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MEMORANDUM SERIES #ACS16-RER-6

CENTER FOR ADMINISTRATIVE RECORDS RESEARCH AND APPLICATIONS
MEMORANDUM SERIES # 16-7

MEMORANDUM FOR ACS Research and Evaluation Advisory Group

From: Amy O'Hara (*signed Amy O'Hara*)
Chief, Center for Administrative Records Research and
Applications (CARRA)

Subject: Preliminary Research for Replacing or Supplementing the Income
Question on the American Community Survey with Administrative
Records

Attached is the Center for Administrative Records Research and Applications (CARRA) Research and Evaluation report, "Preliminary Research for Replacing or Supplementing the Income Question on the American Community Survey with Administrative Records." We conducted this evaluation to assess the potential for using administrative records to replace or supplement the income question on the American Community Survey. If you have any questions about this report, please contact Amy O'Hara at 301-763-5757 or Adam Bee at 301-763-9001.

Attachment

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Preliminary Research for Replacing or Supplementing the Income Question on the American Community Survey with Administrative Records

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EXECUTIVE SUMMARY

As detailed in the report, “Agility in Action: A Snapshot of Enhancements to the American Community Survey” (Census Bureau, 2015), the Census Bureau is investigating ways to reduce the difficulty and length of the American Community Survey (ACS) using administrative records to address the burden survey participation places on respondents. One of the questions we are investigating is the ACS income question. This research will begin the determination of whether there are administrative record sources with data of sufficient coverage and quality that would allow parts of the income question on the ACS to be removed. Alternatively, we may find that there are administrative record sources sufficient only to serve as a supplement to data provided by respondents to fill in missing responses or to enhance editing routines. A Census Bureau team will use this report and conduct additional research to make recommendations on whether each question is a good candidate for removal with the use of external data sources in its place.

This report explores coverage of Internal Revenue Service (IRS) income data for ACS respondents. Among ACS respondents aged 15 and older, 94.3 percent have sufficient identifying information to allow linkage to administrative records. Eighty-eight percent of linkable respondents aged 18 to 64 have at least one of the eight common types of IRS information returns that are currently available to the Census Bureau. Of those 65 and older, 98 percent have an information return.

Earnings from wage and salary are especially important, as they are the most common income source and compose the majority of aggregate income. Linkable ACS respondents aged 15 and older had wage reporting (zero or positive) that agreed with IRS W-2s (absent or present) in 87 percent of cases. Only 6 percent had reported wages in the ACS but did not have any W-2. This type of “false positive” discrepancy may be due to income type confusion, matching error, or the misalignment of reference period or scope. Wages were present only on the W-2 for another 6 percent of this universe, revealing underreporting or reference period misalignment.

Similarly, 87 percent of linkable ACS respondents aged 15 and older had ACS-reported retirement, survivor, and disability pension (RSDP) receipt that agreed with the absence or presence of an IRS 1099-R record. RSDP income was present only in ACS for 2 percent of this universe and was present only on the 1099-R for 12 percent, possibly reflecting underreporting.

Amounts also correspond well between the ACS and linked IRS records. The mean 2011 ACS wage is about \$24,800, compared to a mean W-2 sum of almost \$24,300. Restricting to records with positive amounts, the conditional ACS mean is about \$42,300 compared to the conditional W-2 mean of nearly \$41,300. Further analyses show that these similarities hold across the wage distribution and for a wide variety of demographic groups.

Conditional moments also tend to agree between ACS RDSP income and IRS 1099-R sums: the mean of positive ACS amounts is around \$19,300 compared to \$20,700 for the 1099-R. The unconditional moments do differ, however, due to the 12 percent of ACS respondents with a 1099-R but no reported RDSP income, as mentioned above. Another notable element of difference is that ACS amounts under \$1,000 are rare relative to the 1099-R distribution. For some respondents, the linked 1099-R sum is exactly twelve times the ACS amount, suggesting monthly reporting in the ACS. Taken together, the results suggest that despite many differences in reference period and scope, the ACS income reports correspond well with IRS records.

I. BACKGROUND

Stemming from concerns about the burden that American Community Survey (ACS) participation places on respondents, the Census Bureau is looking for ways to reduce the difficulty and length of the survey with administrative records. We have identified sources of both federal and commercial data that may alleviate the need to ask certain questions altogether or for a subset of the ACS sample. Work is underway to acquire new sources and assess the quality of the matching and coverage of these sources. Data from other agencies are under review, including income data from the Internal Revenue Service (IRS) and pension and disability data from the Social Security Administration (SSA). The American Community Survey Office (ACSO) is consulting with stakeholders, including Congress, regarding the appropriateness of direct substitution.

Recently, the ACSO contracted with the National Opinion Research Center (NORC) to report on the availability of data sources, as well as the potential issues with those sources, as candidates for replacing/supplementing data currently collected by the ACS. Using this report (Ruggles, 2015) as well as their experience, the Center for Administrative Records Research and Applications (CARRA) identified several topics for further study based on the availability of data and likelihood of successful matching and analysis. These topics include:

- Year built
- Part of condominium
- Tenure
- Property value
- Real estate taxes
- Have mortgage/mortgage amount
- Second mortgage/HELOC and payment
- Income in the past 12 months
- Residence one year ago
- Number of rooms/bedrooms
- Facilities
- Fuel type
- Acreage

For each topic, CARRA will acquire and match the administrative records to survey data, provide a report or memo describing the quality and coverage of the data source, and compare the administrative record value to ACS self-reported and imputed responses. CARRA will document the linked file and put the research extract in the Data Management System (DMS) for future research.

This research is intended to be a first look at the various topics to document the coverage, quality, and availability of external data sources for potential ACS integration. This research will enable ACS to evaluate the potential of the replacement data sources, identify challenges, and provide direction for further research. It is an exploratory investigation of the feasibility of replacing ACS data with administrative records.

Next, ACSO will create teams for each ACS topic identified as a potential candidate for records usage based on the results from the first phase of research. Each team will include statistical researchers, subject matter experts, and data processors that together can identify and research issues related to records usage.

The teams will make recommendations on whether each question is a good candidate for removal with the use of external data sources in its place. This recommendation will be based on an assessment of the implications of implementing such a change, considering data quality, reliability, alignment of reference periods, break in series, and the limitations of the data source affecting the suitability for use. The team will document and evaluate various options for integrating the records. For instance, for some topics, records may be better suited in assisting with imputation whereas for other topics the records may be used for direct substitution of a survey question (for all or a subset of the ACS respondent pool).

Moreover, ACSO will gauge reactions to our intention to use external data sources from data users, stakeholders, and the public. They will review current ACS mail materials to ensure proper transparency, as well as publically share our vision in public forums such as the ACS Data Users Conference, meetings of the Association of Public Data Users (APDU), the Population Association of America (PAA), the Joint Statistical Meetings (JSM), the American Association of Public Opinion Research (AAPOR), and other public venues.

II. Literature Review

The report, "Review of Administrative Data Sources Relevant to the American Community Survey," provided a review of data sources that could be used to replace or improve specific questions on the ACS (Ruggles, 2015). Its purpose was to support the work of the ACS content review by providing additional input on potential data sources that might be used to strengthen the survey, improve its content, or reduce the burden associated with its collection.

This report focuses on validating and potentially replacing parts of the ACS income question. A large existing literature compares income measures from Census surveys to administrative data sources. Some of these studies attempt to validate survey data by comparing survey aggregates to their administrative counterparts. The advantage of this approach is that no direct linkage is required between the two sources. Papers in this tradition include Rothbaum's (2015) comparison of the Current Population Survey (CPS) Annual Social and Economic Supplement (ASEC) and ACS income aggregates to the National Income and Product Account tables and the analysis of CPS and IRS pension income in Sabelhaus and Schrass (2009). Erard et al. (2012) also compare CPS and IRS income in order to estimate non-filing rates and the tax gap.

