

# Processing Changes to Income in the CPS ASEC

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## Abstract

I discuss the changes to the income section of the Current Population Survey Annual Social and Economic Supplement, which were implemented in a split-panel test and 2014 and in full production from 2015 onward. I then detail the processing changes being implemented in 2019, as a result of the redesign. These changes include changes to imputations, edits, and income item top codes. Finally, I analyze survey data processed using the legacy and updated processing system to understand how the processing changes affect income estimates.

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## Introduction

The Current Population Survey Annual Social and Economic Supplement (CPS ASEC) is one of the most widely used surveys conducted by the U.S. government. It is the source of the official estimate of poverty, as well as other widely cited income distribution statistics. Furthermore, the CPS ASEC data is used often in social science research.

In 2014, the CPS ASEC underwent a redesign to improve data quality. This paper focuses on the changes to the income section of the survey.<sup>1</sup> In 2014, the redesigned questionnaire was tested in the field using a split-panel design, where roughly 70 percent of the sample received the traditional (pre-redesign) survey instrument and the other 30 percent received the redesigned one. The results of this test are discussed in Semega and Welniak (2015) and Rothbaum (2017). The field test was deemed successful by the Census Bureau and the redesigned instrument was used for the full CPS ASEC sample in 2015 and subsequent years.

However, the data from the redesigned survey instrument was edited using the pre-2014 processing system. This means that responses to the new survey instrument were recoded into the variables used prior to the redesign in order to enable processing. Since 2014, the Census Bureau has been working to update the processing system to take full advantage of the redesigned instrument. In this paper, we discuss the 2014 redesign, the changes that have been made to processing, and the impact on the income data as a result of the processing system changes.

## The 2014 Redesign

The 2014 redesign included a number of changes intended to improve income reporting. These included the following:

- **Dual Pass Approach** – For all income except wages and self-employment earnings, the questions on reciprocity and sources were separated from the questions on amounts. This change was intended to prevent respondent fatigue from affecting income responses. For example, respondents to the traditional instrument may have been able to learn that follow-ups could be avoided by answering “no” to the initial reciprocity question.
- **Family Income Screener** –The family income screener was removed for questions on means-tested benefits and income. Prior to the redesign, only households that reported less than \$75,000 in combined family income were asked questions about means-tested transfer programs, such as questions on Temporary Assistance to Needy Families (TANF) and the Supplemental Nutrition Assistance Program (SNAP). This change was the result of research showing that households that qualified for benefits were being incorrectly screened out of receiving the questions (Semega and Welniak, 2013; Stevens, Fox, and Heggeness, 2018).
- **Tailored Skip Patterns** – The order of income questions in the redesigned instrument depends on household characteristics, including age of householder, and family income (from the screener).

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<sup>1</sup> For background on the redesign, see Semega and Welniak (2015).

- **Income Range Follow-ups** – For respondents unwilling or unable to provide a value for a given income source, unfolding brackets are used.
- **Changes to Retirement and Asset Income Questions** – To address under-reporting of retirement and asset income, these questions were redesigned to better collect these income sources. This includes additional questions on interest from various types of savings instruments as well as withdrawals and distributions from defined-contribution retirement accounts (such as 401(k)s). For withdrawals from defined-contribution accounts, individuals are also asked if amounts withdrawn are reinvested or “rolled over” into another retirement account.
- **Capital Gains** – Questions were added to capture capital gains income.
- **Disability Questions** – The questions on Social Security and Supplemental Security Income (SSI) were expanded to clarify respondent confusion on disability income from each program.
- **Assets to Impute Interest and Dividends** – If respondents were unsure of income from an interest- or dividend-bearing account, they were asked to provide information on assets from which income could be imputed.

The responses in the new instrument were recoded to be used in the pre-redesign processing system. In some cases, this meant ignoring data. For example, income range follow-ups were not used to impute missing income. In other cases, this entailed combining responses with some potential loss of information. For example, for an individual with two interest-bearing accounts that provided an amount for one account but not for the other, no value was imputed for the missing income amount. In other cases, the redesign required no change to processing. For example, the dual-pass approach and tailored skip patterns do not require any changes to processing as only the order of the questions was changed.

Rothbaum (2015) compared 2013 income estimates from the traditional and redesigned samples. He found increases in the aggregates for total income (4.2 percent), interest (113 percent), disability benefits (36.4 percent), public assistance (28.8 percent), and retirement income (21.9 percent). There were declines in farm self-employment income (42.1 percent), veterans’ benefits (23.1 percent), and dividends (20.1 percent).

In their analysis of poverty differences, Mitchell and Renwick (2015) found evidence of sample differences. For example, child poverty was higher in the redesign, but so was the share of children living in families with female householders. They also suggest that the increase in public assistance receipt in the redesign could indicate a larger share of low income households.

### **Changes to the Processing System**

In order to fully utilize the income data from the redesigned instrument, the processing system has been updated. As a part of that update, additional modifications were also made to address issues in or improve upon the prior processing system. In this section, I first list the changes made to the processing system, and then discuss each in detail. The processing changes made include:

- **Earnings Ranges used in Imputation** – The earnings imputation model was modified to use the information from the unfolding brackets in the income range follow-up questions.

- **Other Income Edit and Imputation Overhaul** – For all income types, except wage and salary earnings and self-employment earnings, the imputation system was overhauled to include more variables in the imputation model, impute income at a more fine-grained level, and to utilize the income range responses. Hard-coded adjustment factors that increased imputed interest income were removed.
- **Withdrawals from Defined-Contribution Benefit Plans** – The processing system was updated to edit and impute withdrawals and rollovers from defined-contribution retirement plans.
- **Capital Gains** – The edit and imputation system was updated to process responses on capital gains.
- **Mortgage Imputation** – Imputation of mortgage and house value no longer use information from the American Housing Survey (often from many years earlier) for imputation.
- **Means-Tested Benefit Caps Removed** – Hard-coded household income caps, that prevented imputation of means-tested benefits to higher income households, were removed. For energy assistance benefits, these caps also eliminated program benefits from respondents.
- **Income Allocation Flags** – The income allocation flags were updated to provide more information about the quality of the imputation as well as greater clarity about which income items were imputed for supplement non-respondents.
- **Increased Top-Codes for Some Income Types** – Fixed nominal value top codes have declined in real value over time due to inflation. For some income items, such as rental and retirement income, the top codes were increased.
- **Various Other Small Fixes to Income Items** – During the updating process, we found issues with the income edits that were corrected. This includes minor issues such as changing variable names to have a more consistent naming convention to fixes to income recodes.
- **Changes to Demographic Edits** – Although not a part of the income update, changes to demographic edits can affect income. For example, marital status and spouse characteristics are used in income imputation models. The inclusion of same-sex married couples can, therefore, impact income imputation.

### *Earnings Ranges used in Imputation*

The CPS ASEC includes questions on earnings from the longest job and other wage and salary, self-employment, and farm self-employment earnings. For each earnings question, non-respondents to the value question were asked to provide earnings values in three ranges: 1) less than \$45,000, 2) \$45,000 to \$60,000, and 3) \$60,000 or more. For those in the bottom bracket, they were asked if their earnings fell in the following three ranges: 1) less than \$15,000, 2) \$15,000 to \$30,000, and 3) \$30,000 or more.

The earnings imputation module was changed to use the brackets for earnings from the longest job only.<sup>2</sup> For those who provided an earnings range in one of the five possible brackets after completing

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<sup>2</sup> We chose to use only ranges from earnings from the longest job because including multiple bracket responses would have required a more complete overhaul of the imputation system. Furthermore, including four possible sets of range brackets in the hot deck model, on top of the demographic and social characteristics already included, would have resulted in some very sparse imputation cells by increasing the number of cells by a factor of 625.

both questions (if in the initial lowest bracket), the brackets were included in the imputation process. The imputation model was modified so that the income ranges were used in nearly all cases when they were reported. The imputation flag for earnings from the longest job was also modified to indicate when brackets were used in the imputation process.

#### *Other Income Edit and Imputation Overhaul*

The module for editing and imputing other income types (besides earnings) was the section of the income processing system that was most affected by the redesign.

In many cases, multiple income questions are possible for income from a given income type. For example, unemployment compensation is collected from questions on federal, supplemental, or union unemployment benefits. After the redesign, Social Security income is collected from separate questions on social security disability and social security retirement income. To improve the imputation and utilize the non-response follow-up ranges, income is now imputed for each income response for a given income type.

The CPS ASEC uses a variation of the cell hot deck imputation method. Under this method values are allocated to non-respondents of a particular question by drawing from the values of “similar” respondents. Individuals are defined as similar if they match each other on all of the characteristics defined in the model. As an example, suppose the hot deck includes race (White/non-White) and gender (male/female) as the model characteristics. Suppose there is one White female non-respondent and three White female respondents with values of \$1, \$5, and \$100. To impute a value for the non-respondent, a random respondent would be selected. If the first respondent were selected, the imputed value would be \$1.

One critique of the existing hot deck approach is that it suffers from match bias (Bollinger and Hirsch, 2006; Hirsch and Schumaker, 2004). Match bias is present when the exclusion of a predictor from the model biases estimates that result from using imputed data. This can bias both conditional and unconditional statistics (Hokayem, Raghunathan, and Rothbaum 2018). To address these concerns to the extent possible, imputation for each income type in this module was updated to include more variables and more match levels.

To select which variables to include in the updated imputation model for a given income type we used a random forest technique. Potential imputation model variables are chosen at random and used to predict the variable to be imputed, for example social security income. This process is repeated and potential model variables are ranked according to two random forest ranking criteria: mean decrease in impurity and Gini importance using the RandomForest R package (Liaw, 2018). These methods rank how much the inclusion of each covariate affects the quality of the prediction of the variable of interest (relative to other potential covariates). We ordered the potential imputation model variables by averaging ranks across the separate methods. We then selected cutoffs between model levels to balance improved model fit with having a reasonable number of matches at each level.

As an example, the prior imputation model for Social Security income included seven variables: age, gender, marital status, race education, worker status, and pension type. The new imputation model for Social Security includes 14 variables: age, household income, gender, relationship to household head, reason not working, marital status, disability status, transfer income status, presence of children, labor force status of spouse, education, reason for receipt of social security, race, and earnings.

For each other income item, range responses were also used in the imputation, when possible (including in the aforementioned Social Security income example). Additionally, each income item was imputed sequentially to allow for greater inclusion of processed income types in the models for income items imputed after.

In the prior processing system, imputed interest income was increased by a constant factor based on socioeconomic and demographic characteristics to remedy a shortfall in aggregate interest income (Rothbaum 2015b). That adjustment was eliminated from the updated processing system as it was based only on the aggregate shortfall, not an analysis of individual under-reporting.

Since the 1988 CPS ASEC, interest income has included interest earned on retirement accounts.<sup>3</sup> To preserve consistency in the time series, official income and poverty statistics will include interest earned from retirement accounts, as has been the case since the 1988 CPS ASEC and that income will be included in the summary income values at the person, family, and household level (ptotval, ftotval, and htotval). However, because that money is not directly accessible for current consumption for most households, we have provided variables for researchers to use if they would like to make different assumptions about income and resources available to households. This is possible because the redesigned instrument asks for interest earned from each account separately, as opposed to in a single question as in the traditional instrument.

#### *Withdrawals from Defined Contribution Benefit Plans*

The updated processing system includes specific edits for defined-contribution retirement accounts. In the redesigned instrument, respondents are asked about withdrawals from defined-contribution accounts. For those that took withdrawals, there is a follow-up about whether the withdrawals are rolled over into another retirement account. The withdrawals are imputed using the same approach discussed above. For individuals that report rollovers, but not the amount of the rollover, the allocation variable is the share of the withdrawal that is rolled over. Withdrawals net of rollovers are included in money income variables (ptotval, ftotval, and htotval), which are used to calculate many income and poverty statistics.

#### *Capital Gains*

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<sup>3</sup> In the 1988 questionnaire, the interest question specifically mentioned checking and savings accounts, money market funds, bonds, treasury notes, Individual Retirement Accounts (IRAs), certificates of deposits or any other investments which pay interest. The 1988 questionnaire can be found at <https://www.nber.org/cps/cpsmar88.oldformat.pdf>.

In the old processing system, information on capital gains income was not edited, imputed due to non-response, nor released to the public, because the questions did not exist on the traditional instrument. The processing system was updated to edit and impute capital gains income during the Other Income Edit described above. However, capital gains are not included in money income or used in calculation of official income and poverty statistics.

### *Mortgage Imputation*

Under the earlier processing system, imputation for mortgage- and property value-related questions was done using the American Housing Survey (AHS) using the cell hot deck approach. However, this resulted in a data lag where data from an earlier year's AHS was used. At the time, this was done to impute data from the AHS for questions not asked in the CPS ASEC. In the updated processing system, these additional variables are no longer needed. Therefore, in order to remove the processing dependency on another survey and eliminate the lag that would be present in the imputed data, the new system imputes values for these variables from respondents in the CPS ASEC.

### *Means-Tested Benefit Caps Removed*

Under the previous processing system, various income caps were placed on the receipt of means-tested benefits, including for the Supplemental Nutrition Assistance Program (SNAP), energy assistance benefits, free or reduced price school lunches, and public housing assistance. For each of these benefits, non-respondents with household income above a given threshold were ineligible for imputed benefits. However, research using administrative data has shown benefit receipt above the imputation cutoffs (Stevens, Fox, and Heggeness, 2018). As a result, the imputation cutoff was removed in the updated processing system so that the probability of benefit receipt should be the same for respondents and non-respondents, conditional on the characteristics in the hot deck models.

Furthermore, for energy assistance, a hard cutoff was present in the processing system which edited responses for higher income households to remove their reported energy assistance benefits. This cap was removed.

### *Income Allocation Flags*

There are two forms of non-response possible for income items in the CPS ASEC: item non-response and supplement non-response. Item non-response is when an individual does not respond to a particular income question. Supplement non-response is when an individual does not provide enough information in the entire income supplement of the CPS ASEC. Under item non-response, values are imputed for individual income items as noted above. Under supplement non-response, all income items are imputed together by matching to another individual using characteristics drawn largely from responses to the basic CPS questionnaire.

In the previous processing system, a data user would need to look at two imputation flags to determine if a particular income item was imputed: the item allocation flag (*i\_ernval* for earnings from the longest

job) and the supplemental allocation flag (fl\_665, described as “person match, 665” in the public-use documentation). As a result, many data users were unaware of the imputations from supplement non-response and did not properly account for them in their analysis if they were concerned about non-response bias. In the updated processing system, the item imputation flags contain a value that indicates supplement non-response and imputation.

