2005 American Community Survey

A Comparison of Data on Selected Characteristics From the 2005 New York City Housing and Vacancy Survey

(4/8/08)

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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 will collect 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 and 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 from the ACS began in 2006 for geographic areas with populations of 65,000 or more; release of 3-year period estimates will begin in 2008 for areas and subpopulations of at least 20,000; and release of 5-year period estimates will start in 2010 for all areas down to block groups. All estimates, including 3-year and 5-year period estimates, will be updated every year.

The New York City Housing and Vacancy Survey (NYCHVS) is taken approximately every three years by the Census Bureau for the City of New York.[1] The survey is undertaken to comply with New York state and New York City rent regulation laws that mandate "a survey which the City shall cause to be made of the supply of housing accommodations…the condition of such accommodations, and the need for continuing the regulation and control of residential rents and eviction." New York City looks to the NYCHVS to provide accurate and reliable estimates of rental and homeowner vacancy rates, to measure improvements in housing and neighborhood conditions, and to provide data on low-income, doubled-up, and crowded households whose residents are at risk of becoming homeless. The State and City use the results from the survey to better develop programs and policies that aim to improve housing conditions.

The need to have accurate timely information about the housing and households in the City is critical to government officials, policy makers, and business leaders. The ACS and the NYCHVS play major roles in providing this information.

Coincidently, the first year of full implementation of the ACS (2005) was the latest survey year for which results are available for the NYCHVS. This means that estimates based on two large sample surveys for selected characteristics are available from New

[1] The 1975 NYCHVS was conducted four years after the 1971 special tabulation of 1970 census data; the 1991 NYCHVS was taken four years after the 1987 survey; and the 1993 survey was taken two years after the 1991 NYCHVS. All other surveys were conducted at 3-year intervals.

York City and each of its five boroughs for the same time period, providing an opportunity to compare and evaluate the quality of these estimates.

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 will provide it at various levels of geography depending on population size. The NYCHVS is a single location survey primarily concerned with the occupancy and vacancy status of housing units in New York City. It collects more detailed information on financial and structural characteristics and the condition of housing units than the ACS, as well as similar demographic and socioeconomic data. Most importantly, it uses information collected in the survey and administrative records from the City to determine the rent regulation status of the rental units in the survey. It does this on a regular basis and provides the information at the City, borough, and sub-borough level.

Despite these differences in emphasis, along with many other differences in sample design, collection techniques, and processing methods described later, the two surveys attempt to measure several of the same concepts and characteristics. Although the ACS is a national survey, this report focuses on the 2005 ACS sample estimates for New York City. It looks at similar characteristics and compares the ACS estimates for the City with those from the NYCHVS. It describes the basic differences in methods and process between the ACS and the NYCHVS and the rationale for these differences, and, where appropriate, relates these distinctions to the differences in the distributions produced by the two surveys.

THE 2005 ACS SAMPLE DESIGN

The 2005 ACS is a continuous survey of housing unit addresses throughout the United States and Puerto Rico. The sample frame for the ACS 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.

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 2005 was selected during the summer of 2004, 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 2005. 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. 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 38,783 completed interviews conducted in New York City in the 2005 ACS. For more technical information on the ACS sample design visit the ACS website at http://www.census.gov/acs/www and click on *ACS Design and Methodology Paper,* or go directly to http://www.census.gov/acs/www/Downloads/tp67.pdf.

THE 2005 NYCHVS SAMPLE DESIGN

The 2005 NYCHVS sample consisted of housing unit addresses selected from three different sampling frames.

- Frame 1 – Housing units included in Census 2000 selected from the Census 2000 address file.

- Frame 2 – Housing units built since Census 2000 selected from New York City Certificates of Occupancy (C of O) issued between January 2000 and October 2004. Housing unit addresses that were both in the Census and on the C of O list were unduplicated and dropped from the latter.

- Frame 3 – Housing units in structures owned by New York City as a result of real estate tax delinquency or failure to pay other charges or fees (known as in rem units). These units were oversampled to insure a large enough sample for analysis of this subuniverse. Since all units on the in rem list were also in the census or on the C of O list, the weighting of these units was adjusted to reflect the additional chance of selection.

Addresses in frames 1 and 2 were selected in clusters of 4 consecutive units to improve the efficiency of the interviewing process and to reduce costs. For frame 3, a sample of buildings was selected first and then a systematic sample of units within the sample buildings was selected.

As with the 2005 ACS, the 2005 NYCHVS interviewed only at housing units, including those in residential hotels and motels. However, the NYCHVS excluded housing units in special places such as those located on the grounds of institutions (both civilian and military).

The initial sample selected for the NYCHVS was 18,516, of which 956 were not interviewed because they no longer existed or were uninhabitable. Another 726 were noninterviews because the residents of the sample unit refused to be interviewed, were not at home after repeated visits, or were unavailable for some other reason resulting in 16,834 completed interviews. For more technical information on the 2005 NYCHVS

sample design, go to
http://www.census.gov/hhes/www/housing/nychvs/2005/s&a2005_2.pdf.

DATA COLLECTION IN THE 2005 ACS

The ACS is designed to employ three modes of data collection 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 (CATI) – All non-responding mail addresses from month 1 with an available telephone number are sent to CATI.

- Month 3: Computer Assisted Personal Interview (CAPI) – 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 2005 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 last 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 interviewers under close supervision at one of three Census Bureau call centers and the New York Regional Office. CATI and CAPI interviewers were instructed to conduct interviews only with knowledgeable household respondents, and proxy interviews were not accepted. Approximately 56 percent of the interviews for New York City in the 2005 ACS were obtained by mail, 14 percent were by CATI, and 31 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 2005 NYCHVS

The 2005 NYCHVS was strictly a personal interview survey using a traditional paper questionnaire. Initial interviewing began in February 2005, and all interviewing for the 2005 survey was completed by the end of June. All interviewers for the NYCHVS were new hires selected to work specifically on the survey. At its peak, approximately 180

interviewers worked in 10 crews. Interviewers were instructed to accept interviews only from knowledgeable household respondents. However, as the survey neared its end, interviewers were allowed to accept proxy interviews from knowledgeable respondents who were not household members.

Data collection for the 2005 NYCHVS was managed out of the Census Bureau's New York Regional Office. A temporary office was opened in lower Manhattan and staffed by a survey manager, an assistant manager, various clerical staff, and a housing subject matter "expert" from headquarters for the duration of the interviewing period. Records on the actual completion date of each interview are no longer available. However, records from the office edit operation that occurred soon after interviews were completed showed the following workload completion pattern:

- March -17.6 percent[2]
- April - 22.6 percent
- May - 26.6 percent
- June - 25.5 percent
- July - 7.7 percent

OTHER IMPORTANT DIFFERENCES BETWEEN THE ACS AND NYCHVS

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

Residence rules - The ACS uses different residence rules than the NYCHVS. 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 NYCHVS 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. 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 areas that have a sizeable seasonal population. Since New York City is not a seasonal area, the effect on distributions is probably minimal.

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

The 2005 ACS employed a paper questionnaire for mailout/mailback respondents 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, using a matrix layout (mail questionnaire only), 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

[2] The March editing completion percentage includes cases interviewed and edited in February.

(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 (age, race, sex, etc.) for everyone in the household.
- Collect all housing information (tenure, value, rent, rooms, etc.).
- Collect detailed population information (labor force, industry, occupation, income, etc.) for everyone in the household, one person at a time.

The computerized instruments followed the same general pattern as the paper questionnaire.

The 2005 NYCHVS used only a paper instrument designed and worded to assist interviewers doing personal interviews. It had two principal sections – one for occupied units and a much smaller section for vacant units. The interviewer made an initial determination of the occupancy status of the sample unit and then went to the appropriate section. There were 121 questions for occupied units, 22 for vacant units, and 9 observation questions that applied to both occupied and vacant units. The estimated time to complete an interview at an occupied unit was 45 minutes. Although the NYCHVS questionnaire used a matrix layout to collect basic demographic information, the flow of the interview was different from the ACS and was as follows:

- Collect information through interviewer observation on several housing condition and accessibility variables.
- Determine occupancy status of the sample unit and go to the appropriate occupied unit/vacant unit section of the questionnaire.
- If occupied, determine household membership and make a list of household members.
- Collect basic demographic information (age, race, sex, etc.) for everyone in the household, one person at a time.
- Determine if anyone in the household was previously in a homeless situation.
- Collect limited information for the householder only (year moved in, place of birth, etc.).
- Collect all housing information (tenure, value, rent, rooms, etc.).
- Collect detailed population information (labor force, industry, occupation, income, etc.) for everyone in the household 15 years old or older, one person at a time.
- Complete the occupied section with a series of questions on health issues and immigration status.