While informative, the above studies can only examine simple summary statistics and limited heterogeneity. Direct matching of survey and administrative data, dating back to Kilss and Scheuren (1978), allows for a more comprehensive income comparison. Linked Census survey-administrative earnings studies include Roemer (2002), who uses CPS and the Survey of Income and Program Participation (SIPP) matched to the Detailed Earnings Records (DER) from Social Security, and Bollinger et al. (2015), who document the impact of non-response across the earnings distribution also using the CPS matched to the DER. Davies and Fisher (2009) review several other CPS- and SIPP-DER validation studies, and Meyer (2015) discusses how linked data can be used to assess the decline in standalone survey quality. While most of these earnings validation studies examine survey measurement errors in relation to "true" administrative data sources, Abowd and Stinson (2013) argue that actual earnings are best approximated by a weighted average of survey and administrative measures.

Researchers have also used linked data to examine the effect of mismeasurement on important economic indicators. For example, Hokayem et al. assess the impact of CPS item non-response on poverty in Hokayem et al. (2015), and Gottschalk and Huynh (2010) examine the effects of SIPP measurement error on measured inequality and mobility. In contrast to the large number of earnings validations studies, few papers use direct linking to validate income apart from earnings. Bee (2013) is a recent exception that compares matched CPS ASEC to IRS form 1099-R pension income data, finding substantial underreporting of pension income in the CPS.

III. ACS Income Background

ACS seeks responses for Question 47 for respondents aged 15 and older. Respondents are to respond "Yes" or "No" for each type of income, and enter the amount received IN THE PAST 12 MONTHS for each "Yes" response. Figure 1 (all figures and tables 2 – 9 are presented at the end of the document) shows the income question as it appears on the 2015 ACS questionnaire.

For income received jointly by household members, the ACS Instruction Guide (U.S. Census Bureau, 2016) advises the respondent to report the appropriate share for each person where possible, otherwise to report the whole amount for only one person and respond "No" for the other person. Respondents are advised to only report jointly received income for persons in their household.

The ACS income question is not intended to capture refunds or rebates, withdrawals from savings, capital gains or losses from the sale of homes or shares of stock, inheritances or insurance settlements, loans of any type, or in-kind payments of food or rent.

IV. Data and Methods

This report analyzes the ACS income question using currently available data from the IRS. IRS data are matched to ACS data at the person-level using Protected Identification Keys (PIKs). See Wagner and Layne (2014) for discussion of the method used to link files.

Table 1 summarizes the question sections and potential administrative records sources. The extent of IRS data available varies by income type. The Census Bureau has information returns (e.g., 1099-INT) which indicate only that a person received a specific income type. We currently have additional information on income amounts for two income types (wages and pensions). Other analyses may be possible with other datasets, including SSA data on Supplemental Security Income recipients.

Question 47A reads, “Wages, salary, commissions, bonuses, or tips from all jobs. *Report amount before deductions for taxes, bonds, dues, or other items.*” Respondents are to respond "Yes" or "No" for this type of income, and enter the “TOTAL AMOUNT for past 12 months” for a "Yes" response. The ACS Instruction Guide advises respondents to include wages and salaries before deductions from all jobs including any tips, commissions, or bonuses. Owners of incorporated businesses should enter their salary. Military personnel should include base pay plus cash housing and/or subsistence allowance, flight pay, uniform allotments, reenlistment bonuses. In

this report, we evaluate Wage and Tax Statements, or Form W-2s, from IRS. W-2s include wages, salaries, bonuses, and tips.

Wage data are also available from the National Directory of New Hires (NDNH) and State Unemployment Insurance (UI) Wage records. The Longitudinal Employer Household Dynamics Program (LEHD) at the Census Bureau aggregates UI Wage records. The NDNH and State UI Wage records were unavailable for this analysis.

The NDNH is a component of the Federal Parent Locator Service, which Department of Health and Human Services (HHS) maintains for the Administration for Children and Families (ACF). NDNH is a national database of wage and employment information used for child support enforcement, which includes quarterly wage/unemployment insurance (UI) data, as well as data on new hires and UI beneficiaries. Title 42 of the U.S. Code does not permit the Census Bureau to access NDNH. Access to the NDNH requires legislative change to Section 453(j) of the Social Security Act to allow the Census Bureau limited access for the “purposes of planning or carrying out a census or survey or related statistical activity.” The Census Bureau would seek the minimum information necessary to carry out its programs, reimburse HHS for the costs incurred in furnishing the information, and protect the data under confidentiality provisions of section 9 of Title 13 of the U.S. Code.

State UI Wage records are held by each state, aggregated into the State Directory of New Hires, which is submitted to HHS to form the NDNH. Quarterly wage information for earners could be obtained by negotiating with each state. We did not have time to pursue this lengthy process for this report. The LEHD program has spent decades building relationships to obtain the State UI data. Future research can explore use of LEHD earnings if the IRS data are insufficient.

Question 47B reads, “Self-employment income from own nonfarm businesses or farm businesses, including proprietorships and partnerships. *Report NET income after business expenses.*” There are three checkboxes, a yes and a no checkbox and a checkbox for reporting a loss. Respondents are to respond "Yes," "No," or report a “Loss” for this type of income, and enter the “TOTAL AMOUNT for past 12 months” for a "Yes" response. We identified two potential data sources for this question: IRS Individual Income Tax returns and the SSA Master Earnings File. The IRS individual income tax file contains a flag if a tax return includes a Schedule SE (Form 1040 for self-employment tax). IRS instructions state that persons with self-employment income should include their name on the Schedule SE. If both spouses of a joint return have self-employment income, both should file a Schedule SE. However, the Census Bureau only currently receives a recode indicating that a Schedule SE was associated with the return. Self-employed individuals must pay Social Security and Medicare taxes to SSA. The SSA Master Earnings File captures this information at the person level. The Census Bureau has an interagency agreement with SSA permitting linkages of household surveys with the Master Earnings File. Regular matches occur with the CPS ASEC and the SIPP; a match to the ACS could be negotiated. This report focuses on person-level analyses using currently available administrative records data sources, so no self-employment data matching is included. Future work will analyze the return level flag from the individual income tax returns.

Question 47C reads, “Interest, dividends, net rental income, royalty income, or income from estate and trusts. *Report even small amounts credited to an account.*” Respondents are to respond "Yes," "No," or report a “Loss” for this type of income, and enter the “TOTAL AMOUNT for past 12 months” for a "Yes" response. The ACS Instruction Guide instructs respondents to include interest received or credited to checking and savings accounts, money market funds, certificates of deposit (CDs), individual retirement accounts (IRAs), Keogh plans, and government bonds, and to include dividends received, credited, or reinvested from ownership of stocks or mutual funds. Respondents should include profit (or loss) from royalties and the rental of land, buildings or real estate, or from roomers or boarders, and regular payments from an estate or trust fund.

The Census Bureau receives the universe of 1099-INT and 1099-DIV information returns. We know that an individual had interest or dividend income but do not know the amount. We have initiated a request to the IRS and Department of the Treasury to pursue the amounts. IRS creates an indicator on the 1040 file if a tax return submits a Schedule E, the schedule listing income or loss from rental real estate, royalties, partnerships, S corporations, estates, trusts, or Real Estate Mortgage Investment Conduits (REMICs). In addition, we obtain a continuous variable on the 1040 file for gross rent and royalty income. For this report, only the 1099-INT and 1099-DIV are evaluated to maintain person-level analyses. Future research can explore whether the return-level rent and royalty data provide value, noting that the gross rent and royalty data may include irregular payments (deviating from the ACS Instruction Guide intent).

Question 47D reads, “Social Security or Railroad Retirement.” Respondents are to respond "Yes" or "No" for this type of income, and enter the “TOTAL AMOUNT for past 12 months” for a "Yes" response. The ACS Instruction Guide instructs respondents to include amounts, before Medicare deductions, of Social Security and/or Railroad Retirement payments to retired persons, to dependents of deceased insured workers, and to disabled workers. The Census Bureau receives the universe of SSA-1099 information returns. We know that an individual received Social Security benefits income but do not know the amount. The Census Bureau does not currently receive information returns for Railroad Retirement Benefits (RRB). We have initiated a request to the IRS and Department of the Treasury to pursue the SSA-1099 amounts and the incidence and amounts of 1099-RRB. An alternative data source for 47D would be SSA’s Master Beneficiary Record and Payment History Update System files, which provide monthly benefit amounts received for old age, survivors, and disability insurance (OASDI) programs. We already receive these records matched to the CPS ASEC and SIPP and are pursuing a match to the ACS.