For composite variables, which are created using information from several responses, the imputation flags also contain information on the underlying variables, which are not available on the public-use file. For composite reciprocity variables (such as receipt of interest income), the composite imputation flags note whether some or all of the underlying variables were imputed. For composite value variables (such as the amount of interest income), the imputation flags indicate what share of the total income from the summed variables is imputed (in 25 percent increments).

The imputation flags have also been updated to provide more information. For value variables, the imputation flags contain information on the quality of the match, where match level 1 indicates more variables were used in the imputation model than match level 2, etc., with the match level indicated in the data dictionary. Additionally, the imputation flags contain information on whether ranges were used in the imputation. For example, if a non-respondent indicated that they had less than \$15,000 in earnings from the longest job, the imputed value would be less than \$15,000 and the imputation flag would indicate that a range was used.

Table 1 shows how frequently ranges were used by income item in the 2017 updated file.<sup>4</sup> For earnings from the longest job (ern\_val), 73 percent of item non-respondents were imputed using a range. Overall, 50 percent of all missing income items due to item non-response were imputed using ranges. If we include supplemental non-response imputation (where no ranges are available), 34 percent of all income imputations used ranges.

#### *Increased Top Codes for Some Income Types*

Income values on CPS ASEC are subject to a top code, which determines the maximum possible value on the file, both the public use and internal files. For example, the earnings top code has been (and continues to be) about 1.1 million dollars. The real value of these top codes has declined over time so that a greater share of respondents falls above the top code than is preferred. As a result, we increased the top codes for rental income, retirement income (defined-benefit pensions, defined-contribution withdrawals, and annuities), interest income, dividends, financial assistance, and other income from \$99,999 to \$999,999. For government transfers and means-tested program benefits, the top codes were increased to their maximum value (or a rounded number relatively close to the current statutory maximum).

#### *Various Other Small Fixes*

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<sup>4</sup> I use the naming convention of legacy file to refer to data processed under the legacy processing system and updated file to refer to data processed using the updated processing system.



Various other fixes and improvements were also made to the processing system. These fixes are too minor and numerous to detail here. We will give several examples here to give a sense for the types of small changes made.

Several variable names were changed to make them consistent with the naming conventions used on the file, such as the letter “h” preceding the variable name for household level variables.

An error was found in the allocation of household SNAP benefits to subfamilies in the household that was corrected (the family market value of SNAP benefits, F\_MV\_FS).

An error was found in the calculation of family income for subfamilies. In cases where a primary family member has a loss in at least one income type (self-employment, farm self-employment, or rental income) and the subfamily had zero income, then the subfamily was incorrectly assigned an income of \$1.<sup>5</sup>

We also found evidence of interviewer and respondent confusion when reporting pension income. After the redesign, there was a large increase in the number of cases with two sources of pensions with the exact same reported income value. In reviewing the interview logs and the data, it became clear that in the vast majority of these cases, the duplicate incomes were due to a difference between how pension sources were recorded on the instrument and how other income types with multiple possible sources were recorded. Field representatives appeared to be inadvertently recording a second pension source when they intended to select “No” to receipt of pension income from a set of possible sources. In the follow-up amount questions, the respondent was reporting the same amount as for the first pension source. We implemented an edit to address these cases in the 2017 updated (research) file and 2018 updated (bridge) file. To eliminate this confusion going forward, we also changed the 2019 instrument so that pension source reporting matched the reporting of other income types with multiple possible sources.

### *Changes to Demographic Edits*

Separate from edits to the income items, the processing of demographic and family variables was updated. These changes would primarily affect income through the imputation system. For example, marital status is used as a match variable in several imputation models. The new instrument and demographic edits allow for same-sex married couples. This will affect the imputations as it affects which respondents can be matched with a given non-respondent. It also affects income estimates as households are reclassified as married couple households that would have been non-married households or non-family households.

## **Results**

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<sup>5</sup> This affected a very small number of subfamilies. The error occurred because we assign \$1 to income recodes where a gain and a loss sum to \$0. For example, if a person has \$1,000 in wage income and has a \$1,000 loss in self-employment, we would recode their total income to be \$1 to indicate that they had income and a loss rather than \$0.

In this section, we examine income estimates using responses from the same year, but processed with the earlier processing system (legacy) and the updated processing system (updated).

### *2017 Comparison of the Legacy and Updated Files (Income in 2016)*

First, we show the percent differences in individual income by type and overall in Table 2. The first column shows the percent difference of the number of people with each income type. The primary differences to reciprocity are in property and retirement income. There were small increases in the number of people with dividends and rental income.<sup>6</sup>

There was a 4.2 percent increase in the number of people with retirement income. However, for pension income, there was a decline in reciprocity for each category reported (company or union, government, and military). This is due, in large part, to the fix for erroneous reports of multiple pension sources with the same income value. For other types of retirement income, the updated file estimates higher levels of reciprocity than the legacy file, by 3.7 percent and 73.7 percent respectively for annuities and distributions from defined-contribution retirement plans.

Table 2 also shows distributional statistics of the income distribution by type, including linear interpolations of income at the 10<sup>th</sup>, 25<sup>th</sup>, 50<sup>th</sup>, 75<sup>th</sup>, 90<sup>th</sup>, and 95<sup>th</sup> percentiles, the mean, and aggregate income. These income distribution statistics may have changed for a variety of reasons. However, it is very difficult to disentangle the contribution of a single processing or imputation change to the distribution of a given income type given the number of changes made simultaneously to the processing system. The new imputation system will change the income distribution because: 1) any change to the system will result in a new random draw of income for imputations, and 2) the new hot deck match levels and use of range brackets will change which respondents match with a given non-respondent. Furthermore, changes to how individual income items were edited can also affect the distribution. For example, non-response to individual interest questions (checking, savings, money-market interest, etc.) were imputed separately in the updated processing system, but not in the legacy system. Finally, increases to the maximum value of several income items will affect incomes at the top of the distribution as well as mean and aggregate income.

For total income (ptotval), income in the updated file is lower at the 10<sup>th</sup> percentile (3.9 percent) but higher at the 95<sup>th</sup> percentile as well as at the mean. Several income types were lower at multiple percentiles, including Social Security, Supplemental Security Income (SSI), public assistance, disability benefits, dividends, and retirement income. Others were up across multiple percentiles, such as non-farm self-employment earnings, interest, and rent and royalties. Earnings increased at the 10<sup>th</sup> and 25<sup>th</sup> percentiles.

The final columns of Table 2 show the aggregate income in each income type. Aggregate income was higher overall (1.4 percent), as well as for each source of property income, annuities and distributions from defined-contribution retirement plans (401(k)s, IRAs, etc.), non-farm self-employment, and overall

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<sup>6</sup> The percent difference in the number of people with dividends was not statistically different from the percent difference in the number of people with rental income.

retirement income. Aggregate income was down for Social Security, SSI, public assistance, and government sources of defined-benefit pension income (federal, military, and state and local pensions).

Next, we analyze the household income distribution in Tables 3-7. Each table shows the household income at a given percentile, overall and by various demographic characteristics. Table 3 shows median household income and corresponds to the statistics shown in our annual Income and Poverty Report (Fontenot, Semega, and Kollar, 2018). At the median, only a few of the analyzed groups experienced statistically significant changes in household income: Hispanics, non-citizens and households of those aged 25-34 and 65 and over.

At the 10<sup>th</sup> percentile, household income was lower in the updated file for family households headed by males or females with no spouse present<sup>7</sup> and households of those aged 65 and over. However, household income was higher at the 10<sup>th</sup> percentile for households of those aged 55 to 64, for the foreign born and naturalized citizens.

At the 25<sup>th</sup> percentile, household income was lower in the updated file for family households headed by males with no spouse present and male-headed non-family households, Hispanics, and households of those aged 25 to 34. Household income was higher at the 25<sup>th</sup> percentile for households of those aged 55 to 64 and in the West.

The largest number of statistically different income estimates between the two files are at the top of the distribution, shown in Table 7. At the 95<sup>th</sup> percentile, household income is 3.2 percent higher in the updated file. It is higher for many subgroups, including family households, female non-family households, Whites, Asians, many age groups, the native born, foreign-born citizens, in all four census regions, and inside Metropolitan Statistical Areas. Household income is lower at the 95<sup>th</sup> percentile in the updated file for male non-family households and non-family households overall.

Tables 3-7 also show the earnings at a given point in the distribution overall and by gender of 1) all workers and 2) full-time year-round workers as well as the female-to-male earnings ratio for each. These estimates are primarily affected by the inclusion of income brackets in the imputation model and changes to the demographic edits, which will affect hot deck matches in the imputation system.

From Table 3, median earnings are higher for full-time, year-round workers overall and for women. The female-to-male earnings ratio is also higher in the updated file. For all workers, median earnings is higher only for women.

At the different percentiles analyzed, the female-to-male earnings ratio for full-time, year-round workers is higher at the 10<sup>th</sup>, 50<sup>th</sup>, and 75<sup>th</sup> percentiles. For all workers, the female-to-male earnings ratio is higher at the 10<sup>th</sup>, 25<sup>th</sup>, and 75<sup>th</sup> percentiles.

### *2018 Comparison of the Legacy and Updated Files (Income in 2017)*

Table 8 shows person income statistics by income type for the 2018 legacy and updated files. For the retirement income items, the number of people with income follows the same pattern as in 2017: up for retirement income overall, annuities and defined-contribution plan withdrawals and down for company

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<sup>7</sup> These two groups were affected by the inclusion of same-sex marriages in the demographic edits.

or union and government retirement pensions. For 2017, there was a slight decline in the number of people with income, a larger decline in farm self-employment earners, and increases in those with public assistance, survivor benefits, and rents, royalties, estates or trusts.

Aggregate income increased overall and for disability benefits, interest, dividends, rents, royalties, estates or trusts, and retirement income (as well as various subcomponents of retirement income). Aggregate income declined for social security, SSI, and several subcomponents of retirement income.

Tables 9-13 show household income distribution statistics by subgroup as well as earnings for different types of workers (male/female, full-time, year-round/all workers). As for 2016, estimates for 2017 from the legacy and updated files differ for a small share of subgroups analyzed at the 10<sup>th</sup>, 25<sup>th</sup>, 50<sup>th</sup>, and 75<sup>th</sup> percentiles. At the 95<sup>th</sup> percentile, more than half of the median household income subgroups analyzed have statistically significantly more income in the updated file.

### *Impact of Top-Code Changes*

Many of the differences in income estimates are at the top of the distribution. We can test how much of this is due to the increased top codes as opposed to other processing changes by imposing the legacy top codes on the updated processing system data. In Table 14, we compare inequality statistics across three 2018 files: 1) the file produced with the legacy processing system, 2) the updated file with the top codes from the legacy processing system, and 3) the updated file with the new top codes.

With the top codes held constant, the majority of the share and inequality statistics are not statistically significantly different across the files.<sup>8</sup> However, comparing the updated file with the legacy top codes and the updated file, all of the share and inequality estimates are significantly different. If we decompose the change in the point estimates from the legacy to updated files, in each case, the share of the change explained by the increased top codes is greater than half.<sup>9</sup>

### *Year-to-Year Comparisons*

Finally, we analyze differences in the 2016 to 2017 year-to-year comparisons of real household median income between the legacy and updated files in Table 15. There are a small number of cases where a statistically significant difference in the legacy files is not statistically significant in the updated files or vice versa, including overall, for 15-24 and 45-54 year-olds, the native born, and inside metropolitan statistical areas. However, six of the year-to-year differences are statistically different: for male non-family households, Whites, Blacks, households in the West, inside metropolitan statistical areas, and inside principal cities.

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<sup>8</sup> When comparing the updated file with legacy top codes and the legacy files, the share of income in the third, fourth, and fifth quintiles are statistically different as is the Gini coefficient.

<sup>9</sup> This is merely an accounting exercise to decompose the statistically significant changes. No statistical significance is implied or has been tested.

## **Conclusion**

In summary, the updated processing and imputation system affected the distribution of many income items at the individual level. The distribution of household income was generally not statistically different as a result of the edits. However, at the top of the distribution, household income was higher. Household income changed below the 95<sup>th</sup> percentile for a small set of subgroups. The redesigned processing system also slightly narrowed the female-to-male earnings gap. Finally, the redesigned system had a statistically significant impact on a small number of year-to-year comparisons.

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**Table 1: Use of Ranges in Income Value Imputations**

Income Type	Item Response and Non-Response			Including Supplement Non-Response Items	
	Count Imputed		Share with Range	Count Imputed	Share with Range
	With Range	Overall			
Annuities	200	600	0.31	850	0.22
Capital Gains	1,200	3,300	0.38	4,300	0.29
Disability Benefits	150	500	0.32	800	0.21
Dividends	3,100	8,700	0.36	11,000	0.28
Distributions from Defined-Contribution Retirement Plans	450	2,400	0.20	3,300	0.14
Earnings (Longest Job)	16,000	21,500	0.73	37,500	0.42
Secondary Earnings (Self-Employment)	0	450	0.00	700	0.00
Secondary Earnings (Farm Self-Employment)	0	350	0.00	500	0.00
Secondary Earnings (Wages and Salary)	0	1,300	0.00	2,700	0.00
Financial Assistance	150	450	0.36	700	0.22
Interest	33,000	63,500	0.52	87,500	0.37
Education	350	700	0.48	1,300	0.27
Other Income	40	100	0.34	400	0.10
Public Assistance	70	200	0.33	400	0.18
Pension Income	900	3,200	0.28	4,700	0.19
Rental Income	500	2,200	0.22	3,300	0.15
SSI	250	700	0.37	1,200	0.21
Social Security	2,800	7,300	0.39	11,000	0.26
Survivor's Benefits	150	450	0.29	650	0.20
Veteran's Benefits	150	550	0.30	900	0.18
Unemployment Insurance	200	450	0.41	800	0.22
Workers' Compensation	60	150	0.40	250	0.23
<b>Overall</b>	<b>59,500</b>	<b>119,000</b>	<b>0.50</b>	<b>175,000</b>	<b>0.34</b>

Source: 2017 CPS ASEC Updated Processing System File

This table shows the count of income values imputed using expanding range brackets. For 73 percent of item non-respondents to earnings from the longest job (ern\_val), ranges were used in the imputation. Overall, 50 percent of item non-response imputation used ranges. Including supplemental non-response imputation, 34 percent of income values imputed used ranges (as no ranges were available for supplement non-respondents). Because of the already high dimensionality of the earnings imputation cell hot deck models (> 6 trillion cells in many cases), ranges for secondary earnings were not used in the imputation model.

