower percentage of vacant units. Although the estimates differ, the difference is 1.6 percentage points apart - 87.9 percent compared to 86.3 percent for occupied units and 12.1 percent compared to 13.7 percent for vacant units. The percentage of all units that are vacant is also known as the gross vacancy rate; for additional discussion of the results of the gross vacancy rate comparison, see the section **Type of Vacant**.

[SEE TABLE 1]

### *Analysis*

Although the differences in occupancy and vacancy status between the ACS and the AHS are small, they are worth noting since this topic is a basic component in the analysis of housing characteristics, and it is critical in estimating important statistics such as vacancy and homeownership rates. The differences in residence rules, data collection methodologies, and data collection periods may explain some of the observed higher proportion of occupied units and lower proportion of vacant units in the ACS relative to the AHS, but the amount attributable to each of the differences separately has not been quantified.

## **Tenure**

### *Description*

Tenure – whether a housing unit is occupied by the owner(s) of the unit or by renters – is the basic delineation for the analysis of housing characteristics. It was asked at all occupied housing units in both the 2007 ACS and the 2007 AHS. On the ACS mail form, it was asked as a single question following the question determining condominium status and before the questions on amount of rent paid and the value of the unit. ACS CATI and CAPI interviewers asked a slightly reworded version of the mail-form question in which the four possible response options were asked as part of the question.



**17** Is this house, apartment, or mobile home -

- Owned by you or someone in this household with a mortgage or loan?
- Owned by you or someone in this household free and clear (without a mortgage or loan)?
- Rented for cash rent?
- Occupied without payment of cash rent? → SKIP to **C**

The 2007 AHS determined tenure through the following question. Unlike the ACS, which determines whether or not a home is mortgaged in the same question, the AHS determines this later in the CAPI. (The appropriate fill (element in the italicized list) that is read depends on information obtained earlier in the interview.)

#### AHS CAPI

Is this *{house, apartment, manufactured/mobile home, living quarters}*

Read categories until a yes response is received

- Owned or being bought by someone in your household?
- Rented for cash rent?
- Occupied without payment of cash rent?

Table 2a displays the results of the comparison of Tenure for the 2007 ACS and AHS. The simple two-way categorization of tenure into owner and renter used for this analysis showed that the ACS had a lower rate of homeownership, 67.2 percent compared to 68.3 percent from the AHS and a higher rental rate, 32.8 compared to 31.7 from the AHS (the detailed categorization of owner occupied units by mortgage status will be discussed later). Like the occupancy and vacancy rates, although the estimates differ between the surveys, the differences are around 1 percentage point.

[SEE TABLE 2a]

#### Analysis

The homeownership rate in the AHS is for the most part a reflection of the Current Population Survey (CPS)/Housing Vacancy Survey (HVS) as the AHS' total occupied units are ratio estimated to CPS/HVS. (The CPS/HVS is the official source of the homeownership rate at the national level.) Therefore, any difference between AHS and ACS is actually a reflection of the difference between CPS/HVS and ACS and not a

reflection or question of procedural difference between ACS and AHS. The housing fact sheet found at <http://www.census.gov/hhes/www/housing/homeownershipfactsheet.html> lists some possible reasons that may contribute to the difference in the homeownership rate between the ACS and CPS/HVS, including sample size, residency rules, weighting and control totals.

## Type of Vacant

### *Description*

Type of Vacant information does for vacant units what tenure information does for occupied units: it identifies whether the vacant units are for sale or for rent. This is important for calculating rental and homeowner vacancy rates, which are used in analyzing the housing market. Type of Vacant data are collected for all vacant units in both surveys from a knowledgeable respondent such as the owner, rental agent, or building superintendent. The ACS usually obtains this information during CAPI interviewing, since it is unlikely that a mail questionnaire will be returned or a CATI interview taken at a vacant unit, although some vacant returns do come in via CATI or mail.

### ACS CAPI instrument

|  |
|--|
| Is this unit...?   |
| <ul style="list-style-type: none"><li>• For rent</li><li>• Rented, not occupied</li><li>• For sale only</li><li>• Sold, not occupied</li><li>• For seasonal, recreational or occasional use</li><li>• For migrant workers</li><li>• Other vacant</li></ul> |

The AHS CAPI instrument entails two major questions to assess vacancy status. The second question is answered only if the respondent indicated that the housing unit was intended for year round use.

### AHS CAPI

|   |
|---|
| <p>Is <i>{the, that}</i> <i>{house, apartment, manufactured/mobile home, living quarters}</i><br/>INTENDED for year round use, occupancy only on a seasonal basis, or use by migrant workers?</p> <ul style="list-style-type: none"><li>• Year round</li><li>• Seasonal – summer only</li><li>• Seasonal – winter only</li><li>• Other seasonal - specify</li><li>• Migratory</li></ul> <p><i>{Does the owner/manager intend for this, Is that}</i> <i>{house, apartment, manufactured/mobile home, living quarters}</i> <i>{to be, ‘ ‘}</i></p> <ul style="list-style-type: none"><li>• For rent only?</li><li>• For rent or for sale?</li><li>• For sale only?</li><li>• Rented, but not yet occupied?</li><li>• Sold, but not yet occupied?</li><li>• Held for occasional use throughout the year?</li><li>• Other; specify?</li></ul> |
|---|

Table 2a shows that when type of vacant estimates were tabulated into the three most commonly referred to categories – for rent, for sale only, and (all) other vacant – there were statistically significant, though small, differences between the 2007 ACS and the 2007 AHS. The differences in the shares of vacant, for rent units was around 1.4 percentage points (20.6 percent for ACS compared to 22.0 percent for AHS) and around 1.1 percentage points for the shares of vacant, for sale units (12.6 percent for ACS compared to 11.5 percent for AHS). There was no difference in the share of other vacants. When these estimates are used to compute vacancy rates, the ACS rental vacancy rate (the percentage of all rental units – those renter-occupied; rented, but not yet occupied; and vacant, for rent – that are vacant, for rent) was 1.9 percentage points lower than the AHS, while the gross vacancy rate (the percentage of all units that are vacant) was 1.6 percentage points lower.<sup>5</sup> (See Table 1 for gross vacancy rate information.) In contrast to the difference in the rental vacancy rates between the ACS and AHS, the difference between the ACS homeowner vacancy rate (2.5%) and the AHS rate (2.6%) is very small and not statistically significant.

### *Analysis*

Due to the implications of a tight or loose housing market for housing supply and affordability, the difference in vacancy rates between these two prominent surveys, particularly in the rental vacancy rate, is worth noting even though they are small. The fact that ACS data are collected over the entire 12 months of the year compared with the 5-month period in the AHS may also contribute to this apparent difference.

The main reason for the difference between the two surveys in the gross vacancy rate is likely related to the idiosyncrasies in the treatment of vacant units in both surveys mentioned earlier. In the ACS, the 3-month data collection design (where vacant units are not identified until the final (CAPI) phase), together with the two-month residence rule, may play a role in the difference in the estimate of vacant housing units between the surveys because a vacant unit can become occupied within the 3-month window and an occupied housing unit can become vacant. If more housing units went from vacant to occupied over the 3-month period, as was suggested by a 1998 study, this may explain ACS' lower estimate vis-à-vis the AHS estimate. However the opposite would occur if more units went from occupied to vacant over the period. This would negate the explanation of the 3-month data collection design as a possible contributor to ACS' persistently lower vacancy rate.

Again, as with homeownership rates, rental categories in the AHS are ratio estimated to agree with those from the CPS/HVS, so differences between the AHS and ACS are more the result of differences between ACS and CPS/HVS rather than the result of differences in questions or procedures between the ACS and AHS. The housing fact sheet found at <http://www.census.gov/hhes/www/housing/vacanciesfactsheet.html>

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<sup>5</sup> For this report the rental vacancy rate is the number of vacant for rent units divided by the number of vacant for rent units plus the number of units that are rented but not occupied plus the number of renter occupied units.'

lists some possible reasons that may contribute to the difference in the vacancy rates between the ACS and CPS/HVS, including sample size, residency rules, weighting and control totals.

## Mortgage Status

### Description

Whether an owner occupied unit is or is not mortgaged has a great deal to do with the amount the household in that unit spends for shelter. It is also a key factor in the amount of equity or wealth the household has. The 2007 ACS mail questionnaire determined whether or not a unit was mortgaged from the responses to three questions: the tenure question, asked of all households, and shown in section **Tenure** above; and two additional questions asked of owner households. The first asked owners if there was a mortgage or similar loan on the property, while the second determined if the owner had a second mortgage or a home equity loan on the property. The ACS CATI and CAPI instruments had the ability to reference the response to the tenure question asked earlier when inquiring about whether there was a mortgage or similar loan on the property. The CATI and CAPI instruments asked the question on second mortgage in two parts – one related to second mortgages and one related to home equity loans. The ACS edits looked at all three questions, resolved inconsistencies, and determined the mortgage status for the unit.

ACS mail questionnaire

**22** a. Do you or any member of this household have a mortgage, deed of trust, contract to purchase, or similar debt on THIS property?

Yes, mortgage, deed of trust, or similar debt

Yes, contract to purchase

No → SKIP to question 23a

**23** a. Do you or any member of this household have a second mortgage or a home equity loan on THIS property?

Yes, home equity loan

Yes, second mortgage

Yes, second mortgage and home equity loan

No → SKIP to **D**

The determination of mortgage status involves four questions on the AHS CAPI shown below. The AHS instrument collects the amount borrowed and mortgage payment on up to seven mortgages and up to seven home equity loans (and whether the loan was obtained through a state or local program for the seven mortgages) and very detailed information on the first two mortgages and first two home equity loans. The AHS CAPI also collects credit limits, outstanding balances, interest rates, and monthly payments for up to two home equity lines of credit separately then asks for the total credit limits, outstanding balances, and monthly payments on the remaining home equity lines of credit combined. The AHS CAPI also asks homeowners age 55 and older if they have a reverse annuity mortgage (RAM). The AHS asks no additional questions about the RAM other than whether the household has one.

## AHS CAPI

**Not counting home equity loans, is there a mortgage or any loans on this {house, apartment, manufactured/mobile home/living quarters}?**

**This includes land contracts**

- Yes
- No

**Do you {also, ' '} have a LUMP SUM home equity loan, that is, a home equity loan that is paid out in a one-time lump-sum amount and that must be repaid over a period of time?**

- Yes
- No

**Do you {also, ' '} have a home equity LINE OF CREDIT, that is, a home equity loan that allows you to borrow against it as often as you wish, up to a fixed limit?**

- Yes
- No

**Some people take out a special mortgage called a Reverse Annuity Mortgage or Home Equity Conversion Mortgage that borrows against the equity in their homes to give them retirement money or income. Some of these loans do not have to be paid back during the owner's lifetime because it will be paid back by the sale of the home when the estate is settled. Some provide monthly income over a specified period of time, after which it must be paid back.**

**Do you have this type of mortgage?**

- Yes
- No

Table 2b shows that the 2007 ACS estimated a statistically higher percentage of units owned with a mortgage than the 2007 AHS, and a corresponding lower percentage of units owned without a mortgage. The difference between the two surveys was 3.8 percentage points for each category.

[SEE TABLE 2b]

### *Analysis*

Given that mortgage status is a critical characteristic in analyzing the financial status of owner households, the potential reasons for the differences in this key characteristic need to be explored. Both surveys place a great deal of emphasis on determining mortgage status. ACS uses three related questions on the topic and, using the answers to the three questions (two are shown above and one question is in the **Tenure** section), determines whether or not there is a mortgage on the property. Particularly noteworthy is the

emphasis on second mortgages and home equity loans, where the ACS CATI/CAPI asks the question in two parts. This is done not only to identify the number of units with this type of loan, but also to “correct” in the edit process, mortgage status for those respondents who have only a home equity loan and may have answered not mortgaged because they do not consider these home equity loans to be “true” mortgages.

AHS uses four related questions on the topic and, using the answers to the four related questions (all four shown above in this section), determines whether or not there is a mortgage on the property. Thus, while the ACS “tenure question” asks the respondent immediately if there is mortgage or loan, the AHS “tenure question” only asks if the respondent owns or is buying the property. Whether or not there is a mortgage on the property is not explicit from AHS’ tenure question. Like the ACS CATI/CAPI instruments, the design of the AHS questions helps respondents who only have one home equity loan on the property and appropriately answered “no, they did not have any mortgages or loans” to answer the second of the four questions in the affirmative and appropriately be counted as “mortgaged”.

AHS distinguishes between home equity loans and home equity lines of credit but the ACS does not. The ACS’ inclusion of home equity lines of credit should be inconsequential to the difference in mortgage status between the surveys, as a household with only a home equity line of credit would be considered “mortgaged” as is the case for AHS. One possible source of discrepancy then between the surveys in the share of mortgaged and nonmortgaged homes may come from households with only a home equity line of credit and the possibility of not counting it. If such a household does not include this home equity line of credit, perhaps because its proceeds are being used for some nonhousing related purpose like education, this home may not be counted as mortgaged. The ACS mail questionnaire does not have an instruction that says to include home equity lines of credit; the ACS CAPI does however have a help screen that states a “home equity loan is a line of credit available to the borrower that is secured by real estate.” The AHS CAPI’s more detailed questions and explicit wording about home equity lines of credit may increase the number of properties with only a home equity line of credit that are counted as mortgaged. But the data do not bear this out as the ACS has a higher share of owners with mortgages than the AHS. Given the very different design of the mortgage questions, it is hardly surprising that there is a difference in the share of homes owned with a mortgage between ACS and AHS.

## **Units in Structure**

### *Description*

Units in Structure data were collected for all housing units – both occupied and vacant – in both the 2007 ACS and the 2007 AHS. It was the first housing question asked in the ACS, and respondents were given a set of 10 response options on the mail questionnaire. The question was asked in the same way on the ACS CATI and CAPI instrument with CATI interviewers instructed to read the response options to respondents and CAPI interviewers asked to show a flash card that contained the 10 possible responses.

**1** Which best describes this building?  
*Include all apartments, flats, etc., even if vacant.*

- A mobile home
- A one-family house detached from any other house
- A one-family house attached to one or more houses
- A building with 2 apartments
- A building with 3 or 4 apartments
- A building with 5 to 9 apartments
- A building with 10 to 19 apartments
- A building with 20 to 49 apartments
- A building with 50 or more apartments
- Boat, RV, van, etc.

Units in Structure is captured in three questions in the AHS. The housing unit type is first of the structural characteristics questions asked in the 2007 AHS and it is asked of occupied and vacant units and of units occupied by respondents whose usual home is elsewhere. The housing unit type question on the AHS offered 12 response options, while the ACS offered 10 units in structure questions. Moreover, after the AHS establishes the housing unit type, it then establishes the type of structure in which these housing units are located (see second question below). Then, if the respondent indicates the housing unit is in a multi unit structure, the respondent is asked how many units are in the structure. AHS also asks respondents indicating that they live in attached single family homes, like townhouses and row houses, if the unit shares an attic or furnace with other units. If so, the AHS asks about the number of units sharing the attic or furnace and classifies this unit as multifamily.