Question 47E reads, “Supplemental Security Income (SSI).” Respondents are to respond "Yes" or "No" for this type of income, and enter the “TOTAL AMOUNT for past 12 months” for a "Yes" response. SSI payments for elderly, blind, or disabled persons are not taxable, so there is no IRS form that reflects receipt. We have initiated a request to SSA for the universe of SSI recipients. We will initially obtain information that a person receives SSI, but not the amount. We plan to pursue SSI amounts for persons in the ACS sample for further analysis.

Question 47F reads, “Any public assistance or welfare payments from the state or local welfare office.” Respondents are to respond "Yes" or "No" for this type of income, and enter the “TOTAL AMOUNT for past 12 months” for a "Yes" response. The ACS Instruction Guide

states that the payments are sometimes referred to as Temporary Assistance for Needy Families (TANF), Aid to Families with Dependent Children (AFDC), Aid to Dependent Children (ADC), Welfare or welfare to work, General Assistance, General Relief, Emergency Assistance, and Diversion Payments. Respondents are instructed not to include assistance from the following: private charities, food assistance (such as food stamps and benefits from the Supplemental Nutrition Assistance Program, or SNAP), rental assistance, education assistance, child care assistance, transportation assistance, or assistance with heating or cooling costs or any other energy assistance (such as Low Income Home Energy Assistance Program, or LIHEAP). The ACS Instruction Guide advises respondents to include all benefits received on behalf of children and to include all benefits paid, even if received for only one month or less than a year. Public assistance income is not recorded by IRS or SSA. In the past, we acquired a file of TANF recipients from HHS. We will evaluate the coverage and quality of the TANF data after we renew acquisition efforts with HHS. The file contains the universe of TANF recipients in some states but only a sample in other states. We plan to evaluate the coverage and quality of the TANF data as resources allow, noting that it provides only a partial answer to Question 47F, as it only includes the federally-sponsored portion of public assistance payments (not all state specific or local programs).

Question 47G reads, “Retirement, survivor, or disability pensions. *Do NOT include Social Security.*” Respondents are to respond "Yes" or "No" for this type of income, and enter the “TOTAL AMOUNT for past 12 months” for a "Yes" response. The ACS Instruction Guide instructs respondents to include retirement, survivor or disability benefits received from companies and unions, federal, state, and local governments, and the U.S. military and to include regular income from annuities and IRA or Keogh retirement plans. The Census Bureau receives 1099-R information returns, which include distributions from Pensions, Annuities, Retirement or Profit-Sharing Plans, IRAs, or Insurance Contracts. We also have acquired limited income amounts, but only for payments from IRAs and payments from pensions, annuities, and other employer-sponsored plans.

Question 47H reads, “Any other sources of income received regularly such as Veterans' payments, unemployment compensation, child support or alimony. Do NOT include lump sum payments such as money from an inheritance or the sale of a home.” Respondents are to respond "Yes" or "No" for this type of income, and enter the “TOTAL AMOUNT for past 12 months” for a "Yes" response. The ACS Instruction Guide instructs respondents to include Veterans' disability compensation and educational assistance payments (VEAP); unemployment compensation, worker's compensation, child support or alimony; and all other regular payments such as Armed Forces transfer payments, assistance from private charities, and regular contributions from persons not living in the household.

To approximate the content sought for “Other Income” in Question 47H, we evaluated coverage of 1099-MISC and 1099-G information returns. According to the IRS, miscellaneous income includes: at least \$10 in royalties or broker payments in lieu of dividends or tax-exempt interest, or at least \$600 in: rents, services performed by someone who is not your employee, prizes and awards, other income payments, medical and health care payments, crop insurance proceeds, cash payments for fish (or other aquatic life) you purchase from anyone engaged in the trade or business of catching fish, generally, the cash paid from a notional principal contract to an

individual, partnership, or estate; payments to an attorney, or any fishing boat proceeds. In addition, 1099-MISC reflects direct sales of at least \$5,000 of consumer products to a buyer for resale anywhere other than a permanent retail establishment. Form 1099-G includes “Certain Government Payments.” According to the IRS, these include payments of unemployment compensation; state or local income tax refunds, credits, or offsets; reemployment trade adjustment assistance (RTAA) payments; taxable grants; or agricultural payments.

The ACS concept for Question 47H is not well captured using the 1099-MISC and/or 1099-G. Neither source includes payments from the Department of Veterans Affairs (VA). We are negotiating with the VA to determine whether income amounts paid from VA could be acquired. Unemployment compensation is included in the 1099-G universe, but we cannot currently differentiate that income source from other payments from federal, state, and local governments. We are pursuing unemployment compensation from HHS in the NDNH. We do not have a source for child support or alimony payment amounts. The 1099-MISC provides income from sources not specified in the ACS Instruction Guide. Some income types may be confused with earnings (especially for contractors or attorneys); we plan to conduct further analysis once we obtain income amounts for the 1099-MISC returns.

Table 1: ACS Income Questions and Potential Administrative Records Sources

ACS Question Number	ACS Question Description	Currently Available at Census	Potentially Available
47A	Wages, salary, commissions, bonuses, or tips from all jobs.	W-2 LEHD	NDNH
47B	Self-employment income from own nonfarm business or farm businesses, including proprietorships and partnerships.	Schedule SE (incidence)	Schedule SE (amounts) SSA Masters Earnings File
47C	Interest, dividends, net rental income, royalty income, or income from estate and trusts.	1099-INT (incidence) 1099-DIV (incidence) Schedule E	1099-INT (amounts) 1099-DIV (amounts)
47D	Social Security or Railroad Retirement.	SSA-1099 (incidence)	SSA-1099 (amounts) 1099-RRB SSA Master Beneficiary Record and Payment History Update Files
47E	Supplemental Security Income.	SSA SSI (incidence)	SSA SSI (amounts)
47F	Any public assistance or welfare payments from the state of local welfare office.	TANF (full coverage in some states, sample in others)	
47G	Retirement, survivor, or disability pensions.	1099-R (incidence)	1099-R (amounts)
47H	Any other sources of income received regularly such as Veterans' payments, unemployment compensation, child support, or alimony.	1099-MISC (incidence) 1099-G (incidence)	VA NDNH

V. Match Results for Information Returns

Table 2 shows match rates for the tax year 2010 (TY2010) IRS information returns to the 2011 ACS (tables and figures can be found at end of this report).¹ The matches were conducted at the person level using PIKs. Eighty-eight percent of PIK-linked ACS respondents aged 18 to 64 had one or more information return. The most common type of form is the W-2, reflecting wages and salaries. Nearly all PIK-linked ACS respondents aged 65 and older had at least one information return (98%), reflecting income received from SSA (92%) and pension distributions on Form 1099-R (62%).

Table 3 shows the mean number of information returns by type for PIK-linked ACS respondents who have at least one return of that type. For example, the average number of 1099-INT forms for PIK-linked ACS respondents aged 65 and older who have at least one of these forms is 3.22. Table 3 indicates that unearned income types are often associated with multiple payers. Use of administrative data may improve data quality for often-underreported income types such as interest and dividends.

VI. Wage Income Results

Linking ACS to W-2 records, we can explore wage income in greater detail. Table 4 shows the distribution of W-2 receipt for ACS respondents aged 15 and older (the relevant universe for the income question) who are assigned a PIK. As a share of the population, fewer W-2s were present for those under 17, 65 and older, and those with less than high school educational attainment. A considerable share (18 percent) of working-age adults (18 to 64) have more than one W-2 for tax year 2010. Among those whose ACS wages are imputed to be zero, 46,108 people (29 percent) do have a W-2, while among those imputed positive wages, 98,434 people (23 percent) have no W-2.² Among those with self-reported ACS wages, more than 93 percent have one or more matching W-2s.