**Table 2: Percent Difference in Individual Income Statistics between the 2017 Updated and Legacy Files by Income Type**

Characteristic	Total with Income		P10		P25		P50		P75		P90		P95		Mean income		Total Income	
	* Value	SE	* Value	SE	* Value	SE	* Value	SE	* Value	SE	* Value	SE	* Value	SE	* Value	SE	* Value	SE
Total	0.0	0.1	* -3.9	1.1	* 1.3	0.5	0.3	0.2	0.3	0.4	0.8	0.5	* 1.2	0.7	* 1.4	0.3	* 1.4	0.3
Earnings	0.0	0.1	* 1.7	0.9	* 1.8	0.6	0.3	0.2	0.0	0.1	-0.1	0.1	-0.2	0.5	0.4	0.4	0.4	0.3
Wages and Salary	0.0	0.1	1.1	0.9	0.8	0.6	* 0.4	0.2	-0.1	0.2	-0.1	0.1	-1.1	1.5	0.1	0.4	0.1	0.4
Nonfarm Self-Employment	-0.2	0.4	* 3.3	2.0	6.2	5.6	* 6.1	3.6	1.6	2.8	1.5	3.6	7.1	6.4	* 6.4	2.8	* 6.2	2.8
Farm Self-Employment	-1.5	1.3	2.4	1.8	2.4	1.8	2.4	1.8	15.6	14.3	1.0	5.2	-5.9	12.1	7.1	5.4	5.5	5.3
Social Security	0.0	0.2	* -12.3	1.2	* -2.0	0.5	-0.4	0.4	* -0.6	0.3	0.4	0.3	* 0.5	0.3	* -1.3	0.3	* -1.3	0.4
SSI (Supplemental Security Income)	0.5	0.9	* -18.6	2.9	* -17.7	2.8	* -1.3	0.4	-0.2	0.3	0.1	1.7	-0.8	2.0	* -2.6	0.9	* -2.2	1.2
Public Assistance	0.1	1.8	* -7.3	2.6	* -7.3	2.6	* -11.0	4.0	* -8.7	3.3	-4.8	3.3	-1.6	4.1	* -6.5	2.2	* -6.4	2.9
Veterans Benefits	-1.3	1.3	2.7	4.9	5.8	4.3	-1.0	2.6	-1.6	2.4	-0.6	0.6	-0.5	1.6	-0.8	2.1	-2.1	2.3
Survivor Benefits	-1.0	1.4	-4.4	5.0	-2.8	4.6	0.3	3.8	2.9	3.6	3.6	6.1	10.4	7.7	3.9	3.4	2.9	3.5
Disability Benefits	0.6	1.4	* -7.7	4.4	* -12.6	6.4	* -6.6	3.2	-4.3	2.9	-6.3	7.3	-5.2	4.8	* -5.5	3.0	-4.9	3.3
Unemployment Compensation	0.7	1.4	-3.6	2.4	-3.6	2.4	* -4.8	2.3	-1.9	1.8	-1.5	1.4	-1.6	2.3	* -3.2	1.6	-2.5	2.0
Workers Compensation	* 4.3	2.4	4.1	6.1	6.4	8.7	1.1	7.1	-8.2	5.4	-2.2	2.9	3.2	5.6	-2.9	3.4	1.3	4.2
Property Income	-0.1	0.2	* 4.3	0.3	* 4.3	0.3	* 4.3	0.3	* 4.3	0.3	* 16.9	2.2	* 6.6	2.0	* 18.1	2.4	* 18.0	2.4
Interest	-0.1	0.2	* 5.1	0.2	* 5.1	0.2	* 5.1	0.2	* 5.1	0.2	* 38.4	3.0	* 14.2	2.6	* 15.1	2.7	* 15.0	2.7
Dividends	* 1.4	0.5	* -1.9	0.6	* -1.9	0.6	* -1.9	0.6	* -14.1	3.9	* -4.5	2.3	-2.2	2.5	* 13.0	4.9	* 14.6	5.1
Rents, Royalties, Estates or Trusts	* 1.9	0.8	* 4.1	1.7	* 4.1	1.7	* 14.1	5.9	* 11.7	3.6	5.2	5.8	2.2	6.5	* 27.8	5.6	* 30.2	6.1
Retirement Income	* 4.2	0.5	* -6.8	2.2	* -4.3	1.9	* -5.6	1.8	* -3.8	1.2	-2.4	1.5	-1.8	2.4	1.7	1.4	* 6.0	1.6
Company or Union Retirement	* -4.2	0.7	-2.7	2.8	-0.9	2.3	1.3	2.0	-2.2	1.5	2.5	2.3	3.4	2.4	* 6.4	2.4	1.9	2.4
Federal Government Retirement	* -5.8	1.9	* -27.0	8.7	* -20.4	4.9	* -9.1	2.9	* -12.4	3.5	* -9.1	4.7	-10.8	7.4	* -9.8	2.6	* -15.0	3.0
Military Retirement	* -18.1	2.6	* -48.9	8.6	* -28.2	6.0	* -11.9	3.5	0.1	5.3	* 4.5	2.4	11.9	9.2	-1.1	4.0	* -19.0	4.1
State or Local Government Retirement	* -11.6	1.3	* 13.5	6.4	6.6	4.7	2.5	2.5	2.4	2.2	3.6	2.7	3.3	3.1	* 4.6	1.8	* -7.5	2.0
Annuities	* 3.7	1.8	0.0	4.6	0.0	4.6	4.5	3.6	10.4	8.1	-1.3	4.1	0.7	6.2	5.5	4.5	* 9.4	5.2
IRA, Keogh, or 401(K)	* 73.7	3.2	-2.9	3.5	-2.9	3.6	0.9	2.5	-2.6	4.9	-7.7	11.3	2.1	3.7	* 8.5	3.9	* 88.4	7.7

For information on confidentiality protection, sampling error, nonsampling error, and definitions, see [www2.census.gov/programs-surveys/cps/techdocs/cpsmar17.pdf](http://www2.census.gov/programs-surveys/cps/techdocs/cpsmar17.pdf)

Source: U.S. Census Bureau, Current Population Survey, 2017 Annual Social and Economic Supplement.

Standard errors calculated using replicate weights. P10, P25, etc. indicate linear interpolated percentile (10<sup>th</sup>, 25<sup>th</sup>, etc.). SE indicates standard error. Asterisks indicate statistical significance at the 10 percent level.



**Table 3: Comparison of Household Income under the 2017 Legacy and Updated Files, 2017: Median**

(Income in 2016 dollars. Households and people as of March of the following year. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see [www2.census.gov/programs-surveys/cps/techdocs/cpsmar17.pdf](http://www2.census.gov/programs-surveys/cps/techdocs/cpsmar17.pdf))

Characteristic	Legacy			Updated			Percentage change* in real median income (Updated less Legacy)	
	Number (thousands)	Median income (dollars)		Number (thousands)	Median income (dollars)		Estimate	90 percent CI
		Estimate	90 percent CI		Estimate	90 percent CI		
<b>HOUSEHOLDS</b>								
All Households	126,200	59,040	7.17	126,300	59,210	748	0.3	0.65
<b>Type of Household</b>								
Family households	82,830	75,060	692	83,150	75,050	728	0.0	0.60
Married-couple	60,800	87,060	695	61,360	87,360	808	0.3	0.63
Female householder, no spouse present	15,570	41,030	871	15,400	40,640	808	-1.0	1.19
Male householder, no spouse present	6,452	58,050	2,172	6,388	56,830	1,395	-2.1	2.48
Nonfamily households	43,400	35,760	467	43,120	35,770	492	0.0	0.91
Female householder	22,860	30,570	603	22,740	30,800	621	0.8	1.28
Male householder	20,540	41,750	701	20,380	41,880	706	0.3	1.10
<b>Race<sup>2</sup> and Hispanic Origin of Householder</b>								
White	99,400	61,860	549	99,440	61,950	590	0.1	0.51
White, not Hispanic	84,390	65,040	839	84,400	65,440	754	0.6	0.68
Black	16,730	39,490	1,187	16,740	39,750	1,145	0.7	1.86
Asian	6,392	81,430	1916	6,384	80,880	2,561	-0.7	1.77
Hispanic (any race)	16,920	47,680	1,113	16,930	46,930	876	*-1.6	1.33
<b>Age of Householder</b>								
Under 65 years	94,430	66,490	580	94,480	66,180	612	-0.5	0.51
15 to 24 years	6,238	41,660	1,145	6,178	41,010	1,039	-1.6	1.79
25 to 34 years	20,110	60,930	802	20,220	60,020	1,180	*-1.5	1.19
35 to 44 years	21,500	74,480	1,834	21,450	73,880	1,968	-0.8	1.48
45 to 54 years	22,810	77,210	1,156	22,780	77,700	1,523	0.6	1.17
55 to 64 years	23,770	65,240	1,309	23,850	65,710	1,196	0.7	1.28
65 years and older	31,800	39,820	909	31,790	40,530	957	*1.8	1.48
<b>Nativity of Householder</b>								
Native born	107,200	59,780	691	107,200	60,050	633	0.5	0.65
Foreign born	19,030	55,560	1,190	19,040	55,020	1,324	-1.0	1.30
Naturalized citizen	10,050	63,890	2,628	10,070	63,740	2,550	-0.2	2.57
Not a citizen	8,978	48,070	1,733	8,967	46,910	1,340	*-2.4	1.89
<b>Region</b>								
Northeast	22,320	64,390	1,806	22,320	64,900	1,754	0.8	1.53
Midwest	27,360	58,300	1,476	27,360	58,330	1,627	0.1	1.27
South	48,060	53,860	1,160	48,090	53,680	1,264	-0.3	1.14
West	28,470	64,280	1,708	28,490	64,880	1,652	0.9	1.31
<b>Residence<sup>3</sup></b>								
Inside metropolitan statistical areas	108,200	61,530	533	108,200	61,700	510	0.3	0.44
Inside principal cities	42,270	54,670	1,242	42,290	54,790	1,161	0.2	1.05
Outside principal cities	65,900	66,330	765	65,910	66,470	768	0.2	0.67
Outside metropolitan statistical areas	18,060	45,800	1,012	18,070	45,720	962	-0.2	1.26
<b>EARNINGS OF FULL-TIME, YEAR-ROUND WORKERS</b>								
All Full-Time, Year-Round Workers	113,300	47,180	241	113,300	48,180	543	*2.1	0.83
Men with earnings	64,950	51,640	211	65,000	51,750	184	0.2	0.30
Women with earnings	48,330	41,550	246	48,330	42,010	285	*1.1	0.38
Female-to-male earnings ratio	N	0.805	0.005	N	0.812	0.006	*0.9	0.44
<b>EARNINGS OF ALL WORKERS</b>								
All workers	164,600	36,590	193	164,700	36,710	210	0.3	0.35
All men with earnings	86,890	42,220	234	86,950	42,440	439	0.5	0.75
All women with earnings	77,740	30,880	202	77,730	31,140	199	*0.8	0.39
Female-to-male earnings ratio	N	0.732	0.006	N	0.734	0.008	0.3	0.82

\*An asterisk preceding an estimate indicates change is statistically different from zero at the 90 percent confidence level.

N Not applicable.

<sup>1</sup> A margin of error is a measure of an estimate's variability. The larger the margin of error in relation to the size of the estimate, the less reliable the estimate. This number, when added to and subtracted from the estimate, forms the 90 percent confidence interval. Margin of errors shown in this table are based on standard errors calculated using replicate weights. For more information, see "Standard Errors and Their Use" at [www2.census.gov/library/publications/2017/demo/p60-259sa.pdf](http://www2.census.gov/library/publications/2017/demo/p60-259sa.pdf)

<sup>2</sup> Federal surveys give respondents the option of reporting more than one race. Therefore, two basic ways of defining a race group are possible. A group such as Asian may be defined as those who reported Asian and no other race (the race-alone or single-race concept) or as those who reported Asian regardless of whether they also reported another race (the race-alone-or-in-combination concept). This table shows data using the first approach (race alone). The use of the single-race population does not imply that it is the preferred method of presenting or analyzing data. The Census Bureau uses a variety of approaches. Information on people who reported more than one race, such as White and American Indian and Alaska Native or Asian and Black or African American, is available from the 2010 Census through American FactFinder. About 2.9 percent of people reported more than one race in the 2010 Census. Data for American Indians and Alaska Natives, Native Hawaiians and Other Pacific Islanders, and those reporting two or more races are not shown separately.

<sup>3</sup> For information on metropolitan statistical areas and principal cities, see <https://www.census.gov/programs-surveys/metro-micro/about/glossary.html>.

Note: Inflation-adjusted estimates may differ slightly from other published data due to rounding.

Source: U.S. Census Bureau, Current Population Survey, 2017 Annual Social and Economic Supplement, Legacy and Updated (Research) Files.