Question wording - Another difference between the 2005 ACS and the NYCHVS was in question wording. In general, the ACS used the same questions and the same question

wording employed 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.[3]

The 2005 NYCHVS question wording was designed to work in a personal, face-to-face interview situation with the interviewer reading the questions to the respondent. In addition, some questions in the NYCHVS were worded in a way that reflects the uniqueness that is New York City. For example, the ACS determines the number of rooms in a sample unit by asking, "How many rooms are in this **house, apartment, or mobile home**?" The NYCHVS asks, "How many rooms are in this **apartment (house)**?" reflecting the fact that approximately 87 percent of the units in the City are in multi-family buildings and that there are no mobile homes in the City.

Finally, one topic covered in both surveys and examined in this report – year structure built – was asked of respondents in the ACS but was obtained from administrative records for the NYCHVS. Evaluations have shown that respondents, particularly renters, have difficulty in accurately answering this question. Although administrative records have their own sources of error, they are believed to give a more accurate estimate of this characteristic in a city with a large number of rental units and a high proportion of older buildings.

Reference periods – The 2005 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" all began the reference period as of the interview date. ACS interviews were conducted almost every day of the year and most of the yearly estimates produced by the 2005 ACS are considered to be averages for the 12-month time frame.

All income in the 2005 ACS was adjusted to reflect calendar year 2005 dollars. That is, the 12 different reference periods were adjusted to reflect a fixed reference period, in this case January 2005 through December 2005, using the Consumer Price Index (CPI-U-RS).[4] This adjustment took the sum of the 2005 monthly CPI-U-RS adjustment factors, divided it by the sum of the CPI-U-RS monthly adjustment factors for the income reference period (the last 12 months), and multiplied the result by the income for the reference period.

For example, consider a household interviewed in June of 2005 with a household income of $40,000. The sum of the CPI-U-RS monthly adjustment factors for 2005 was 2,343.5. The sum of the CPI-U-RS monthly adjustment factors for the reference period for a June 2005 interview was 2,295.5. Dividing 2,343.5 by 2,295.5 results in an adjustment factor of 1.0209. Multiplying the reported household income of $40,000 by this adjustment factor results in a 2005 ACS inflation-adjusted household income of $40,836. No

[3] The wording for the ACS CATI and CAPI instruments was modified to be appropriate for those modes of interviewing.
[4] This resulted in a total income time span covering 23 months.

financial characteristics related to housing were adjusted in this manner or in any other way.

Like the ACS, for most questions in the 2005 NYCHVS, the day of interview is the reference period. However, the NYCHVS interview period is only about one third the length of the yearlong ACS interview period. Given the completion patterns shown earlier, the "average" interview date for the 2005 NYCHVS was the first week of May. Questions with time references such as "last week" or "last five years" all began the reference period as of the date of interview.

There are several questions in the 2005 NYCHVS that ask for a specific reference period unrelated to the interview date, usually calendar year 2004. These are mostly financial questions such as the amount of real estate taxes paid, the cost of fire and liability insurance, and the amount of income received. No dollar amounts were inflation adjusted as a regular part of the NYCHVS.

This report compares the household income from the 2005 ACS and the 2005 NYCHVS in two ways. It first looks at the 2005 inflation-adjusted ACS income and compares it with the reported and tabulated 2004 income from the NYCHVS; then it adjusts the NYCHVS household income to 2005 dollars and compares this estimate with the 2005 inflation-adjusted ACS income.

Collection periods - The ACS data collection methods mean that estimates from the 2005 survey describe conditions during the entire 12-month survey year. Estimates from the 2005 NYCHVS reflect a 4 to 5 month timeframe, primarily March, April, May, and June of 2005. Comparisons of estimates, particularly estimates for financial characteristics, between the ACS the NYCHVS may be affected by this difference.

ADDITIONAL FACTORS TO CONSIDER

The section above discussed some of the broad differences between the 2005 ACS and the 2005 NYCHVS. 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, theoretically ensures that the survey produces a higher proportion of occupied units and a lower proportion of vacant units than in other surveys, like the NYCHVS, where more traditional methods of data collection are used. The effect of this difference in a single area such as New York City is not known, but research has shown that at the national level, 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.[5]

[5] See the report by Peter Fronczek and Howard Savage, "Vacanies and Vacancy Rates in the ACS," presented at the 1998 American Community Survey Conference.

The NYCHVS has its own unique procedure that may affect occupancy and vacancy estimates. As part of the field quality control operation, all vacant units are contacted again for an interview (all units classified as being out of the housing inventory because they were demolished, condemned, open to the elements, boarded up to prevent entrance, or merged with another unit are also rechecked), while only ten percent of occupied units are reinterviewed. This is done to verify that an interviewer actually contacted a respondent for the sample unit and that the occupancy/vacancy status of the unit was correctly determined for the time of the interview. If an error in occupancy/vacancy status is detected, the correct status is given to the sample unit. Since all vacant units, but only a small proportion of occupied units in the NYCHVS are checked, this could have the effect of slightly reducing the vacancy rate relative to what it would be if occupied and vacant units were reinterviewed at the same rate.

A second difference related to vacancies is the way the rental vacancy rate is calculated. Since the NYCHVS still asks interviewers to determine if a sample unit is in a sound, deteriorating, or dilapidated building, it uses this determination in calculating the vacancy rate. Vacant for rent, dilapidated units are not considered "available" and are not included in the numerator in the rental vacancy rate calculations. The effect of this on the rate is minimal. In the 2005 NYCHVS, it reduced the rental vacancy rate by 0.01 percentage points. Otherwise, rental vacancy rates for this report are calculated similarly.

Unit nonresponse – 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.

Both the 2005 ACS and the 2005 NYCHVS had relatively low levels of unit nonresponse and high response levels. The unit response rate for the state of New York in the 2005 ACS was 95.2 percent (no separate data are available for New York City). For the 2005 NYCHVS, the comparable rate was 95.9 percent (this includes a number of proxy interviews).[6]

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/accuracy2005.pdf for the ACS and http://www.census.gov/hhes/www/housing/nychvs/2005/s&a2005_2.pdf for the NYCHVS.

Item nonresponse – Item nonresponse occurs when a respondent fails to provide complete and usable information for a data item. This may happen when an otherwise

[6] The ACS is a weighted nonresponse rate while the NYCHVS is an unweighted nonresponse rate.

willing respondent declines to provide what he/she considers to be sensitive information, such as income; when a self-respondent in the ACS inadvertently omits an item that should be answered; or when a NYCHVS interviewer unintentionally follows an incorrect "skip" instruction.

Most item nonresponse in the 2005 ACS and the 2005 NYCHVS 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 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 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 rooms was 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 NYCHVS has also generally adopted the various assignment and allocation procedures used in the decennial census, and then has adapted them to take advantage of the greater detail available from the survey. For example, in editing missing information for the units-in-structure question, the NYCHVS can take advantage of administrative data on structure class provided by the City. For some characteristics, such as income, the NYCHVS uses the same basic approach as the ACS but uses a simpler allocation procedure.

Item nonresponse is measured in the ACS and the NYCHVS through the calculation of allocation rates. Table A below shows the allocation rates for the questionnaire items used in this comparison. 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 be respondents.

[INSERT TABLE A HERE]

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 follow-up operation for missing information from mail returns. The telephone follow-up program recontacts mail return households 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 telephone follow-up and a household member is contacted to get the required information. Trained staff in one of the three Census Bureau Call Centers do the follow-up.

The NYCHVS also has a questionnaire edit operation and follow-up for missing information. It is probably both less formal and more comprehensive than that used in the ACS. The housing expert assigned to the temporary NYCHVS office and a small clerical staff review every questionnaire returned by an interviewer. Employing a flexible set of guidelines, they check questionnaires to: (1) determine if any interviewer is falsifying information; (2) identify interviewers needing further training on survey concepts; and (3) identify questionnaires missing required information. Questionnaires in the latter category are either returned to the original interviewer for completion or sent to the housing expert who contacts the household by telephone to complete the questionnaire.