Table 5 further explores the rate of agreement for the presence of wage income between ACS and the W-2. Row totals reflect whether non-zero wage amounts occur in both, one, or neither data source. The first set of results in Table 5 show that the income imputation aligns with the IRS information for over 71 percent of non-earners and for over 77 percent of earners. The self-reported amounts align for 86 percent of non-earners and 93 percent of earners. The misalignment could be due to definitional differences (reporting wages but contractor payments recorded on 1099-MISC) or temporal differences (reference year not equal to tax year). The results for demographic characteristics in the table indicate that the sources agree (both indicate wages or both indicate zero wages) for approximately 80-90 percent of PIK-linked respondents aged 15 and older. The disagreement (wages in ACS or W2) is highest for respondents who are non-citizen and unemployed.

¹ The IRS data used in this report reflect income for a January-December tax year. Returns for tax year 2010 were due by April 15, 2011. ACS PIK rates can be found in the Appendix Table.

² The imputation rate for ACS wage income is 16.0 percent (ages 15 and older, PIK-linked sample).

For wage income, we can also compare ACS and IRS dollar amounts.³ Figure 2 shows how the log wage distributions align. Wages for PIK-linked ACS respondents aged 15 and older are shown by the blue line. There is more heaping in the ACS but the distribution aligns well to the IRS Form W-2 distribution (red line).

The following results show how the two sources compare for the same individuals. Figure 3 shows a sample of the log wages from ACS (excluding wages that were imputed) and IRS as a scatterplot. The bulk of the records are along the diagonal, reflecting similar values for individual earners. ACS heaping is evident in the horizontal lines, especially prominent at lower ACS log wage values and again at the very top of the figure reflecting the ACS topcode⁴. Table 6 further compares average wage amounts by ACS demographic group. ACS and W-2 wages are quite comparable whether one examines unconditional wages (including people with zero) or conditional wages (excluding people with zero).

VII. Pension Income Results

We can also examine retirement, survivor, disability and pension (RSDP) income using matched ACS and 1099-R data. Table 7 shows the distribution of receipt of form 1099-R. Not surprisingly, 1099-Rs are more common among the older population -- 62 percent of persons aged 65 and older receive at least one 1099-R while only 12 percent of persons aged 18 to 64 receive one. Citizens and married people are also more likely to receive a 1099-R. Many of those in these groups receive multiple 1099-Rs.

The overall agreement rate between RSDP and 1099-R income is 87 percent as shown in Table 8. The high agreement rate is driven in part by high rates of neither source reporting pension income for many of the demographic groups. The agreement rate is 71 percent among those aged 65 and older. The agreement rate remains fairly high for those with imputed positive RSDP income at 75 percent and for those with imputed zero RSDP income at 82 percent.⁵

Figure 4 compares the kernel densities for the log of RSDP and 1099-R income. Lower values of pension income are more prevalent on the 1099-R than the ACS. There is also a noticeable amount of heaping in RSDP income around \$1000. Figure 5 shows a scatterplot of non-imputed ACS versus IRS income. Pension income appears underreported in the ACS, and there is a noticeable secondary line of data points to the right of the 45 degree line. This corresponds to 1099-R amounts that are twelve times the ACS amounts. This suggests that some respondents may report a monthly value rather than the value over the previous twelve months.

Table 9 provides further evidence of underreporting of ACS pension income. Among those aged 65 and older the unconditional (including those with zero) mean amount of 1099-R income is \$13,159 compared to \$7,138 of RSDP income. There is much less underreporting on a

³ For comparison purposes, we have censored IRS W-2 and 1099-R income each at \$999,999 to match the ACS wage and pension income topcodes.

⁴ The word topcode is used to describe the process where the highest ACS incomes are rounded down to a maximum allowable value. This prevents high values from skewing estimates and also assists in disclosure avoidance.

⁵ The RSDP income imputation rate is 7.2 percent (ages 15 and older, PIK-linked sample).

conditional mean basis (excluding zeros) with \$21,247 in 1099-R income and \$18,430 in RSDP income.

VIII. Limitations

The matching in this report uses PIKs. Not all ACS respondents receive a PIK and there may be error in PIK assignments if information is incomplete, erroneous, or for common names. Table 10 presents PIK rates for various groups. The ACS responses are collected each month of the year, asking about income received in the previous twelve months. The extent to which respondents adhere to this reference period, as opposed to reporting for the previous calendar year, is beyond the scope of this report.⁶ The IRS data used in this report reflect income for a January-December tax year. Future research can assess whether other data sources align with the current ACS income concept. No administrative records data are available for off-the-books income.

IX. Conclusions and Future Research

IRS information returns provide substantial coverage for expected income types (e.g., wages, pensions, SSA). False negative and positive reporting discrepancies are small (e.g., 5-7 percent for wages across many demographic groups) and symmetrical for wages. Distributions of wages and pensions are similar overall and by demographic characteristics. Some of the discrepancies between sources appear to be the result of heaping and underreporting of small pension amounts in the ACS. Future research will continue to assess income types, and will test edit and imputation processing using the IRS data for wages and pensions.

X. References

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⁶ In future work, we plan to examine whether the correlation between ACS and IRS income varies by the month the ACS household is surveyed. A finding of a stronger correlation for early months would suggest respondents interpret the ACS income question reference period as the previous twelve months rather than the previous calendar year.

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XI. Tables and Figures**Table 2: Match Rates of 2011 ACS Respondents to Tax Year 2010 IRS Information Returns**

Selected characteristics	ACS Respondents with a PIK	Any 1099	1099-MISC	1099-R	1099-S	1099-G	W-2	1099-SSA	1099-INT	1099-DIV
All respondents	4,448,645	0.74	0.09	0.19	0.01	0.24	0.48	0.21	0.29	0.14
Age										
Under 18	997,065	0.16	0.01	0.00	0.00	0.00	0.04	0.05	0.06	0.04
18 to 64	2,696,703	0.88	0.11	0.14	0.01	0.34	0.72	0.08	0.30	0.14
65 and older	754,877	0.98	0.11	0.62	0.01	0.21	0.20	0.92	0.54	0.29
Sex										
Male	2,143,755	0.74	0.11	0.20	0.01	0.32	0.50	0.20	0.31	0.16
Female	2,304,890	0.73	0.07	0.18	0.00	0.17	0.47	0.23	0.27	0.13
Race										
White alone	3,525,242	0.76	0.09	0.21	0.01	0.25	0.49	0.23	0.32	0.16
Black or African American alone	429,830	0.67	0.06	0.16	0.00	0.24	0.45	0.21	0.16	0.05
American Indian and Alaska Native alone	52,525	0.67	0.21	0.09	0.00	0.20	0.42	0.15	0.13	0.07
Asian alone	186,301	0.68	0.08	0.11	0.00	0.24	0.49	0.10	0.32	0.15
Native Hawaiian and other Pacific Islander alone	6,064	0.65	0.08	0.10	0.00	0.26	0.48	0.11	0.17	0.05
Some Other Race alone	132,479	0.54	0.05	0.06	0.00	0.21	0.41	0.08	0.13	0.02
Two or More Races	116,204	0.52	0.06	0.08	0.00	0.17	0.35	0.11	0.16	0.06
Ethnicity										
Hispanic or Latino	543,675	0.56	0.05	0.08	0.00	0.19	0.40	0.11	0.15	0.04
Not Hispanic or Latino	3,904,970	0.77	0.10	0.21	0.01	0.25	0.49	0.22	0.31	0.15
Educational attainment (population 25 and older)										
Less than high school graduate	392,566	0.82	0.08	0.22	0.00	0.22	0.35	0.45	0.24	0.07
High school graduate (includes equivalency)	921,957	0.91	0.10	0.29	0.01	0.30	0.53	0.36	0.33	0.14
Some college, associate's degree	906,864	0.93	0.11	0.26	0.01	0.34	0.65	0.24	0.35	0.16
Bachelor's degree or higher	896,382	0.95	0.16	0.29	0.01	0.36	0.72	0.19	0.51	0.31