**Table 4: Comparison of Household Income under the 2017 Legacy and Updated Files: 10<sup>th</sup> Percentile**

(Income in 2016 dollars. Households and people as of March of the following year. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see [www2.census.gov/programs-surveys/cps/techdocs/cpsmar17.pdf](http://www2.census.gov/programs-surveys/cps/techdocs/cpsmar17.pdf))

Characteristic	Legacy			Updated			Percentage change* in real 10th Percentile income (Updated less Legacy)	
	Number (thousands)	10th Percentile income (dollars)		Number (thousands)	10th Percentile income (dollars)		Estimate	90 percent CI
		Estimate	90 percent CI		Estimate	90 percent CI		
<b>HOUSEHOLDS</b>								
All Households	126,200	13,650	248	126,300	13,720	244	0.5	1.7
<b>Type of Household</b>								
Family households	82,830	21,470	319	83,150	21,430	314	-0.2	0.94
Married-couple	60,800	28,830	563	61,360	28,900	590	0.2	1.40
Female householder, no spouse present	15,570	9,685	613	15,400	9,335	554	*-3.6	3.48
Male householder, no spouse present	6,452	18,990	1,464	6,388	17,740	1,283	*-6.5	4.56
Nonfamily households	43,400	9,227	211	43,120	9,138	228	-1.0	1.72
Female householder	22,860	8,583	223	22,740	8,511	244	-0.8	2.00
Male householder	20,540	10,310	318	20,380	10,210	316	-0.9	2.19
<b>Race<sup>2</sup> and Hispanic Origin of Householder</b>								
White	99,400	15,370	263	99,440	15,430	263	0.4	1.12
White, not Hispanic	84,390	15,950	307	84,400	16,030	306	0.5	1.26
Black	16,730	8,452	323	16,740	8,366	355	-1.0	2.43
Asian	6,392	18,300	1,857	6,384	17,190	1,560	2.2	6.46
Hispanic (any race)	16,920	12,290	481	16,930	12,160	409	-1.1	2.08
<b>Age of Householder</b>								
Under 65 years	94,430	15,240	373	94,480	15,420	323	1.2	1.38
15 to 24 years	6,238	9,293	1,488	6,178	9,063	1,463	-2.5	8.21
25 to 34 years	20,110	16,350	615	20,220	16,220	617	-0.8	2.37
35 to 44 years	21,500	19,280	1,137	21,450	19,450	1,098	0.9	2.92
45 to 54 years	22,810	17,350	968	22,780	17,290	839	-0.3	3.08
55 to 64 years	23,770	12,470	560	23,850	12,880	643	*3.3	3.18
65 years and older	31,800	11,850	272	31,790	11,580	277	*-2.3	1.71
<b>Nativity of Householder</b>								
Native born	107,200	13,810	258	107,200	13,820	258	0.1	1.30
Foreign born	19,030	12,640	650	19,040	13,050	690	*3.2	3.24
Naturalized citizen	10,050	13,520	1,090	10,070	14,280	1,023	*5.6	4.81
Not a citizen	8,978	11,910	747	8,967	11,930	813	0.2	3.92
<b>Region</b>								
Northeast	22,320	14,070	759	22,320	14,010	653	-0.4	3.47
Midwest	27,360	14,130	519	27,360	14,340	525	1.5	2.58
South	48,060	12,580	357	48,090	12,520	340	-0.4	1.93
West	28,470	15,090	547	28,490	15,210	546	0.9	2.46
<b>Residence<sup>3</sup></b>								
Inside metropolitan statistical areas	108,200	14,200	283	108,200	14,290	294	0.7	1.33
Inside principal cities	42,270	11,640	279	42,290	11,740	287	0.9	1.55
Outside principal cities	65,900	16,290	340	65,910	16,360	358	0.4	1.45
Outside metropolitan statistical areas	18,060	11,510	476	18,070	11,550	483	0.3	2.47
<b>EARNINGS OF FULL-TIME, YEAR-ROUND WORKERS</b>								
All Full-Time, Year-Round Workers	113,300	21,010	129	113,300	20,970	130	-0.2	0.48
Men with earnings	64,950	22,230	219	65,000	22,000	211	*-1.0	0.77
Women with earnings	48,330	19,750	350	48,330	20,010	272	1.3	1.42
Female-to-male earnings ratio	N	0.889	0.017	N	0.909	0.014	*2.4	1.59
<b>EARNINGS OF ALL WORKERS</b>								
All workers	164,600	7,080	139	164,700	7,200	134	*1.7	1.46
All men with earnings	86,890	9,937	306	86,950	9,776	329	-1.6	2.67
All women with earnings	77,740	5,655	161	77,730	5,816	163	*2.9	1.83
Female-to-male earnings ratio	N	0.569	0.024	N	0.595	0.025	*4.5	3.17

\*An asterisk preceding an estimate indicates change is statistically different from zero at the 90 percent confidence level.

N Not applicable.

<sup>1</sup> A margin of error is a measure of an estimate's variability. The larger the margin of error in relation to the size of the estimate, the less reliable the estimate. This number, when added to and subtracted from the estimate, forms the 90 percent confidence interval. Margin of errors shown in this table are based on standard errors calculated using replicate weights. For more information, see "Standard Errors and Their Use" at [www2.census.gov/library/publications/2017/demo/p60-259sa.pdf](http://www2.census.gov/library/publications/2017/demo/p60-259sa.pdf)

<sup>2</sup> Federal surveys give respondents the option of reporting more than one race. Therefore, two basic ways of defining a race group are possible. A group such as Asian may be defined as those who reported Asian and no other race (the race-alone or single-race concept) or as those who reported Asian regardless of whether they also reported another race (the race-alone-or-in-combination concept). This table shows data using the first approach (race alone). The use of the single-race population does not imply that it is the preferred method of presenting or analyzing data. The Census Bureau uses a variety of approaches. Information on people who reported more than one race, such as White and American Indian and Alaska Native or Asian and Black or African American, is available from the 2010 Census through American FactFinder. About 2.9 percent of people reported more than one race in the 2010 Census. Data for American Indians and Alaska Natives, Native Hawaiians and Other Pacific Islanders, and those reporting two or more races are not shown separately.

<sup>3</sup> For information on metropolitan statistical areas and principal cities, see <https://www.census.gov/programs-surveys/metro-micro/about/glossary.html>.

Note: Inflation-adjusted estimates may differ slightly from other published data due to rounding.

Source: U.S. Census Bureau, Current Population Survey, 2017 Annual Social and Economic Supplement, Legacy and Updated (Research) Files.

**Table 5: Comparison of Household Income under the 2017 Legacy and Updated Files: 25<sup>th</sup> Percentile**

(Income in 2016 dollars. Households and people as of March of the following year. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see [www2.census.gov/programs-surveys/cps/techdocs/cpsmar17.pdf](http://www2.census.gov/programs-surveys/cps/techdocs/cpsmar17.pdf))

Characteristic	Legacy			Updated			Percentage change* in real 25th Percentile income (Updated less Legacy)	
	Number (thousands)	25th Percentile income (dollars)		Number (thousands)	25th Percentile income (dollars)		Estimate	90 percent CI
		Estimate	90 percent CI		Estimate	90 percent CI		
<b>HOUSEHOLDS</b>								
All Households	126,200	29,390	421	126,300	29,330	421	-0.2	0.84
<b>Type of Household</b>								
Family households	82,830	40,700	424	83,150	40,820	439	0.3	0.60
Married-couple	60,800	50,560	507	61,360	50,920	526	0.7	0.65
Female householder, no spouse present	15,570	21,180	565	15,400	21,080	564	-0.5	1.50
Male householder, no spouse present	6,452	34,760	1,592	6,388	32,810	1,622	*-5.6	3.33
Nonfamily households	43,400	17,100	269	43,120	17,090	269	-0.1	1.09
Female householder	22,860	15,380	340	22,740	15,470	340	0.6	1.50
Male householder	20,540	20,800	459	20,380	20,340	540	*-2.2	1.59
<b>Race<sup>2</sup> and Hispanic Origin of Householder</b>								
White	99,400	31,450	345	99,440	31,500	369	0.2	0.67
White, not Hispanic	84,390	32,680	605	84,400	33,060	660	12	1.21
Black	16,730	18,300	747	16,740	18,030	754	-14	2.40
Asian	6,392	40,100	2,546	6,384	41,090	2,156	2.5	3.70
Hispanic (any race)	16,920	25,520	582	16,930	25,190	562	*-1.3	1.25
<b>Age of Householder</b>								
Under 65 years	94,430	34,600	683	94,480	34,280	698	-0.9	1.11
15 to 24 years	6,238	22,030	1,115	6,178	21,880	1,010	-0.7	3.14
25 to 34 years	20,110	32,850	1,187	20,220	31,870	586	*-3.0	2.26
35 to 44 years	21,500	39,520	1,190	21,450	39,900	1,205	10	1.46
45 to 54 years	22,810	40,320	822	22,780	40,710	751	10	1.15
55 to 64 years	23,770	30,930	836	23,850	31,480	893	*1.8	1.55
65 years and older	31,800	20,840	405	31,790	20,700	446	-0.7	1.35
<b>Nativity of Householder</b>								
Native born	107,200	29,690	452	107,200	29,650	458	-0.1	0.91
Foreign born	19,030	27,570	871	19,040	27,530	782	-0.1	1.85
Naturalized citizen	10,050	31,220	1,007	10,070	31,450	1,001	0.7	1.86
Not a citizen	8,978	25,420	794	8,967	25,180	830	-0.9	1.75
<b>Region</b>								
Northeast	22,320	31,000	817	22,320	30,910	810	-0.3	1.36
Midwest	27,360	30,310	638	27,360	30,270	697	-0.1	1.30
South	48,060	26,840	451	48,090	26,710	442	-0.5	0.96
West	28,470	31,660	728	28,490	32,160	802	*1.6	1.33
<b>Residence<sup>3</sup></b>								
Inside metropolitan statistical areas	108,200	30,690	345	108,200	30,680	342	0.0	0.59
Inside principal cities	42,270	26,170	537	42,290	26,240	500	0.3	1.04
Outside principal cities	65,900	33,730	723	65,910	33,690	712	-0.1	1.28
Outside metropolitan statistical areas	18,060	23,380	692	18,070	23,190	731	-0.8	1.71
<b>EARNINGS OF FULL-TIME, YEAR-ROUND WORKERS</b>								
All Full-Time, Year-Round Workers	113,300	30,860	130	113,300	30,770	139	-0.3	0.30
Men with earnings	64,950	32,630	604	65,000	32,270	176	-1.1	1.50
Women with earnings	48,330	27,540	375	48,330	27,680	440	0.5	1.03
Female-to-male earnings ratio	N	0.844	0.017	N	0.858	0.013	1.6	1.90
<b>EARNINGS OF ALL WORKERS</b>								
All workers	164,600	19,240	325	164,700	19,590	315	*1.8	1.04
All men with earnings	86,890	23,020	469	86,950	22,680	420	*-1.5	1.34
All women with earnings	77,740	15,490	195	77,730	15,890	202	*2.6	0.76
Female-to-male earnings ratio	N	0.673	0.016	N	0.701	0.015	*4.1	1.60

\*An asterisk preceding an estimate indicates change is statistically different from zero at the 90 percent confidence level.

N Not applicable.

<sup>1</sup> A margin of error is a measure of an estimate's variability. The larger the margin of error in relation to the size of the estimate, the less reliable the estimate. This number, when added to and subtracted from the estimate, forms the 90 percent confidence interval. Margin of errors shown in this table are based on standard errors calculated using replicate weights. For more information, see "Standard Errors and Their Use" at [www2.census.gov/library/publications/2017/demo/p60-259sa.pdf](http://www2.census.gov/library/publications/2017/demo/p60-259sa.pdf)

<sup>2</sup> Federal surveys give respondents the option of reporting more than one race. Therefore, two basic ways of defining a race group are possible. A group such as Asian may be defined as those who reported Asian and no other race (the race-alone or single-race concept) or as those who reported Asian regardless of whether they also reported another race (the race-alone-or-in-combination concept). This table shows data using the first approach (race alone). The use of the single-race population does not imply that it is the preferred method of presenting or analyzing data. The Census Bureau uses a variety of approaches. Information on people who reported more than one race, such as White and American Indian and Alaska Native or Asian and Black or African American, is available from the 2010 Census through American FactFinder. About 2.9 percent of people reported more than one race in the 2010 Census. Data for American Indians and Alaska Natives, Native Hawaiians and Other Pacific Islanders, and those reporting two or more races are not shown separately.

<sup>3</sup> For information on metropolitan statistical areas and principal cities, see <https://www.census.gov/programs-surveys/metro-micro/about/glossary.html>.

Note: Inflation-adjusted estimates may differ slightly from other published data due to rounding.

Source: U.S. Census Bureau, Current Population Survey, 2017 Annual Social and Economic Supplement, Legacy and Updated (Research) Files.

**Table 6: Comparison of Household Income under the 2017 Legacy and Updated Files: 75<sup>th</sup> Percentile**

(Income in 2016 dollars. Households and people as of March of the following year. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see [www2.census.gov/programs-surveys/cps/techdocs/cpsmar17.pdf](http://www2.census.gov/programs-surveys/cps/techdocs/cpsmar17.pdf))

Characteristic	Legacy			Updated			Percentage change* in real 75th Percentile income (Updated less Legacy)	
	Number (thousands)	75th Percentile income (dollars)		Number (thousands)	75th Percentile income (dollars)		Estimate	90 percent CI
		Estimate	90 percent CI		Estimate	90 percent CI		
<b>HOUSEHOLDS</b>								
All Households	126,200	106,200	837	126,300	106,200	869	0.0	0.49
<b>Type of Household</b>								
Family households	82,830	124,700	1,136	83,450	125,600	1,173	*0.7	0.63
Married-couple	60,800	140,300	1,447	61,360	141,300	1,442	0.9	0.71
Female householder, no spouse present	15,570	72,840	1,928	15,400	71,200	1,511	*-2.3	1.46
Male householder, no spouse present	6,452	97,090	2,890	6,388	93,190	3,392	*-4.0	2.45
Nonfamily households	43,400	66,060	931	43,120	65,480	921	-0.9	0.96
Female householder	22,860	58,080	1,513	22,740	57,110	1,192	-1.7	1.71
Male householder	20,540	75,670	1,486	20,380	73,450	2,211	*-2.9	1.99
<b>Race<sup>2</sup> and Hispanic Origin of Householder</b>								
White	99,400	110,400	799	99,440	110,200	936	-0.2	0.52
White, not Hispanic	84,390	114,900	1,230	84,400	115,400	1,249	0.4	0.75
Black	16,730	73,370	2,315	16,740	74,000	1,988	0.8	1.92
Asian	6,392	145,500	3,365	6,384	142,700	6,059	-2.0	3.00
Hispanic (any race)	16,920	84,140	2,019	16,930	82,560	1,514	*-1.9	1.39
<b>Age of Householder</b>								
Under 65 years	94,430	114,900	1,145	94,480	114,900	1,201	0.1	0.65
15 to 24 years	6,238	67,570	2,017	6,178	65,450	1,847	*-3.1	2.14
25 to 34 years	20,110	99,950	2,038	20,220	99,030	2,410	-0.9	1.50
35 to 44 years	21,500	122,900	2,018	21,450	122,100	1,595	-0.6	1.02
45 to 54 years	22,810	132,300	2,252	22,780	134,000	2,806	1.3	1.38
55 to 64 years	23,770	117,000	2,537	23,850	118,800	2,750	1.6	1.62
65 years and older	31,800	76,330	1,351	31,790	77,050	1,447	0.9	1.22
<b>Nativity of Householder</b>								
Native born	107,200	107,000	908	107,200	107,100	975	0.1	0.55
Foreign born	19,030	101,500	1,356	19,040	101,100	1,303	-0.3	0.84
Naturalized citizen	10,050	114,600	3,533	10,070	113,300	3,767	-1.1	2.29
Not a citizen	8,978	86,710	2,230	8,967	85,230	2,805	-1.7	2.18
<b>Region</b>								
Northeast	22,320	117,900	2,892	22,320	118,800	2,856	0.8	1.46
Midwest	27,360	102,600	1,723	27,360	103,000	1,771	0.4	0.93
South	48,060	99,120	1,664	48,090	98,380	1,947	-0.7	1.17
West	28,470	113,700	2,384	28,490	114,700	2,900	0.9	1.23
<b>Residence<sup>3</sup></b>								
Inside metropolitan statistical areas	108,200	110,800	797	108,200	110,700	921	-0.1	0.46
Inside principal cities	42,270	101,800	1,071	42,290	101,300	1,175	-0.5	0.61
Outside principal cities	65,900	115,700	1,258	65,910	116,600	1,589	*0.8	0.70
Outside metropolitan statistical areas	18,060	82,100	1,680	18,070	81,370	1,852	-0.9	1.30
<b>EARNINGS OF FULL-TIME, YEAR-ROUND WORKERS</b>								
All Full-Time, Year-Round Workers	113,300	75,400	370	113,300	75,330	378	-0.1	0.33
Men with earnings	64,950	82,140	435	65,000	81,980	396	-0.2	0.35
Women with earnings	48,330	62,730	1,070	48,330	63,600	1,388	1.4	1.50
Female-to-male earnings ratio	N	0.764	0.013	N	0.776	0.017	*1.6	1.55
<b>EARNINGS OF ALL WORKERS</b>								
All workers	164,600	62,170	219	164,700	62,150	221	0.0	0.23
All men with earnings	86,890	72,880	1,445	86,950	72,250	413	-0.9	1.56
All women with earnings	77,740	51,810	266	77,730	52,290	255	*0.9	0.31
Female-to-male earnings ratio	N	0.711	0.014	N	0.724	0.005	*1.8	1.63

\*An asterisk preceding an estimate indicates change is statistically different from zero at the 90 percent confidence level.