Weighting - Both the 2005 ACS and the 2005 NYCHVS employed a three-stage weighting process to produce survey estimates. 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 people by selected characteristics to estimates produced as part of the Census Bureau's Intercensal Population Estimates program.

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 sample housing unit a base weight as a function of its initial probability of selection. The ACS added two additional steps not found in the NYCHVS. One to adjust for the sampling of housing units prior to CAPI, and a second to adjust the weighting to account for seasonal variations in monthly response patterns. A second example involved stage three. Although each survey controlled survey estimates to independent control estimates, the detail of the characteristics used to control estimates and the method of applying the controls differed in each survey.

METHODOLOGY FOR MAKING COMPARISONS

This section describes the methods used to compare the 2005 ACS and the 2005 NYCHVS 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 the large sample sizes for New York City, the variances are relatively small for many estimates, sometimes resulting in statistically significant differences between estimates from the two surveys that are not analytically important.

The 2005 ACS estimates for the comparison analysis tables came from several sources. Most of the data came from the ACS Detailed Tables, while other sources were the Data Profiles, Subject Tables, and the internal ACS microdata file. The 2005 NYCHVS data came from the Series I, II, and VII Data Tables and the internal microdata file. Wherever possible, the comparison tables in this report present the data as they are commonly found in the ACS data products, with the NYCHVS data mapped to this structure.

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. The remaining rows represent the distributions of the various categories. An example of the boxhead columns is shown below:

Character-istic (1)	2005 ACS Estimate (percent) (2)	Margin of Error ACS Estimate (percent-age points (3)	2005 NYCHVS Estimate (percent) (4)	Margin of Error NYCHVS Estimate (percent-age points) (5)	Diff. ACS – NYCHVS (percent-age points) (6)	Margin of Error of Diff. (percent-age points) (7)	Diff. Statistic-ally Signifi-cant (8)

Column (2) of the table is the 2005 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 2005 NYCHVS. Column (6) is the result of the subtraction of the NYCHVS 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 NYCHVS 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.[7] The rounding to tenths was done to avoid over-

[7] The same is true for all values of 0.0.

emphasizing very small differences in the distributions. Finally, column (8) states whether the difference between the two estimates is statistically significant.

ESTIMATES COMPARED

The following estimates derived from questions asked in both the 2005 ACS and the 2005 NYCHVS 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
- Units in structure
- Year structure built
- Rooms in unit
- Bedrooms in unit
- Household income
- Gross rent
- Gross rent as a percentage of household income
- Value of owner occupied units
- Year householder moved into unit
- Age of householder

The need to know about the quality and quantity of housing in the City, as well as the characteristics of the people who occupy that housing is important for the effective design and implementation of City and State programs to improve housing conditions and to allocate funds. Information on rent, income, property values, and mortgages are necessary to determine the affordability and availability of both rental and owner housing in the City. The number of units in a building, the age of the units, the level of vacancies, and when households moved into their units, along with other data, help determine the rent regulation status for many rental units. The number of rooms and bedrooms in a unit determine the level of crowding and perhaps the potential for future homelessness.

Each survey collects much additional information, some unique to that survey. For example, the ACS collects information on size of property, telephone service, availability of automobiles, second mortgages, meals included in rent, veteran status, and journey to work not covered in the NYCHVS. Similarly, the NYCHVS collects information on the reasons a household moved from its previous residence; cooperative and condominium status; purchase price of owned units; current interest rate on mortgages; elevator availability; accessibility to the building and sample unit; length of lease; type of rental subsidies received; and unit, building, and neighborhood conditions not covered in the ACS.

RESULTS

This section discusses the comparisons made of the distributions from the 2005 ACS and the 2005 NYCHVS and documents the outcome of these comparisons. Differences between the estimates from the 2005 ACS and 2005 NYCHVS 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 at least one resident of the unit is away for two months or less; otherwise the unit is classified as vacant.

The NYCHVS 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.

City-wide comparisons

Table 1 shows the distribution of housing units by whether they were occupied or vacant from both the 2005 ACS and the 2005 NYCHVS, the differences between the two surveys, and the results of the statistical tests on those differences. The 2005 ACS estimated a statistically lower percentage of occupied units than the 2005 NYCHVS and a higher percentage of vacant units. Although the estimates differ, they are less than 1 percentage point apart - 92.4 percent compared to 93.2 percent for occupied units and 7.6 percent compared to 6.8 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 on Type of Vacant).

[INSERT TABLE 1 HERE]

Analysis

Although the differences in occupancy and vacancy status between the ACS and the NYCHVS 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. Many factors could affect the estimates of occupied and vacant units, such as the difference in residence rules, the three-month data collection design in the ACS, and the 100-percent reinterview and correction of the classification of all vacant units in the NYCHVS. Theoretically, the residence rule difference and the ACS data collection methodology should result in a higher proportion of occupied units and a lower proportion of vacant units in the ACS, but the ACS/NYCHVS comparison shows the opposite result. Part of the explanation may be that New York City, with few seasonal units, is not affected by the ACS residence rule, and that the NYCHVS 100-percent reinterview of all vacant units and correction of occupancy and vacancy status if an error is found more than offsets the tendency toward fewer vacant units resulting from the three-month data collection design.

A further consideration is the classification of units condemned, open to the elements, boarded up to prevent entrance, or merged with another unit. In the NYCHVS, professional staff from headquarters recheck 100 percent of these units and the final classification is considered to have a high degree of validity. A study done following the 1980 Decennial Census found that the NYCHVS tended to classify more of these units as out of the housing inventory than did the decennial census. In cases where there was a difference in classification between the NYCHVS and the census, the study found that most of the time the census considered these units vacant. No similar study has been done regarding the NYCHVS and the ACS. However, if the census pattern were to hold with the ACS, this might help explain why the 2005 ACS had a higher estimate of vacant units than the 2005 NYCHVS.

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 2005 ACS and the 2005 NYCHVS. 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.

ACS mail questionnaire

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

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

The 2005 NYCHVS determined tenure through a series of three questions.

NYCHVS questionnaire

9a. **Is this apartment (house) owned or being bought by**…(*reference person*) **or someone else in this household?**	0 Yes, owned or being bought – *SKIP to 11a* 0 No – *GO to 9b*
b. **Does**…(*reference person)* **or someone else in this household own cooperative shares for this apartment (house)?**	0 Yes – *SKIP to 11a* 0 No – *GO* to 9c 0 Don't know – *GO to 9c*
c. **Does**…(*reference person)* **pay cash rent for this apartment (house) or does he/she occupy it rent free?**	0 Pay cash rent – *GO to Check Item B* 0 Occupy rent free – *SKIP to 20*

City-wide comparisons

Table 2a displays the results of the comparison of Tenure for the 2005 ACS and NYCHVS. The simple two-way categorization of tenure into owner and renter used for this analysis showed no statistical difference between the 2005 ACS and 2005 NYCHVS estimates (the detailed categorization of owner occupied units by mortgage status will be discussed later). Both the 2005 ACS and the 2005 NYCHVS showed an estimate of about 33 percent for owner occupied units and 67 percent for renter occupied units.

[INSERT TABLE 2a HERE]

Analysis

The closeness of the estimates of tenure between the two surveys may be surprising given that the two surveys obtain this information in different ways, each attempting to address two different potential problems. The ACS separates the owner category into two parts – owned with a mortgage or loan and owned free and clear (without a mortgage or loan). The reason for this is based on the premise that some owners with a mortgage do not consider themselves to be owners because a bank or other type of lender holds the mortgage on their property.

The NYCHVS determines tenure through a series of three questions, with the second focusing on residents of cooperatives, a type of ownership popular in New York City. A cooperative is a building or development that is owned by its shareholders and is organized as a corporation. Ownership of shares in the corporation entitles the shareholder to hold the lease for one (or more) of the units. If the person or persons owning the cooperative shares also occupies the unit, the cooperative unit is considered owner-occupied. The second of the NYCHVS tenure questions is based on the premise that some cooperative residents may not consider themselves to be owners because they technically do not own the individual unit they live in. The second question allows the Census Bureau to edit these cases to owner occupied. The results of the ACS/NYCHVS

comparison suggest that neither of the potential difficulties actually turned out to be a problem for respondents in New York City.