While ACS does publish a separate line for boat, RVs, and vans, the AHS does not. After processing the AHS data, these nontraditional housing types are included in the "1, detached" category. Therefore, for the ACS column in Table 3, the boats, RV and vans are included with "1, detached", making the estimates for 1, detached comparable between the surveys. Also, while ACS publishes data on housing units in structures with 2 units separately, the AHS includes housing units in duplexes with those in structures with 3 to 4 units. The AHS Units in Structure question was asked as an open-ended question. If respondents had difficulty in providing an answer, interviewers provided assistance by showing respondents the questionnaire response categories.

**Is {address of home} a house, an apartment, a manufactured/mobile home, or some other type of residence?**

1. House
2. Apartment, flat
3. Manufactured/Mobile home with no permanent room added
4. Manufactured/Mobile home with one or more permanent rooms added
5. Housing unit in nontransient hotel, motel, etc.
6. Housing unit permanent in transient hotel, motel
7. Housing unit in rooming house or boarding house
8. Boat or recreational vehicle
9. Tent, cave, or railroad car
10. Housing unit not specified above, specify
11. Unoccupied site for manufactured/mobile home, trailer, or tent
12. Group Quarters

If above is "other", specify other type of home

**If not obvious ask...**

{Are Your, Is That} living quarters in a

[Read all categories](#)

1. Manufactured/Mobile home
2. Detached
3. Attached
4. Multi

**How many apartments are in the {manufactured/mobile home,building}?**

Enter 998 if 998 or more

Table 3 shows statistically significant differences in the numbers of housing units in one-unit detached, two to four unit, 20 to 49, and 50 and more unit structures. The differences in two to four, 20 to 49, and 50 or more unit structures are less than 1 percentage point.

**[SEE TABLE 3]**

### *Analysis*

Interestingly, the differences occur in the small and large structures. The very detailed way in which the AHS establishes units in structure may explain some of the statistically significant difference in shares of units in the various categories. The CAPI instruments have many checks and balances inherent in their design to ask many questions and resolve inconsistencies among answers. In AHS, for example, if the respondent indicates that the respondent's housing unit type is a house and then at the structure type question screen says that it is in a multiunit structure, the CAPI instrument brings up an error screen. Inconsistencies can be resolved immediately. On the other hand with the mail questionnaire, it is possible that a respondent living in a townhome in which five townhomes are attached, would indicate that the home was in a building with 5 or more apartments. This misunderstanding by the respondent would cause the structure type to be misclassified. The degree to which such misclassifications occur has not been quantified.

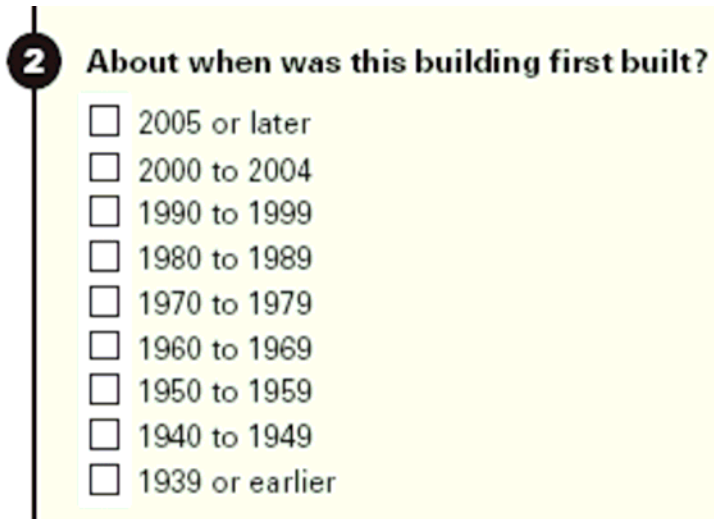


## Year Structure Built

### *Description*

Year Structure Built was the second housing question asked in the 2007 ACS, following the Units in Structure question. The information was collected for all housing units – occupied and vacant - and the response options on the mail questionnaire were a series of nine yearly ranges. ACS CATI and CAPI interviewers asked the question in an open-ended way and coded the responses into the same ranges as were on the mail questionnaire.

ACS mail questionnaire



**2** About when was this building first built?

- 2005 or later
- 2000 to 2004
- 1990 to 1999
- 1980 to 1989
- 1970 to 1979
- 1960 to 1969
- 1950 to 1959
- 1940 to 1949
- 1939 or earlier

Again because it is CAPI, the AHS can be much more probing if the respondent does not know the year the structure was built. Moreover, if it was built after 2000, the AHS asks for the exact year. Beginning in 2008, the ACS will ask for the respondent to specify the exact year the structure was built if the respondent said that it was built after 2000.

## AHS CAPI

**What year was {your home, the manufactured/mobile home, the building} built?**

Mark appropriate year range

0. 2000- present
1. 1995-1999
2. 1990-94
3. 1985-89
4. 1980-84
5. 1975-79
6. 1970-74
7. 1960-69
8. 1950-59
9. 1940-49
10. 1930-39
11. 1920-29
12. 1919 or earlier

**[If respondent, said “don’t know” then] What decade was {your home, the manufactured/mobile home, the building} built?**

0. 2000-present
1. 1995-1999
2. 1990-1994
3. 1985-1989
4. 1980-1984
5. 1975-1979
6. 1970-1974
7. 1960-1969
8. 1950-1959
9. 1940-1949
10. 1930-1939
11. 1920-1929
12. 1919 or earlier

**[If respondent, said 2000 to present then] What year was {your house, manufactured/mobile home, the building} built?**

Enter appropriate year, 2000-present

The one year difference in median year built between the ACS (1974) and the AHS (1973) is not statistically significant. However, all the year built categories were statistically different with the ACS tending to have higher percentages in later years and AHS having higher percentages in earlier years.

**[SEE TABLE 4]**

### *Analysis*

That the shares of homes in all categories of year built are significantly different is hardly surprising since with a large national survey even small differences, with few policy ramifications, can prove to be statistically significant. As mentioned in the OVERVIEW AND PURPOSE section, the AHS is a longitudinal survey with some units having been visited since 1985. However, once the AHS gets a valid answer for the year built, the survey does not ask the question again. The one exception to this is when the tenure of a housing unit goes from rented to owned, the question is asked again. This “reasking” was due to earlier research on the decennial census response to Year Structure Built that showed that respondents, particularly those in rental units, have a difficult time providing consistent and accurate answers to this question.

The implications of inaccurate responses about year built are mitigated to some extent by the fact that AHS does not ask the question again once a valid response is obtained. So in 2007 then, a smaller share of AHS respondents was required to answer this question. The larger share of ACS respondents having to answer the question coupled with the difficulty of households, particularly renters, to provide an accurate response likely contributes to discrepancies between the surveys, especially for older units.

## Rooms and Bedrooms

### *Description*

The items Number of Rooms and Number of Bedrooms are often viewed and analyzed together, and will be done so here. Rooms and bedrooms data are available for occupied and vacant units in both the 2007 ACS and 2007 AHS.

On the ACS mail questionnaire, the rooms question was asked and examples of what not to include as a room provided. Respondents answered by selecting from one of nine response options. The ACS CATI and CAPI instruments asked the question in basically the same way as the mail questionnaire, although the CATI and CAPI instruction on what not to include added utility rooms as an example. The bedrooms question was asked on the mail questionnaire in a way that related it to how the respondent would advertise the unit if it were for rent or sale. The CATI and CAPI version of the bedrooms question did not use this approach, instead treating it as a follow-up to the rooms question, basically worded “how many of these rooms are bedrooms”?

ACS mail questionnaire

**7** How many rooms are in this house, apartment, or mobile home? Do NOT count bathrooms, porches, balconies, foyers, halls, or half-rooms.

- 1 room
- 2 rooms
- 3 rooms
- 4 rooms
- 5 rooms
- 6 rooms
- 7 rooms
- 8 rooms
- 9 or more rooms

**8**

**How many bedrooms are in this house, apartment, or mobile home; that is, how many bedrooms would you list if this house, apartment, or mobile home were on the market for sale or rent?**

- No bedroom
- 1 bedroom
- 2 bedrooms
- 3 bedrooms
- 4 bedrooms
- 5 or more bedrooms

The AHS CAPI does not ask the respondent to provide the total number of rooms in the home. Rather, it asks the respondent on separate screens how many of each of the following rooms it has: bedrooms, full bathrooms, half bathrooms, kitchens, dining rooms, living rooms, family rooms/great rooms, recreation rooms, dens/libraries, laundry/utility rooms, all “other” finished rooms, and all “other” unfinished rooms. During the recode process, the number of rooms is calculated from the sum of the components, except full and half bathrooms, laundry/utility rooms and “other” unfinished rooms, which are not included in total rooms. The bedrooms screen from the AHS CAPI is shown below.

AHS CAPI

***{Thinking of all of the different floors, how; How} many bedrooms are there in {your, that}{house, apartment, manufactured/mobile home, living quarters}?***  
**Enter 10 for 10 or more**

Estimates in Table 5 show that all shares, except for the shares of housing units with eight rooms differ significantly. The magnitude of the differences is small, however, with, the largest difference being 2.4 percentage point difference between the ACS and AHS in the number of housing units with nine or more rooms (8.2% for the ACS versus 5.8% for the AHS).

Estimates in Table 6 show that shares in all categories, except for housing units with one bedroom, differ significantly. The magnitude of the differences is again small, however, with the largest difference being 1.3 percentage points in homes with 3 bedrooms (40.0% for ACS and 41.3% for AHS).

[SEE TABLE 5]

[SEE TABLE 6]

## *Analysis*

The differences in the rooms distribution indicate that the 2007 ACS question and methods result in greater shares in the larger and smaller categories, while the AHS has greater shares in the middle categories of rooms.

Several factors should be considered. First, examples of spaces not to include as rooms given in the ACS CATI and CAPI instruments differ from those on the ACS paper questionnaire. Most significantly, the CATI and CAPI instruments from the ACS instruct respondents not to count utility rooms as rooms. No mention of excluding these rooms is made in the ACS paper questionnaires. So it is possible that laundry/utility rooms are included in the count of ACS rooms. The AHS does collect information on utility/laundry rooms but it does not include them in its count of rooms, which is similar to their exclusion from the ACS CAPI/CATI. Furthermore, in neither the ACS mail questionnaire nor its CATI/CAPI does the ACS say not to include unfinished rooms. So it is possible that the ACS includes unfinished rooms, while the AHS explicitly asks for the number of unfinished rooms and then does not include them in the total count of rooms.

The higher share of housing units with three bedrooms in the AHS suggests less of a tendency toward extremely large or small homes. Under the ACS design, if the respondent answers that the respondent only has one room and then indicates any other category of bedrooms other than “No bedroom”, the edit process for the ACS makes the number of bedrooms 0. For the AHS CAPI, once the respondent indicates that the respondent has no bedrooms, no kitchen and either 0 or 1 living room, the CAPI asks the respondent if the home is a one room efficiency apartment or studio apartment. Therefore, the respondent has several opportunities to correct the number of bedrooms.

## **Household Income**

### *Description*

The 2007 ACS asked for income data from all people 15 years old or older in occupied housing units; while the 2007 AHS asked for income from all people 16 years or older in occupied housing units. Household income is a recoded variable created by adding together the income from all income sources for eligible household members.

The 2007 ACS collected data on income in eight questions at the very end of the ACS interview. The example below shows two of the eight questions – wages, salary, commissions, bonuses, or tips from all jobs; and self-employment income from own farm or nonfarm businesses, including proprietorships and partnerships. The other six questions covered the following sources of income:

- Interest, dividends, net rental income, royalty income, income from estates, trusts
- Social Security or Railroad Retirement payments.
- Supplemental Security Income (SSI).
- Public assistance or welfare payments from the state or local welfare office.
- Retirement, survivor, or disability pensions.
- Any other sources of income received regularly such as Veteran’s (VA) payments, unemployment compensation, child support, or alimony.

The ACS paper questionnaire also included a question that asked respondents to add up the income from all sources covered by the eight questions and provide a total income. The ACS CATI and CAPI interviewers collected data on the same sources of income in eight questions but asked the income questions in two parts – did the person receive income from that source, and, if yes, what was the amount of income received.

### ACS mail questionnaire

**41 INCOME IN THE PAST 12 MONTHS.**  
 Mark (X) the "Yes" box for each type of income this person received, and give your best estimate of the TOTAL AMOUNT during the PAST 12 MONTHS. (NOTE: The "past 12 months" is the period from today's date one year ago up through today.)

Mark (X) the "No" box to show types of income NOT received.

If net income was a loss, mark the "Loss" box to the right of the dollar amount.

For income received jointly, report the appropriate share for each person –or, if that's not possible, report the whole amount for only one person and mark the "No" box for the other person.

**a. Wages, salary, commissions, bonuses, or tips from all jobs.** Report amount before deductions for taxes, bonds, dues, or other items.

Yes → \$  .00  No

TOTAL AMOUNT for past 12 MONTHS

---

**b. Self-employment income from own nonfarm businesses or farm businesses, including proprietorships and partnerships.** Report NET income after business expenses.

Yes → \$  .00  Loss  
 No

TOTAL AMOUNT for past 12 MONTHS

---

**42 What was this person's total income during the PAST 12 MONTHS?** Add entries in questions 41a to 41h; subtract any losses. If net income was a loss, enter the amount and mark (X) the "Loss" box.

None OR \$  .00  
 Loss

TOTAL AMOUNT for past 12 MONTHS

For a look at the full set of income questions on the 2007 ACS questionnaire see the web site, [www.census.gov/acs/www/Downloads/SQuest07.pdf](http://www.census.gov/acs/www/Downloads/SQuest07.pdf)

In 2005, the AHS CAPI income questions were taken directly from the design of the ACS. However, some unexpected results from AHS respondents about income from interest, dividends, net rental income, royalty income or income from estates and trusts prompted cognitive research. The research concluded that when this question was administered in a personal interview like the AHS, by the time the FR was reading the words “income from estates and trusts”, the respondent did not remember that they were also being asked about income from the more common sources within the question. Unfortunately, the more obscure sources of income within the question were the last heard by the respondents. Consequently, many of them answered “no” but did indeed have income from the more common sources, like interest and dividends, that were read at the beginning of the question.

In 2007, the AHS broke up this question into separate ones for interest, dividends, and net rental income. While not asked explicitly, respondents were expected to report royalty income and regular income from estates and trusts in with the question for other income. Also, in 2007, the AHS reinstated an explicit question about alimony received, while the ACS expects the respondent to include alimony in “other” income. For houses on lots of 44,000 square feet or on more than one acre, the AHS also asked a question about income from crops and livestock, which the ACS did not.