Selected characteristics	ACS	Any 1099	1099-MISC	1099-R	1099-S	1099-G	W-2	1099-SSA	1099-INT	1099-DIV
	Respondents with a PIK									
Citizenship										
Citizen	4,250,430	0.74	0.09	0.20	0.01	0.24	0.48	0.22	0.30	0.15
Noncitizen	198,215	0.64	0.07	0.05	0.00	0.23	0.48	0.07	0.19	0.04
Marital status (population 18 and older)										
Married or previously married	2,685,952	0.92	0.12	0.29	0.01	0.30	0.58	0.31	0.39	0.20
Never married	765,628	0.84	0.08	0.09	0.00	0.34	0.69	0.09	0.24	0.10
Employment status (population 16 and older)										
Employed	2,039,928	0.95	0.13	0.15	0.01	0.38	0.87	0.07	0.35	0.17
Unemployed	207,780	0.78	0.08	0.14	0.00	0.43	0.55	0.09	0.19	0.08
Not in labor force	1,324,838	0.80	0.07	0.39	0.01	0.16	0.19	0.58	0.37	0.19
Urban/Rural										
Urban	2,964,064	0.73	0.08	0.19	0.00	0.24	0.49	0.20	0.29	0.15
Rural	1,484,581	0.75	0.10	0.20	0.01	0.24	0.47	0.24	0.29	0.13
Region										
Northeast	865,699	0.76	0.07	0.20	0.00	0.26	0.50	0.22	0.35	0.19
Midwest	1,279,474	0.76	0.09	0.20	0.01	0.31	0.50	0.22	0.29	0.15
South	1,388,703	0.72	0.09	0.19	0.01	0.17	0.46	0.23	0.26	0.12
West	914,769	0.71	0.10	0.17	0.01	0.24	0.46	0.18	0.28	0.13

Source: PIK-linked 2011 ACS person records and TY2010 IRS Information Returns

Note: Proportions are counts of person records linked via PIK to at least one 1099 record of the type listed divided by counts of ACS person records assigned Person Identification Keys (PIKs). Proportions are unweighted and rounded to the nearest hundredth. Values of “0.00” represent proportions under 0.005; each cell has at least one linked respondent.

“Married or previously married” includes persons that are widowed, divorced, separate, and married.

Table 3: Mean Number of Matching Information Returns, Conditional on Having at Least One Return of that Type

Selected characteristics	1099-MISC	1099-R	1099-S	1099-G	W-2	1099-SSA	1099-INT	1099-DIV
All respondents	1.63	1.72	1.10	1.15	1.34	1.02	2.31	2.01
Age								
Under 18	1.07	1.33	1.05	1.11	1.23	1.01	1.26	1.32
18 to 64	1.61	1.46	1.10	1.16	1.36	1.04	1.93	1.91
65 and older	1.72	1.93	1.10	1.11	1.17	1.01	3.22	2.30
Sex								
Male	1.75	1.75	1.11	1.17	1.34	1.01	2.34	2.11
Female	1.45	1.68	1.07	1.11	1.35	1.02	2.27	1.89
Race								
White alone	1.67	1.75	1.10	1.15	1.33	1.02	2.36	2.03
Black or African American alone	1.30	1.49	1.05	1.15	1.40	1.02	1.76	1.55
American Indian and Alaska Native alone	1.27	1.42	1.03	1.15	1.39	1.02	1.64	1.49
Asian alone	1.62	1.66	1.12	1.12	1.30	1.01	2.36	2.11
Native Hawaiian and other Pacific Islander alone	1.33	1.46	1.00	1.13	1.37	1.02	1.60	1.56
Some Other Race alone	1.41	1.37	1.12	1.17	1.40	1.02	1.45	1.42
Two or More Races	1.47	1.52	1.07	1.14	1.41	1.02	1.78	1.68
Ethnicity								
Hispanic or Latino	1.45	1.47	1.07	1.16	1.39	1.02	1.65	1.59
Not Hispanic or Latino	1.64	1.73	1.10	1.15	1.33	1.02	2.35	2.03
Educational attainment (population 25 and older)								
Less than high school graduate	1.45	1.55	1.10	1.16	1.31	1.02	2.31	1.64
High school graduate (includes equivalency)	1.52	1.70	1.10	1.16	1.29	1.02	2.40	1.80
Some college, associate's degree	1.56	1.68	1.10	1.15	1.33	1.02	2.20	1.88
Bachelor's degree or higher	1.87	1.84	1.10	1.14	1.31	1.01	2.58	2.34
Citizenship								
Citizen	1.63	1.72	1.10	1.15	1.34	1.02	2.32	2.01

Selected characteristics	1099-MISC	1099-R	1099-S	1099-G	W-2	1099-SSA	1099-INT	1099-DIV
Noncitizen	1.45	1.44	1.06	1.15	1.37	1.02	1.73	1.74
Marital status (population 18 and older)								
Married or previously married	1.68	1.73	1.10	1.15	1.29	1.02	2.43	2.07
Never married	1.40	1.51	1.09	1.14	1.49	1.03	1.99	1.88
Employment status (population 16 and older)								
Employed	1.71	1.48	1.10	1.14	1.35	1.02	1.99	1.94
Unemployed	1.31	1.53	1.12	1.30	1.46	1.02	1.80	1.84
Not in labor force	1.48	1.87	1.10	1.12	1.26	1.02	2.91	2.19
Urban/Rural								
Urban	1.63	1.74	1.09	1.14	1.35	1.02	2.35	2.07
Rural	1.62	1.67	1.11	1.16	1.32	1.02	2.22	1.86
Region								
Northeast	1.64	1.78	1.06	1.15	1.34	1.02	2.48	2.14
Midwest	1.59	1.75	1.11	1.17	1.35	1.02	2.29	1.95
South	1.66	1.64	1.11	1.11	1.33	1.02	2.30	1.99
West	1.62	1.71	1.10	1.14	1.35	1.02	2.14	1.96

Source: PIK-linked 2011 ACS person records and TY2010 IRS Information Returns

Note: Denominators of means are counts of ACS person records linked to at least one information returns of that type, and numerators are counts of linked information returns. Means are unweighted. Race groups include both Hispanics and non-Hispanics, and the category of Hispanic or Latino includes any race. “Married or previously married” includes persons that are widowed, divorced, separate, and married.

Table 4: Proportion of PIK-Linked 2011 ACS Respondents Aged 15 and Older by Number of Linked W-2 Records

Selected characteristics	ACS Respondents Aged 15 and Older with a PIK	Proportion of PIK-Linked ACS Respondents Aged 15 and Older by Number of Linked W-2 Records					
		0	1 or more	1	2	3	4 or more
All respondents	3,631,883	0.41	0.59	0.45	0.11	0.03	0.01
ACS Wage Imputation							
ACS wages imputed, zero	158,113	0.71	0.29	0.23	0.05	0.01	0.00
ACS wages imputed, positive	423,786	0.23	0.77	0.56	0.15	0.04	0.02
ACS wages not imputed, zero	1,343,707	0.86	0.14	0.11	0.02	0.00	0.00
ACS wages not imputed, positive	1,706,277	0.07	0.93	0.70	0.17	0.04	0.02
Age							
Under 18	180,303	0.83	0.17	0.14	0.02	0.00	0.00
18 to 64	2,696,703	0.28	0.72	0.54	0.13	0.03	0.01
65 and older	754,877	0.80	0.20	0.18	0.02	0.00	0.00
Sex							
Male	1,725,215	0.38	0.62	0.47	0.11	0.03	0.01
Female	1,906,668	0.44	0.56	0.42	0.10	0.03	0.01
Race							
White alone	2,929,132	0.41	0.59	0.45	0.10	0.03	0.01
Black or African American alone	340,519	0.43	0.57	0.41	0.12	0.03	0.01
American Indian and Alaska Native alone	38,880	0.44	0.56	0.41	0.11	0.03	0.01
Asian alone	153,011	0.40	0.60	0.47	0.10	0.02	0.01
Native Hawaiian and other Pacific Islander alone	4,632	0.38	0.62	0.46	0.12	0.03	0.01
Some Other Race alone	96,175	0.44	0.56	0.41	0.11	0.03	0.01
Two or More Races	69,534	0.43	0.57	0.41	0.12	0.03	0.01
Ethnicity							
Hispanic or Latino	391,065	0.44	0.56	0.41	0.11	0.03	0.01
Not Hispanic or Latino	3,240,818	0.41	0.59	0.45	0.11	0.03	0.01