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 is 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.

ACS CAPI instrument

Is this unit…?

0 For rent
0 Rented, not occupied
0 For sale only
0 Sold, not occupied
0 For seasonal, recreational or occasional use
0 For migrant workers
0 Other vacant

Type of Vacant information is even more important for the NYCHVS than for the ACS. The primary reason for conducting the NYCHVS is to determine the rental vacancy rate, which is then used in the analysis of whether to continue regulating rents within the City. Type of vacant is determined from two questions – the first to assess if the unit is available for rent or sale, and the second, for those units not available, to determine the reason they are not available.

NYCHVS questionnaire

70. **Is this apartment (house)**	0 Available for rent? – *SKIP to 72* 0 Available for sale only? – *SKIP to closing statement below* 0 Not available for rent or sale? – *GO to 71*
71. **What are the reasons that this apartment (house) is not available for sale or rent?** *List all reasons mentioned, and then be sure to mark (X) ONLY one box for the primary reason.*	0 Rented, not yet occupied 0 Sold, not yet occupied 0 Unit or building is undergoing renovation 0 Unit or building is awaiting renovation 0 Being converted to nonresidential purposes 0 There is a legal dispute involving the unit 0 Being converted or awaiting conversion to condominium or cooperative 0 Held for occasional, seasonal, or recreational use 0 The owner cannot rent or sell at this time due to personal problems (e.g. age or illness) 0 Being held pending sale of building 0 Being held for planned demolition 0 Held for other reasons – *Specify* _____

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 no statistical differences between the 2005 ACS and the 2005 NYCHVS. However, when these estimates are used to compute vacancy rates, the ACS rental vacancy rate (the percentage of rental units that are vacant for rent) was 0.6 percentage points higher than the NYCHVS, while the gross vacancy rate (the percentage of all units that are vacant) was 0.8 percentage points higher.[8] (See Table 1 for gross vacancy rate information.) There was no statistical difference in the homeowner vacancy rate (the percentage of owner occupied and vacant for sale units that are vacant for sale) between the two surveys.

Analysis

While it is satisfying to see no statistical differences between estimates for the three primary categories used for vacancy analysis, the universe for the three vacancy categories is relatively small and the sampling error relatively large. Small universes and larger sampling error mean that fewer apparent differences will prove to be statistically significant.

The difference in vacancy rates, particularly in the rental vacancy rate, is important. The rate calculated from the NYCHVS is the key statistic used by New York City to determine the continuance of rent regulations in the City. The threshold rate for the possible elimination of rent regulation is 5.0 percent, and while neither the rate from the 2005 ACS nor that from the 2005 NYCHVS approaches this level, when two prominent surveys show a significant difference in this important characteristic, it is worth noting.

[8] 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 renter occupied units.

One possible reason for the difference in the rental vacancy rate is the difference in collection periods for the two surveys. The 2005 ACS collected information over a 12-month period while the 2005 NYCHVS collected information between February and June. However, when the ACS data were limited to the same collection months as the NYCHVS, the ACS rental vacancy rate did not change.

The reasons for the difference in the rental vacancy rate and the gross vacancy rate are likely related to the idiosyncrasies in the treatment of vacant units in both surveys mentioned earlier. In the NYCHVS, these include the 100-percent reinterview of vacant units and correction of errors found, which would tend to lower the estimate of vacant units relative to the ACS, and the elimination of vacant for rent, dilapidated units from the numerator in the calculation of the rental vacancy rate, which would also lower the rental vacancy rate relative to the ACS. In the ACS, the 3-month data collection design where vacant units are not identified until the final (CAPI) phase plays a role in lowering the estimate of vacant units compared with a more traditional data collection approach, such as the one employed in the NYCHVS.

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 2005 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 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

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

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

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

0 Yes, home equity loan
0 Yes, second mortgage
0 Yes, second mortgage and home equity loan
0 No → *Skip to* D

On the 2005 NYCHVS questionnaire, mortgage status was determined from the responses to a single question asked at all owner-occupied households.

NYCHVS questionnaire

14. **Is there a mortgage, home equity loan, or similar loan on this apartment (house) or is this apartment (house) owned free and clear?**	0 Mortgage, home equity or similar loan 0 Owned free and clear – *SKIP to Check Item D*

City-wide comparisons

Table 2b shows that the 2005 ACS estimated a statistically higher percentage of units owned with a mortgage than the 2005 NYCHVS, and a corresponding lower percentage of units owned without a mortgage. The difference between the two surveys was 2.2 percentage points for each category. The NYCHVS did not allocate responses to this question when it wasn't answered, resulting in a small number of households in a not-reported category (0.8 percent of owner households). The not-reported cases were not included in the calculations.

[INSERT TABLE 2b HERE]

Analysis

Given that mortgage status is a critical characteristic in analyzing the finacial status of owner households, the potential reasons for the differences in this key characteristic need to be explored. As noted above, the ACS places emphasis on determining mortgage status. It does so by asking three related questions on the topic and, using the answers to the three questions, 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 uses a separate question. This is done not only to identify the number of units with this type of loan, but also to "correct" mortgage status for those respondents who have only a home equity loan and may have answered not mortgaged to the other two mortgage status questions because they do not consider these loans to be a "true" mortgage.

The NYCHVS, with a single all encompassing mortgage status question does not have the ability to identify and correct for this type of situation. Therefore, any differences in the estimates of mortgage status between the ACS and NYCHVS would be expected to be in the direction seen in the 2005 comparisons.

Units in Structure

Description

Units in Structure data were collected for all housing units – both occupied and vacant – in both the 2005 ACS and the 2005 NYCHVS. 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.

ACS mail questionnaire

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

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

The Units in Structure question was the first of the structural characteristics questions asked in the 2005 NYCHVS. It followed a series of questions on the financial characteristics of owner occupied units. The Units in Structure question on the NYCHVS offered 14 response options, while the ACS offered 10. The NYCHVS dropped the ACS categories mobile home and boat, RV, van, etc.; separated the ACS 1-unit category into 1 unit without business and 1 unit with business; did the same for the 2-unit category; showed the 3-, 4-, and 5-unit categories separately; separated the ACS 10- to 19-unit category into two categories – 10 to 12 units and 13 to 19 units; and separated the ACS

50-or-more category into three categories – 50 to 99 units, 100 to 199 units, and 200 or more units. The 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.

NYCHVS questionnaire

20. **How many units are in this building?** *If the respondent doesn't know, canvass the building and count the units.*	0 1 unit without business 0 1 unit with business 0 2 units without business 0 2 units with business 0 3 units 0 4 units 0 5 units 0 6 to 9 units 0 10 to 12 units 0 13 to 19 units 0 20 to 49 units 0 50 to 99 units 0 100 to 199 units 0 200 or more units

City-wide comparisons

The comparisons shown in Table 3 primarily reflect the way in which Units in Structure data were collected in the 2005 ACS with the exception of the 1-unit category, which is a combination of the ACS collection categories one-family house detached and one-family house attached. The table shows that 5 of the 7 categories that could be compared (the mobile home and the boat, RV, van, etc. categories were not used in the 2005 NYCHVS), as well as the median number of units in structure, had statistical differences between the two surveys.

The most notable difference was in 1-unit structures, where the ACS estimate is 4.1 percentage points higher than the NYCHVS estimate. The ACS also had higher estimates of units in the 10- to 19-unit category (0.6 percentage points) and the 20- to 49-unit category (1.6 percentage points). Estimates of units in small multi-unit buildings (2 units) and the largest multi-unit building category (50 or more units) were lower in the 2005 ACS than in the 2005 NYCHVS, by 2.6 and 3.1 percentage points, respectively. Finally, the derived estimate of median number of units in structure was 2.0 units lower in the ACS than in the NYCHVS.

[INSERT TABLE 3 HERE]

Analysis

The primary differences in Units in Structure data between the 2005 ACS and the 2005 NYCHVS occur at the lower end of the distribution – units in 1-unit and 2-unit structures – and at the high end of the distribution – units in 50-or-more unit structures. It is difficult to determine the specific reasons for these differences, but one factor deserves

mention. The NYCHVS identifies single-family and two-family units by whether they are in a structure also containing a business, while the ACS uses the traditional approach of identifying single-family units by whether they are detached or attached. Without the detached/attached identifier, it is possible that interviewers and respondents in the NYCHVS are classifying townhouse or brownstone type units, occupied by a single family, as multi-family rather than one-family attached units.