N Not applicable.

<sup>1</sup> A margin of error is a measure of an estimate's variability. The larger the margin of error in relation to the size of the estimate, the less reliable the estimate. This number, when added to and subtracted from the estimate, forms the 90 percent confidence interval. Margin of errors shown in this table are based on standard errors calculated using replicate weights. For more information, see "Standard Errors and Their Use" at [www2.census.gov/library/publications/2017/demo/p60-259sa.pdf](http://www2.census.gov/library/publications/2017/demo/p60-259sa.pdf)

<sup>2</sup> Federal surveys give respondents the option of reporting more than one race. Therefore, two basic ways of defining a race group are possible. A group such as Asian may be defined as those who reported Asian and no other race (the race-alone or single-race concept) or as those who reported Asian regardless of whether they also reported another race (the race-alone-or-in-combination concept). This table shows data using the first approach (race alone). The use of the single-race population does not imply that it is the preferred method of presenting or analyzing data. The Census Bureau uses a variety of approaches. Information on people who reported more than one race, such as White and American Indian and Alaska Native or Asian and Black or African American, is available from the 2010 Census through American FactFinder. About 2.9 percent of people reported more than one race in the 2010 Census. Data for American Indians and Alaska Natives, Native Hawaiians and Other Pacific Islanders, and those reporting two or more races are not shown separately.

<sup>3</sup> For information on metropolitan statistical areas and principal cities, see <https://www.census.gov/programs-surveys/metro-micro/about/glossary.html>.

Note: Inflation-adjusted estimates may differ slightly from other published data due to rounding.

Source: U.S. Census Bureau, Current Population Survey, 2017 Annual Social and Economic Supplement, Legacy and Updated (Research) Files.

**Table 7: Comparison of Household Income under the 2017 Legacy and Updated Files: 95<sup>th</sup> Percentile**

(Income in 2016 dollars. Households and people as of March of the following year. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see [www2.census.gov/programs-surveys/cps/techdocs/cpsmar17.pdf](http://www2.census.gov/programs-surveys/cps/techdocs/cpsmar17.pdf).)

Characteristic	Legacy			Updated			Percentage change* in real 95th Percentile income (Updated less Legacy)	
	Number (thousands)	95th Percentile income (dollars)		Number (thousands)	95th Percentile income (dollars)		Estimate	90 percent CI
		Estimate	90 percent CI		Estimate	90 percent CI		
<b>HOUSEHOLDS</b>								
All Households	126,200	226,000	2,855	126,300	233,300	3,668	*3.2	106
<b>Type of Household</b>								
Family households	82,830	254,000	3,931	83,150	264,100	4,573	*4.0	137
Married-couple	60,800	276,400	5,914	61,360	286,700	4,959	3.8	162
Female householder, no spouse present	15,570	151,000	4,576	15,400	150,500	4,041	-0.3	2.2
Male householder, no spouse present	6,452	205,200	14,260	6,388	210,500	12,010	2.6	5.96
Nonfamily households	43,400	151,200	2,448	43,120	147,600	3,788	*-2.4	192
Female householder	22,860	125,900	5,051	22,740	129,800	4,403	*3.1	2.97
Male householder	20,540	172,800	5,809	20,380	166,500	5,965	*-3.6	3.16
<b>Race<sup>2</sup> and Hispanic Origin of Householder</b>								
White	99,400	231,300	3,422	99,440	240,200	4,021	*3.8	120
White, not Hispanic	84,390	240,200	3,846	84,400	250,600	3,242	*4.3	115
Black	16,730	158,000	4,417	16,740	159,800	4,574	12	2.37
Asian	6,392	276,000	10,580	6,384	289,600	17,230	*4.9	4.60
Hispanic (any race)	16,920	170,500	4,459	16,930	168,400	4,955	-12	2.42
<b>Age of Householder</b>								
Under 65 years	94,430	239,300	4,008	94,480	246,900	3,955	*3.2	120
15 to 24 years	6,238	144,500	8,628	6,178	138,500	8,031	-4.2	4.97
25 to 34 years	20,110	189,500	6,077	20,220	190,400	5,256	0.5	2.52
35 to 44 years	21,500	250,500	3,923	21,450	259,000	6,594	*3.4	2.00
45 to 54 years	22,810	273,600	7,829	22,780	280,700	7,860	*2.6	2.20
55 to 64 years	23,770	251,700	6,485	23,850	262,200	6,274	*4.2	2.12
65 years and older	31,800	181,700	5,231	31,790	190,300	5,323	*4.7	2.21
<b>Nativity of Householder</b>								
Native born	107,200	225,300	3,185	107,200	233,000	3,953	*3.4	119
Foreign born	19,030	232,100	7,899	19,040	235,200	8,295	13	2.64
Naturalized citizen	10,050	251,100	8,095	10,070	264,500	10,560	*5.4	3.22
Not a citizen	8,978	202,800	8,364	8,967	205,900	8,392	15	3.39
<b>Region</b>								
Northeast	22,320	253,400	7,535	22,320	266,200	8,776	*5.1	2.49
Midwest	27,360	210,200	4,820	27,360	220,300	5,400	*4.8	188
South	48,060	211,600	5,429	48,090	215,700	4,711	*2.0	180
West	28,470	246,100	7,305	28,490	251,500	6,661	*2.2	2.16
<b>Residence<sup>3</sup></b>								
Inside metropolitan statistical areas	108,200	236,200	2,869	108,200	243,900	4,162	*3.2	121
Inside principal cities	42,270	225,900	6,509	42,290	230,400	7,019	2.0	2.08
Outside principal cities	65,900	241,100	3,722	65,910	251,700	3,622	*4.4	124
Outside metropolitan statistical areas	18,060	166,900	3,502	18,070	168,000	4,727	0.6	1.96
<b>EARNINGS OF FULL-TIME, YEAR-ROUND WORKERS</b>								
All Full-Time, Year-Round Workers	113,300	151,900	347	113,300	151,900	350	0.0	0.14
Men with earnings	64,950	176,700	3,772	65,000	179,900	5,764	18	2.25
Women with earnings	48,330	121,900	716	48,330	122,500	4,289	0.4	2.65
Female-to-male earnings ratio	N	0.690	0.014	N	0.681	0.027	-1.3	3.51
<b>EARNINGS OF ALL WORKERS</b>								
All workers	164,600	140,700	1,294	164,700	140,400	1,822	-0.2	0.81
All men with earnings	86,890	156,100	5,332	86,950	155,700	6,005	-0.2	2.71
All women with earnings	77,740	106,300	2,106	77,730	107,500	3,777	11	2.29
Female-to-male earnings ratio	N	0.681	0.026	N	0.690	0.036	14	3.72

\*An asterisk preceding an estimate indicates change is statistically different from zero at the 90 percent confidence level.

N Not applicable.

<sup>1</sup> A margin of error is a measure of an estimate's variability. The larger the margin of error in relation to the size of the estimate, the less reliable the estimate. This number, when added to and subtracted from the estimate, forms the 90 percent confidence interval. Margin of errors shown in this table are based on standard errors calculated using replicate weights. For more information, see "Standard Errors and Their Use" at [www2.census.gov/library/publications/2017/demo/p60-259sa.pdf](http://www2.census.gov/library/publications/2017/demo/p60-259sa.pdf).

<sup>2</sup> Federal surveys give respondents the option of reporting more than one race. Therefore, two basic ways of defining a race group are possible. A group such as Asian may be defined as those who reported Asian and no other race (the race-alone or single-race concept) or as those who reported Asian regardless of whether they also reported another race (the race-alone-or-in-combination concept). This table shows data using the first approach (race alone). The use of the single-race population does not imply that it is the preferred method of presenting or analyzing data. The Census Bureau uses a variety of approaches. Information on people who reported more than one race, such as White and American Indian and Alaska Native or Asian and Black or African American, is available from the 2010 Census through American FactFinder. About 2.9 percent of people reported more than one race in the 2010 Census. Data for American Indians and Alaska Natives, Native Hawaiians and Other Pacific Islanders, and those reporting two or more races are not shown separately.

<sup>3</sup> For information on metropolitan statistical areas and principal cities, see <https://www.census.gov/programs-surveys/metro-micro/about/glossary.html>.

Note: Inflation-adjusted estimates may differ slightly from other published data due to rounding.

Source: U.S. Census Bureau, Current Population Survey, 2017 Annual Social and Economic Supplement, Legacy and Updated (Research) Files.

**Table 8: Percent Difference in Individual Income Statistics between the 2018 Updated and Legacy Files by Income Type**

Characteristic	Total with Income		P10		P25		P50		P75		P90		P95		Mean income		Total Income	
	* Value	SE	* Value	SE	* Value	SE	* Value	SE	* Value	SE	* Value	SE	* Value	SE	* Value	SE	* Value	SE
Total	* -0.1	0.1	0.0	0.9	* 1.8	0.4	* 0.6	0.2	-0.1	0.2	0.2	0.2	* 1.7	0.8	* 1.7	0.4	* 1.6	0.4
Earnings	0.0	0.1	* 5.5	1.3	* 1.1	0.3	* 1.4	0.6	* -0.4	0.3	-0.1	0.3	-0.2	0.8	0.0	0.4	0.0	0.4
Wages and Salary	-0.1	0.1	* 5.5	1.1	* 0.9	0.3	* 1.3	0.5	* -0.5	0.2	-0.1	0.3	-1.5	1.5	0.0	0.4	-0.1	0.4
Nonfarm Self-Employment	0.1	0.5	* 5.4	2.0	* 13.0	4.8	* 10.6	3.9	6.2	5.2	* 4.6	2.7	1.1	6.4	1.3	2.6	1.4	2.7
Farm Self-Employment	* -4.2	1.4	3.4	3.0	3.4	3.0	3.4	3.0	16.6	13.2	2.1	7.5	10.7	7.1	14.3	8.9	9.5	8.5
Social Security	0.1	0.2	* -13.5	1.3	* -2.4	0.4	-0.3	0.3	* -1.0	0.3	-0.5	0.4	0.6	0.6	* -1.7	0.3	* -1.5	0.4
SSI (Supplemental Security Income)	-0.7	1.0	* -20.4	3.5	* -15.0	3.5	* -1.5	0.6	-0.1	0.5	-1.9	2.2	* -3.1	1.6	* -3.4	1.2	* -4.1	1.5
Public Assistance	* 4.4	2.2	* -6.5	3.2	* -6.5	3.2	* -6.5	3.6	* -3.7	2.2	-1.6	2.5	1.2	2.6	* -5.7	2.6	-1.6	3.4
Veterans Benefits	0.0	1.5	0.7	5.3	-0.4	4.7	-3.5	2.7	-1.7	2.2	0.3	0.8	0.8	1.9	-0.1	2.1	-0.2	2.6
Survivor Benefits	* 3.9	1.6	-5.9	5.4	-5.2	5.7	-1.8	4.1	* -8.5	4.2	-3.3	6.9	-0.8	12.8	-3.8	3.1	-0.1	3.6
Disability Benefits	2.1	1.8	-0.2	5.3	3.3	7.9	* 6.2	3.0	0.1	2.8	11.6	7.5	1.1	3.6	4.6	2.8	* 6.8	3.4
Unemployment Compensation	0.3	1.4	-3.5	2.5	-3.5	2.5	-3.4	2.4	-2.3	2.3	-0.4	2.2	2.4	5.6	-1.3	2.2	-1.1	2.6
Workers Compensation	1.6	2.3	10.1	6.2	11.6	7.3	-0.5	5.9	-6.7	5.1	-1.5	6.4	-3.7	5.3	-2.8	4.2	-1.2	4.9
Property Income	-0.1	0.2	* 4.6	0.3	* 4.6	0.3	* 4.6	0.3	* 4.6	0.3	* 18.4	2.0	* 14.1	2.4	* 22.5	3.0	* 22.3	3.0
Interest	0.0	0.2	* 5.7	0.2	* 5.7	0.2	* 5.7	0.2	* 5.7	0.2	* 46.1	2.7	* 30.6	2.7	* 19.6	2.4	* 19.6	2.4
Dividends	0.9	0.5	* -1.8	0.7	* -1.8	0.7	* -1.8	0.7	* -11.9	4.6	-3.1	2.3	-0.4	2.4	* 8.8	4.4	* 9.7	4.5
Rents, Royalties, Estates or Trusts	* 2.2	0.9	* 3.4	1.7	* 3.4	1.7	* 11.5	4.5	* 7.5	2.3	* 6.4	3.4	6.6	8.0	* 43.0	9.6	* 46.1	9.7
Retirement Income	* 5.3	0.5	* -13.1	2.2	* -9.2	1.9	* -4.7	1.4	* -5.3	1.4	* -4.8	1.5	-3.0	2.6	* 3.5	1.7	* 9.0	1.9
Company or Union Retirement	* -4.5	0.8	* -4.8	2.5	-3.8	2.5	2.2	2.0	2.1	2.0	3.0	2.4	-0.2	2.2	* 7.4	2.3	2.6	2.2
Federal Government Retirement	* -10.5	2.1	* -33.9	13.5	* -11.8	4.2	* -11.7	4.8	-3.7	4.3	-5.3	4.6	-5.0	6.7	-4.3	2.7	* -14.3	3.0
Military Retirement	* -12.2	3.2	* -71.5	4.7	* -50.4	6.3	* -18.6	3.6	* -14.8	6.9	* -15.9	6.2	-2.3	6.8	* -18.2	3.5	* -28.2	4.4
State or Local Government Retirement	* -10.1	1.3	* -12.4	5.7	-5.9	3.9	* -7.8	4.0	-1.0	3.0	0.5	1.6	-0.5	2.8	* 6.3	3.7	-4.5	3.5
Annuities	* 4.6	1.7	* -8.1	3.6	* -8.1	3.6	* -9.7	3.9	-5.2	5.3	-9.3	8.1	-6.7	4.7	-1.2	4.7	3.4	5.2
IRA, Keogh, or 401(K)	* 73.3	3.7	* -12.1	3.4	* -15.2	4.0	* -4.2	2.2	-1.3	3.4	-0.9	10.1	-1.9	5.0	* 14.8	5.9	* 98.9	11.7

For information on confidentiality protection, sampling error, nonsampling error, and definitions, see [www2.census.gov/programs-surveys/cps/techdocs/cpsmar18.pdf](http://www2.census.gov/programs-surveys/cps/techdocs/cpsmar18.pdf)

Source: U.S. Census Bureau, Current Population Survey, 2018 Annual Social and Economic Supplement, Legacy and Updated (Bridge) Files.