Selected characteristics	ACS Respondents Aged 15 and Older with a PIK	Proportion of PIK-Linked ACS Respondents Aged 15 and Older by Number of Linked W-2 Records					
		0	1 or more	1	2	3	4 or more
Educational attainment (population 25 and older)							
Less than high school graduate	392,566	0.65	0.35	0.28	0.06	0.01	0.01
High school graduate (includes equivalency)	921,957	0.47	0.53	0.42	0.08	0.02	0.01
Some college, associate's degree	906,864	0.35	0.65	0.50	0.11	0.03	0.01
Bachelor's degree or higher	896,382	0.28	0.72	0.56	0.12	0.03	0.01
Citizenship							
Citizen	3,445,897	0.41	0.59	0.45	0.11	0.03	0.01
Noncitizen	185,986	0.48	0.52	0.39	0.09	0.02	0.01
Marital status (population 18 and older)							
Married or previously married	2,685,952	0.41	0.59	0.46	0.10	0.02	0.01
Never married	765,628	0.31	0.69	0.46	0.16	0.05	0.02
Employment status (population 16 and older)							
Employed	2,039,928	0.13	0.87	0.65	0.16	0.04	0.02
Unemployed	207,780	0.45	0.55	0.38	0.12	0.03	0.02
Not in labor force	1,324,838	0.81	0.19	0.15	0.03	0.01	0.00
Urban/Rural							
Urban	2,418,539	0.41	0.59	0.45	0.11	0.03	0.01
Rural	1,213,344	0.42	0.58	0.44	0.10	0.02	0.01
Region							
Northeast	715,534	0.40	0.60	0.46	0.11	0.03	0.01
Midwest	1,044,854	0.39	0.61	0.46	0.11	0.03	0.01
South	1,133,161	0.44	0.56	0.43	0.10	0.02	0.01
West	738,334	0.43	0.57	0.43	0.10	0.03	0.01

Source: PIK-linked ACS person records and TY2010 IRS Form W-2

Note: Proportions are unweighted and rounded to the nearest hundredth. Values of "0.00" represent proportions under 0.005; each cell has at least one linked respondent. "Married or previously married" includes persons that are widowed, divorced, separate, and married.

Table 5: Agreement between 2011 ACS Wage Receipt and Linking of IRS Form W-2 Records

Selected characteristics	ACS Respondents Aged 15 and Older with a PIK	<u>Sources Agree</u>		<u>Sources Disagree</u>		Agreement Rate
		Both Sources	Neither Source	ACS Only	W-2 Only	
All respondents	3,631,883	0.52	0.35	0.06	0.06	0.87
ACS Wage Imputation						
ACS wages imputed, zero	158,113	n/a	0.71	n/a	0.29	0.71
ACS wages imputed, positive	423,786	0.77	n/a	0.23	n/a	0.77
ACS wages not imputed, zero	1,343,707	n/a	0.86	n/a	0.14	0.86
ACS wages not imputed, positive	1,706,277	0.93	n/a	0.07	n/a	0.93
Age						
Under 18	180,303	0.11	0.75	0.08	0.07	0.86
18 to 64	2,696,703	0.66	0.21	0.07	0.06	0.87
65 and older	754,877	0.14	0.76	0.03	0.07	0.90
Sex						
Male	1,725,215	0.55	0.31	0.07	0.06	0.86
Female	1,906,668	0.50	0.39	0.05	0.06	0.89
Race						
White alone	2,929,132	0.53	0.35	0.06	0.06	0.88
Black or African American alone	340,519	0.48	0.37	0.06	0.09	0.85
American Indian and Alaska Native alone	38,880	0.45	0.36	0.08	0.11	0.81
Asian alone	153,011	0.54	0.32	0.08	0.06	0.86
Native Hawaiian and other Pacific Islander alone	4,632	0.52	0.28	0.10	0.10	0.81
Some Other Race alone	96,175	0.48	0.32	0.12	0.07	0.80
Two or More Races	69,534	0.50	0.34	0.08	0.07	0.84
Ethnicity						
Hispanic or Latino	391,065	0.48	0.34	0.11	0.07	0.82
Not Hispanic or Latino	3,240,818	0.52	0.35	0.05	0.06	0.88
Educational attainment (population 25 and older)						
Less than high school graduate	392,566	0.28	0.57	0.07	0.07	0.86

Selected characteristics	ACS Respondents Aged 15 and Older with a PIK	Sources Agree		Sources Disagree		Agreement Rate
		Both Sources	Neither Source	ACS Only	W-2 Only	
High school graduate (includes equivalency)	921,957	0.47	0.41	0.05	0.07	0.88
Some college, associate's degree	906,864	0.59	0.29	0.05	0.06	0.88
Bachelor's degree or higher	896,382	0.67	0.23	0.05	0.05	0.90
Citizenship						
Citizen	3,445,897	0.53	0.35	0.06	0.06	0.88
Noncitizen	185,986	0.46	0.32	0.16	0.06	0.77
Marital status (population 18 and older)						
Married or previously married	2,685,952	0.53	0.36	0.05	0.06	0.89
Never married	765,628	0.62	0.22	0.08	0.07	0.84
Employment status (population 16 and older)						
Employed	2,039,928	0.85	0.05	0.09	0.02	0.90
Unemployed	207,780	0.37	0.36	0.09	0.18	0.73
Not in labor force	1,324,838	0.07	0.79	0.02	0.12	0.86
Urban/Rural						
Urban	2,418,539	0.53	0.34	0.06	0.06	0.87
Rural	1,213,344	0.51	0.37	0.06	0.07	0.88
Region						
Northeast	715,534	0.54	0.34	0.06	0.06	0.88
Midwest	1,044,854	0.55	0.33	0.06	0.07	0.88
South	1,133,161	0.50	0.37	0.07	0.06	0.87
West	738,334	0.51	0.36	0.07	0.06	0.87

Source: PIK-linked ACS person records and TY 2010 IRS Form W-2

Note: Proportions are unweighted and rounded to the nearest hundredth. "Both sources" refers to the proportion of ACS person records (at least age 15 and with PIKs) that have a positive wage amount reported in the ACS and are also matched to at least one Form W-2 record. "Neither source" refers to qualifying ACS respondents who have zero reported ACS wages and do not match to any Form W-2 record. "ACS only" refers to those with positive ACS wages but no matched W-2, and "W-2 only" refers to those who match to a W-2 but have zero ACS wages. "Married or previously married" includes persons that are widowed, divorced, separate, and married.