A final classification issue that has no real effect on the data because the numbers involved are so small is the treatment of mobile homes and boats, RVs, vans, etc. The 2005 ACS estimated about 3,100 of these units in New York City (less than 0.1 percent of the housing inventory). The 2005 NYCHVS, using the assumption that these units either did not exist or were so few in number they did not warrant being identified, did not offer a response option for these units.[9] If the ACS is correct and these units do exist, then the NYCHVS misclassifies them in relation to the ACS.

Year Structure Built

Description

Year Structure Built was the second housing question asked in the 2005 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?**

0 2005 or later
0 2000 to 2004
0 1990 to 1999
0 1980 to 1989
0 1970 to 1979
0 1960 to 1969
0 1950 to 1959
0 1940 to 1949
0 1939 or earlier

Year Structure Built was not asked of respondents in the 2005 NYCHVS, rather the information was obtained from administrative records – the Real Property Assessment Division (RPAD) file maintained by the New York City Department of Finance. While acknowledging that matching to administrative records opens the door to errors, and that the records themselves might contain errors, the RPAD information is still likely to be of

[9] It is possible that boats, etc. used as living quarters could be in the NYCHVS sample selected from Census 2000 addresses. In those rare cases, interviewers were instructed to apply the housing unit definition. In most cases, these units would be classified as 1-unit, without business.

higher quality than responses received from household respondents in the ACS (or any other household survey or census).

City-wide comparisons

Table 4 shows the distribution of total housing units by Year Structure Built from both the ACS and the NYCHVS (from administrative records). Seven of the eight response categories and the median year built show significant differences between the two surveys. However, the primary differences occur at the older end of the distribution – in the 1940 to 1949 and 1939 or earlier categories. The 2005 ACS estimated 14.4 percentage points fewer units built 1939 or earlier than the NYCHVS. About half of this difference (7.1 percentage points) is accounted for in the 1940 to 1949 category and the other half are spread throughout the rest of the distribution.

[INSERT TABLE 4 HERE]

Analysis

Earlier research on decennial census responses to Year Structure Built showed that respondents, particularly those in rental units, have a difficult time providing consistent and accurate answers to this question. The problem was most prominent for renters in older buildings. Since New York City has both a high proportion of renters (67 percent in both surveys) and a high proportion of older buildings built before 1939 (41 percent in the ACS, 55 percent in the NYCHVS), inconsistencies at the older end of the distribution could be expected.

The results from the ACS/NYCHVS comparison for this characteristic appear to confirm the earlier analysis. Respondents in the ACS underestimated the number of very old units – built in 1939 or earlier – relative to the administrative record data from the NYCHVS. The fact that the ACS overstates the 1940 to 1949 category relative to the NYCHVS implies that many 2005 ACS respondents knew they lived in older units but didn't realize just how old the units actually were.

In addition, item nonresponse was high for the Year Structure Built item in the ACS (see Table A). High item nonresponse may be contributing to the observed differences with the administrative data from the NYCHVS.

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 were collected for occupied and vacant units in both the 2005 ACS and the 2005 NYCHVS, and in both surveys the bedroom question followed the rooms question.

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.

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.*

0 1 room
0 2 rooms
0 3 rooms
0 4 rooms
0 5 rooms
0 6 rooms
0 7 rooms
0 8 rooms
0 9 or more rooms

ACS mail questionnaire

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?**

0 No bedroom
0 1 bedroom
0 2 bedrooms
0 3 bedrooms
0 4 bedrooms
0 5 or more bedrooms

The rooms question on the 2005 NYCHVS questionnaire was almost identical to that on the ACS, with an added emphasis on apartments as the primary building type in the City and no mention of mobile homes, being the only differences. The NYCHVS had one fewer response option than the ACS. A difference between the ACS mail questionnaire rooms question and the NYCHVS version was not related to how the question was asked, but rather to how certain responses were processed. In the NYCHVS, if a respondent answered that there was one room in the unit, he/she did not have to answer the bedrooms question that followed. In this case, the response to the number of bedrooms was edited to "None."

Since the NYCHVS is a personal visit survey, the bedrooms question was asked much like it was asked in the ACS CATI and CAPI format, as a natural follow-up to the rooms question. The NYCHVS bedrooms question offered respondents three more response options than did the ACS.

NYCHVS questionnaire

24a. **How many rooms are in this apartment (house)? Do not count bathrooms, porches, balconies, halls, foyers, or half-rooms.**

0 One – *SKIP to 25a*
0 Two
0 Three
0 Four
0 Five
0 Six
0 Seven
0 Eight or more

24b. **Of these rooms, how many are bedrooms?**	0 None 0 One 0 Two 0 Three 0 Four 0 Five 0 Six 0 Seven 0 Eight or more

City-wide comparisons

The count of rooms is the physical measure of the size of housing units in both surveys, and estimates differ considerably between the ACS and the NYCHVS. The estimates in Table 5 in every rooms category except 6 rooms are statistically different, with the ACS estimates of number of rooms tending to be lower for the smallest and mid-sized apartments - 1 room, 3 rooms, 4 rooms, and 5 rooms - and higher for the largest apartments - 7 rooms and 8 or more rooms. Apartments with 2 rooms are the only exception, with the ACS estimate higher than the NYCHVS estimate.

The difference in the 8 rooms or more category, with the ACS estimate 2.8 percentage points higher than the NYCHVS estimate, is one of the largest of all the city-wide differences. Despite this difference, and the other differences throughout the distribution, the median number of rooms per unit is 3.9 in both surveys.

[INSERT TABLE 5 HERE]

The 2005 ACS and the 2005 NYCHVS estimates of the number of bedrooms in the unit differed in four of the six comparison categories, with the ACS showing fewer no bedroom and 2 bedroom units and more 4 bedroom and 5 or more bedroom units. The proportion of 1 bedroom and 3 bedroom units did not differ between the two surveys, while the estimates of median number of bedrooms for the two surveys were also not statistically different.

[INSERT TABLE 6 HERE]

Analysis

The differences in the rooms distribution indicate that the 2005 ACS question and methods result in fewer of the smaller and mid-sized units and more of the larger units than are reported in the 2005 NYCHVS. The one anomaly to this pattern is in the 2-rooms category. The reasons for the differences throughout the distribution are unclear, but a number of contributing factors may be at work. The first relates to a skip pattern in the NYCHVS that does not exist in the ACS paper questionnaire. Interviewers in the NYCHVS at units where respondents report only one room do not have to ask the next

question on number of bedrooms in the unit; a computer edit automatically edits bedrooms to none. The ACS computer edits do the same thing, but there is no skip pattern on the ACS paper questionnaire. It is possible NYCHVS interviewers tend to mark 1 room in situations where the respondent and the interviewer are not sure if a space in the unit meets the definition of a room, and thereby ask one less question.

A second factor relates to the examples of spaces not to include as rooms given in the ACS CATI and CAPI instruments. They differ from the examples given on the ACS paper questionnaire and the NYCHVS questionnaire. Most significantly, the CATI and CAPI instruments instruct respondents not to count utility rooms as rooms. No mention of excluding these rooms is made in the ACS and NYCHVS paper questionnaires. As a result, it is possible that some utility rooms were counted as rooms in the NYCHVS and excluded in the ACS.

A final factor related to rooms is a difference in the number of response options offered in the ACS paper questionnaire compared with the NYCHVS document. The ACS offered the category 9 or more rooms while the NYCHVS went only to 8 or more rooms. A comparison of results by ACS mode of interviewing should be considered to evaluate the effect of these factors.

The ACS tended to have lower estimates of units with fewer bedrooms (no bedrooms and 2 bedrooms) and higher estimates of units with more bedrooms (4 bedrooms and 5 bedrooms or more). As there were more large units in the ACS than in the NYCHVS (as measured by number of rooms) and fewer small and mid-size units, we would expect the ACS to have higher estimates of units with 4 and 5 or more bedrooms and lower estimates of units with no bedrooms and 2 bedrooms.