The AHS income questions were asked as two-part questions, one on reciprocity and if the respondent said the respondent received income from a source, the respondent was immediately asked about the amount before going on to the question of reciprocity from the next source. This is just like ACS CATI and CAPI interviews. Below is an example for two income sources, wages, salaries, tips, bonuses, or commissions; and self-employment income.

#### AHS CAPI

|   |
|---|
| <p><b>During the past 12 months, did {you, name of nonrespondent household member} receive any wages, salary, tips, bonuses, or commissions?</b></p> <ul style="list-style-type: none"><li>• Yes</li><li>• No</li></ul> <p><b>How much did {you, name of nonrespondent household member} receive?</b><br/>(Report amount from all jobs before any deductions for taxes, bonds or other items.)<br/>Enter 9999998 if \$9,999,998 or more</p> <p><b>Did {you, name of nonrespondent household member} receive any self-employment income DURING THE PAST 12 MONTHS?</b><br/>Report income from own business (farm or non-farm) including proprietorship and partnership.</p> <ul style="list-style-type: none"><li>• Yes</li><li>• No</li></ul> <p><b>What was the amount?</b><br/>Report net income after operating expenses. Include earnings as a tenant farmer or sharecropper. If net income was a loss precede amount with a '-'. Breakeven = 1.<br/>Enter 9999998 if \$9,999,998 or more</p> |
|---|

Table 7 shows that, except for the income categories of \$10,000 to \$14,999 and \$30,000 to \$34,999, the shares of households in all categories of income were statistically

different between the surveys. The ACS' shares in all of the top five income categories led to its higher median income of \$50,740 compared to \$47,632 in the AHS.

[SEE TABLE 7]

### *Analysis*

Although the ACS and AHS income questions are quite similar, except for those differences noted above, there are reasons why these income estimates will differ. Research has shown that modes of interview – self-administered mail questionnaires versus Field Representative administered CAPI – can yield different results, as evidenced by the reporting of interest and dividend income noted above. Also, item nonresponse for the income questions used in calculating household income is high in both surveys, while allocation specifications are very different. Most significantly, ACS income is collected for the twelve months prior to the date of interview and adjusted to reflect calendar 2007. The AHS also collects income for the twelve months prior to the date of interview. However, the AHS does not adjust incomes from 2006 to reflect calendar year 2007 which may partially explain why the ACS income is higher.

### **Monthly Housing Costs for Renters (Gross Rent)**

#### *Description*

Data on rent levels are critical for any analysis of housing markets and the ability of renter households to provide adequate shelter for themselves. ACS' gross rent is the monthly rent contracted for plus the monthly cost of utilities: electricity, gas, other fuels (oil, coal, kerosene, wood, etc.) and water and sewer if these items are paid by the renter in addition to rent. The AHS refers to its measure as monthly housing cost for renter occupied units, which is essentially the same as ACS' gross rent but with some additional components. Use of a gross measure eliminates differentials that result from varying practices with respect to the inclusion of utilities and fuels as part of the rent payment. Gross rent is tabulated only for renter-occupied households. In this context, renter-occupied means that the household is paying cash rent for living in the unit. Thus, this analysis is limited to that universe.

The 2007 ACS collected data on monthly rent for all renter-occupied units (and monthly asking rent for all vacant for rent units and rented, not occupied units). The ACS CATI and CAPI instruments asked the question in basically the same way as it was asked on the mail questionnaire. All ACS modes of collection asked the question in an open-ended manner and recorded the exact rent reported by the respondent.



**18** a. **What is the monthly rent for this house, apartment, or mobile home?**

Monthly amount – *Dollars*

|    |  |     |
|----|--|-----|
| \$ |  | .00 |
|----|--|-----|

The 2007 AHS also collected monthly rent for all renter-occupied units (and asking rent for all vacant for rent units). Unlike the ACS, mobile home renters in the AHS were asked about land rent as well as rent on the structure in separate questions. Whether the rent provided by mobile home renters who pay separately for land rent in the ACS includes land rent is up to the respondent’s interpretation of the question. But neither the ACS mail questionnaire nor the ACS CAPI instrument explicitly instructs the mobile home renter to include land rent.

#### AHS CAPI

*{How much is the rent?, What is the asking rent?}*

*{Include total amount paid by household and any other source, ‘’}*  
 If parking priced separately, exclude it here.  
*{Enter 1 if rent depends on income of the occupants, such as public housing or some military housing; ‘’}*  
 Enter 29998 for \$29,998 or more.

[For mobile home renters only] What is the cost (of the land rent) each *{month, quarter, . . .}*?

To determine the cost of utilities and fuels for renter occupied units, the 2007 ACS asked four questions – the cost for electricity in the previous month, the cost for gas in the previous month, the cost of water and sewer in the previous 12 months, and the cost of oil, coal, kerosene, wood, etc, in the previous 12 months. Each cost question also determined if the utility or fuel costs were included in the monthly rent paid, if there was no charge for the service, or if the service was not used. If electricity and gas costs were paid together, the ACS asked respondents to report both in the answer to the electricity cost question. The ACS CATI and CAPI instruments used a three-part approach to determine utility and fuel costs. CATI and CAPI first determined if anyone in the household paid for the utility or fuel. If someone did, respondents were asked the cost of the service. If no one in the household paid for the service, respondents were asked if the service was included in the monthly rent paid.

**14**

**a. LAST MONTH, what was the cost of electricity for this house, apartment, or mobile home?**

Last month's cost - *Dollars*

|    |  |  |  |  |  |     |
|----|--|--|--|--|--|-----|
| \$ |  |  |  |  |  | .00 |
|----|--|--|--|--|--|-----|

**OR**

- Included in rent or condominium fee
- No charge or electricity not used

**b. LAST MONTH, what was the cost of gas for this house, apartment, or mobile home?**

Last month's cost - *Dollars*

|    |  |  |  |  |  |     |
|----|--|--|--|--|--|-----|
| \$ |  |  |  |  |  | .00 |
|----|--|--|--|--|--|-----|

**OR**

- Included in rent or condominium fee
- Included in electricity payment entered above
- No charge or gas not used

**c. IN THE PAST 12 MONTHS, what was the cost of water and sewer for this house, apartment, or mobile home? If you have lived here less than 12 months, estimate the cost.**

Past 12 months' cost - *Dollars*

|    |  |  |  |  |  |     |
|----|--|--|--|--|--|-----|
| \$ |  |  |  |  |  | .00 |
|----|--|--|--|--|--|-----|

**OR**

- Included in rent or condominium fee
- No charge

**d. IN THE PAST 12 MONTHS, what was the cost of oil, coal, kerosene, wood, etc., for this house, apartment, or mobile home?** *If you have lived here less than 12 months, estimate the cost.*

Past 12 months' cost – Dollars

|    |  |  |  |  |  |  |  |     |
|----|--|--|--|--|--|--|--|-----|
| \$ |  |  |  |  |  |  |  | .00 |
|----|--|--|--|--|--|--|--|-----|

**OR**

- Included in rent or condominium fee
- No charge or these fuels not used

Although the AHS approach is similar to the ACS CATI / CAPI approach, it collects payments for utilities in a much more detailed manner than the ACS. The AHS goes to great lengths to disentangle combined utility bills. While the ACS checks only whether electricity and gas are combined, the AHS looks at combinations of all components, including water and sewer, garbage collection, and fuel purchases. Moreover, respondents with actual records (bills) for electricity and gas are asked for their costs in each of the preceding four months – April, July, August, and December; while those without records are asked for the average monthly cost over the past 12 months. The AHS then employs statistical procedures (regression estimates) to combine the monthly amounts into an annual average, and benchmark the data to independent estimates of utility costs from the Department of Energy's RECS. The ACS does not use independent estimates or regression analysis in this manner.

AHS CAPI (examples of some electricity questions that would be asked to respondents with electricity records/bills available for reference)

**Do you use electricity in your home?**

- Yes
- No

**Are you billed separately for electricity?**

- Yes
- No

Read categories until a "Yes" is obtained.

**Is that because the electricity . . .**

- is included in the rent, condominium fee, site rent or other fee?
- is combined with another utility cost?
- is obtained free?

**What else is included in the electricity bill?**

- Enter all that apply, separate with commas.
  - gas
  - fuel oil
  - any other fuel
  - garbage and trash
  - water and sewage

**How many months does each (used with combined electric bills) bill usually cover?**

- If billed more than once a month, enter 0.

**Do you have any of these records available showing your costs for electricity? Can you please get them now?**

- Yes
- No

**From your records, what were the costs for electricity for the months of . . . January?**

- Enter 998 for \$998 or more

**(From your records, what were the costs for electricity for the months of . . .) April?**

- Enter 998 for \$998 or more

**(From your records, what were the costs for electricity for the months of . . .) August?**

- Enter 998 for \$998 or more

**(From your records, what were the costs for electricity for the months of . . .) December?**

- Enter 998 for \$998 or more

The AHS also includes some components in monthly housing cost for renter-occupied homes in addition to the gross rent provided by the ACS. The AHS also collects data on garbage and trash collection and includes them in the monthly housing costs. The AHS includes information on renters insurance and mobile home park fees for mobile homes, which the ACS does not. The AHS explicitly collects and includes in the estimate of monthly renter costs the land rent paid by renters in mobile homes; as mentioned before, the land rent may or may not be included in the ACS' gross rent estimate depending on the respondent's interpretation of the ACS rent question shown above.

Table 8 shows that 5 of the 16 monthly housing cost for renters categories did not have significant differences in their shares between the ACS and the AHS; while the remaining eleven did. Again, while the differences in the 11 categories were statistically

different, they were not analytically so, with nine having differences in the shares of less than 1.5 percentage points. Similar to the findings on income, ACS had higher shares of renters in the four highest categories leading to a five percent higher median monthly housing cost for renters of \$789 compared to the AHS' \$755.

[SEE TABLE 8]

#### *Analysis*

The inclusion of more housing costs in the total costs for renters in the AHS, including garbage and trash collection, renter insurance, mobile home park fees, and land rent for mobile homes, would suggest that the AHS costs would be higher. However, housing costs, for both renters and owners, have been consistently higher in the ACS than in the AHS. One conclusion, albeit anecdotal, might be that without the detailed probing about the costs, the bundling of utilities, and the inclusion of utility costs in rents in the Utility module of the AHS CAPI, many respondents would overestimate their housing costs. So the additional probing by the AHS and consequent lowering of the respondent's answer to utility costs appears to more than compensate for the additional cost components that AHS has in its estimate of monthly housing costs for renters.

The regression procedures and subsequent benchmarking of the AHS estimates to an independent source would add credence to its costs. The ACS makes no such effort to benchmark to outside sources.

### **Monthly Housing Costs for Renters (Gross Rent) as a Percentage of Income**

#### *Description*

Monthly housing costs for renters as a percentage of income is a composite measure of rent in relation to household income. It shows the proportion of a household's income that is spent on monthly rent plus all utility and fuel costs. Commonly referred to as "housing burden," it is an important measure of rental housing affordability. The components of the variable are monthly rent, utility and fuel costs, household income, and for the AHS measure, garbage and trash collection costs, renters insurance, and for mobile homes, mobile home park fees and land rent. All of these have been discussed earlier in this report.

[SEE TABLE 9]

The AHS data shown in Table 9 indicate a higher housing burden for renters than does the ACS. Median monthly housing cost as a percentage of income is only 29.7 percent in the ACS but one third in the AHS. The shares of renters in the each of the four categories above 25 to 29 percent are higher in the AHS than in the ACS. Indeed, the AHS shows a significantly higher share of households severely-burdened (25.7 percent) – paying 50% or more – than the ACS (22.7 percent).

#### *Analysis*

The ACS' consistently higher renter housing costs may suggest a higher housing burden. But this is only part of the story. The ACS' consistently higher income appears to more

than compensate for its higher rents and other renter costs driving its housing cost burden below that of the AHS.

## Monthly Housing Costs for Owners (Selected Monthly Owner Costs)

### Description

Like data on rent levels, data on monthly housing costs are critical for any analysis of housing markets and the ability of owner households to afford homeownership. Monthly housing costs for owners generally include the following if applicable: mortgage payments, installment loans for mobile homes, real estate taxes, personal property taxes for mobile homes, property (fire, hazard, and flood) insurance, home owner association fees, condominium fees, land rent, mobile home park fees, mobile home license and registration fees, and utility costs. In the analysis that follows, there will be a discussion of how differences in what is included in the ACS’ “selected monthly owner costs (SMOC)” and what is included in AHS’ “monthly housing costs for owner-occupied housing” may be contributing to differences in the medians and shares of households within various costs categories between the two surveys.

The following questions from the ACS mail questionnaire, in addition to the utility questions already shown in the section **Monthly Housing Costs for Renters** capture all the components of ACS SMOC.

ACS mail questionnaire

**16** Is this house, apartment, or mobile home part of a condominium?

Yes → What is the monthly condominium fee? For renters, answer only if you pay the condominium fee in addition to your rent; otherwise, mark the "None" box.

Monthly amount – Dollars

|    |  |     |
|----|--|-----|
| \$ |  | .00 |
|----|--|-----|

**OR**

None

No

**20** What are the annual real estate taxes on THIS property?

Annual amount – Dollars

|    |  |  |  |  |  |  |  |  |  |  |     |
|----|--|--|--|--|--|--|--|--|--|--|-----|
| \$ |  |  |  |  |  |  |  |  |  |  | .00 |
|----|--|--|--|--|--|--|--|--|--|--|-----|

OR

None

**21** What is the annual payment for fire, hazard, and flood insurance on THIS property?

Annual amount – Dollars

|    |  |  |  |  |  |  |  |  |  |  |     |
|----|--|--|--|--|--|--|--|--|--|--|-----|
| \$ |  |  |  |  |  |  |  |  |  |  | .00 |
|----|--|--|--|--|--|--|--|--|--|--|-----|

OR

None

**22** a. Do you or any member of this household have a mortgage, deed of trust, contract to purchase, or similar debt on THIS property?

- Yes, mortgage, deed of trust, or similar debt
- Yes, contract to purchase
- No → SKIP to question 23a

b. How much is the regular monthly mortgage payment on THIS property? Include payment only on FIRST mortgage or contract to purchase.

Monthly amount – Dollars

|    |  |  |  |  |  |  |  |  |  |  |     |
|----|--|--|--|--|--|--|--|--|--|--|-----|
| \$ |  |  |  |  |  |  |  |  |  |  | .00 |
|----|--|--|--|--|--|--|--|--|--|--|-----|

OR

No regular payment required → SKIP to question 23a

c. Does the regular monthly mortgage payment include payments for real estate taxes on THIS property?

- Yes, taxes included in mortgage payment
- No, taxes paid separately or taxes not required

d. Does the regular monthly mortgage payment include payments for fire, hazard, or flood insurance on THIS property?

