

## User Note on New 2005 American Housing Survey Income Questions

After redesigning the American Housing Survey (AHS) in 1997, the Census Bureau and the Department of Housing and Urban Development compared the income data collected in that survey with those found by the Current Population Survey (CPS).<sup>1</sup> That study found that the AHS reported fewer households with non-wage income than the CPS and that AHS respondents tended to report self-employment income as wages. Furthermore, AHS users requested that disability-related income sources be reported separately from other sources, to make it easier to count the number of households with disabled persons. The 2005 American Housing Survey addressed these findings and requests by adopting a series of income questions similar to the questions used in the American Community Survey (ACS).<sup>2</sup> Prior to 2005, respondents were asked the wages and salaries of each person in the family, and all other sources of income were collected as a single amount for the family as a whole. The 2005 questions collected an amount for each person in the family from nine different types of income (such as wages and salaries or social security). In addition, for each non-relative (a person not related to the householder), the 2005 questionnaire was changed to ask about wages, self-employment, and other income separately. Prior to 2005, non-relatives were asked only to report their total income. (See Figure A for a comparison of the 2003 and 2005 AHS income questions.) The AHS chose to adopt the ACS questions because they had already been tested and to facilitate comparisons between the two surveys.

The approach for obtaining household and family income prior to 2005 AHS resulted in reported income that was generally lower than in other surveys. The new income questions were intended to increase the amount of income reported. Comparisons of median household income from the 2003 and 2005 AHS, the 2005 CPS Annual Social and Economic Supplement (ASEC, 2004 income), and the 2004 ACS (2004 inflation adjusted income) indicate that goal may have been achieved overall. Median AHS household income rose 1% more than inflation from 2003 to 2005 – from \$41,775<sup>3</sup> to \$44,834<sup>4</sup> (rising 7% while inflation was 6%). Median household income from the 2005 ASEC was \$44,389,<sup>5</sup> not statistically different from the 2005 AHS median household income. Finally, median household income from the 2004 ACS was \$44,684,<sup>6</sup> also not statistically different from the 2005 AHS median household income.

Comparing receipt of income by source for the 2005 AHS and the 2003 AHS (see Table 1) shows that the percent reporting wages and salaries and the percent reporting social security or retirement at the family level, while statistically different, are generally comparable. On the other hand, the percent reporting interest, dividend and rental income is much lower in 2005 than

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<sup>1</sup> See Susin, Scott. 2003. "Discrepancies Between Measured Income in the American Housing Survey (AHS) and the Current Population Survey (CPS): Final Report", March 27.  
<http://www.census.gov/hhes/income/hudmemo8a.pdf>

<sup>2</sup> The AHS adopted the income categories used in the 2003 ACS with one change. Disability-related payments were accorded a separate item in the AHS, while the ACS included these types of payments with retirement and survivor pensions.

<sup>3</sup> The margin of error at the 90-percent confidence level is +/- \$265.

<sup>4</sup> The margin of error at the 90-percent confidence level is +/- \$289.

<sup>5</sup> The margin of error at the 90-percent confidence level is +/- \$322.

<sup>6</sup> The margin of error at the 90-percent confidence level is +/- \$214.

in 2003. One possible explanation for the difference in reporting of interest, dividend, and rental income is that the 2003 AHS included separate questions on receipt of interest, dividend and rental income while the 2005 AHS question combined interest, dividend, net rental income, royalty income and income from estates and trusts into one income category (see Figure A). Table 2 shows that at the person level, reporting of specific types of income in the 2005 AHS and the 2004 ACS is generally comparable except for reporting of interest, dividend, rental, etc. income and “other” income where the percent reporting in these categories is less in the 2005 AHS.<sup>7</sup> The 2003 AHS had two separate questions about income from “other” sources, such as VA payments, unemployment compensation, child support or alimony, whereas the 2005 AHS reduced this to one question.

Another difference between the 2003 AHS and the 2005 AHS was a new edit and allocation system for the income questions. The 2005 AHS used “regression-based” hot decks that allow more information to be used to provide a better match between donors and donees. In other words, an income-predicting regression assigns donors and recipients to cells in the hot deck matrix.<sup>8</sup> Preliminary analysis indicates that the edit and allocation system has a minor effect on the percent receiving income types (see Table 3).

More detailed analysis of the differences between the 2005 and 2003 AHS income data will be addressed in a forthcoming technical paper.

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<sup>7</sup> Please note that the American Community Survey is primarily a mail out/mail back survey with telephone and personal visit interviews for a subsample of people who did not mail back their forms. The American Housing Survey, by contrast, is conducted solely through personal visit and telephone interviews.

<sup>8</sup> A more detailed explanation of this approach will appear in the forthcoming paper by Susin (“Imputations via Triangular Regression-Based Hot Deck: Methods for Rapid Development of an Allocation Scheme and Preservation of the Covariate Matrix”) to be presented at the Joint Statistical Meeting of the American Statistical Association, August 6-10, 2006, Seattle, Washington.