The same factors influencing the differences in rooms are probably at play with bedrooms as well, particularly the skip pattern in the NYCHVS that does not require interviewers to ask and complete the bedrooms question if the unit has only 1 room. Similarly, the fact the ACS paper questionnaire only allows respondents to answer up to 5 or more bedrooms while the NYCHVS allows up to 8 or more may have had an undetermined affect on the estimates.

Household Income

Description

Both the 2005 ACS and the 2005 NYCHVS asked for income data from all people 15 years old or older in occupied housing unit. Household income is a recoded variable created by adding together the income from all sources for eligible household members.

The 2005 ACS collected data on eight different sources of income and asked these eight questions at the very end of the ACS interview. The example below shows the first 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, or income from estates and 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 eight sources and provide a total income. The ACS CATI and CAPI interviewers collected data on the same sources of income 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.

The 2005 NYCHVS collected income data from seven sources, one fewer than the ACS. The example below shows the first two of the seven questions – income from wages, salary, commissions, bonuses, or tips from all jobs; and income from own farm or nonfarm business, proprietorship, or partnership. The other five income questions covered:

- Interest, dividends, net rental or royalty income, or income from estates or trusts
- Social Security or Railroad Retirement payments.
- Supplemental Security Income, Temporary Assistance for Needy Families, Home Relief, Safety Net, or any other public assistance or public welfare payments, including shelter allowance.
- Retirement, survivor, or disability pensions.
- Veteran's payments, unemployment compensation, child support, alimony, or any other regular sources of income.

The one additional income source identified in the ACS resulted from dividing the NYCHVS question on Supplemental Security Income (SSI), Temporary Assistance for Needy Families, etc. into two parts, one dealing with SSI and the other with all other forms of public assistance or welfare payments. The NYCHVS income questions were asked as two-part questions, similar to the ACS CATI and CAPI interviews.

ACS mail questionnaire

41. *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 type 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.*

0 Yes → $_____.00
0 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.*
:
0 Yes → $_____.00 0 Loss
0 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 next to the dollar amount.*

None or $_____.00 0 Loss
TOTAL AMOUNT for past 12 MONTHS

For a look at the full set of income questions on the 2005 ACS questionnaire see the web site, www.census.gov/acs/www/Downloads/SQuest05.pdf

NYCHVS questionnaire

The following questions are about income received during 2004? *If an exact amount is not known, accept a best estimate. If there was a net loss in b or c, mark the "Loss" box and enter the dollar amount of the loss.*

49a. Did…earn income from wages, salary, commissions, bonuses or tips?

0 Yes – **How much from all jobs? Report the amount before deductions for taxes, bonds, dues or other items**

_____.00
Annual amount – Dollars

0 No

b. Did…earn any income from (his/her) own farm or nonfarm business, proprietorship, or partnership?

0 Yes – **How much?**
Report net income after business expenses

_____.00
Annual amount – Dollars

0 No
0 Loss

For a look at the full set of income questions on the 2005 NYCHVS questionnaire see the web site, www.census.gov/hhes/www/housing/nychvs/2005/h10005.pdf

City-wide comparisons

A comparison of the income distribution data between the 2005 ACS and 2005 NYCHVS (2004 income) shows consistency and agreement throughout the distribution. Of the 16 comparison categories in Table 7a, 11 showed no statistical difference between the two surveys. Where differences did occur, three were in the lower part of the income distribution (below $40,000) and two were in the upper part of the distribution ($40,000

or more). The ACS showed fewer households in the $10,000 to $14,999, $15,000 to $19,999, and $35,000 to $39,999 categories and more households in the $45,000 to $49,999 and $200,000 or more categories. Only one of the category differences, the $200,000 or more category, had a difference of over 1 percentage point (the 2005 ACS had 1.2 percentage points more households with household income greater than $200,000). All other category differences were less than 1 percentage point. The 2005 ACS also had a higher median household income than the 2005 NYCHVS, $43,732 vs. $41,347.

[INSERT TABLE 7a HERE]

Analysis

Of all the variables examined in this report, household income is the one where substantial differences might be expected.

- The ACS asks about eight sources of income while the NYCHVS asks about only seven.
- The ACS asks respondents a total income question, giving respondents a final chance to think of income not included in the individual income source questions, while the NYCHVS does not.
- The individual income questions are worded differently in the two surveys.
- Item nonresponse for the income questions used in calculating household income is high in both surveys, while allocation specifications are somewhat different.
- Most significantly, ACS income is collected for the twelve months prior to the date of interview resulting in a total time span covered by responses of 23 months, and adjusted to reflect calendar 2005, while the NYCHVS income reflects calendar 2004.

Certainly, the last factor would lead to the assumption that the ACS income estimates should be higher than those from NYCHVS.

In spite of these major differences, the distribution of total household income appears to be remarkably similar between the two surveys. How do we explain this? Part of the reason is in the income distribution that was compared – the standard ACS distribution found in the ACS detailed tables. Although only 5 of the 16 comparison categories show statistical differences between estimates, tendencies throughout the distribution and with median household income are in line with expectations. When a different distribution with broader categories was considered and the medians compared, these tendencies were apparent. Arbitrarily segmenting the distribution into low income (categories below $20,000), low-middle income (categories between $20,000 and $39,999), high-middle income (categories between $40,000 and $99,999), and high income (categories above $100,000) the ACS has fewer households in the low and low-middle income categories

and more households in the high-income category.[10] There is no statistical difference between the ACS and NYCHVS in the high middle-income category. Similarly, the ACS median household income is higher than the NYCHVS median. These results conform to expectations given the year difference in reference period for the income data.

The income comparison between the 2005 ACS and 2005 NYCHVS (2004 income) is done even though the reference periods are different because this is how income is collected and tabulated in the two surveys. However, we would obtain a better picture if the income data from the two surveys reflected the same reference period. Adjusting the 2004 NYCHVS to 2005 dollars by using the Consumer Price Index (CPI-U-RS) does this and allows for a more consistent comparison.

Using the adjusted NYCHVS household income, Table 7b shows that 12 of the 16 comparison categories had no statistical differences. The $15,000 to $19,999, $35,000 to $39,999, and $200,000 or more categories continue to differ. However, the $10,000 to $14,999 and $45,000 to $49,999 categories are no longer statistically different, while the $20,000 to $24,999 category is now different. Looking at the low, low-middle, high-middle, and high distribution discussed earlier, the statistical difference in the low grouping disappears. The statistical differences in the low-middle and high groupings remain, as does the difference in median household income. The difference in medians between the ACS and the unadjusted NYCHVS was $2,385, while it is $1,645 after adjustment (these two differences are not statistically different from each other).

[INSERT TABLE 7b HERE]

The 2005 ACS and the 2005 NYCHVS collect and process income data differently, but a comparison of the results of these different processes indicates substantial agreement in the two household income distributions. This finding should give users of both data sets confidence that they are generally measuring the same level of household income.

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. Gross rent is the monthly rent contracted for plus the monthly cost of utilities: electricity, gas, water and sewer, and other fuels (oil, coal, kerosene, wood, etc.) if these items are paid by the renter in addition to rent. Use of this 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 units; thus, this analysis is limited to that universe.

[10] The names and ranges of the income categories are arbitrary and used for descriptive purposes only; they do not represent official definitions of low, middle, or high income.

The 2005 ACS collected data on monthly rent for all renter occupied units (and monthly asking rent for all vacant for rent 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. The 2005 NYCHVS also collected monthly rent for all renter occupied units (and asking rent for all vacant for rent units). Unlike the ACS, the NYCHVS used separate questions for the two different types of rental units. The NYCHVS rent questions were also open-ended and the exact dollar amount reported was captured.

ACS mail questionnaire

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

Monthly amount – *Dollars*

$_____.00

NYCHVS questionnaire (occupied units)

30a. **What is the MONTHLY rent?**

(If rent is paid other than monthly, refer to the manual on how to convert it)

$_____.00
Per month

To determine the cost of utilities and fuels for renter occupied units, the 2005 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.

ACS mail questionnaire

14a. **LAST MONTH, what was the cost of electricity for this house, apartment, or mobile home?**

Last month's cost – *Dollars*

$_____.00

OR
0 Included in rent or condominium fee
0 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
0 Included in rent or condominium fee
0 Included in electricity payment entered above
0 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
0 Included in rent or condominium fee
0 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
0 Included in rent or condominium fee
0 No charge or these fuels not used

The 2005 NYCHVS asked five questions, four or them two-part questions, to determine the cost of utilities and fuels – average monthly cost for electricity; average monthly cost for gas; combined average monthly cost of electricity and gas (if paid together); yearly cost for water and sewer; and yearly cost for oil, coal, kerosene, wood, steam, etc. Each of the questions, except the combined electricity and gas question, had two parts. The first part asked whether the utility or fuel was paid by the household, included in the rent, or not used. If the utility or fuel was paid separately, then the cost was obtained.