- Yes, insurance included in mortgage payment
- No, insurance paid separately or no insurance

**23** a. Do you or any member of this household have a second mortgage or a home equity loan on THIS property?

- Yes, home equity loan
- Yes, second mortgage
- Yes, second mortgage and home equity loan
- No → SKIP to **D**

b. How much is the regular monthly payment on all second or junior mortgages and all home equity loans on THIS property?

Monthly amount – Dollars

|    |  |  |  |  |  |  |  |  |  |  |     |
|----|--|--|--|--|--|--|--|--|--|--|-----|
| \$ |  |  |  |  |  |  |  |  |  |  | .00 |
|----|--|--|--|--|--|--|--|--|--|--|-----|

OR

No regular payment required

**D** Answer question 24 ONLY IF this is a MOBILE HOME. Otherwise, SKIP to **E**.

**24** What are the total annual costs for personal property taxes, site rent, registration fees, and license fees on THIS mobile home and its site? Exclude real estate taxes.

Annual costs – Dollars

|    |  |  |  |  |  |  |  |  |  |  |     |
|----|--|--|--|--|--|--|--|--|--|--|-----|
| \$ |  |  |  |  |  |  |  |  |  |  | .00 |
|----|--|--|--|--|--|--|--|--|--|--|-----|

The AHS captures similar, although more detailed, data for monthly owner costs. In addition to the utility questions already shown in the section **Monthly Housing Costs for Renters**, the following are some of the questions asked on the AHS CAPI instrument that capture the other components of owner housing cost. The complexity of the instrument precludes showing in this report all screens that collect data for owner-occupied housing costs. The mortgage payments for up to seven mortgages and up to seven lump sum home equity loans (which in practice is essentially all mortgage and home equity loan payments) are included in AHS' monthly housing costs for owners.

#### AHS CAPI

What is the current monthly payment?

- ◆ Include as much PITI as they pay
- ◆ Enter 9998 for \$9,998 or more

\$ \_\_\_\_\_

Besides principal and interest, does the payment include - -

Property taxes?  
Homeowner's insurance?

What were the real estate taxes last year for this *{cooperative, condominium, house and its land, apartment and its land, living quarters and its land}*?

- ◆ Include all connecting owned land.
- ◆ If multi-unit building, estimate share for sample unit.
- ◆ Include school taxes, special assessments, and any other real estate taxes.
- ◆ Exclude taxes past due from other years.
- ◆ Subtract any rebates.
- ◆ Enter 0 for none.
- ◆ Enter 99998 for \$99,998 or more.

\$ \_\_\_\_\_

On the manufactured/mobile home and its lot last year, what was the total cost of property and real estate taxes, registration fees, and license fees?

\$ \_\_\_\_\_

*{In the past 12 months, Since you have lived here}* what was the total cost of homeowners insurance?

- ◆ Enter 9998 for \$9,998 or more

\$ \_\_\_\_\_

What is the average cost (of homeowner, condo, coop fee) each *{week, month, year, etc.}*?

- ◆ Enter 9998 for \$9,998 or more

\$ \_\_\_\_\_



What is the average cost (for the manufactured/mobile home park fee) each {*week, month, year, etc.*}?

- ◆ Enter 9998 for \$9,998 or more

\$ \_\_\_\_\_

What is the average cost each {*week, month, year, etc.*} for those (utility hookups, mobile home association fees, and so forth) fees?

- ◆ Enter 998 for \$998 or more?

\$ \_\_\_\_\_

What does it (land rent) cost each {*week, month, year, etc.*}?

- ◆ Enter 9998 for \$9,998 or more

\$ \_\_\_\_\_

As it does in its measure of gross rent for renters, the AHS includes garbage and trash collection in its estimates of housing costs for owners. ACS is unable to do this since this question is not asked. The AHS may include more fees paid by mobile home owners since the ACS' one question asks mobile home owners about "personal property taxes, site rent, registration fees, and license fees" while the AHS asks for "personal property, taxes, license, and registration fees", "land rent", "mobile home park fees", and "other mobile home costs, including utility hookups and mobile home association fees" in four separate CAPI questions.

Table 10 shows that when mortgaged and nonmortgaged homes are considered together, two of the 12 monthly housing cost for owners categories did not have significant differences in their shares between ACS and AHS; while the remaining 10 categories did. While the differences in the 10 categories were statistically different, they were relatively small – with the largest difference in shares between the ACS and AHS being 3.7 percentage points. Similar to the findings for income and gross rent, ACS had higher share of owners in the three highest categories leading to a 14.7 percent higher median monthly housing cost for owners of \$1,084 compared to \$927. When limited to homeowners with mortgages, the findings are the same. The ACS' greater shares of homeowners in the highest monthly housing cost for owners categories led to a 9.1 percent higher median of \$1,464 monthly housing cost for owners with mortgages compared to \$1,332 from the AHS. Among homeowners without mortgages, four of the ten categories had no significant differences in the shares between the ACS and AHS. The ACS' higher concentration of households in the highest cost categories led to a median monthly housing cost for homeowners without mortgages of \$407 compared to \$385 for the AHS – a difference of 5.7 percent.

[SEE TABLE 10]

## *Analysis*

The inclusion of a few additional components in the total housing costs for owners in the AHS, including garbage and trash collection; mobile home park fees; other fees for mobile homes, including utility hookups and mobile home association fees; home owner association fees; and land rent for all owner-occupied housing except for condos, coops, and apartments in multiunit buildings, suggest that the AHS costs should have been higher. However, these additional cost components represent a small share of the total monthly housing costs which help explain why, despite these additional costs captured in AHS, the ACS costs are higher. For example, the AHS CAPI employs very detailed questions in its Mortgage Module that distinguishes between payments on lump sum home equity mortgages and payments on loans outstanding against home equity lines of credit. Any confusion by the respondent can be easily remedied during the interview. ACS respondents, by contrast, do not receive this level of help. In the AHS, homes on which home owners only have home equity lines of credit (no mortgages or lump sum home equity loans) then are considered mortgaged. However, the payments on loans outstanding against the home equity lines are not included in AHS' monthly housing costs for owner-occupied housing. For ACS, if there is a regular payment on a home equity line of credit, the respondent is expected to include it and it becomes part of ACS' SMOC.

Also, as seen in the section **Monthly Housing Costs for Renters**, AHS' series of questions on utility payments go to great lengths to disentangle utility bills. In contrast, the ACS provides the respondent with the option of saying that the gas bill is included with the electricity bill. For the other utilities, however, no such accommodation is made opening up the possibility of double counting if, for example, the ACS respondent's payment for fuel oil is included with electricity.

### **Monthly Housing Costs for Owners (Selected Monthly Owner Costs) as a Percentage of Income**

#### *Description*

Monthly housing costs for home owners as a percentage of income is a composite measure of owner housing costs in relation to household income. This measure is commonly called "housing burden." It shows the proportion of a household's income that is spent on the monthly owner housing costs discussed in the previous section. This is the conventional public policy measure of the affordability of home ownership.

[SEE TABLE 11]

Despite the higher median housing costs of renters in the ACS, its higher income actually keeps the housing cost burden of renters in the ACS below the AHS. Table 11 shows that ACS' higher incomes do not offset the higher housing costs for homeowners, except for those without mortgages, in a similar way. When all owners are considered together, the median housing cost burden is 21.5 percent in the ACS compared to 20 percent for the AHS. When only homeowners with mortgages are considered, results are similar to those for all owners with ACS owners with mortgages spending 25.1 percent and AHS owners with mortgages spending 24 percent. In contrast, the median housing cost burden of those homeowners without mortgages in the ACS is one-half percentage point lower than the median housing cost burden of homeowners without mortgages in the AHS.

Despite the AHS' lower median housing cost burdens for all homeowners and homeowners with mortgages, the AHS shows a significantly higher share of all homeowners who are severely burdened; that is, spending 50 percent or more of their incomes for housing, at 12.4 percent than the ACS at 11.8 percent. Notably, unlike the ACS' higher median housing cost burden for homeowners being driven by homeowners with mortgages, the AHS' higher share of homeowners who are severely-burdened is attributable to homeowners without a mortgage. There is no difference in the shares of home owners with a mortgage who are severely-burdened between the two surveys; however, the AHS shows a higher share of severely-burdened home owners among those without a mortgage, 8.7 percent versus 6.2 percent for the ACS.

### *Analysis*

Like the renter housing costs, the ACS' consistently higher housing costs for owners initially suggest a higher housing burden. Similar to the renter situation, the owner housing cost burden is lightened by ACS' higher median income.

## **Value**

### *Description*

Both the ACS and AHS provide a value for owner occupied housing units as measured by the householder's estimate of how much his/her house and lot, apartment, or mobile home would sell for if it were on the market at the time of the interview.

Neither the ACS nor the AHS asks renters to estimate the value of their homes. Also, although both surveys collect value for vacant units, as measured by the asking price for those that are for sale and as measured by the sale price for those that have been sold but are not yet occupied, the comparison below is limited to owner-occupied units.

On the 2007 ACS mail questionnaire, the value question was the first of nine questions asked only of owner occupied households. The mail questionnaire had 19 response option categories consisting of ranges of values. If a respondent selected the highest category - \$250,000 or more – he/she was asked to write-in the specific amount above that value. The ACS CATI and CAPI instruments asked the question in basically the same way as the mail questionnaire, but treated every response as a numeric write-in and not as a ranged response category.



In the AHS CAPI instrument, owners of manufactured/mobile homes are asked the value of the manufactured/mobile homes in one question. If the mobile home owner indicates that he or she owns the land, the mobile home owner is asked the value of the land in another question. Despite the fact that the land value is asked for mobile home owners who own their land, it is not included in AHS' published estimate for value. The ACS, on the other hand, instructs owners of mobile homes to exclude the land value only if the land is not owned; if it is owned ACS' estimate includes land value. The ACS' and AHS' published estimates then are comparable for owners of mobile homes who do not own the land but not comparable for owners of mobile homes who do own the land on which their mobile home sits. Unlike the AHS, the ACS cannot determine if the mobile home owner owns the land or not and thus ACS data users cannot limit their analysis to mobile homeowners who own their land as can be done with the AHS.

Condo owners are never asked about the value of land in the AHS CAPI instrument. Even if the condo is a single-family detached one, the owner is neither asked to estimate and include the land value in a combined value nor asked in a separate question about the land value. It is unclear whether owners of single family detached condos in the ACS are including the value of the land, because the question reads "house and lot" on both the mail and CAPI instrument and respondents are not explicitly instructed to exclude the value of the land unless they own it. To the extent that condo owners in the ACS are not including land values, AHS and ACS condo values are comparable.

#### AHS CAPI

*{What is the value of; What do you think}{the house; the house and its lot; the apartment only; the manufactured/mobile home; the residential portion of the property} would sell for on today's market?*

For mobile homes only, the following instruction would appear:  
*{Do not include the value of the land}*

(For mobile homes on which land is owned only) How much do you think the land would sell for on today's market?

\$ \_\_\_\_\_

Table 12 shows that the ACS has a statistically significant higher median value for all owner-occupied homes at \$194,300 than the AHS at \$191,495. This difference was driven by the statistically significant \$5,102 difference between the ACS' \$149,200 and the AHS' \$144,098 median value of owner-occupied homes without a mortgage. There was no difference in the median value of homes for owners with mortgages.

The differences in the shares of owner-occupied homes in each value category are small, usually less than 1 percentage point. The largest differences between the ACS and AHS occurred in the "less than \$100,000" category for all owner occupied homes, owner-occupied homes with a mortgage, and owner-occupied homes without a mortgage, with ACS' share smaller for all three.

[SEE TABLE 12]

## *Analysis*

The only difference in the components of value between the ACS and AHS is that if the manufactured/mobile homeowner owns the land, the owner is asked, in the instruction guide to the ACS mail questionnaire and on the help screen for the ACS CATI, to include the value of the land. In contrast, the AHS collects both the value of the manufactured/mobile home and, in a separate question, the value of the land, if the respondent has indicated that the household owns it. The AHS then excludes the land value for manufactured/mobile home owners who own the land on which the manufactured/mobile home sits from its published value. This inclusion by ACS of land value for mobile homeowners who own their land is not sufficient to explain ACS' higher median value, however.

The comparison of value data from the 2007 ACS and 2007 AHS shows statistically significant differences in all the categories shown for all owner-occupied homes. This is not necessarily surprising, since over half of ACS respondents answer the survey by mail, and the ACS mail questionnaire, unlike the ACS CATI and CAPI instruments and the AHS CAPI, offered respondents precoded ranges for values under \$250,000.<sup>6</sup> This difference alone could be expected to result in the slightly different distributions shown in Table 12.

Another explanation for the differences could be that the AHS allocation rates for value were nearly twice as high as the ACS allocation rate. For all owner-occupied homes, the allocation rates were 16.5 percent from the AHS and 8.2 percent from the ACS; for owner-occupied homes with mortgages, the allocation rates were 12.4 percent from the AHS and 6.2 percent from the ACS; and for owner-occupied homes without mortgages, the allocation rates were 22.6 percent from the AHS and 12.5 percent from the ACS. Allocated values can often be different from respondent provided answers, despite the attention paid to ensuring that the frequency distributions of allocated and respondent-provided values overall are similar.

## **Year Householder Moved In**

### *Description*

Housing researchers often try to use the Year Householder Moved In item to measure turnover/length of stay among various subpopulations, such as the elderly or various racial or ethnic groups. This is generally difficult in that neither survey can know when the householder moved out. Attempts have been made to take advantage of the longitudinal aspect of AHS to measure turnover, but this has proven difficult. The Year Householder Moved In item is also used to identify recent mover households who have the most value for housing affordability research. The question was asked at all occupied units in both the 2007 ACS and the 2007 AHS. Year Householder Moved In was the third housing (non-household roster) related question asked on the ACS mail questionnaire following the Units in Structure and Year Structure Built questions. In addition to obtaining the year the householder moved in, the month of the move is also obtained as part of the same question. The householder is identified in the Year Householder Moved In question as "...PERSON 1..." The CATI and CAPI instruments

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<sup>6</sup> Beginning with the 2008 ACS, value is an open-ended, write-in question on the mail questionnaire.

asked the question slightly differently, and the year and month were two separate questions.

#### ACS mail questionnaire

**3** When did PERSON 1 (listed in the List of Residents on page 2) move into this house, apartment, or mobile home?

Month Year

|  |  |
|--|--|
|  |  |
|--|--|

Similar to the ACS CATI and CAPI, the AHS CAPI asks about the year moved in and month moved in with separate questions. Unlike the ACS questionnaire, CATI, and CAPI instruments, the AHS CAPI asks this question for each person on the household roster. When the Field Representative begins the household roster, the FR tells the AHS respondent to begin with the names of the people who own the home or whose name is on the lease. Thus the person at the top of the household roster is the householder.

#### AHS CAPI

When did {you, **name of nonrespondent household member**} move to this {house, apartment, manufactured/mobile home, living quarters}?

- Enter 4 digit year. If mother lived here when person was born enter 0.