Standard errors calculated using replicate weights. P10, P25, etc. indicate linear interpolated percentile (10<sup>th</sup>, 25<sup>th</sup>, etc.). SE indicates standard error. Asterisks indicate statistical significance at the 10 percent level.

**Table 9: Comparison of Household Income under the 2018 Legacy and Updated Files: Median**

(Income in 2017 dollars. Households and people as of March of the following year. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see [www2.census.gov/programs-surveys/cps/techdocs/cpsmar18.pdf](http://www2.census.gov/programs-surveys/cps/techdocs/cpsmar18.pdf))

Characteristic	Legacy			Updated			Percentage change* in real Median income (Updated less Legacy)	
	Number (thousands)	Median income (dollars)		Number (thousands)	Median income (dollars)		Estimate	90 percent CI
		Estimate	90 percent CI		Estimate	90 percent CI		
<b>HOUSEHOLDS</b>								
All Households	127,600	61,370	552	127,700	61,140	529	-0.4	0.48
<b>Type of Household</b>								
Family households	83,090	77,710	836	83,520	77,800	863	0.1	0.66
Married-couple	61,240	90,390	820	61,870	91,330	842	10	0.60
Female householder, no spouse present	15,420	41,700	746	15,300	41,650	841	-0.1	1.23
Male householder, no spouse present	6,424	60,840	1,733	6,351	58,220	2,023	*-4.3	2.42
Nonfamily households	44,500	36,650	557	44,160	36,340	500	-0.8	0.85
Female householder	23,480	30,750	632	23,320	31,160	579	*1.3	1.26
Male householder	21,020	44,250	2,185	20,830	42,800	1,640	*-3.3	2.71
<b>Race<sup>2</sup> and Hispanic Origin of Householder</b>								
White	100,100	65,270	685	100,100	64,830	842	*-0.7	0.67
White, not Hispanic	84,680	68,160	1,050	84,710	68,190	1,109	0.1	0.85
Black	17,000	40,260	949	17,020	39,360	1,396	*2.2	1.99
Asian	6,735	81,330	1,962	6,750	81,390	1,779	0.1	1.33
Hispanic (any race)	17,320	50,490	721	17,340	50,170	758	-0.6	0.95
<b>Age of Householder</b>								
Under 65 years	94,610	69,630	917	94,700	69,260	993	-0.5	0.75
15 to 24 years	6,211	40,090	1,430	6,223	38,950	1,624	-2.8	3.02
25 to 34 years	20,260	62,290	1,051	20,260	61,240	832	*-1.7	1.03
35 to 44 years	21,580	78,370	1,578	21,610	78,850	1,848	0.6	1.42
45 to 54 years	22,540	80,670	1,064	22,570	80,160	1,332	-0.6	0.93
55 to 64 years	24,020	68,570	1,587	24,050	68,900	1,565	0.5	1.51
65 years and older	32,970	41,130	839	32,970	41,300	789	0.4	1.32
<b>Nativity of Householder</b>								
Native born	107,700	61,990	574	107,700	61,870	566	-0.2	0.53
Foreign born	19,930	57,270	1,630	19,950	56,420	1,203	-1.5	1.50
Naturalized citizen	10,880	65,860	1,753	10,890	64,530	2,455	-2.0	2.19
Not a citizen	9,050	49,740	1,406	9,063	49,160	1,666	-1.2	2.07
<b>Region</b>								
Northeast	22,510	66,450	1,437	22,510	65,590	1,666	-1.3	1.38
Midwest	27,630	61,140	1,039	27,660	61,120	1,118	0.0	1.04
South	48,590	55,710	990	48,630	55,770	982	0.1	0.97
West	28,850	67,520	1,354	28,870	66,960	1,247	-0.8	0.92
<b>Residence<sup>3</sup></b>								
Inside metropolitan statistical areas	109,700	64,270	971	109,800	63,590	849	*-1.0	0.79
Inside principal cities	42,560	55,710	1,073	42,570	54,960	1,275	*-1.3	1.11
Outside principal cities	67,170	69,360	1,178	67,230	69,920	1,051	0.8	0.94
Outside metropolitan statistical areas	17,850	47,560	1,364	17,870	47,950	1,508	0.8	1.54
<b>EARNINGS OF FULL-TIME, YEAR-ROUND WORKERS</b>								
All Full-Time, Year-Round Workers	115,700	48,500	622	115,700	49,750	580	*2.6	0.72
Men with earnings	66,380	52,160	225	66,500	52,190	223	0.1	0.29
Women with earnings	49,290	41,980	208	49,230	42,620	872	1.5	1.66
Female-to-male earnings ratio	N	0.805	0.005	N	0.817	0.016	1.5	1.71
<b>EARNINGS OF ALL WORKERS</b>								
All workers	166,300	37,480	322	166,300	37,990	573	*1.4	1.02
All men with earnings	88,100	44,410	1,226	88,020	45,070	674	1.5	1.91
All women with earnings	78,200	31,610	171	78,290	31,890	191	*0.9	0.38
Female-to-male earnings ratio	N	0.712	0.019	N	0.708	0.010	-0.6	1.93

\*An asterisk preceding an estimate indicates change is statistically different from zero at the 90 percent confidence level.

N Not applicable.

<sup>1</sup> A margin of error is a measure of an estimate's variability. The larger the margin of error in relation to the size of the estimate, the less reliable the estimate. This number, when added to and subtracted from the estimate, forms the 90 percent confidence interval. Margin of errors shown in this table are based on standard errors calculated using replicate weights. For more information, see "Standard Errors and Their Use" at [www2.census.gov/library/publications/2018/demo/p60-263sa.pdf](http://www2.census.gov/library/publications/2018/demo/p60-263sa.pdf)

<sup>2</sup> Federal surveys give respondents the option of reporting more than one race. Therefore, two basic ways of defining a race group are possible. A group such as Asian may be defined as those who reported Asian and no other race (the race-alone or single-race concept) or as those who reported Asian regardless of whether they also reported another race (the race-alone-or-in-combination concept). This table shows data using the first approach (race alone). The use of the single-race population does not imply that it is the preferred method of presenting or analyzing data. The Census Bureau uses a variety of approaches. Information on people who reported more than one race, such as White and American Indian and Alaska Native or Asian and Black or African American, is available from the 2010 Census through American FactFinder. About 2.9 percent of people reported more than one race in the 2010 Census. Data for American Indians and Alaska Natives, Native Hawaiians and Other Pacific Islanders, and those reporting two or more races are not shown separately.

<sup>3</sup> For information on metropolitan statistical areas and principal cities, see <https://www.census.gov/programs-surveys/metro-micro/about/glossary.html>.

Note: Inflation-adjusted estimates may differ slightly from other published data due to rounding.

Source: U.S. Census Bureau, Current Population Survey, 2018 Annual Social and Economic Supplement, Legacy and Updated (Research) Files.

**Table 10: Comparison of Household Income under the 2018 Legacy and Updated Files: 10<sup>th</sup> Percentile**

(Income in 2017 dollars. Households and people as of March of the following year. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see [www2.census.gov/programs-surveys/cps/techdocs/cpsmar18.pdf](http://www2.census.gov/programs-surveys/cps/techdocs/cpsmar18.pdf))

Characteristic	Legacy			Updated			Percentage change* in real 10th Percentile income (Updated less Legacy)	
	Number (thousands)	10th Percentile income (dollars)		Number (thousands)	10th Percentile income (dollars)		Estimate	90 percent CI
		Estimate	90 percent CI		Estimate	90 percent CI		
<b>HOUSEHOLDS</b>								
All Households	127,600	14,220	276	127,700	14,310	270	0.6	130
<b>Type of Household</b>								
Family households	83,090	22,250	366	83,520	22,410	366	0.7	128
Married-couple	61,240	29,740	594	61,870	30,280	402	18	134
Female householder, no spouse present	15,420	10,220	431	15,300	10,300	444	0.7	2.71
Male householder, no spouse present	6,424	19,310	1516	6,351	18,500	1,171	-4.2	4.67
Nonfamily households	44,500	9,487	234	44,180	9,337	250	-1.6	2.16
Female householder	23,480	8,908	280	23,320	8,716	286	-2.2	2.59
Male householder	21,020	10,350	354	20,830	10,250	378	-1.0	2.64
<b>Race<sup>2</sup> and Hispanic Origin of Householder</b>								
White	100,100	15,950	281	100,100	15,990	256	0.3	107
White, not Hispanic	84,680	16,510	310	84,710	16,570	283	0.4	123
Black	17,000	8,652	308	17,020	8,531	374	-1.4	2.81
Asian	6,735	16,680	1,533	6,750	17,670	1,446	*5.9	5.70
Hispanic (any race)	17,320	12,550	573	17,340	12,380	498	-1.4	2.88
<b>Age of Householder</b>								
Under 65 years	94,610	16,000	355	94,700	16,200	338	1.2	125
15 to 24 years	6,211	8,171	1,291	6,223	7,926	1,340	-3.1	8.56
25 to 34 years	20,260	17,100	881	20,260	17,490	970	2.2	3.24
35 to 44 years	21,580	19,750	1,034	21,610	20,150	874	2.0	2.87
45 to 54 years	22,540	19,300	992	22,570	19,970	808	*3.5	3.16
55 to 64 years	24,020	13,200	689	24,050	13,530	682	2.5	2.94
65 years and older	32,970	12,120	266	32,970	11,870	306	*-2.1	1.83
<b>Nativity of Householder</b>								
Native born	107,700	14,380	302	107,700	14,430	286	0.3	1.43
Foreign born	19,930	13,200	751	19,950	13,600	741	3.0	3.35
Naturalized citizen	10,880	14,380	923	10,890	15,000	813	4.3	4.38
Not a citizen	9,056	11,930	768	9,063	12,010	744	0.6	3.43
<b>Region</b>								
Northeast	22,510	14,130	664	22,510	14,200	676	0.5	2.83
Midwest	27,630	14,690	607	27,660	14,870	543	1.2	2.43
South	48,590	13,290	398	48,630	13,360	419	0.5	1.94
West	28,850	15,550	473	28,870	15,640	487	0.6	2.03
<b>Residence<sup>3</sup></b>								
Inside metropolitan statistical areas	109,700	14,800	334	109,800	14,860	325	0.4	1.52
Inside principal cities	42,560	11,880	311	42,570	11,960	311	0.7	1.75
Outside principal cities	67,170	16,880	365	67,230	17,010	370	0.8	1.40
Outside metropolitan statistical areas	17,850	11,940	468	17,870	12,110	504	1.5	2.41
<b>EARNINGS OF FULL-TIME, YEAR-ROUND WORKERS</b>								
All Full-Time, Year-Round Workers	115,700	21,310	131	115,700	21,360	139	0.2	0.51
Men with earnings	66,380	22,810	340	66,500	22,470	262	*-1.5	1.15
Women with earnings	49,290	20,060	166	49,230	20,260	166	*1.0	0.67
Female-to-male earnings ratio	N	0.879	0.014	N	0.902	0.012	*2.6	1.35
<b>EARNINGS OF ALL WORKERS</b>								
All workers	166,300	7,347	142	166,300	7,748	254	*5.5	2.09
All men with earnings	88,100	10,150	205	88,020	10,530	204	*3.8	1.53
All women with earnings	78,200	6,019	158	78,290	6,180	165	*2.7	1.60
Female-to-male earnings ratio	N	0.593	0.017	N	0.587	0.016	-1.1	2.23

\*An asterisk preceding an estimate indicates change is statistically different from zero at the 90 percent confidence level.

N Not applicable.

<sup>1</sup> A margin of error is a measure of an estimate's variability. The larger the margin of error in relation to the size of the estimate, the less reliable the estimate. This number, when added to and subtracted from the estimate, forms the 90 percent confidence interval. Margin of errors shown in this table are based on standard errors calculated using replicate weights. For more information, see "Standard Errors and Their Use" at [www2.census.gov/library/publications/2018/demo/p60-263sa.pdf](http://www2.census.gov/library/publications/2018/demo/p60-263sa.pdf)

<sup>2</sup> Federal surveys give respondents the option of reporting more than one race. Therefore, two basic ways of defining a race group are possible. A group such as Asian may be defined as those who reported Asian and no other race (the race-alone or single-race concept) or as those who reported Asian regardless of whether they also reported another race (the race-alone-or-in-combination concept). This table shows data using the first approach (race alone). The use of the single-race population does not imply that it is the preferred method of presenting or analyzing data. The Census Bureau uses a variety of approaches. Information on people who reported more than one race, such as White and American Indian and Alaska Native or Asian and Black or African American, is available from the 2010 Census through American FactFinder. About 2.9 percent of people reported more than one race in the 2010 Census. Data for American Indians and Alaska Natives, Native Hawaiians and Other Pacific Islanders, and those reporting two or more races are not shown separately.

<sup>3</sup> For information on metropolitan statistical areas and principal cities, see <https://www.census.gov/programs-surveys/metro-micro/about/glossary.html>.

Note: Inflation-adjusted estimates may differ slightly from other published data due to rounding.

Source: U.S. Census Bureau, Current Population Survey, 2018 Annual Social and Economic Supplement, Legacy and Updated (Research) Files.



**Table 11: Comparison of Household Income under the 2018 Legacy and Updated Files: 25<sup>th</sup> Percentile**

(Income in 2017 dollars. Households and people as of March of the following year. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see [www2.census.gov/programs-surveys/cps/techdocs/cpsmar18.pdf](http://www2.census.gov/programs-surveys/cps/techdocs/cpsmar18.pdf).)