NYCHVS questionnaire

28a(1) **Do you pay for your own electricity?**	0 Yes – *GO to 28a(2)* 0 Yes, but combined with gas – *Ask for separate estimates; if not possible SKIP to 28c* 0 No, included in rent, condominium or other fee – *SKIP to 28b(1)*
(2) **What is the average MONTHLY cost?**	**$ _____.00**
b(1) **Do you pay for your own gas?**	0 Yes – *GO to 28b(2)* 0 No, included in rent, condominium or other fee – *SKIP to 28d(1)* 0 No, gas not used – *SKIP to 28d(1)*
(2) **What is the average MONTHLY cost?**	**$ _____.00**
c. **What is your combined average electricity and gas payment each month?**	**$_____.00** *Fill this ONLY when separate estimates cannot be given*
d(1) **Do you pay your own water and sewer charges?**	0 Yes – *GO to 28d(2)* 0 No, included in rent, condominium or other fee or no charge – *SKIP to 28e(1)*
(2) **What is the total YEARLY cost?**	**$ _____.00**
e(1) **Do you pay for your own oil, coal, kerosene, wood, steam, etc.?**	0 Yes – *GO to 28e(2)* 0 No, included in rent, condominium or other fee – *SKIP to Check Item F* 0 No, these fuels not used – *SKIP to Check Item F*
(2) **What is the total YEARLY cost?**	**$ _____.00**

City-wide comparisons

A comparison of 2005 ACS and 2005 NYCHVS data in Table 8 shows that there was no statistical difference in the estimates for 14 of the 21 rent comparison categories, while 7 categories and the median had differences.[11] For 4 of the 7 comparison categories with differences, those differences were 0.5 percentage points or less. Where differences in estimates did occur, five were in categories in the lower part of the gross rent distribution – less than $100, $150 to $199, $200 to $249, $250 to $299, and $350 to $399; while two were in categories in the upper part of the distribution - $750 to 799 and $900 to $999. The differences in the lower part of the rent distribution all showed the ACS estimating more households in these categories. The NYCHVS estimated more households in the two categories in the upper part of the distribution with differences. The 2005 ACS also estimated a lower median gross rent than the 2005 NYCHVS ($909 vs. $925). Interestingly, the ACS estimated fewer households in the rent paying universe (paying cash rent) and correspondingly more households reporting that they paid no cash rent.

[11] All percentages as well as the median gross rent were calculated only for those units paying rent.

[INSERT TABLE 8 HERE]

Analysis

The comparison of gross rent data from the 2005 ACS and 2005 NYCHVS shows a fairly high level of consistency. Monthly rent, the largest component of gross rent, is asked similarly in both surveys and is an amount that respondents deal with frequently and are likely to remember. Where differences do occur between the ACS and NYCHVS gross rent estimates, further study is needed to determine if these differences occur in the rent component of the gross rent variable or the utilities and fuels component.

The statistical differences between the two surveys show that the ACS has more households in the lower portion of the rent distribution (less than $100, $150 to $199, $200 to $249, $250 to $299, and $350 to $399) and fewer households in the high end of the distribution ($750 to $799 and $900 to $999). A possible reason for this relates to a question asked on the NYCHVS but not asked on the ACS – out-of-pocket rent. Out-of-pocket rent refers to the rent actually paid by the respondent excluding payments made by federal or local government housing subsidy programs. Respondents who have inadvertently given the amount of out-of-pocket rent in the question asking for the full monthly rent may go back and revise their answer to the monthly rent question based on the out-of-pocket rent question. The fact that the median gross rent from the 2005 ACS was $16 less than that in the 2005 NYCHVS ($909 vs. $925) does not negate this possibility.

A final difference in the gross rent distributions from the 2005 ACS and the 2005 NYCHVS is in the estimates of the percentage of households occupying their unit without paying rent. These households were identified in the ACS by answering the tenure question "Occupied without payment of cash rent," while they were identified in the NYCHVS by the answer "Occupy rent free." The ACS shows statistically more households occupying their unit without paying rent than does the NYCHVS (2.5 percent vs. 1.8 percent). There is speculation that the word "cash" in the ACS response category may cause some respondents who pay their rent by check or credit card to incorrectly report that they do not pay "cash" rent, but there is no definitive evidence of this. It is not known how having more households reporting not paying rent in the ACS affected the gross rent dollar estimate comparisons.

Item nonresponse for the rent component of gross rent – the largest component - is relatively low in both surveys, particularly the 2005 NYCHVS. However, several of the utility and fuel components of gross rent in the NYCHVS have higher item nonresponse (see Table A). This may play a role in some of the observed differences between the two surveys.

Gross rent as a percentage of income

Description

Gross rent 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 and is an important and commonly used measure of rental housing affordability. The components of the variable are monthly rent, utility and fuel costs, and household income, all of which have been discussed earlier in this report.

City-wide comparisons

There were no statistical differences in the estimates of gross rent as a percentage of income for 7 of the 10 comparison categories in Table 9a, or the medians, while three categories had differences. For all three of the categories with differences, those differences were 0.9 percentage points or less. The differences occurred in the 25.0 to 29.9 percent, 35.0 to 39.9 percent, and not computed categories. In the 25.0 to 29.9 percent and the 35.0 to 39.9 percent categories, the ACS estimated more households in these categories than the NYCHVS (10.6 percent vs. 9.7 percent and 6.2 percent vs. 5.6 percent). In the not computed category, the opposite was true, as the ACS estimated fewer households in this category (4.5 percent vs. 5.3 percent). The estimated median gross rent as a percentage of income was about 31 percent in both surveys.

[INSERT TABLE 9a HERE]

Analysis

As with gross rent, the comparison of gross rent as a percentage of income between the 2005 ACS and the 2005 NYCHVS shows a high level of consistency. Where statistical differences occur in the two categories representing computed percents, the differences are relatively small (0.9 percentage points or less) and show the ACS with higher estimates than the NYCHVS.

Perhaps most interesting is the difference in the not computed category. This category represents households reporting no household income or negative household income and/or households occupying their unit without paying rent. The ACS estimate of households in the not computed category is statistically less than the NYCHVS estimate. Since the ACS estimated more households not paying rent than the NYCHVS (see the analysis section of the Gross Rent comparison), the lower ACS estimate of households in the not computed category implies that the NYCHVS estimated more households with no income or negative income. If the not computed cases are eliminated from the distributions for both surveys, the comparison results in Table 9b show that the estimates in the 35.0 to 39.9 percent category are no longer statistically different between the two surveys, but the estimates in the less than 10 percent category are now different.

[INSERT TABLE 9b HERE]

Value

Description

Value is 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. Value data were collected for all owner occupied and vacant-for-sale units in the 2005 ACS, but were collected only for owner-occupied households in the 2005 NYCHVS. The comparisons below are for owner occupied units only.

On the 2005 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.

ACS mail questionnaire

19. **What is the value of this property; that is, how much do you think this house and lot, apartment, or mobile home and lot, would sell for if it were for sale?**

0 Less than $10,000
0 $10,000 to $14,999
0 $15,000 to $19,999
0 $20,000 to $24,999
0 $25,000 to $29,999
0 $30,000 to $34,999
0 $35,000 to $39,999
0 $40,000 to $49,999
0 $50,000 to $59,999
0 $60,000 to $69,999
0 $70,000 to $79,999
0 $80,000 to $89,999
0 $90,000 to $99,999
0 $100,000 to $124,999
0 $125,000 to $149,999
0 $150,000 to $174,999
0 $175,000 to $199,999
0 $200,000 to $249,999
0 $250,000 or more – *Specify*
_____.00

On the 2005 NYCHVS questionnaire, the value question was the third question in a series of 14 questions asked of owner-occupied households. The wording of the question was similar to, but not the same as, the ACS. Unlike the ACS mail questionnaire, but similar to the CATI and CAPI instruments, the NYCHVS asked value as a specific numeric estimate rather than a ranged response category.