What month was that?

- Enter month.

While there are some statistical differences in the distributions of households by year householder moved into the unit, particularly for renter-occupied housing, the differences are small. (See Table 13.) Moreover, the two surveys show no differences in the median years that the household moved in. The median year that the householder moved in when all homes are considered together is 2001 according to both surveys. The earlier median year that householders in the ACS and AHS who owned their own homes moved in (1997 and 1998, respectively) than their renting counterparts (2005) supports research that shows that home owners tend to move less often due to their higher transactions costs of moving.

[SEE TABLE 13]

## Analysis

One can conclude that the results about the year the householder moved in from these two surveys are quite similar.

## Age of Householder

### Description

Age is one of the basic demographic characteristics collected on the roster page in both the ACS and the AHS along with race, gender, relationship to the householder, Hispanic origin, marital status, and within household relationships (AHS). It is also used as a screener for other questions. For example, the questions on income, journey to work/commuting, labor force status (ACS), are asked only of people 15 years old and older (16 years and older for AHS). So it is an important variable in determining whether a person is in the universe for questions about income, commuting, and labor force status. The 2007 ACS collected age data for all people in the household by asking a two-part question on the roster page that obtained both the age in years of each person and their date of birth. The ACS CATI and CAPI versions of the question were similar to the mail questionnaire version.

ACS mail questionnaire

**2** What is this person's age and what is this person's date of birth?  
*Print numbers in boxes.*

Age (in years)

|  |
|--|
|  |
|--|

Month Day Year of birth

|  |  |  |
|--|--|--|
|  |  |  |
|--|--|--|

The 2007 AHS also collected date of birth or age data for all people in the household and asked the question as one of a series of questions during the rostering of the household information in the Demographic module. The AHS was designed to ask initially about the household member's date of birth. The CAPI instrument then calculated the age and the interviewer said "So this makes {you; name of household member} {calculated age} old?" If the respondent said that this was not the age, then it asked the respondent to provide the correct age. The age question was also asked if the respondent refused to give the respondent's or the household member's actual birth date or did not know the actual birth date. Many respondents who refuse to give their actual birth date, for fear of identity theft, are more forthcoming about their age than date of birth. The ACS CATI and CAPI are nearly identical to the AHS CAPI for collecting age.



What is {*your, name of household member's*} date of birth?

(The month, day, and year are entered on separate CAPI screens.)

I have recorded that {*you, name of household member*} are {*calculated age*}?

- Yes
- No

What is your best estimate of {*your, name of household member's*} age?

Table 14 shows that more than half of the categories show significant differences in the age of householder between the ACS and the AHS. For householders in owner-occupied homes, with the exception of the 35 to 44 year old category, differences in the shares was significant for the youngest household groups – 15 to 24 years old, 25 to 34 years old, 45 to 54, and 55 to 64. There were no differences between the two surveys in the shares in the oldest categories- 65 to 74 and 75 and older. The pattern was almost the same for renter-occupied homes. The differences in the shares between ACS and AHS were statistically significant across all age of householder categories up to the 65 to 74 age category, after which the differences were not statistically significant.

[SEE TABLE 14]

### *Analysis*

With differences in shares in all age categories in both owner-occupied and renter-occupied homes below three-quarters of a percentage point, it is hard to see that there are any practical consequences. Indeed, since many housing and mortgage programs are designed specifically for older households, the fact there are no differences between the two surveys in the oldest age categories is encouraging.

## CONCLUSIONS

This study compared 194 estimates and 18 derived measures (all of which are medians except for the rental vacancy rate and the homeowner vacancy rate) from the 2007 ACS with similar estimates and derived measures from the 2007 AHS. Of the 194 estimates, 143 estimates or 74 percent tested as statistically different. Of the 18 derived measures, 11 measures or 65 percent tested as different. This outcome may seem to imply that the two surveys are far apart in their view of the nation's housing and households, but that conclusion would overstate the case. The large sample sizes for both surveys contribute to the large number of estimates (not including derived measures) found to be "statistically different," but of these differences 79 were less than one percentage point, 33 had differences between 1.0 to 1.5 percentage points, and 11 had differences of 1.6 to 2.0 percentage points. Altogether, 86 percent of the estimates had differences less than 2.0 percentage points. The ACS and AHS were furthest apart on the breakdown of

owner-occupied housing into those with and without mortgages, housing costs, and home value. And even then the differences in estimates between the surveys were less than 5.0 percentage points.

The two surveys differed on 11 of 18 - or 64.7 percent - of the derived measures. These differences may have more relevance for housing policy than differences in the estimates. For example, the ACS vacancy rate has always been lower than that for the AHS. Table 2a illustrates this result for 2007. The ACS vacancy rate is just 1.9 percentage points lower than AHS. However, given the implications of the vacancy rate for home building and given the current uncertainty about the inventory of unsold homes, underestimation of a vacancy rate can have serious consequences. The consequences of these differences are magnified at the local level.

The higher housing costs seen in ACS have persisted too. In 2005, the ACS had a gross median rent of \$728 versus \$694 for the AHS. In 2007, the gap barely closed - \$789 for ACS versus \$755 for AHS. Likewise, in 2005, the ACS had median selected monthly housing costs for mortgaged owner-occupied homes of \$1,295 compared to \$1,162 from the AHS. The selected monthly housing costs for nonmortgaged owner-occupied homes were \$369 from the ACS and \$334 from the AHS. In 2007, the gap persisted with median housing costs for owners with mortgages of \$1,464 from the ACS and \$1,332 from AHS and median housing costs for owners without mortgages of \$407 from the ACS and \$385 from the AHS.

Differences between estimates and derived measures from the 2007 ACS and the 2007 AHS were expected. However, the relatively small level of these differences should provide confidence in the quality of the estimates for users of both surveys. This study pointed out the fundamental differences in data collection methods, residence rules, survey instrument (CAPI versus mailout/mailback), question wording, data processing methods of editing and allocating, and offered theories, explanations, etc. about how they may have accounted for some portion of the observed differences in the estimates compared. Because of the interdependencies between the different methods, the relative effect of these methodological differences cannot be determined.

The limited scope of this study invites further work. Areas of further exploration might include comparing the estimates from the AHS with the different ACS modes of collection to determine what role this plays in the comparisons; and, for characteristics common to both occupied and vacant units, comparing estimates by occupancy and vacancy status.

The overall conclusion reached by this study is that, for the characteristics examined here, the ACS and AHS both provide acceptable estimates; where differences in estimates do exist, it is important for the data user to understand that the two surveys employ different methodologies, procedures, and processes that may affect survey estimates. In this way, users can better determine which survey's estimates of a particular characteristic are most appropriate for their needs.

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**Table 1. Occupancy and Vacancy Status: 2007 ACS and 2007 AHS**

(All figures related to the universe for a distribution, which appears at the top of the distribution, are in thousands. Distributions within the universe are shares/percents of universe. Margins of error and differences for the shares are in percentage points)

| <b>Occupancy and Vacancy Status</b> | <b>2007 ACS Estimate</b> | <b>Margin of Error ACS Estimate*</b> | <b>2007 AHS Estimate</b> | <b>Margin of Error of AHS Estimate</b> | <b>Difference ACS-AHS</b> | <b>Margin of Error of Difference</b> | <b>Difference Statistically Significant?</b> |
|-------------------------------------|--------------------------|--------------------------------------|--------------------------|--|---------------------------|--------------------------------------|--|
| Total housing units                 | 127,895                  | 4                                    | 128,203                  | 54                                     | -308                      | NA                                   | NA   |
| Occupied                            | 87.9                     | 0.11                                 | 86.3                     | 0.29                                   | 1.6                       | 0.31                                 | Yes  |
| Vacant <sup>1</sup>                 | 12.1                     | 0.11                                 | 13.7                     | 0.29                                   | -1.6                      | 0.32                                 | Yes  |

\*The standard errors from which the margin of errors are produced are based on unrounded data.

Percentages are rounded to one decimal place for estimates; a value of 0.0 indicates an estimate of less than 0.05 percent. Percentages are rounded to two decimal places for margins of error; a value of 0.00 indicates a margin of error of less than 0.005 percent.

NA - Not applicable.

<sup>1</sup>The percentage of vacant units is also referred as the gross vacancy rate. Homes that are rented but not yet occupied and homes that are sold but not yet occupied are not counted as vacant.

Note: For more information on the ACS, see <http://www.census.gov/acs/www/>.

For more information on the AHS, see <http://www.census.gov/hhes/www/housing/ahs/ahs.html>.

**Table 2a. Tenure and Type of Vacant: 2007 ACS and 2007 AHS**

(All figures related to the universe for a distribution, which appears at the top of the distribution, are in thousands. Distributions within the universe are shares/percents of universe. Margins of error and differences for the shares are in percentage points)

| Tenure and Type of Vacant      | 2007 ACS Estimate | Margin of Error ACS Estimate* | 2007 AHS Estimate | Margin of Error AHS Estimate | Difference ACS-AHS | Margin of Error of Difference | Difference Statistically Significant? |
|--------------------------------|-------------------|-------------------------------|-------------------|------------------------------|--------------------|-------------------------------|---------------------------------------|
| Total occupied housing units.  | 112,378           | 144                           | 110,692           | 380                          | 1,686              | NA                            | NA                                    |
| Owner.....                     | 67.2              | 0.10                          | 68.3              | 0.43                         | -1.1               | 0.44                          | Yes                                   |
| Renter.....                    | 32.8              | 0.10                          | 31.7              | 0.43                         | 1.1                | 0.44                          | Yes                                   |
| Total vacant housing units.... | 15,517            | 146                           | 17,512            | 377                          | -1,995             | NA                            | NA                                    |
| For rent.....                  | 20.6              | 0.25                          | 22.0              | 0.96                         | -1.4               | 0.99                          | Yes                                   |
| For sale only.....             | 12.6              | 0.18                          | 11.5              | 0.74                         | 1.1                | 0.76                          | Yes                                   |
| Other vacant.....              | 66.8              | 0.17                          | 66.5              | 1.09                         | 0.3                | 1.11                          | No                                    |
| Rental vacancy rate.....       | 7.9               | 0.10                          | 9.8               | 0.46                         | -1.9               | 0.47                          | Yes                                   |
| Homeowner vacancy rate . . .   | 2.5               | 0.10                          | 2.6               | 0.17                         | -0.1               | 0.20                          | No                                    |

\*The standard errors from which the margin of errors are produced are based on unrounded data.

Percentages are rounded to one decimal place for estimates; a value of 0.0 indicates an estimate of less than 0.05 percent.

Percentages are rounded to two decimal places for margins of error; a value of 0.00 indicates a margin of error of less than 0.005 percent.

NA - Not applicable.

Note: For more information on the ACS, see <http://www.census.gov/acs/www/>.

For more information on the AHS, see <http://www.census.gov/hhes/www/housing/ahs/ahs.html>.

**Table 2b. Mortgage Status: 2007 ACS and 2007 AHS**

(All figures related to the universe for a distribution, which appears at the top of the distribution, are in thousands. Distributions within the universe are shares/percents of universe. Margins of error and differences for the shares are in percentage points)

| <b>Mortgage Status</b>             | <b>2007 ACS Estimate</b> | <b>Margin of Error of ACS Estimate*</b> | <b>2007 AHS Estimate</b> | <b>Margin of Error of AHS Estimate</b> | <b>Difference ACS-AHS</b> | <b>Margin of Error of Difference</b> | <b>Difference Statistically Significant?</b> |
|------------------------------------|--------------------------|---|--------------------------|--|---------------------------|--------------------------------------|--|
| Total owner-occupied housing units | 75,515                   | 227                                     | 75,647                   | 541                                    | -132                      | NA                                   | NA   |
| Owned with a mortgage              | 68.4                     | 0.06                                    | 64.6                     | 0.53                                   | 3.8                       | 0.54                                 | Yes  |
| Owned without a mortgage           | 31.6                     | 0.06                                    | 35.4                     | 0.53                                   | -3.8                      | 0.54                                 | Yes  |

\*The standard errors from which the margin of errors are produced are based on unrounded data.

Percentages are rounded to one decimal place for estimates; a value of 0.0 indicates an estimate of less than 0.05 percent.

Percentages are rounded to two decimal places for margins of error; a value of 0.00 indicates a margin of error of less than 0.005 percent.

NA - Not applicable.

Note: For more information on the ACS, see <http://www.census.gov/acs/www/>.

For more information on the AHS, see <http://www.census.gov/hhes/www/housing/ahs/ahs.html>.

**Table 3. Units in Structure: 2007 ACS and 2007 AHS**

(All figures related to the universe for a distribution, which appears at the top of the distribution, are in thousands. Distributions within the universe are shares/percents of universe. Margins of error and differences for the shares are in percentage points)

| Units in Structure               | 2007 ACS Estimate | Margin of Error of ACS Estimate* | 2007 AHS Estimate | Margin of Error of AHS Estimate | Difference ACS-AHS | Margin of Error of Difference | Difference Statistically Significant? |
|----------------------------------|-------------------|----------------------------------|-------------------|---------------------------------|--------------------|-------------------------------|---------------------------------------|
| Total housing units              | 127,895           | 4                                | 128,203           | 54                              | -308               | NA                            | NA                                    |
| 1 detached <sup>1</sup>          | 61.8              | 0.10                             | 62.7              | 0.41                            | -0.9               | 0.42                          | Yes                                   |
| 1 attached                       | 5.7               | 0.04                             | 5.6               | 0.20                            | 0.1                | 0.20                          | No                                    |
| 2 to 4                           | 8.5               | 0.05                             | 8.2               | 0.23                            | 0.3                | 0.24                          | Yes                                   |
| 5 to 9                           | 4.9               | 0.04                             | 4.8               | 0.18                            | 0.1                | 0.19                          | No                                    |
| 10 to 19                         | 4.5               | 0.03                             | 4.5               | 0.18                            | 0.0                | 0.18                          | No                                    |
| 20 to 49                         | 3.4               | 0.02                             | 3.6               | 0.16                            | -0.2               | 0.16                          | Yes                                   |
| 50 or more                       | 4.5               | 0.03                             | 3.8               | 0.16                            | 0.7                | 0.17                          | Yes                                   |
| Manufactured/mobile home/trailer | 6.7               | 0.04                             | 6.8               | 0.22                            | -0.1               | 0.22                          | No                                    |

\*The standard errors from which the margin of errors are produced are based on unrounded data for ACS.

Percentages are rounded to one decimal place for estimates; a value of 0.0 indicates an estimate of less than 0.05 percent.

Percentages are rounded to two decimal places for margins of errors; a value of 0.00 indicates a margin of error of less than 0.005 percent.

NA - Not applicable.

<sup>1</sup>Includes Boats, RVs, and Vans.

Note: For more information on the ACS, see <http://www.census.gov/acs/www/>.

For more information on the AHS, see <http://www.census.gov/hhes/www/housing/ahs/ahs.html>.