Characteristic	Legacy			Updated			Percentage change* in real 25th Percentile income (Updated less Legacy)	
	Number (thousands)	25th Percentile income (dollars)		Number (thousands)	25th Percentile income (dollars)		Estimate	90 percent CI
		Estimate	90 percent CI		Estimate	90 percent CI		
<b>HOUSEHOLDS</b>								
All Households	127,600	30,190	323	127,700	30,370	302	0.6	0.62
<b>Type of Household</b>								
Family households	83,090	41,600	454	83,520	41,880	460	0.7	0.70
Married-couple	61,240	51,970	617	61,870	52,720	812	14	0.91
Female householder, no spouse present	15,420	22,050	526	15,300	21,820	571	-10	1.74
Male householder, no spouse present	6,424	35,360	946	6,351	34,100	1,665	*-3.6	3.52
Nonfamily households	44,500	17,500	329	44,180	17,450	292	-0.3	1.26
Female householder	23,480	15,790	323	23,320	15,670	300	-0.7	1.39
Male householder	21,020	21,100	697	20,830	21,090	607	0.0	1.80
<b>Race<sup>2</sup> and Hispanic Origin of Householder</b>								
White	100,100	32,110	387	100,100	32,360	377	*0.8	0.71
White, not Hispanic	84,680	33,640	609	84,710	34,130	572	*15	1.08
Black	17,000	18,760	680	17,020	18,750	672	-0.1	2.43
Asian	6,735	40,900	1,440	6,750	41,080	1,577	0.4	2.19
Hispanic (any race)	17,320	26,320	522	17,340	26,160	509	-0.6	1.17
<b>Age of Householder</b>								
Under 65 years	94,610	35,560	367	94,700	35,540	373	0.0	0.55
15 to 24 years	6,211	21,610	947	6,223	20,980	907	*-2.9	2.73
25 to 34 years	20,260	34,370	1,152	20,260	33,950	1,320	-1.2	2.06
35 to 44 years	21,580	40,640	809	21,610	41,140	761	*12	1.13
45 to 54 years	22,540	41,530	757	22,570	41,560	957	0.1	1.25
55 to 64 years	24,020	32,390	999	24,050	32,420	1,054	0.1	1.88
65 years and older	32,970	20,990	464	32,970	21,170	465	0.9	1.35
<b>Nativity of Householder</b>								
Native born	107,700	30,450	342	107,700	30,630	323	0.6	0.65
Foreign born	19,930	28,070	1,091	19,950	28,320	1,143	0.9	2.25
Naturalized citizen	10,880	31,630	1,177	10,890	31,600	1,189	-0.1	2.01
Not a citizen	9,056	25,530	841	9,063	25,970	754	17	1.94
<b>Region</b>								
Northeast	22,510	31,160	832	22,510	31,520	933	12	1.54
Midwest	27,630	30,580	656	27,660	30,660	574	0.2	1.25
South	48,590	27,630	619	48,630	27,670	649	0.1	1.29
West	28,850	33,040	1,090	28,870	33,200	1,099	0.5	1.91
<b>Residence<sup>3</sup></b>								
Inside metropolitan statistical areas	109,700	31,220	341	109,800	31,440	345	*0.7	0.62
Inside principal cities	42,560	26,460	534	42,570	26,310	549	-0.6	1.14
Outside principal cities	67,170	34,620	638	67,230	35,170	545	*16	1.07
Outside metropolitan statistical areas	17,850	23,860	860	17,870	23,760	815	-0.4	1.78
<b>EARNINGS OF FULL-TIME, YEAR-ROUND WORKERS</b>								
All Full-Time, Year-Round Workers	115,700	31,200	130	115,700	31,230	144	0.1	0.31
Men with earnings	66,380	34,140	746	66,500	33,660	765	-14	1.62
Women with earnings	49,290	28,470	416	49,230	28,970	484	*18	1.31
Female-to-male earnings ratio	N	0.834	0.019	N	0.861	0.022	*3.2	2.13
<b>EARNINGS OF ALL WORKERS</b>								
All workers	166,300	20,320	142	166,300	20,550	149	*11	0.45
All men with earnings	88,100	24,390	384	88,020	24,330	416	-0.2	1.17
All women with earnings	78,200	16,260	189	78,290	16,600	217	*2.1	0.78
Female-to-male earnings ratio	N	0.667	0.012	N	0.682	0.014	*2.3	1.38

\*An asterisk preceding an estimate indicates change is statistically different from zero at the 90 percent confidence level.

N Not applicable.

<sup>1</sup> A margin of error is a measure of an estimate's variability. The larger the margin of error in relation to the size of the estimate, the less reliable the estimate. This number, when added to and subtracted from the estimate, forms the 90 percent confidence interval. Margin of errors shown in this table are based on standard errors calculated using replicate weights. For more information, see "Standard Errors and Their Use" at [www2.census.gov/library/publications/2018/demo/p60-263sa.pdf](http://www2.census.gov/library/publications/2018/demo/p60-263sa.pdf).

<sup>2</sup> Federal surveys give respondents the option of reporting more than one race. Therefore, two basic ways of defining a race group are possible. A group such as Asian may be defined as those who reported Asian and no other race (the race-alone or single-race concept) or as those who reported Asian regardless of whether they also reported another race (the race-alone-or-in-combination concept). This table shows data using the first approach (race alone). The use of the single-race population does not imply that it is the preferred method of presenting or analyzing data. The Census Bureau uses a variety of approaches. Information on people who reported more than one race, such as White and American Indian and Alaska Native or Asian and Black or African American, is available from the 2010 Census through American FactFinder. About 2.9 percent of people reported more than one race in the 2010 Census. Data for American Indians and Alaska Natives, Native Hawaiians and Other Pacific Islanders, and those reporting two or more races are not shown separately.

<sup>3</sup> For information on metropolitan statistical areas and principal cities, see <https://www.census.gov/programs-surveys/metro-micro/about/glossary.html>.

Note: Inflation-adjusted estimates may differ slightly from other published data due to rounding.

Source: U.S. Census Bureau, Current Population Survey, 2018 Annual Social and Economic Supplement, Legacy and Updated (Research) Files.

**Table 12: Comparison of Household Income under the 2018 Legacy and Updated Files: 75<sup>th</sup> Percentile**

(Income in 2017 dollars. Households and people as of March of the following year. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see [www2.census.gov/programs-surveys/cps/techdocs/cpsmar18.pdf](http://www2.census.gov/programs-surveys/cps/techdocs/cpsmar18.pdf))

Characteristic	Legacy			Updated			Percentage change* in real 75th Percentile income (Updated less Legacy)	
	Number (thousands)	75th Percentile income (dollars)		Number (thousands)	75th Percentile income (dollars)		Estimate	90 percent CI
		Estimate	90 percent CI		Estimate	90 percent CI		
<b>HOUSEHOLDS</b>								
All Households	127,600	10,900	899	127,700	11,000	908	0.1	0.46
<b>Type of Household</b>								
Family households	83,090	10,500	1,063	83,520	11,400	1,293	*0.7	0.62
Married-couple	61,240	14,900	1,286	61,870	14,400	1,897	-1.7	0.86
Female householder, no spouse present	15,420	7,670	1,610	15,300	7,750	1,546	*-2.6	1.55
Male householder, no spouse present	6,424	9,920	3,192	6,351	9,750	2,953	-2.1	2.56
Nonfamily households	44,500	7,240	1,098	44,180	6,780	1,388	*-3.5	1.24
Female householder	23,480	5,370	1,487	23,320	5,910	1,463	-0.4	1.57
Male householder	21,020	8,130	1,380	20,860	7,830	2,584	*-3.9	2.11
<b>Race<sup>2</sup> and Hispanic Origin of Householder</b>								
White	100,100	15,100	1,303	100,100	15,300	1,259	0.1	0.65
White, not Hispanic	84,680	12,500	1,085	84,710	12,600	1,105	0.1	0.55
Black	17,000	7,700	1,617	17,020	7,450	1,723	*-1.6	1.27
Asian	6,735	10,800	4,264	6,750	10,300	3,702	-0.3	1.87
Hispanic (any race)	17,320	8,820	1,855	17,340	8,670	1,226	*-1.7	1.22
<b>Age of Householder</b>								
Under 65 years	94,610	12,600	921	94,700	12,500	979	-0.1	0.44
15 to 24 years	6,211	7,890	2,144	6,223	6,870	3,250	-2.9	3.70
25 to 34 years	20,260	10,900	1,466	20,260	10,300	1,356	-0.6	0.88
35 to 44 years	21,580	12,700	2,130	21,610	13,600	2,530	0.7	1.29
45 to 54 years	22,540	13,200	2,599	22,570	13,200	2,946	0.0	1.38
55 to 64 years	24,020	13,900	3,285	24,050	12,600	2,282	1.7	1.89
65 years and older	32,970	8,070	1,542	32,970	8,170	1,820	0.4	1.35
<b>Nativity of Householder</b>								
Native born	107,700	11,600	876	107,700	11,800	914	0.2	0.51
Foreign born	19,930	10,500	2,891	19,950	10,400	3,123	-0.6	1.63
Naturalized citizen	10,880	12,100	3,077	10,890	12,100	3,917	-0.8	2.01
Not a citizen	9,050	9,050	2,559	9,063	8,700	2,521	*-3.7	1.96
<b>Region</b>								
Northeast	22,510	12,700	3,140	22,510	12,000	2,298	-0.6	1.50
Midwest	27,630	10,300	2,159	27,660	10,800	2,085	0.7	1.33
South	48,590	12,100	1,031	48,630	10,900	1,011	-0.2	0.60
West	28,850	11,900	2,105	28,870	12,900	1,614	1.0	1.08
<b>Residence<sup>3</sup></b>								
Inside metropolitan statistical areas	109,700	15,500	1,301	109,800	15,500	1,292	0.0	0.66
Inside principal cities	42,560	10,300	2,187	42,570	10,100	2,244	*-2.1	1.36
Outside principal cities	67,170	12,100	1,155	67,230	12,000	1,281	*0.7	0.63
Outside metropolitan statistical areas	17,850	8,540	1,765	17,870	8,420	1,775	-0.9	1.48
<b>EARNINGS OF FULL-TIME, YEAR-ROUND WORKERS</b>								
All Full-Time, Year-Round Workers	115,700	7,670	429	115,700	7,620	434	*-0.6	0.34
Men with earnings	66,380	8,540	809	66,500	8,470	1,889	-0.8	1.61
Women with earnings	49,290	6,560	553	49,230	6,530	623	-0.3	0.66
Female-to-male earnings ratio	N	0.768	0.008	N	0.771	0.016	0.5	1.74
<b>EARNINGS OF ALL WORKERS</b>								
All workers	166,300	6,600	402	166,300	6,520	504	*-0.4	0.42
All men with earnings	88,100	7,070	537	88,020	7,640	553	*-0.6	0.47
All women with earnings	78,200	5,410	1,044	78,290	5,480	838	*2.6	1.27
Female-to-male earnings ratio	N	0.702	0.013	N	0.725	0.011	*3.2	1.39

\*An asterisk preceding an estimate indicates change is statistically different from zero at the 90 percent confidence level.

N Not applicable.

<sup>1</sup> A margin of error is a measure of an estimate's variability. The larger the margin of error in relation to the size of the estimate, the less reliable the estimate. This number, when added to and subtracted from the estimate, forms the 90 percent confidence interval. Margin of errors shown in this table are based on standard errors calculated using replicate weights. For more information, see "Standard Errors and Their Use" at [www2.census.gov/library/publications/2018/demo/p60-263sa.pdf](http://www2.census.gov/library/publications/2018/demo/p60-263sa.pdf)

<sup>2</sup> Federal surveys give respondents the option of reporting more than one race. Therefore, two basic ways of defining a race group are possible. A group such as Asian may be defined as those who reported Asian and no other race (the race-alone or single-race concept) or as those who reported Asian regardless of whether they also reported another race (the race-alone-or-in-combination concept). This table shows data using the first approach (race alone). The use of the single-race population does not imply that it is the preferred method of presenting or analyzing data. The Census Bureau uses a variety of approaches. Information on people who reported more than one race, such as White and American Indian and Alaska Native or Asian and Black or African American, is available from the 2010 Census through American FactFinder. About 2.9 percent of people reported more than one race in the 2010 Census. Data for American Indians and Alaska Natives, Native Hawaiians and Other Pacific Islanders, and those reporting two or more races are not shown separately.

<sup>3</sup> For information on metropolitan statistical areas and principal cities, see <https://www.census.gov/programs-surveys/metro-micro/about/glossary.html>.

Note: Inflation-adjusted estimates may differ slightly from other published data due to rounding.

Source: U.S. Census Bureau, Current Population Survey, 2018 Annual Social and Economic Supplement, Legacy and Updated (Research) Files.