NYCHVS questionnaire

13. What is the value of this apartment (house), that is, in your opinion, how much would it currently sell for if it were on the market?	$_____.00

The comparison data in Table 10 show no statistical differences in the estimates for 7 of the comparison categories, and differences in estimates for 6 categories as well as median value. Two of the differences occurred in the lower part of the value distribution – Less than $50,000 and $50,000 to $99,999; two were in the upper middle part of the distribution - $250,000 to $299,999 and $300,000 to $399,999; and two were in the upper part of the distribution - $500,000 to $749,999 and $750,000 to $999,999. The magnitude of the differences ranged from 0.6 percentage points for the $50,000 to $99,999 category to 1.9 percentage points for the $750,000 to $999,999 category. The 2005 ACS median value of $448,963 was $29,144 higher than the 2005 NYCHVS estimate of $419,819.

[INSERT TABLE 10 HERE]

Analysis

The comparison of value data from the 2005 ACS and 2005 NYCHVS shows a moderate level of consistency. Almost half of the comparison categories showed differences. 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 NYCHVS questionnaire, offered respondents precoded ranges for values under $250,000. This difference alone could be expected to result in slightly different distributions; and, in fact, two of the seven comparison categories under $250,000 in Table 10 do have differences.

New York City is a very high housing cost area and only 19.8 percent of respondents in the 2005 ACS and 21.7 percent in the 2005 NYCHVS estimated the value of their homes at under $250,000. For the six comparison categories at $250,000 or above, containing 80.2 percent of the ACS households and 78.3 percent of the NYCHVS households in the City, four had differences. Since the ACS required respondents to report a specific dollar amount for values of $250,000 or more (the same as the NYCHVS), clearly something other than the method of reporting (providing a specific dollar amount as opposed to selecting from a range of values) was at work.

Fewer ACS respondents estimated values in the less than $50,000, $50,000 to $99,999, $250,000 to $299,999, and $300,000 to $399,999 categories than NYCHVS respondents, while more ACS respondents reported values in the $500,000 to $749,999 and $750,000 to $999,999 categories. This tendency for the ACS to have more households in the higher portion of the value distribution is confirmed by the higher median value estimated in the ACS, and can probably be explained at least partially by the different

reference periods for the two surveys. The 2005 ACS distribution and median represent an "average" of housing values in the City collected over the entire calendar year 2005. The 2005 NYCHVS distribution and median can also be considered an "average" of housing values, but only over the time period NYCHVS data were being collected, February to June 2005. Given that housing prices were increasing throughout 2005 (the average sale price of housing units in the Northeast increased by 11 percent between 2004 and 2005), it is not surprising that the 2005 ACS would have higher housing values than the 2005 NYCHVS.

Year Householder Moved In

Description

Housing researchers use the Year Householder Moved In item to measure turnover among various subpopulations, such as the elderly or minority groups, and to identify recent mover households. The question was asked at all occupied units in both the 2005 ACS and the 2005 NYCHVS. 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 was 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 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 ☐☐☐☐

Year Householder Moved In was the fifth housing (non-household roster) related question asked on the 2005 NYCHVS questionnaire. The question was asked differently than either the ACS mail questionnaire or the CATI and CAPI instruments. The NYCHVS asked the respondent when the reference person moved into the unit and then, for those who moved in 1971, whether the move was on or after July 1. This information is important in determining the rent regulation status of the sample unit when the unit's status cannot be determined from administrative records

NYCHVS questionnaire

4a. **In what year did …***(reference person)* **move into this apartment (house)?**	Year ☐☐☐☐ If 1971 – *Ask 4b* If any other year – *SKIP to 5*
b. *Ask only if reference person moved here in 1971* **Did …** *(reference person)* **move here on or after July 1, 1971?**	☐ Yes, on or after July 1 in 1971 ☐ No, before July 1 in 1971

City-wide comparisons

Table 11 shows no statistical difference in 5 of the 6 comparison categories. Only one category, 1969 or earlier, showed a statistically significant difference and this difference was only 0.8 percentage points. The median year householder moved in was 1997 in both surveys.

[INSERT TABLE 11 HERE]

Analysis

Despite the differences between the 2005 ACS and the 2005 NYCHVS, including differences in how the question was asked, the comparison of year moved in data from the two surveys indicates that respondents in both surveys generally answered the question consistently. The only comparison category that showed a difference was the category 1969 or earlier, representing people who had moved in at least 35 years prior to the survey and some who may have lived in the unit their entire lives. If there were to be differences, it is not surprising that they would occur in this category. It is commonly assumed that the further from an event one gets, the greater the likelihood that aspects of the event are forgotten or remembered inaccurately. In addition, people who have lived in a unit all their lives, or who lived in a unit as a child, moved out, and then moved back in as an adult may have more difficulty understanding how to answer the question and therefore answer with greater variability. Even accounting for these possibilities, the difference between the estimates in the 1969 or earlier category is only 0.8 percentage points.

Age of Householder

Description

Age is one of the basic demographic characteristics collected on the roster page in both the ACS and the NYCHVS along with race, gender, relationship to the householder, Hispanic origin, marital status (ACS), and within household relationships (NYCHVS). It is also used as a screener for other questions. For example, the questions on income and labor force status are asked only of people 15 years old and older. Finally, age is used as

a variable in many of the edit procedures for both surveys. The 2005 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 2005 NYCHVS also collected age data for all people in the household and asked the question as one of a series of questions on the roster page of the questionnaire. The NYCHVS asked only a single question on the individual's age and did not collect information on date of birth.

NYCHVS questionnaire

1c. **How old is …?** *(Enter whole years ONLY.)*

Age

City-wide comparisons

Half of the comparison categories (four of eight) for the age of householder variable had statistical differences, as did median age. The ACS estimated 22.5 percent of householders were between the ages of 35 to 44 years, while the NYCHVS estimate 24.0 percent. This difference of 1.5 percentage points was one of the largest for any of the comparison categories. The three other categories with differences were 55- to 64-year-olds where the ACS estimated 15.4 percent of householders while the NYCHVS estimated 14.6 percent; the 75- to 84-year-old category where the ACS was 7.5 percent and the NYCHVS 6.6 percent; and the 85 and older category, where the estimates were 2.7 percent and 2.4 percent, respectively. The median age of householder also differed between the 2005 ACS and the 2005 NYCHV, with the ACS estimating a median almost one year older than that in the NYCHVS.

[INSERT TABLE 12 HERE]

Analysis

The differences between the two surveys tended to be in the estimate of older householders. The only comparison category below 55 years old with a difference was the 35- to 44-year-old category, where the ACS estimate was 1.5 percentage points lower than the NYCHVS. For the other three categories, the ACS estimated more householders than did the NYCHVS. Although statistically significant, other than the 1.5 percentage point difference in the 35- to 44-year-old category, the other differences were all under 1 percentage point.

It is difficult to determine the exact reasons for these differences, particularly when the differences are relatively small. One possible explanation is evidence that shows there are differences in who is selected as the householder on mail returns as opposed to who is selected during CATI and CAPI interviews (and presumably who is selected during personal interviews with a paper questionnaire).

A second possibility is that the ACS's ability to estimate age from two different vantage points – directly through the respondent's answers, and indirectly through calculation based on date of birth – provides dual measures and a better fine-tuning of the estimate of age than does the NYCHVS.

CONCLUSIONS

This study compared 140 estimates and 14 derived measures (mostly medians) from the 2005 ACS with similar estimates and derived measures from the 2005 NYCHVS at the New York City level. Of the 140 estimates, 61 estimates or 44 percent tested as statistically different. Of the 14 derived measures, 8 measures or 57 percent tested as different. This outcome may seem to imply that the two surveys are far apart in their view of New York City's housing and households, but that conclusion would overstate the case. The relatively large sample sizes for both surveys contribute to the large number of estimates found to be "statistically different," but only 26 of these estimates (not including derived measures) differed by 1 or more percentage points and only 10 differed by 2 or more percentage points.

Differences between estimates from the 2005 ACS and the 2005 NYCHVS were expected. However, the level of 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, questionnaire design and question wording, and other areas, 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 NYCVHS with the different ACS modes of collection to determine what role this plays in the comparisons; comparing estimates at

the borough level; 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 NYCHVS 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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