**Table 4. Year Built: 2007 ACS and 2007 AHS**

(All figures related to the universe for a distribution, which appears at the top of the distribution, are in thousands. Distributions within the universe are shares/percents of universe. Margins of error and differences for the shares are in percentage points)

| Year Built            | 2007 ACS Estimate | Margin of Error ACS Estimate* | 2007 AHS Estimate | Margin of Error AHS Estimate | Difference ACS-AHS | Margin of Error of Difference | Difference Statistically Significant? |
|-----------------------|-------------------|-------------------------------|-------------------|------------------------------|--------------------|-------------------------------|---------------------------------------|
| Total housing units   | 127,895           | 4                             | 128,203           | 54                           | -308               | NA                            | NA                                    |
| Built 2005 or later   | 3.3               | 0.02                          | 3.8               | 0.16                         | -0.5               | 0.17                          | Yes                                   |
| Built 2000 to 2004    | 8.6               | 0.04                          | 7.1               | 0.22                         | 1.5                | 0.22                          | Yes                                   |
| Built 1990 to 1999    | 13.9              | 0.05                          | 12.3              | 0.28                         | 1.6                | 0.29                          | Yes                                   |
| Built 1980 to 1989    | 14.3              | 0.04                          | 12.7              | 0.28                         | 1.6                | 0.29                          | Yes                                   |
| Built 1970 to 1979    | 16.6              | 0.05                          | 19.8              | 0.34                         | -3.2               | 0.34                          | Yes                                   |
| Built 1960 to 1969    | 11.5              | 0.05                          | 11.9              | 0.28                         | -0.4               | 0.28                          | Yes                                   |
| Built 1950 to 1959    | 11.4              | 0.04                          | 10.1              | 0.26                         | 1.3                | 0.26                          | Yes                                   |
| Built 1940 to 1949    | 5.8               | 0.03                          | 6.2               | 0.21                         | -0.4               | 0.21                          | Yes                                   |
| Built 1939 or earlier | 14.5              | 0.04                          | 16.0              | 0.31                         | -1.5               | 0.32                          | Yes                                   |
| Median Year Built     | 1974              | 1                             | 1973              | 0.25                         | 1.0                | 1.03                          | No                                    |

\*The standard errors from which the margin of errors are produced are based on unrounded data.

Percentages are rounded to one decimal place for estimates; a value of 0.0 indicates an estimate of less than 0.05 percent.

Percentages are rounded to two decimal places for margins of errors; a value of 0.00 indicates a margin of error of less than 0.005 percent.

NA - Not applicable.

Note: For more information on the ACS, see <http://www.census.gov/acs/www/>.

For more information on the AHS, see <http://www.census.gov/hhes/www/housing/ahs/ahs.html>.

**Table 5. Rooms in Unit: 2007 ACS and 2007 AHS**

(All figures related to the universe for a distribution, which appears at the top of the distribution, are in thousands. Distributions within the universe are shares/percents of universe. Margins of error and differences for the shares are in percentage points)

| Rooms               | 2007 ACS Estimate | Margin of Error ACS Estimate* | 2007 AHS Estimate | Margin of Error AHS Estimate | Difference ACS-AHS | Margin of Error of Difference | Difference Statistically Significant? |
|---------------------|-------------------|-------------------------------|-------------------|------------------------------|--------------------|-------------------------------|---------------------------------------|
| Total housing units | 127,895           | 4                             | 128,203           | 54                           | -308               | NA                            | NA                                    |
| 1 room              | 1.0               | 0.01                          | 0.5               | 0.06                         | 0.5                | 0.06                          | Yes                                   |
| 2 rooms             | 3.1               | 0.03                          | 1.1               | 0.09                         | 2.0                | 0.09                          | Yes                                   |
| 3 rooms             | 9.2               | 0.04                          | 8.6               | 0.24                         | 0.6                | 0.24                          | Yes                                   |
| 4 rooms             | 17.3              | 0.07                          | 18.2              | 0.33                         | -0.9               | 0.34                          | Yes                                   |
| 5 rooms             | 21.8              | 0.06                          | 22.8              | 0.36                         | -1.0               | 0.36                          | Yes                                   |
| 6 rooms             | 19.0              | 0.06                          | 21.2              | 0.35                         | -2.2               | 0.35                          | Yes                                   |
| 7 rooms             | 12.4              | 0.05                          | 13.8              | 0.29                         | -1.4               | 0.30                          | Yes                                   |
| 8 rooms             | 8.0               | 0.04                          | 8.1               | 0.23                         | -0.1               | 0.24                          | No                                    |
| 9 or more rooms     | 8.2               | 0.04                          | 5.8               | 0.20                         | 2.4                | 0.20                          | Yes                                   |

\*The standard errors from which the margin of errors are produced are based on unrounded data.

Percentages are rounded to one decimal place for estimates; a value of 0.0 indicates an estimate of less than 0.05 percent.

Percentages are rounded to two decimal places for margins of errors; a value of 0.00 indicates a margin of error of less than 0.005 percent.

NA - Not applicable.

Note: For more information on the ACS, see <http://www.census.gov/acs/www/>.

For more information on the AHS, see <http://www.census.gov/hhes/www/housing/ahs/ahs.html>.

**Table 6. Bedrooms: 2007 ACS and 2007 AHS**

(All figures related to the universe for a distribution, which appears at the top of the distribution, are in thousands. Distributions within the universe are shares/percents of universe. Margins of error and differences for the shares are in percentage points)

| <b>Bedrooms</b>     | <b>2007 ACS Estimate</b> | <b>Margin of Error ACS Estimate*</b> | <b>2007 AHS Estimate</b> | <b>Margin of Error AHS Estimate</b> | <b>Difference ACS-AHS</b> | <b>Margin of Error of Difference</b> | <b>Difference Statistically Significant?</b> |
|---------------------|--------------------------|--------------------------------------|--------------------------|-------------------------------------|---------------------------|--------------------------------------|--|
| Total housing units | 127,895                  | 4                                    | 128,203                  | 54                                  | -308                      | NA                                   | NA   |
| None                | 1.3                      | 0.02                                 | 1.1                      | 0.09                                | 0.2                       | 0.09                                 | Yes  |
| 1                   | 11.5                     | 0.05                                 | 11.4                     | 0.27                                | 0.1                       | 0.28                                 | No   |
| 2                   | 27.5                     | 0.08                                 | 26.9                     | 0.38                                | 0.6                       | 0.39                                 | Yes  |
| 3                   | 40.0                     | 0.08                                 | 41.3                     | 0.42                                | -1.3                      | 0.43                                 | Yes  |
| 4 or more           | 19.6                     | 0.05                                 | 19.3                     | 0.34                                | 0.3                       | 0.34                                 | Yes  |

\*The standard errors from which the margin of errors are produced are based on unrounded data.

Percentages are rounded to one decimal place for estimates; a value of 0.0 indicates an estimate of less than 0.05 percent.

Percentages are rounded to two decimal places for margins of errors; a value of 0.00 indicates a margin of error of less than 0.005 percent.

NA - Not applicable.

Note: For more information on the ACS, see <http://www.census.gov/acs/www/>.

For more information on the AHS, see <http://www.census.gov/hhes/www/housing/ahs/ahs.html>.

**Table 7. Household Income: 2007 ACS and 2007 AHS**

(All figures related to the universe for a distribution, which appears at the top of the distribution, are in thousands. Distributions within the universe are shares/percents of universe. Margins of error and differences for the shares are in percentage points)

| Household Income             | 2007 ACS Estimate | Margin of Error ACS Estimate* | 2007 AHS Estimate | Margin of Error AHS Estimate | Difference ACS-AHS | Margin of Error of Difference | Difference Statistically Significant? |
|------------------------------|-------------------|-------------------------------|-------------------|------------------------------|--------------------|-------------------------------|---------------------------------------|
| Total occupied housing units | 112,378           | 144                           | 110,692           | 380                          | 1,686              | NA                            | NA                                    |
| Less than \$10,000           | 7.3               | 0.04                          | 9.1               | 0.27                         | -1.8               | 0.27                          | Yes                                   |
| \$10,000 to \$14,999         | 5.6               | 0.04                          | 5.5               | 0.21                         | 0.1                | 0.21                          | No                                    |
| \$15,000 to \$19,999         | 5.4               | 0.03                          | 4.8               | 0.20                         | 0.6                | 0.20                          | Yes                                   |
| \$20,000 to \$24,999         | 5.6               | 0.04                          | 5.2               | 0.20                         | 0.4                | 0.21                          | Yes                                   |
| \$25,000 to \$29,999         | 5.3               | 0.04                          | 8.6               | 0.26                         | -3.3               | 0.26                          | Yes                                   |
| \$30,000 to \$34,999         | 5.5               | 0.04                          | 5.4               | 0.21                         | 0.1                | 0.21                          | No                                    |
| \$35,000 to \$39,999         | 5.0               | 0.04                          | 4.8               | 0.20                         | 0.2                | 0.20                          | Yes                                   |
| \$40,000 to \$49,999         | 9.5               | 0.05                          | 8.8               | 0.26                         | 0.7                | 0.26                          | Yes                                   |
| \$50,000 to \$59,999         | 8.4               | 0.05                          | 7.9               | 0.25                         | 0.5                | 0.25                          | Yes                                   |
| \$60,000 to \$99,999         | 22.7              | 0.08                          | 21.6              | 0.38                         | 1.1                | 0.39                          | Yes                                   |
| \$100,000 or more            | 19.7              | 0.06                          | 18.4              | 0.36                         | 1.3                | 0.36                          | Yes                                   |
| Median income                | \$50,740          | \$75                          | \$47,632          | \$526                        | \$3,108            | \$531                         | Yes                                   |

\*The standard errors from which the margin of errors are produced are based on unrounded data.

Percentages are rounded to one decimal place for estimates; a value of 0.0 indicates an estimate of less than 0.05 percent.

Percentages are rounded to two decimal places for margins of errors; a value of 0.00 indicates a margin of error of less than 0.005 percent.

NA - Not applicable.

Note: For more information on the ACS, see <http://www.census.gov/acs/www/>.

For more information on the AHS, see <http://www.census.gov/hhes/www/housing/ahs/ahs.html>.

**Table 8. Monthly Housing Costs for Renters (Gross Rent): 2007 ACS and 2007 AHS**

(All figures related to the universe for a distribution, which appears at the top of the distribution, are in thousands. Distributions within the universe are shares/percents of universe. Margins of error and differences for the shares are in percentage points)

| Gross Rent                               | 2007 ACS Estimate | Margin of Error ACS Estimate* | 2007 AHS Estimate | Margin of Error AHS Estimate | Difference ACS-AHS | Margin of Error of Difference | Difference Statistically Significant? |
|--|-------------------|-------------------------------|-------------------|------------------------------|--------------------|-------------------------------|---------------------------------------|
| Total renter occupied housing units..... | 36,863            | 112                           | 35,045            | 489                          | 1,818              | NA                            | NA                                    |
| With cash rent.....                      | 94.1              | 0.12                          | 93.3              | 0.41                         | 0.8                | 0.43                          | Yes                                   |
| No cash rent.....                        | 5.9               | 0.06                          | 6.7               | 0.41                         | -0.8               | 0.41                          | Yes                                   |
| With cash rent.....                      | 100.0             | NA                            | 100.0             | NA                           | NA                 | NA                            | NA                                    |
| Less than \$100.....                     | 0.4               | 0.02                          | 0.9               | 0.16                         | -0.5               | 0.16                          | Yes                                   |
| \$100 to \$199.....                      | 2.3               | 0.04                          | 2.7               | 0.27                         | -0.4               | 0.28                          | Yes                                   |
| \$200 to \$249                           | 1.9               | 0.04                          | 2.5               | 0.26                         | -0.6               | 0.27                          | Yes                                   |
| \$250 to \$299.....                      | 1.7               | 0.03                          | 2.1               | 0.24                         | -0.4               | 0.24                          | Yes                                   |
| \$300 to \$349.....                      | 1.9               | 0.04                          | 2.2               | 0.25                         | -0.3               | 0.25                          | Yes                                   |
| \$350 to \$399.....                      | 2.4               | 0.04                          | 2.5               | 0.27                         | -0.1               | 0.27                          | No                                    |
| \$400 to \$449.....                      | 3.4               | 0.05                          | 3.6               | 0.32                         | -0.2               | 0.32                          | No                                    |
| \$450 to \$499                           | 4.1               | 0.06                          | 4.6               | 0.35                         | -0.5               | 0.36                          | Yes                                   |
| \$500 to \$599.....                      | 10.2              | 0.08                          | 10.5              | 0.52                         | -0.3               | 0.53                          | No                                    |
| \$600 to \$699.....                      | 11.6              | 0.09                          | 12.2              | 0.56                         | -0.6               | 0.56                          | Yes                                   |
| \$700 to \$799.....                      | 11.3              | 0.09                          | 11.4              | 0.54                         | -0.1               | 0.55                          | No                                    |
| \$800 to \$999.....                      | 18.5              | 0.11                          | 18.1              | 0.65                         | 0.4                | 0.66                          | No                                    |
| \$1000 to \$1249.....                    | 13.5              | 0.10                          | 12.5              | 0.56                         | 1.0                | 0.57                          | Yes                                   |
| \$1250 to \$1499.....                    | 7.2               | 0.07                          | 6.4               | 0.42                         | 0.8                | 0.42                          | Yes                                   |
| \$1500 to \$1999.....                    | 6.2               | 0.07                          | 5.0               | 0.37                         | 1.2                | 0.37                          | Yes                                   |
| \$2000 or more.....                      | 3.3               | 0.05                          | 2.9               | 0.29                         | 0.4                | 0.29                          | Yes                                   |
| Median gross rent                        | \$789             | \$2                           | \$755             | \$7                          | \$34               | \$8                           | Yes                                   |

\*The standard errors from which the margin of errors are produced are based on unrounded data.

Percentages are rounded to one decimal place for estimates; a value of 0.0 indicates an estimate of less than 0.05 percent.

Percentages are rounded to two decimal places for margins of errors; a value of 0.00 indicates a margin of error of less than 0.005 percent.

NA - Not applicable.

Note: For more information on the ACS, see <http://www.census.gov/acs/www/>.

For more information on the AHS, see <http://www.census.gov/hhes/www/housing/ahs/ahs.html>.