Table 6: Mean Wage Amounts for 2011 ACS Respondents Aged 15 and Older Matched to TY 2010 IRS Form W-2 Records

Selected characteristics	Mean ACS Wages		Mean W-2 Wages	
	Conditional on Positive ACS Wages	Unconditional	Conditional on Positive W-2 Wages	Unconditional
All respondents	\$42,321	\$24,821	\$41,279	\$24,264
ACS Wage Imputation				
ACS wages imputed, zero	-	\$0	\$20,721	\$6,043
ACS wages imputed, positive	\$35,962	\$35,962	\$36,180	\$27,776
ACS wages not imputed, zero	-	\$0	\$13,880	\$1,899
ACS wages not imputed, positive	\$43,901	\$43,901	\$46,118	\$42,692
Age				
Under 18	\$2,517	\$457	\$3,529	\$605
18 to 64	\$43,465	\$31,762	\$42,783	\$30,926
65 and older	\$34,818	\$5,846	\$29,859	\$6,114
Sex				
Male	\$51,152	\$31,966	\$50,177	\$30,867
Female	\$33,271	\$18,356	\$32,482	\$18,289
Race				
White alone	\$43,760	\$25,817	\$42,754	\$25,269
Black or African American alone	\$31,976	\$17,299	\$29,623	\$16,850
American Indian and Alaska Native alone	\$28,153	\$15,033	\$26,301	\$14,709
Asian alone	\$52,307	\$32,524	\$53,325	\$32,000
Native Hawaiian and other Pacific Islander alone	\$32,922	\$20,420	\$31,468	\$19,532
Some Other Race alone	\$27,374	\$16,655	\$27,806	\$15,534
Two or More Races	\$34,050	\$19,799	\$33,124	\$18,932
Ethnicity				
Hispanic or Latino	\$30,765	\$18,174	\$30,639	\$17,024
Not Hispanic or Latino	\$43,742	\$25,623	\$42,489	\$25,138

Selected characteristics	Mean ACS Wages		Mean W-2 Wages	
	Conditional on Positive ACS Wages	Unconditional	Conditional on Positive W-2 Wages	Unconditional
Educational attainment (population 25 and older)				
Less than high school graduate	\$24,146	\$8,647	\$23,088	\$8,185
High school graduate (includes equivalency)	\$31,998	\$16,735	\$30,681	\$16,405
Some college, associate's degree	\$38,921	\$25,217	\$37,726	\$24,700
Bachelor's degree or higher	\$69,979	\$50,653	\$69,473	\$49,844
Citizenship				
Citizen	\$42,743	\$24,995	\$41,504	\$24,553
Noncitizen	\$34,930	\$21,602	\$36,499	\$18,893
Marital status (population 18 and older)				
Married or previously married	\$48,511	\$28,128	\$47,403	\$27,751
Never married	\$26,881	\$18,957	\$25,354	\$17,599
Employment status (population 16 and older)				
Employed	\$45,527	\$42,689	\$46,513	\$40,313
Unemployed	\$15,580	\$7,176	\$17,744	\$9,803
Not in labor force	\$12,943	\$1,188	\$15,428	\$2,896
Urban/Rural				
Urban	\$44,550	\$26,554	\$43,722	\$25,970
Rural	\$37,655	\$21,366	\$36,252	\$20,861
Region				
Northeast	\$47,820	\$28,798	\$47,128	\$28,509
Midwest	\$38,353	\$23,173	\$37,017	\$22,732
South	\$41,045	\$23,260	\$39,784	\$22,467
West	\$44,564	\$25,695	\$44,035	\$25,074

Source: PIK-linked 2011 ACS person records and TY 2010 Form W-2

Note: "Married or previously married" includes persons that are widowed, divorced, separate, and married.

Table 7: Proportion of PIK-Linked 2011 ACS Respondents Aged 15 and Older by Number of Matching 1099-R Records

Selected characteristics	ACS Respondents Aged 15 and Older with a PIK	Proportion of PIK-Linked ACS Respondents Aged 15 and Older by Number of Matching 1099-R Records					
		0	1 or More	1	2	3	4 or more
All respondents	3,631,883	0.78	0.22	0.13	0.05	0.02	0.01
ACS RSDP Income Imputation							
ACS RSDP income imputed, zero	183,008	0.82	0.18	0.12	0.04	0.02	0.01
ACS RSDP income imputed, positive	77,241	0.25	0.75	0.39	0.21	0.09	0.06
ACS RSDP income not imputed, zero	3,006,285	0.87	0.13	0.09	0.02	0.01	0.01
ACS RSDP income not imputed, positive	365,349	0.11	0.89	0.45	0.25	0.11	0.07
Age							
Under 18	180,303	1.00	0.00	0.00	0.00	0.00	0.00
18 to 64	2,696,703	0.88	0.12	0.09	0.02	0.01	0.00
65 and older	754,877	0.38	0.62	0.31	0.17	0.08	0.06
Sex							
Male	1,725,215	0.76	0.24	0.14	0.06	0.02	0.02
Female	1,906,668	0.79	0.21	0.13	0.05	0.02	0.01
Race							
White alone	2,929,132	0.76	0.24	0.14	0.06	0.02	0.02
Black or African American alone	340,519	0.80	0.20	0.14	0.04	0.01	0.01
American Indian and Alaska Native alone	38,880	0.88	0.12	0.09	0.02	0.01	0.00
Asian alone	153,011	0.89	0.11	0.07	0.02	0.01	0.01
Native Hawaiian and other Pacific Islander alone	4,632	0.87	0.13	0.09	0.03	0.01	0.00
Some Other Race alone	96,175	0.93	0.07	0.06	0.01	0.00	0.00
Two or More Races	69,534	0.88	0.12	0.09	0.02	0.01	0.00
Ethnicity							
Hispanic or Latino	391,065	0.90	0.10	0.07	0.02	0.01	0.00
Not Hispanic or Latino	3,240,818	0.77	0.23	0.14	0.05	0.02	0.01

Selected characteristics	ACS Respondents Aged 15 and Older with a PIK	Proportion of PIK-Linked ACS Respondents Aged 15 and Older by Number of Matching 1099-R Records					
		0	1 or More	1	2	3	4 or more
Educational attainment (population 25 and older)							
Less than high school graduate	392,566	0.78	0.22	0.14	0.05	0.02	0.01
High school graduate (includes equivalency)	921,957	0.72	0.28	0.17	0.07	0.03	0.02
Some college, associate's degree	906,864	0.75	0.25	0.15	0.06	0.02	0.01
Bachelor's degree or higher	896,382	0.74	0.26	0.15	0.06	0.03	0.02
Citizenship							
Citizen	3,445,897	0.77	0.23	0.14	0.05	0.02	0.01
Noncitizen	185,986	0.95	0.05	0.03	0.01	0.00	0.00
Marital status (population 18 and older)							
Married or previously married	2,685,952	0.72	0.28	0.17	0.07	0.03	0.02
Never married	765,628	0.92	0.08	0.06	0.01	0.00	0.00
Employment status (population 16 and older)							
Employed	2,039,928	0.87	0.13	0.10	0.02	0.01	0.00
Unemployed	207,780	0.87	0.13	0.09	0.02	0.01	0.00
Not in labor force	1,324,838	0.62	0.38	0.20	0.10	0.04	0.03
Urban/Rural							
Urban	2,418,539	0.78	0.22	0.13	0.05	0.02	0.01
Rural	1,213,344	0.77	0.23	0.14	0.05	0.02	0.01
Region							
Northeast	715,534	0.77	0.23	0.13	0.05	0.02	0.02
Midwest	1,044,854	0.76	0.24	0.14	0.06	0.02	0.02
South	1,133,161	0.78	0.22	0.14	0.05	0.02	0.01
West	738,334	0.80	0.20	0.12	0.05	0.02	0.01

Source: PIK-linked ACS person records and TY2010 IRS Form W-2

Note: "ACS RSDP Income" refers to the amount from item 47g: retirement, survivor, or disability pensions. Proportions are unweighted and rounded to the nearest hundredth. Values of "0.00" represent proportions under 0.005; each cell has at least one linked respondent. "Married or previously married" includes persons that are widowed, divorced, separate, and married.