**Table 13: Comparison of Household Income under the 2018 Legacy and Updated Files: 95<sup>th</sup> Percentile**

(Income in 2017 dollars. Households and people as of March of the following year. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see [www2.census.gov/programs-surveys/cps/techdocs/cpsmar18.pdf](http://www2.census.gov/programs-surveys/cps/techdocs/cpsmar18.pdf))

Characteristic	Legacy			Updated			Percentage change* in real 95th Percentile income (Updated less Legacy)	
	Number (thousands)	95th Percentile income (dollars)		Number (thousands)	95th Percentile income (dollars)		Estimate	90 percent CI
		Estimate	90 percent CI		Estimate	90 percent CI		
<b>HOUSEHOLDS</b>								
All Households	127,600	237,100	3,672	127,700	243,900	3,702	*2.9	1.9
<b>Type of Household</b>								
Family households	83,090	264,500	4,323	83,520	275,300	4,391	*4.1	1.32
Married-couple	61,240	289,400	6,218	61,870	300,400	6,357	3.8	1.84
Female householder, no spouse present	15,420	155,700	3,465	15,300	153,000	4,946	-1.8	2.43
Male householder, no spouse present	6,424	201,200	5,751	6,351	194,300	8,916	-3.4	3.73
Nonfamily households	44,500	161,000	4,284	44,180	156,600	4,927	*-2.7	2.53
Female householder	23,480	136,800	6,916	23,320	134,200	4,472	-1.9	3.77
Male householder	21,020	185,700	7,021	20,830	183,700	6,432	-1.1	3.06
<b>Race<sup>2</sup> and Hispanic Origin of Householder</b>								
White	100,100	242,100	3,076	100,100	250,500	3,205	*3.5	1.07
White, not Hispanic	84,680	250,900	3,187	84,710	260,600	4,131	*3.9	1.25
Black	17,000	166,000	4,980	17,020	166,900	6,123	0.6	3.06
Asian	6,735	308,200	3,180	6,750	309,100	12,160	0.3	3.00
Hispanic (any race)	17,320	180,400	5,958	17,340	181,900	5,349	0.8	2.61
<b>Age of Householder</b>								
Under 65 years	94,610	250,600	2,540	94,700	256,300	4,353	*2.3	1.28
15 to 24 years	6,211	150,500	10,020	6,223	144,900	11,050	-3.7	6.16
25 to 34 years	20,260	205,200	6,409	20,260	202,300	5,296	-1.4	2.17
35 to 44 years	21,580	258,500	8,172	21,610	262,200	7,173	1.4	2.56
45 to 54 years	22,540	272,600	6,341	22,570	281,500	8,290	*3.2	2.20
55 to 64 years	24,020	269,800	10,010	24,050	284,600	7,973	*5.5	3.18
65 years and older	32,970	188,500	4,286	32,970	198,400	7,871	*5.3	3.34
<b>Nativity of Householder</b>								
Native born	107,700	235,500	4,227	107,700	243,500	3,810	*3.4	1.39
Foreign born	19,930	243,000	6,923	19,950	245,700	9,165	1.1	2.60
Naturalized citizen	10,880	260,200	5,260	10,890	265,500	12,270	2.0	4.61
Not a citizen	9,056	220,100	9,544	9,063	210,300	10,260	*-4.4	3.34
<b>Region</b>								
Northeast	22,510	265,100	8,364	22,510	276,500	9,714	*4.3	2.59
Midwest	27,630	221,700	6,451	27,660	228,400	6,256	*3.0	2.23
South	48,590	220,000	4,790	48,630	221,800	4,735	0.8	1.58
West	28,850	250,300	6,814	28,870	259,800	7,773	*3.8	2.01
<b>Residence<sup>3</sup></b>								
Inside metropolitan statistical areas	109,700	245,200	3,768	109,800	252,200	2,959	*2.9	1.13
Inside principal cities	42,560	237,200	8,262	42,570	243,400	7,798	*2.6	2.22
Outside principal cities	67,170	250,200	4,159	67,230	258,700	5,774	*3.4	1.66
Outside metropolitan statistical areas	17,850	177,100	6,617	17,870	177,500	5,081	0.2	2.79
<b>EARNINGS OF FULL-TIME, YEAR-ROUND WORKERS</b>								
All Full-Time, Year-Round Workers	115,700	156,700	5,453	115,700	155,700	5,171	-0.7	2.30
Men with earnings	66,380	180,800	2,608	66,500	180,400	4,242	-0.2	1.60
Women with earnings	49,290	126,000	1,250	49,230	126,400	1,186	0.3	0.70
Female-to-male earnings ratio	N	0.697	0.011	N	0.700	0.017	0.5	1.72
<b>EARNINGS OF ALL WORKERS</b>								
All workers	166,300	146,200	2,746	166,300	145,900	3,128	-0.2	1.40
All men with earnings	88,100	161,900	2,931	88,020	161,500	1,620	-0.3	1.39
All women with earnings	78,200	112,000	1,564	78,290	111,600	1,053	-0.3	1.04
Female-to-male earnings ratio	N	0.692	0.015	N	0.691	0.009	-0.1	1.76

\*An asterisk preceding an estimate indicates change is statistically different from zero at the 90 percent confidence level.

N Not applicable.

<sup>1</sup> A margin of error is a measure of an estimate's variability. The larger the margin of error in relation to the size of the estimate, the less reliable the estimate. This number, when added to and subtracted from the estimate, forms the 90 percent confidence interval. Margin of errors shown in this table are based on standard errors calculated using replicate weights. For more information, see "Standard Errors and Their Use" at [www2.census.gov/library/publications/2018/demo/p60-263sa.pdf](http://www2.census.gov/library/publications/2018/demo/p60-263sa.pdf)

<sup>2</sup> Federal surveys give respondents the option of reporting more than one race. Therefore, two basic ways of defining a race group are possible. A group such as Asian may be defined as those who reported Asian and no other race (the race-alone or single-race concept) or as those who reported Asian regardless of whether they also reported another race (the race-alone-or-in-combination concept). This table shows data using the first approach (race alone). The use of the single-race population does not imply that it is the preferred method of presenting or analyzing data. The Census Bureau uses a variety of approaches. Information on people who reported more than one race, such as White and American Indian and Alaska Native or Asian and Black or African American, is available from the 2010 Census through American FactFinder. About 2.9 percent of people reported more than one race in the 2010 Census. Data for American Indians and Alaska Natives, Native Hawaiians and Other Pacific Islanders, and those reporting two or more races are not shown separately.

<sup>3</sup> For information on metropolitan statistical areas and principal cities, see <https://www.census.gov/programs-surveys/metro-micro/about/glossary.html>.

Note: Inflation-adjusted estimates may differ slightly from other published data due to rounding.

Source: U.S. Census Bureau, Current Population Survey, 2018 Annual Social and Economic Supplement, Legacy and Updated (Research) Files.

**Table 14: Comparison of Inequality Statistics under the 2018 Legacy and Updated Files**

(For information on confidentiality protection, sampling error, nonsampling error, and definitions, see [www2.census.gov/programs-surveys/cps/techdocs/cpsmar18.pdf](http://www2.census.gov/programs-surveys/cps/techdocs/cpsmar18.pdf))

Measure	Legacy		Updated with Legacy Top Codes		Updated		Percentage change <sup>2*</sup> (Updated with Legacy Top Codes - Legacy)		Percentage change <sup>2*</sup> (Updated - Updated with Legacy Top Codes)		Percentage change <sup>2*</sup> (Updated - Legacy)		Share of Difference From Top Codes (Percent Change Updated-Updated with Legacy Top Codes)/Percent Change Updated - Legacy)
	Estimate	Margin of error <sup>1</sup> (±)	Estimate	Margin of error <sup>1</sup> (±)	Estimate	Margin of error <sup>1</sup> (±)	Estimate	Margin of error <sup>1</sup> (±)	Estimate	Margin of error <sup>1</sup> (±)	Estimate	Margin of error <sup>1</sup> (±)	
<b>Shares of Aggregate Income by Percentile</b>													
Low est quintile	3.1	0.05	3.1	0.05	3.04	0.05	-0.2	1.10	*-1.0	0.21	*-1.2	1.13	0.87
Second quintile	8.2	0.08	8.2	0.08	8.10	0.09	-0.3	0.68	*-1.0	0.21	*-1.3	0.75	0.75
Third quintile	14.3	0.11	14.1	0.11	14.00	0.12	*-1.0	0.54	*-1.0	0.21	*-2.0	0.62	0.51
Fourth quintile	23.0	0.15	22.8	0.14	22.60	0.16	*-0.7	0.47	*-1.0	0.22	*-1.6	0.55	0.60
Highest quintile	51.5	0.33	51.8	0.31	52.26	0.35	*0.6	0.42	*0.9	0.20	*1.6	0.51	0.60
Top 5 percent	22.3	0.40	22.6	0.36	23.18	0.44	1.0	1.21	*2.7	0.68	*3.8	1.53	0.73
<b>Summary Measures</b>													
Gini index of income inequality	0.482	0.0034	0.484	0.0032	0.4891	0.0036	*0.5	0.46	*1.0	0.22	*1.5	0.55	0.65
Mean logarithmic deviation of income	0.609	0.0121	0.609	0.0114	0.6169	0.0119	-0.1	1.19	*1.3	0.30	1.2	1.27	1.05
Theil	0.424	0.0089	0.428	0.0084	0.4414	0.0103	1.1	1.34	*3.1	0.93	*4.2	1.81	0.75
Atkinson:													
e=0.25	0.103	0.0018	0.103	0.0017	0.1061	0.0020	0.9	1.13	*2.5	0.69	*3.5	1.46	0.73
e=0.50	0.202	0.0030	0.203	0.0028	0.2072	0.0032	0.7	0.95	*2.0	0.51	*2.8	1.18	0.74
e=0.75	0.310	0.0041	0.309	0.0038	0.3134	0.0042	-0.4	0.83	*1.5	0.36	*1.1	0.96	1.31

\*An asterisk preceding an estimate indicates change is statistically different from zero at the 90 percent confidence level.

<sup>1</sup> A margin of error is a measure of an estimate's variability. The larger the margin of error in relation to the size of the estimate, the less reliable the estimate. This number, when added to and subtracted from the estimate, forms the 90 percent confidence interval. Margins of error shown in this table are based on standard errors calculated using replicate weights. For more information, see "Standard Errors and Their Use" at [www2.census.gov/library/publications/2018/demo/P60-263sa.pdf](http://www2.census.gov/library/publications/2018/demo/P60-263sa.pdf)

<sup>2</sup> Calculated estimate may be different due to rounded components.

Source: U.S. Census Bureau, Current Population Survey, 2018 Annual Social and Economic Supplement, Legacy and Updated (Bridge) Files.

**Table 15: Comparison Year-to-Year Changes of Household Income under Legacy and Updated Processing System: Median**

(Income in 2017 dollars. Households and people as of March of the following year. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see [www2.census.gov/programs-surveys/cps/techdocs/cpsmar18.pdf](http://www2.census.gov/programs-surveys/cps/techdocs/cpsmar18.pdf))

Characteristic	Legacy		Updated		Percentage change (2017 less 2016)		Difference in Percentage Change (Updated less Legacy)	
	2016	2017	2016	2017	Legacy	Updated	Estimate	90 Percent CI
<b>HOUSEHOLDS</b>								
All Households	60,310	61,370	60,490	61,140	* 1.76	1.07	-0.69	0.79
<b>Type of Household</b>								
Family households	76,680	77,710	76,660	77,800	* 1.35	* 1.48	0.13	0.91
Married-couple	88,930	90,390	89,240	91,330	* 1.64	* 2.35	0.71	0.87
Female householder, no spouse present	41,910	41,700	41,510	41,650	-0.49	0.34	0.84	1.62
Male householder, no spouse present	59,300	60,840	58,050	58,220	2.60	0.29	-2.32	3.59
Nonfamily households	36,530	36,650	36,540	36,340	0.33	-0.54	-0.87	1.25
Female householder	31,230	30,750	31,470	31,160	-1.54	-0.99	0.55	1.70
Male householder	42,650	44,250	42,780	42,800	3.76	0.05	* -3.71	3.21
<b>Race<sup>2</sup> and Hispanic Origin of Householder</b>								
White	63,190	65,270	63,280	64,830	* 3.30	* 2.45	* -0.85	0.83
White, not Hispanic	66,440	68,150	66,850	68,190	* 2.57	* 2.01	-0.56	1.11
Black	40,340	40,260	40,610	39,360	-0.20	-3.06	* -2.86	2.75
Asian	83,180	81,330	82,620	81,390	-2.23	-1.48	0.74	2.22
Hispanic (any race)	48,700	50,490	47,940	50,170	* 3.67	* 4.64	0.97	1.72
<b>Age of Householder</b>								
Under 65 years	67,920	69,630	67,610	69,260	* 2.52	* 2.44	-0.08	0.91
15 to 24 years	42,550	40,090	41,890	38,950	-5.78	* -7.01	-1.23	3.29
25 to 34 years	62,240	62,290	61,310	61,240	0.08	-0.11	-0.19	1.70
35 to 44 years	76,080	78,370	75,470	78,850	* 3.00	* 4.48	1.48	2.05
45 to 54 years	78,870	80,670	79,370	80,160	* 2.28	0.99	-1.29	1.42
55 to 64 years	66,640	68,570	67,120	68,900	2.89	2.65	-0.24	2.02
65 years and older	40,680	41,130	41,400	41,300	1.10	-0.25	-1.35	1.87
<b>Nativity of Householder</b>								
Native born	61,070	61,990	61,340	61,870	* 1.51	0.86	-0.65	0.83
Foreign born	56,750	57,270	56,200	56,420	0.92	0.39	-0.52	2.10
Naturalized citizen	65,270	65,860	65,110	64,530	0.91	-0.89	-1.80	3.01
Not a citizen	49,100	49,740	47,920	49,160	1.30	2.60	1.30	2.84
<b>Region</b>								
Northeast	65,770	66,450	66,300	65,590	1.03	-1.06	-2.09	2.10
Midwest	59,560	61,140	59,590	61,120	2.65	2.57	-0.08	1.60
South	55,020	55,710	54,840	55,770	1.25	1.71	0.46	1.53
West	65,660	67,520	66,270	66,960	2.83	1.04	* -1.80	1.65
<b>Residence<sup>3</sup></b>								
Inside metropolitan statistical areas	62,850	64,270	63,030	63,590	* 2.25	0.90	* -1.35	0.89
Inside principal cities	55,850	55,710	55,970	54,960	-0.25	-1.80	* -1.55	1.53
Outside principal cities	67,750	69,360	67,900	69,920	* 2.37	* 2.98	0.62	1.19
Outside metropolitan statistical areas	46,790	47,560	46,700	47,950	1.65	2.66	1.01	1.99

\*An asterisk preceding an estimate indicates change is statistically different from zero at the 90 percent confidence level.

N Not applicable.

<sup>1</sup> A margin of error is a measure of an estimate's variability. The larger the margin of error in relation to the size of the estimate, the less reliable the estimate.

This number, when added to and subtracted from the estimate, forms the 90 percent confidence interval. Margin of errors shown in this table are based on standard errors calculated using replicate weights. For more information, see "Standard Errors and Their Use" at

[www2.census.gov/library/publications/2018/demo/p60-263sa.pdf](http://www2.census.gov/library/publications/2018/demo/p60-263sa.pdf)

<sup>2</sup> Federal surveys give respondents the option of reporting more than one race. Therefore, two basic ways of defining a race group are possible. A group such as Asian may be defined as those who reported Asian and no other race (the race-alone or single-race concept) or as those who reported Asian regardless of whether they also reported another race (the race-alone-or-in-combination concept). This table shows data using the first approach (race alone). The use of the single-race population does not imply that it is the preferred method of presenting or analyzing data. The Census Bureau uses a variety of approaches. Information on people who reported more than one race, such as White and American Indian and Alaska Native or Asian and Black or African American, is available from the 2010 Census through American FactFinder. About 2.9 percent of people reported more than one race in the 2010 Census. Data for American Indians and Alaska Natives, Native Hawaiians and Other Pacific Islanders, and those reporting two or more races are not shown separately.

<sup>3</sup> For information on metropolitan statistical areas and principal cities, see <https://www.census.gov/programs-surveys/metro-micro/about/glossary.html>.

Note: Inflation-adjusted estimates may differ slightly from other published data due to rounding.

Source: U.S. Census Bureau, Current Population Survey, 2017 and 2018 Annual Social and Economic Supplement, Legacy and Updated (Research in 2017 and Bridge in 2018) Files.