**Table 9. Monthly Housing Costs for Renters (Gross Rent) as a Percentage of Income: 2007 ACS and 2007 AHS**

(All figures related to the universe for a distribution, which appears at the top of the distribution, are in thousands. Distributions within the universe are shares/percents of universe. Margins of error and differences for the shares are in percentage points)

| Gross Rent as Percentage of Income  | 2007 ACS Estimate* | Margin of Error ACS Estimate** | 2007 AHS Estimate | Margin of Error AHS Estimate | Difference ACS-AHS | Margin of Error of Difference | Difference Statistically Significant? |
|-------------------------------------|--------------------|--------------------------------|-------------------|------------------------------|--------------------|-------------------------------|---------------------------------------|
| Total renter occupied housing units | 36,863             | 112                            | 35,044            | 489                          | 1,819              | NA                            | NA                                    |
| Less than 10%                       | 3.7                | 0.05                           | 3.3               | 0.29                         | 0.4                | 0.30                          | Yes                                   |
| 10%-14%                             | 8.4                | 0.08                           | 6.3               | 0.40                         | 2.1                | 0.41                          | Yes                                   |
| 15%-19%                             | 11.8               | 0.10                           | 9.2               | 0.47                         | 2.6                | 0.48                          | Yes                                   |
| 20%-24%                             | 12.1               | 0.10                           | 9.9               | 0.49                         | 2.2                | 0.50                          | Yes                                   |
| 25%-29%                             | 10.8               | 0.09                           | 10.6              | 0.50                         | 0.2                | 0.51                          | No                                    |
| 30%-34%                             | 8.4                | 0.07                           | 8.9               | 0.47                         | -0.5               | 0.47                          | Yes                                   |
| 35%-39%                             | 6.1                | 0.07                           | 7.0               | 0.42                         | -0.9               | 0.42                          | Yes                                   |
| 40%-49%                             | 8.4                | 0.08                           | 9.2               | 0.47                         | -0.8               | 0.48                          | Yes                                   |
| 50% or more                         | 22.7               | 0.13                           | 25.7              | 0.72                         | -3.0               | 0.73                          | Yes                                   |
| Not computed <sup>1</sup>           | 7.5                | 0.08                           | 9.8               | 0.49                         | -2.3               | 0.49                          | Yes                                   |
| Median <sup>2</sup>                 | 29.7               | 0.1                            | 33.0              | 0.46                         | -3.3               | 0.47                          | Yes                                   |

<sup>1</sup>Percent not computed for households with zero or negative income or for households with no cash rent.

<sup>2</sup>The median gross rent as a percentage of household income is for those paying "cash rent" and having household income.

\*The shares within each category may not be directly comparable to the AHS share within the same category due to the differences in published categories. For example, the ACS publishes a category "10.0 to 14.9 percent" while AHS publishes from "10 to 14 percent". For ACS then, we have used the numbers of housing units in the category of 10 to 14.9% and put them all in the category 10% to 14%. So homes in which households are spending 14.5, 14.6, 14.7, 14.8, 14.9 percent are put in the above category of 10% to 14%. But homes with households spending 14.5, 14.6, 14.7, 14.8, and 14.9% in the AHS would be in the above category of 15% to 19%.

\*\*The standard errors from which the margin of errors are produced are based on unrounded data.

Percentages are rounded to one decimal place for estimates; a value of 0.0 indicates an estimate of less than 0.05 percent. Percentages are rounded to two decimal places for margins of errors (except for margin of error for the ACS median which is rounded to one decimal place); a value of 0.00 indicates a margin of error of less than 0.005 percent.

NA - Not applicable.

Note: For more information on the ACS, see <http://www.census.gov/acs/www/>.

For more information on the AHS, see <http://www.census.gov/hhes/www/housing/ahs/ahs.html>.

**Table 10. Monthly Housing Costs for Owners: 2007 ACS versus 2007 AHS**

(All figures related to the universe for a distribution, which appears at the top of the distribution, are in thousands. Distributions within the universe are shares/percent of universe. Margins of error and differences for the shares are in percentage points)

| Monthly Housing Costs for Owner-Occupied Housing | Margin of         |                     | Margin of         |                    | Difference | Margin of |                     | Difference |
|--|-------------------|---------------------|-------------------|--------------------|------------|-----------|---------------------|------------|
|  | 2007 ACS Estimate | Error ACS Estimate* | 2007 AHS Estimate | Error AHS Estimate |            | ACS-AHS   | Error of Difference |            |
| Total owner occupied housing units               | 75,515            | 227                 | 75,647            | 541                | -132       | NA        | NA                  | NA         |
| Less than \$100                                  | 0.5               | 0.01                | 0.7               | 0.09               | -0.2       | 0.09      | Yes                 | Yes        |
| \$100 to \$199                                   | 2.8               | 0.03                | 4.3               | 0.23               | -1.5       | 0.23      | Yes                 | Yes        |
| \$200 to \$299                                   | 6.0               | 0.04                | 7.7               | 0.30               | -1.7       | 0.30      | Yes                 | Yes        |
| \$300 to \$399                                   | 6.9               | 0.03                | 8.4               | 0.31               | -1.5       | 0.31      | Yes                 | Yes        |
| \$400 to \$499                                   | 6.1               | 0.04                | 7.1               | 0.29               | -1.0       | 0.29      | Yes                 | Yes        |
| \$500 to \$599                                   | 5.3               | 0.04                | 5.8               | 0.26               | -0.5       | 0.26      | Yes                 | Yes        |
| \$600 to \$699                                   | 4.9               | 0.04                | 5.2               | 0.25               | -0.3       | 0.25      | Yes                 | Yes        |
| \$700 to \$799                                   | 4.7               | 0.04                | 4.9               | 0.24               | -0.2       | 0.24      | No                  | No         |
| \$800 to \$999                                   | 9.3               | 0.05                | 9.2               | 0.32               | 0.1        | 0.33      | No                  | No         |
| \$1000 to \$1499                                 | 20.2              | 0.07                | 18.9              | 0.44               | 1.3        | 0.44      | Yes                 | Yes        |
| \$1500 to \$1999                                 | 13.5              | 0.06                | 11.5              | 0.36               | 2.0        | 0.36      | Yes                 | Yes        |
| \$2000 or more                                   | 20.0              | 0.06                | 16.3              | 0.41               | 3.7        | 0.42      | Yes                 | Yes        |
| Median   | \$1,084           | \$3                 | \$927             | \$12               | \$157      | \$12      | Yes                 | Yes        |
| Owner occupied housing units with mortgages      | 51,615            | 153                 | 48,901            | 533                | 2,714      | NA        | NA                  | NA         |
| Less than \$200                                  | 0.0               | 0.00                | 0.6               | 0.10               | -0.6       | 0.10      | Yes                 | Yes        |
| \$200 to \$299                                   | 0.2               | 0.01                | 1.2               | 0.15               | -1.0       | 0.15      | Yes                 | Yes        |
| \$300 to \$399                                   | 0.7               | 0.00                | 2.0               | 0.19               | -1.3       | 0.19      | Yes                 | Yes        |
| \$400 to \$499                                   | 1.5               | 0.03                | 2.8               | 0.23               | -1.3       | 0.23      | Yes                 | Yes        |
| \$500 to \$599                                   | 2.6               | 0.03                | 3.6               | 0.26               | -1.0       | 0.26      | Yes                 | Yes        |
| \$600 to \$699                                   | 3.7               | 0.04                | 4.4               | 0.28               | -0.7       | 0.29      | Yes                 | Yes        |
| \$700 to \$799                                   | 4.6               | 0.04                | 5.2               | 0.31               | -0.6       | 0.31      | Yes                 | Yes        |
| \$800 to \$999                                   | 11.1              | 0.07                | 11.6              | 0.44               | -0.5       | 0.45      | Yes                 | Yes        |
| \$1000 to \$1249                                 | 14.4              | 0.08                | 14.5              | 0.49               | -0.1       | 0.49      | No                  | No         |
| \$1250 to \$1499                                 | 13.1              | 0.07                | 12.7              | 0.46               | 0.4        | 0.47      | No                  | No         |
| \$1500 to \$1999                                 | 19.2              | 0.09                | 17.2              | 0.52               | 2.0        | 0.53      | Yes                 | Yes        |
| \$2000 to \$2500                                 | 11.4              | 0.06                | 9.7               | 0.41               | 1.7        | 0.42      | Yes                 | Yes        |
| \$2500 or more                                   | 17.5              | 0.08                | 14.6              | 0.49               | 2.9        | 0.50      | Yes                 | Yes        |
| Median   | \$1,464           | \$2                 | \$1,332           | \$14               | \$132      | \$14      | Yes                 | Yes        |
| Owner occupied housing units without mortgages   | 23,900            | 92                  | 26,746            | 446                | -2,846     | NA        | NA                  | NA         |
| Less than \$100                                  | 1.5               | 0.03                | 1.6               | 0.24               | -0.1       | 0.24      | No                  | No         |
| \$100 to \$199                                   | 8.7               | 0.08                | 11.4              | 0.60               | -2.7       | 0.60      | Yes                 | Yes        |
| \$200 to \$249                                   | 8.4               | 0.08                | 9.2               | 0.54               | -0.8       | 0.55      | Yes                 | Yes        |
| \$250 to \$299                                   | 10.2              | 0.09                | 10.5              | 0.57               | -0.3       | 0.58      | No                  | No         |
| \$300 to \$349                                   | 10.3              | 0.08                | 10.6              | 0.58               | -0.3       | 0.58      | No                  | No         |
| \$350 to \$399                                   | 9.8               | 0.08                | 9.7               | 0.55               | 0.1        | 0.56      | No                  | No         |
| \$400 to \$499                                   | 16.1              | 0.12                | 15.0              | 0.67               | 1.1        | 0.68      | Yes                 | Yes        |
| \$500 to \$599                                   | 11.2              | 0.09                | 9.9               | 0.56               | 1.3        | 0.57      | Yes                 | Yes        |
| \$600 to \$699                                   | 7.4               | 0.07                | 6.7               | 0.47               | 0.7        | 0.47      | Yes                 | Yes        |
| \$700 or more                                    | 16.4              | 0.11                | 15.4              | 0.68               | 1.0        | 0.69      | Yes                 | Yes        |
| Median   | \$407             | \$2                 | \$385             | \$5                | \$22       | \$5       | Yes                 | Yes        |

\*The standard errors from which the margin of errors are produced are based on unrounded data.

Percentages are rounded to one decimal place for estimates; a value of 0.0 indicates an estimate of less than 0.05 percent. Percentages are rounded to two decimal places for margins of errors; a value of 0.00 indicates a margin of error of less than 0.005 percent.

NA - Not applicable.

Note: For more information on the ACS, see <http://www.census.gov/acs/www/>.

For more information on the AHS, see <http://www.census.gov/hhes/www/housing/ahs/ahs.html>.

**Table 11. Monthly Housing Costs for Owners (Selected Monthly Owner Costs) as a Percentage of Income: 2007 ACS and 2007 AHS**

(All figures related to the universe for a distribution, which appears at the top of the distribution, are in thousands. Distributions within the universe are shares/percents of universe. Margins of error and differences for the shares are in percentage points)

| Monthly Housing Costs for Owners as Percentage of Income | 2007 ACS Estimate* | Margin of Error ACS Estimate** | 2007 AHS Estimate | Margin of Error AHS Estimate | Difference ACS-AHS | Margin of Error of Difference | Difference Statistically Significant? |
|--|--------------------|--------------------------------|-------------------|------------------------------|--------------------|-------------------------------|---------------------------------------|
| Total owner-occupied housing units                       | 75,515             | 227                            | 75,648            | 541                          | -133               | NA                            | NA                                    |
| Less than 10%  | 15.9               | 0.06                           | 18.6              | 0.43                         | -2.7               | 0.44                          | Yes                                   |
| 10%-14%  | 14.5               | 0.06                           | 15.2              | 0.40                         | -0.7               | 0.40                          | Yes                                   |
| 15%-19%  | 15.3               | 0.06                           | 14.7              | 0.39                         | 0.6                | 0.40                          | Yes                                   |
| 20%-24%  | 13.2               | 0.06                           | 12.3              | 0.37                         | 0.9                | 0.37                          | Yes                                   |
| 25%-29%  | 10.1               | 0.05                           | 8.9               | 0.32                         | 1.2                | 0.32                          | Yes                                   |
| 30%-34%  | 7.2                | 0.05                           | 6.4               | 0.27                         | 0.8                | 0.28                          | Yes                                   |
| 35%-39%  | 5.1                | 0.03                           | 4.8               | 0.24                         | 0.3                | 0.24                          | Yes                                   |
| 40%-49%  | 6.3                | 0.04                           | 5.7               | 0.26                         | 0.6                | 0.26                          | Yes                                   |
| 50% or more  | 11.8               | 0.05                           | 12.4              | 0.37                         | -0.6               | 0.37                          | Yes                                   |
| Not computed <sup>1</sup>                                | 0.5                | 0.01                           | 1.0               | 0.11                         | -0.5               | 0.11                          | Yes                                   |
| Median <sup>2</sup>                                      | 21.5               | 0.1                            | 20                | 0.23                         | 1.5                | 0.2                           | Yes                                   |
| Owner-occupied housing units with mortgage               | 51,615             | 153                            | 48,903            | 533                          | 2,712              | NA                            | NA                                    |
| Less than 10%  | 5.0                | 0.04                           | 8.7               | 0.39                         | -3.8               | 0.39                          | Yes                                   |
| 10%-14%  | 12.1               | 0.07                           | 13.2              | 0.47                         | -1.1               | 0.47                          | Yes                                   |
| 15%-19%  | 16.8               | 0.07                           | 15.7              | 0.50                         | 1.1                | 0.51                          | Yes                                   |
| 20%-24%  | 15.8               | 0.07                           | 14.9              | 0.49                         | 1.0                | 0.50                          | Yes                                   |
| 25%-29%  | 12.4               | 0.06                           | 11.0              | 0.43                         | 1.5                | 0.44                          | Yes                                   |
| 30%-34%  | 9.0                | 0.06                           | 8.1               | 0.38                         | 0.8                | 0.38                          | Yes                                   |
| 35%-39%  | 6.3                | 0.05                           | 5.9               | 0.33                         | 0.4                | 0.33                          | Yes                                   |
| 40%-49%  | 7.8                | 0.05                           | 7.3               | 0.36                         | 0.4                | 0.37                          | Yes                                   |
| 50% or more  | 14.4               | 0.07                           | 14.4              | 0.49                         | 0.0                | 0.49                          | No                                    |
| Not computed <sup>1</sup>                                | 0.4                | 0.01                           | 0.7               | 0.12                         | -0.4               | 0.12                          | Yes                                   |
| Median <sup>2</sup>                                      | 25.1               | 0.1                            | 24                | 0.23                         | 1.1                | 0.3                           | Yes                                   |
| Owner-occupied housing units without mortgage            | 23,900             | 92                             | 26,745            | 446                          | -2,845             | NA                            | NA                                    |
| Less than 10%  | 39.5               | 0.17                           | 36.7              | 0.90                         | 2.8                | 0.92                          | Yes                                   |
| 10%-14%  | 19.7               | 0.10                           | 19.0              | 0.73                         | 0.7                | 0.74                          | No                                    |
| 15%-19%  | 12.1               | 0.08                           | 12.9              | 0.63                         | -0.7               | 0.63                          | Yes                                   |
| 20%-24%  | 7.6                | 0.08                           | 7.6               | 0.50                         | 0.0                | 0.50                          | No                                    |
| 25%-29%  | 5.0                | 0.07                           | 5.2               | 0.41                         | -0.1               | 0.42                          | No                                    |
| 30%-34%  | 3.4                | 0.06                           | 3.2               | 0.33                         | 0.2                | 0.33                          | No                                    |
| 35%-39%  | 2.4                | 0.04                           | 2.6               | 0.30                         | -0.2               | 0.30                          | No                                    |
| 40%-49%  | 3.1                | 0.05                           | 2.7               | 0.30                         | 0.4                | 0.31                          | Yes                                   |
| 50% or more  | 6.2                | 0.07                           | 8.7               | 0.53                         | -2.5               | 0.53                          | Yes                                   |
| Not computed <sup>1</sup>                                | 0.9                | 0.03                           | 1.5               | 0.23                         | -0.6               | 0.23                          | Yes                                   |
| Median <sup>2</sup>                                      | 12.5               | 0.2                            | 13                | 0.25                         | -0.5               | 0.3                           | Yes                                   |

<sup>1</sup>Percent not computed for households with zero or negative income.