**Figure A: Question Text for Income Items, AHS National (question order not preserved)**

2003 (person level)	2005 (all items person-level)
In the past 12 months, how much did . . . earn in wages, salaries, tips, and commissions before deductions? (SAL)	During the past 12 months, did . . . receive any wages, salary, tips, bonuses or commissions? (QSAL) How much did . . . receive? (SALQ)
<b>2003 (family level)</b>	
In the past 12 months, did . . . have a business, farm or ranch? (QBUS)	Did . . . receive any self-employment income during the past 12 months? (QSELF) What was the amount? (SELFQ)
. . . receive Social Security/pensions? (QSS)	Did . . . receive any Social Security or Railroad Retirement benefits during the past 12 months? (QSS) What was the amount? (SSQ)  Did . . . receive any retirement or survivor pensions during the past 12 months? (QRETIR) What was the amount? (RETIRQ)
. . . have interest from savings, money market funds, IRAs, CDs, other? (QINT) . . . have dividends from stocks? (QDIV) . . . receive rental income? (QRENT)	Did . . . receive any interest, dividends, net rental income, royalty income, or income from estates and trusts during the past 12 months? Report even small amounts credited to your account. (QIDRI) What was the amount received? (IDRIQ)
. . . receive SSI, public assistance or welfare payments such as [fill state program name]? (QWELF)	Did . . . receive any Supplemental Security Income (SSI) payments during the past 12 months? (QSSI) What was the amount? (SSIQ)  Did . . . receive any public assistance or public welfare payments from the state or local welfare office during the past 12 months? (QWELF) What was the amount? (WELFQ)
. . . receive worker's compensation or other disability payment? (QWKCMP)	Did . . . receive any disability payments such as SSDI, worker's compensation, veteran's disability or other disability payments during the past 12 months? (QWKCMP) What was the amount? (WKCMPQ)
. . . receive alimony/child support? (QALIM) . . . receive unemployment compensation, veterans' payments not already mentioned or any other income? (QOTHER)	Did . . . receive income on a REGULAR basis from any other source such as Veteran's Administration (VA) payments, unemployment compensation, child support or alimony during the past 12 months? (QOTALM) What was the amount from all sources? (OTALMQ)
In the past 12 months, what was the total income from: [source1, source2, etc.]?	

**Table 1. Reciprocity Rates for People in Families, by Income Types: 2003 and 2005  
American Housing Survey**

Income Type	Percent by Income Type			Notes on change from 2003 to 2005
	AHS 2005	AHS 2003	Difference	
Social Security and Retirement	0.289	0.269	0.020	SS and pensions were combined in 2003, split into 2 questions in 2005.
Wages and Salaries	0.747	0.785	-0.037	
Social Security	0.256			
Interest, Dividends, Rental Income	0.162	0.318	-0.156	These were 3 questions in 2003, combined into one in 2005.
Supplemental Security Income	0.038			
Welfare	0.022	0.047		Welfare and SSI were combined in 2003, split into 2 questions in 2005
Workers' Compensation	0.049	0.030	0.019	
Self-Employment	0.131	0.095	0.036	In 2003, question referred to business income. In 2005, it refers to self-employment
Other Income	0.068	0.103	-0.036	Other income and alimony were 2 questions in 2003, combined into one in 2005.
Sample Size	43,360	48,197		

**Table 2. Income Reciprocity Rates by Type of Income and Survey**

<b>Income Type</b>	<b>2004 ACS</b>	<b>2005 AHS</b>
Wages (all adults)	65.5	62.9
Householder and relatives		62.1
Nonrelatives of householder		76.7
Self employment (all adults)	7.0	7.8
Householder and relatives		8.0
Nonrelatives of householder		5.8
Interest	16.1	10.4
Social Security	17.6	18.6
SSI	2.1	2.2
Public Assistance	1.3	1.2
Retirement	9.7	8.7
Other income (all adults)	7.6	4.5
Householder and relatives		3.8
Nonrelatives of householder		11.9
Worker's compensation		2.7

NOTE: For the ACS, persons "with receipt" of income type are counted if they reported either "yes" to the reciprocity question or reported an amount in the question for amount of that income type. Also note, the ACS data are weighted, and the AHS data are not weighted since the latter has no person weights.

**Table 3. Income Receipt Rates for Individuals, by Imputation Status: 2005 AHS**

Income Type	Full Sample		Reported		Imputed	
	Proportion	Sample size	Proportion	Sample size	Proportion	Sample size
Social Security	0.187	80,615	0.187	76,272	0.184	4,343
Wages and Salaries	0.615	80,615	0.617	76,991	0.590	3,624
Retirement	0.087	80,615	0.087	76,209	0.091	4,406
Interest/Dividends/ Rental Income	0.104	80,615	0.104	75,329	0.103	5,286
Supplemental Security Income	0.022	80,615	0.022	76,306	0.022	4,309
Welfare	0.012	80,615	0.012	76,443	0.011	4,172
Workers' Compensation	0.028	80,615	0.028	76,344	0.029	4,271
Self-employment	0.079	80,615	0.080	76,473	0.056	4,142
Other income	0.038	80,615	0.039	76,306	0.027	4,309

NOTE: Data are unweighted and exclude non-relatives of the householder.