<sup>2</sup>The selected monthly owner costs as a percentage of household income is for those having household income.

\*The shares within each category may not be directly comparable to the AHS share within the same category due to the differences in published categories. For example, the ACS publishes a category "10.0 to 14.9 percent" while AHS publishes from "10 to 14 percent".

For ACS then, we have used the numbers of housing units in the category of 10 to 14.9% and put them all in the category 10% to 14%. So homes in which households are spending 14.5, 14.6, 14.7, 14.8, 14.9 percent are put in the above category of 10% to 14%. But homes with households spending 14.5, 14.6, 14.7, 14.8, and 14.9% in the AHS would be in the above category of 15% to 19%.

\*\*The standard errors from which the margin of errors are produced are based on unrounded data.

Percentages are rounded to one decimal place for estimates; a value of 0.0 indicates an estimate of less than 0.05 percent.

Percentages are rounded to two decimal places for margins of errors (except for margin of error for the ACS median which is rounded to one decimal place); a value of 0.00 indicates a margin of error of less than 0.005 percent.

NA - Not applicable.

Note: For more information on the ACS, see <http://www.census.gov/acs/www/>.

For more information on the AHS, see <http://www.census.gov/hhes/www/housing/ahs/ahs.html>.



**Table 12. Home Value: 2007 ACS and 2007 AHS**

(All figures related to the universe for a distribution, which appears at the top of the distribution, are in thousands. Distributions within the universe are shares/percents of universe. Margins of error and differences for the shares are in percentage points)

| Value by Mortgage Status         | 2007 ACS Estimate | Margin of Error ACS Estimate* | 2007 AHS Estimate | Margin of Error AHS Estimate | Difference ACS-AHS | Margin of Error of Difference | Difference Statistically Significant? |
|----------------------------------|-------------------|-------------------------------|-------------------|------------------------------|--------------------|-------------------------------|---------------------------------------|
| All owner-occupied housing units | 75,515            | 227                           | 75,648            | 541                          | -133.0             | NA                            | NA                                    |
| Less than \$100,000              | 22.1              | 0.10                          | 24.8              | 0.48                         | -2.7               | 0.49                          | Yes                                   |
| \$100,000 to \$149,999           | 15.6              | 0.07                          | 14.6              | 0.39                         | 1.0                | 0.40                          | Yes                                   |
| \$150,000 to \$199,999           | 13.6              | 0.06                          | 12.7              | 0.37                         | 0.8                | 0.38                          | Yes                                   |
| \$200,000 to \$299,999           | 16.9              | 0.05                          | 17.4              | 0.42                         | -0.5               | 0.43                          | Yes                                   |
| \$300,000 to \$499,999           | 17.6              | 0.04                          | 16.9              | 0.42                         | 0.7                | 0.42                          | Yes                                   |
| \$500,000 or more                | 14.1              | 0.03                          | 13.5              | 0.38                         | 0.6                | 0.38                          | Yes                                   |
| Median Value                     | \$194,300         | \$429                         | \$191,495         | \$2,185                      | \$2,805            | \$2,227                       | Yes                                   |
| With a mortgage                  | 51,615            | 153                           | 48,902            | 533                          | 2,713              | NA                            | NA                                    |
| Less than \$100,000              | 16.4              | 0.10                          | 18.2              | 0.53                         | -1.8               | 0.54                          | Yes                                   |
| \$100,000 to \$149,999           | 15.5              | 0.08                          | 14.5              | 0.49                         | 1.0                | 0.50                          | Yes                                   |
| \$150,000 to \$199,999           | 14.2              | 0.07                          | 13.4              | 0.47                         | 0.7                | 0.48                          | Yes                                   |
| \$200,000 to \$299,999           | 18.5              | 0.07                          | 19.1              | 0.54                         | -0.6               | 0.55                          | Yes                                   |
| \$300,000 to \$499,999           | 19.8              | 0.06                          | 19.3              | 0.55                         | 0.5                | 0.55                          | No                                    |
| \$500,000 or more                | 15.6              | 0.05                          | 15.4              | 0.50                         | 0.2                | 0.50                          | No                                    |
| Median Value                     | \$216,400         | \$467                         | \$219,843         | \$3,623                      | -\$3,443           | \$3,653                       | No                                    |
| Without a mortgage               | 23,900            | 92                            | 26,746            | 446                          | -2,846             | NA                            | NA                                    |
| Less than \$100,000              | 34.5              | 0.17                          | 36.9              | 0.90                         | -2.4               | 0.92                          | Yes                                   |
| \$100,000 to \$149,999           | 15.8              | 0.10                          | 14.7              | 0.66                         | 1.1                | 0.67                          | Yes                                   |
| \$150,000 to \$199,999           | 12.4              | 0.09                          | 11.5              | 0.60                         | 0.9                | 0.60                          | Yes                                   |
| \$200,000 to \$299,999           | 13.5              | 0.08                          | 14.1              | 0.65                         | -0.6               | 0.66                          | No                                    |
| \$300,000 to \$499,999           | 12.9              | 0.08                          | 12.6              | 0.62                         | 0.3                | 0.63                          | No                                    |
| \$500,000 or more                | 10.9              | 0.06                          | 10.2              | 0.57                         | 0.7                | 0.57                          | Yes                                   |
| Median Value                     | \$149,200         | \$569                         | \$144,098         | \$3,184                      | \$5,102            | \$3,234                       | Yes                                   |

\*The standard errors from which the margin of errors are produced are based on unrounded data.

Percentages are rounded to one decimal place for estimates; a value of 0.0 indicates an estimate of less than 0.05 percent.

Percentages are rounded to two decimal places for margins of errors; a value of 0.00 indicates a margin of error of less than 0.005 percent.

NA - Not applicable.

Note: For more information on the ACS, see <http://www.census.gov/acs/www/>.

For more information on the AHS, see <http://www.census.gov/hhes/www/housing/ahs/ahs.html>.

**Table 13. Year Householder Moved into Home: 2007 ACS and 2007 AHS**

(All figures related to the universe for a distribution, which appears at the top of the distribution, are in thousands. Distributions within the universe are shares/percents of universe. Margins of error and differences for the shares are in percentage points)

| Year Householder Moved Into Unit    | 2007 ACS Estimate | Margin of Error ACS Estimate* | 2007 AHS Estimate | Margin of Error AHS Estimate | Difference ACS-AHS | Margin of Error of Difference | Difference Statistically Significant? |
|-------------------------------------|-------------------|-------------------------------|-------------------|------------------------------|--------------------|-------------------------------|---------------------------------------|
| Total occupied housing units        | 112,378           | 144                           | 110,692           | 380                          | 1,686              | NA                            | NA                                    |
| Moved in 2005 or later              | 30.1              | 0.06                          | 30.3              | 0.42                         | -0.2               | 0.43                          | No                                    |
| Moved in 2000 to 2004               | 25.7              | 0.07                          | 25.9              | 0.40                         | -0.2               | 0.41                          | No                                    |
| Moved in 1990 to 1999               | 22.2              | 0.07                          | 22.4              | 0.38                         | -0.2               | 0.39                          | No                                    |
| Moved in 1980 to 1989               | 9.8               | 0.04                          | 9.2               | 0.27                         | 0.6                | 0.27                          | Yes                                   |
| Moved in 1970 to 1979               | 6.5               | 0.03                          | 6.7               | 0.23                         | -0.2               | 0.23                          | No                                    |
| Moved in 1969 or earlier            | 5.7               | 0.03                          | 5.6               | 0.21                         | 0.1                | 0.21                          | No                                    |
| Median Year Householder Moved In    | 2001              | 1                             | 2001              | 0.09                         | 0                  | 1                             | No                                    |
| Total owner occupied housing units  | 75,515            | 227                           | 75,647            | 541                          | -132               | NA                            | NA                                    |
| Moved in 2005 or later              | 16.8              | 0.07                          | 17.4              | 0.42                         | -0.6               | 0.43                          | Yes                                   |
| Moved in 2000 to 2004               | 25.9              | 0.07                          | 26.3              | 0.49                         | -0.4               | 0.50                          | No                                    |
| Moved in 1990 to 1999               | 27.3              | 0.06                          | 27.2              | 0.50                         | 0.1                | 0.50                          | No                                    |
| Moved in 1980 to 1989               | 13.1              | 0.04                          | 12.2              | 0.36                         | 0.9                | 0.37                          | Yes                                   |
| Moved in 1970 to 1979               | 9.0               | 0.04                          | 9.2               | 0.32                         | -0.2               | 0.32                          | No                                    |
| Moved in 1969 or earlier            | 7.9               | 0.04                          | 7.7               | 0.30                         | 0.2                | 0.30                          | No                                    |
| Median Year Householder Moved In    | 1997              | 1                             | 1998              | 0.17                         | -1                 | 1                             | No                                    |
| Total renter occupied housing units | 36,863            | 112                           | 35,044            | 489                          | 1,819              | NA                            | NA                                    |
| Moved in 2005 or later              | 57.3              | 0.22                          | 58.2              | 0.81                         | -0.9               | 0.84                          | Yes                                   |
| Moved in 2000 to 2004               | 25.2              | 0.10                          | 25.0              | 0.71                         | 0.2                | 0.72                          | No                                    |
| Moved in 1990 to 1999               | 11.6              | 0.07                          | 11.8              | 0.53                         | -0.2               | 0.53                          | No                                    |
| Moved in 1980 to 1989               | 3.2               | 0.04                          | 2.8               | 0.27                         | 0.4                | 0.27                          | Yes                                   |
| Moved in 1970 to 1979               | 1.5               | 0.03                          | 1.3               | 0.19                         | 0.2                | 0.19                          | Yes                                   |
| Moved in 1969 or earlier            | 1.1               | 0.02                          | 0.9               | 0.16                         | 0.2                | 0.16                          | Yes                                   |
| Median Year Householder Moved In    | 2005              | 1                             | 2005              | 0.04                         | 0                  | 1                             | No                                    |

\*The standard errors from which the margin of errors are produced are based on unrounded data.

Percentages are rounded to one decimal place for estimates; a value of 0.0 indicates an estimate of less than 0.05 percent.

Percentages are rounded to two decimal places for margins of errors; a value of 0.00 indicates a margin of error of less than 0.005 percent.

NA - Not applicable.

Note: For more information on the ACS, see <http://www.census.gov/acs/www/>.

For more information on the AHS, see <http://www.census.gov/hhes/www/housing/ahs/ahs.html>.

**Table 14. Age of Householder: 2007 ACS and 2007 AHS**

(All figures related to the universe for a distribution, which appears at the top of the distribution, are in thousands. Distributions within the universe are shares/percents of universe. Margins of error and differences for the shares are in percentage points)

| Householder Age                     | 2007 ACS Estimate | Margin of Error ACS Estimate* | 2007 AHS Estimate | Margin of Error AHS Estimate | Difference ACS-AHS | Margin of Error of Difference | Difference Statistically Significant? |
|-------------------------------------|-------------------|-------------------------------|-------------------|------------------------------|--------------------|-------------------------------|---------------------------------------|
| Total owner occupied housing units  | 75,515            | 227                           | 75,647            | 541                          | -132               | NA                            | NA                                    |
| Householder 15 to 24 years          | 1.2               | 0.03                          | 1.9               | 0.15                         | -0.7               | 0.16                          | Yes                                   |
| Householder 25 to 34 years          | 11.1              | 0.08                          | 11.8              | 0.36                         | -0.7               | 0.37                          | Yes                                   |
| Householder 35 to 44 years          | 19.8              | 0.08                          | 19.5              | 0.44                         | 0.3                | 0.45                          | No                                    |
| Householder 45 to 54 years          | 24.0              | 0.08                          | 23.2              | 0.47                         | 0.8                | 0.48                          | Yes                                   |
| Householder 55 to 64 years          | 19.9              | 0.06                          | 19.4              | 0.44                         | 0.5                | 0.44                          | Yes                                   |
| Householder 65 to 74 years          | 12.6              | 0.04                          | 12.7              | 0.37                         | -0.1               | 0.37                          | No                                    |
| Householder 75 year and over        | 11.4              | 0.04                          | 11.4              | 0.35                         | 0.0                | 0.36                          | No                                    |
| Total renter occupied housing units | 36,863            | 112                           | 35,044            | 489                          | 1,819              | NA                            | NA                                    |
| Householder 15 to 24 years          | 11.8              | 0.08                          | 13.7              | 0.56                         | -1.9               | 0.57                          | Yes                                   |
| Householder 25 to 34 years          | 26.2              | 0.14                          | 27.1              | 0.73                         | -0.9               | 0.74                          | Yes                                   |
| Householder 35 to 44 years          | 21.2              | 0.14                          | 19.9              | 0.65                         | 1.3                | 0.67                          | Yes                                   |
| Householder 45 to 54 years          | 17.0              | 0.12                          | 16.2              | 0.60                         | 0.8                | 0.61                          | Yes                                   |
| Householder 55 to 64 years          | 10.6              | 0.08                          | 10.0              | 0.49                         | 0.6                | 0.50                          | Yes                                   |
| Householder 65 to 74 years          | 5.9               | 0.06                          | 5.9               | 0.39                         | 0.0                | 0.39                          | No                                    |
| Householder 75 year and over        | 7.4               | 0.06                          | 7.2               | 0.42                         | 0.2                | 0.43                          | No                                    |

\*The standard errors from which the margin of errors are produced are based on unrounded data.

Percentages are rounded to one decimal place for estimates; a value of 0.0 indicates an estimate of less than 0.05 percent.

Percentages are rounded to two decimal places for margins of errors; a value of 0.00 indicates a margin of error of less than 0.005 percent.

NA - Not applicable.

Note: For more information on the ACS, see <http://www.census.gov/acs/www/>.

For more information on the AHS, see <http://www.census.gov/hhes/www/housing/ahs/ahs.html>.