Table 8: Agreement between 2011 ACS RSDP Income Receipt and Listing of IRS Form 1099-R Records

Selected characteristics	ACS Respondents Aged 15 and Older with a PIK	<u>Sources Agree</u>		<u>Source Disagree</u>		Agreement Rate
		Both Sources	Neither Source	ACS Only	1099-R Only	
All respondents	3,631,883	0.11	0.76	0.02	0.12	0.87
ACS RSDP Income Imputation						
ACS RSDP Income imputed, zero	183,008	n/a	0.82	n/a	0.18	0.82
ACS RSDP Income imputed, positive	77,241	0.75	n/a	0.25	n/a	0.75
ACS RSDP Income not imputed, zero	3,006,285	n/a	0.87	n/a	0.13	0.87
ACS RSDP Income not imputed, positive	365,349	0.89	n/a	0.11	n/a	0.89
Age						
Under 18	180,303	0.00	0.99	0.01	0.00	0.99
18 to 64	2,696,703	0.04	0.86	0.01	0.08	0.90
65 and older	754,877	0.36	0.35	0.03	0.26	0.71
Sex						
Male	1,725,215	0.12	0.75	0.02	0.12	0.87
Female	1,906,668	0.09	0.78	0.02	0.12	0.87
Race						
White alone	2,929,132	0.11	0.75	0.02	0.12	0.86
Black or African American alone	340,519	0.09	0.78	0.02	0.11	0.87
American Indian and Alaska Native alone	38,880	0.05	0.85	0.03	0.08	0.90
Asian alone	153,011	0.04	0.88	0.01	0.07	0.92
Native Hawaiian and other Pacific Islander alone	4,632	0.05	0.85	0.02	0.08	0.90
Some Other Race alone	96,175	0.02	0.92	0.01	0.05	0.94
Two or More Races	69,534	0.05	0.86	0.02	0.07	0.91
Ethnicity						
Hispanic or Latino	391,065	0.04	0.89	0.01	0.06	0.92
Not Hispanic or Latino	3,240,818	0.12	0.74	0.02	0.13	0.86
Educational attainment (population 25 and older)						
Less than high school graduate	392,566	0.10	0.76	0.03	0.11	0.86

Selected characteristics	ACS Respondents Aged 15 and Older with a PIK	Sources Agree		Source Disagree		Agreement Rate
		Both Sources	Neither Source	ACS Only	1099-R Only	
High school graduate (includes equivalency)	921,957	0.13	0.70	0.02	0.15	0.83
Some college, associate's degree	906,864	0.11	0.74	0.02	0.13	0.85
Bachelor's degree or higher	896,382	0.13	0.73	0.01	0.13	0.86
Citizenship						
Citizen	3,445,897	0.11	0.75	0.02	0.12	0.86
Noncitizen	185,986	0.01	0.94	0.01	0.04	0.95
Marital status (population 18 and older)						
Married or previously married	2,685,952	0.14	0.70	0.02	0.14	0.84
Never married	765,628	0.02	0.91	0.01	0.06	0.93
Employment status (population 16 and older)						
Employed	2,039,928	0.03	0.86	0.01	0.10	0.89
Unemployed	207,780	0.03	0.86	0.01	0.09	0.89
Not in labor force	1,324,838	0.23	0.58	0.03	0.15	0.81
Urban/Rural						
Urban	2,418,539	0.10	0.77	0.02	0.11	0.87
Rural	1,213,344	0.11	0.75	0.02	0.12	0.86
Region						
Northeast	715,534	0.11	0.76	0.02	0.12	0.86
Midwest	1,044,854	0.11	0.75	0.02	0.12	0.86
South	1,133,161	0.11	0.76	0.02	0.11	0.87
West	738,334	0.09	0.79	0.02	0.10	0.88

Source: PIK-linked 2011 ACS person records and TY2010 IRS Form 1099-R.

Note: "ACS RSDP Income" refers to the amount from item 47g: retirement, survivor, or disability pensions. Proportions are unweighted and rounded to the nearest hundredth. "Both sources" refers to the proportion of ACS person records (at least age 15 and with PIKs) that have a positive RSDP Income amount reported in the ACS and are also matched to at least one Form 1099-R record. "Neither source" refers to qualifying ACS respondents who have zero reported RSDP Income and do not match to any Form 1099-R record. "ACS only" refers to those with positive RSDP Income but no matched 1099-R, and "1099-R only" refers to those who match to a 1099-R but have zero RSDP Income. "Married or previously married" includes persons that are widowed, divorced, separate, and married.

Table 9: Mean ACS RSDP Income Amounts for 2011 ACS Respondents Aged 15 and Older Matched to TY 2010 IRS Form 1099-R Records

Selected characteristics	Mean RSDP Income		Mean 1099-R	
	Conditional on Positive RSDP Income	Unconditional	Conditional on Positive 1099-R Amount	Unconditional
All respondents	\$19,283	\$2,350	\$20,717	\$4,583
ACS RSDP Income Imputation				
ACS RSDP Income imputed, zero	-	\$0	\$18,075	\$3,323
ACS RSDP Income imputed, positive	\$16,428	\$16,428	\$20,845	\$15,571
ACS RSDP Income not imputed, zero	-	\$0	\$15,820	\$2,042
ACS RSDP Income not imputed, positive	\$19,887	\$19,887	\$26,834	\$23,797
Age				
Under 18	\$6,740	\$38	\$12,588	\$35
18 to 64	\$21,040	\$1,164	\$19,990	\$2,487
65 and older	\$18,430	\$7,138	\$21,247	\$13,159
Sex				
Male	\$22,769	\$3,116	\$25,225	\$5,964
Female	\$15,296	\$1,656	\$16,068	\$3,334
Race				
White alone	\$19,574	\$2,564	\$21,250	\$5,065
Black or African American alone	\$17,181	\$1,999	\$16,135	\$3,183
American Indian and Alaska Native alone	\$15,330	\$1,121	\$14,892	\$1,820
Asian alone	\$20,629	\$1,084	\$23,475	\$2,651
Native Hawaiian and other Pacific Islander alone	\$17,793	\$1,256	\$17,340	\$2,231
Some Other Race alone	\$13,757	\$468	\$12,599	\$904
Two or More Races	\$17,333	\$1,198	\$17,687	\$2,189
Ethnicity				
Hispanic or Latino	\$16,549	\$848	\$15,478	\$1,550
Not Hispanic or Latino	\$19,401	\$2,531	\$20,974	\$4,949

Selected characteristics	Mean RSDP Income		Mean 1099-R	
	Conditional on Positive RSDP Income	Unconditional	Conditional on Positive 1099-R Amount	Unconditional
Educational attainment (population 25 and older)				
Less than high school graduate	\$10,392	\$1,355	\$10,672	\$2,321
High school graduate (includes equivalency)	\$13,632	\$2,073	\$14,602	\$4,040
Some college, associate's degree	\$17,853	\$2,349	\$18,685	\$4,582
Bachelor's degree or higher	\$30,440	\$4,403	\$33,436	\$8,730
Citizenship				
Citizen	\$19,323	\$2,459	\$20,801	\$4,798
Noncitizen	\$14,911	\$325	\$12,896	\$594
Marital status (population 18 and older)				
Married or previously married	\$19,317	\$2,995	\$21,152	\$5,845
Never married	\$19,218	\$631	\$15,459	\$1,226
Employment status (population 16 and older)				
Employed	\$19,870	\$0	\$18,494	\$2,436
Unemployed	\$17,145	\$0	\$16,714	\$2,112
Not in labor force	\$19,207	\$5,043	\$22,101	\$8,481
Urban/Rural				
Urban	\$20,244	\$2,383	\$21,931	\$4,734
Rural	\$17,552	\$2,284	\$18,464	\$4,282
Region				
Northeast	\$19,411	\$2,403	\$21,321	\$4,861
Midwest	\$17,379	\$2,187	\$18,483	\$4,349
South	\$19,272	\$2,400	\$20,544	\$4,508
West	\$22,237	\$2,452	\$24,103	\$4,759

Source: PIK-linked 2011 ACS person records and TY 2010 Form 1099-R

Note: "ACS RSDP Income" refers to the amount from item 47g; retirement, survivor, or disability pensions. Means are unweighted and rounded to the nearest dollar. "Married or previously married" includes persons that are widowed, divorced, separate, and married.

Table 10: PIK Rates of ACS Respondents

Selected Characteristic	ACS respondents	ACS respondents with PIK	PIK rate
ACS Respondents	4,730,607	4,448,645	0.94
Age			
Under 18	1,071,059	997,065	0.93
18 to 64	2,870,361	2,696,703	0.94
65 and older	789,187	754,877	0.96
Sex			
Male	2,282,990	2,143,755	0.94
Female	2,447,617	2,304,890	0.94
Race			
White alone	3,719,992	3,525,242	0.95
Black or African American alone	464,551	429,830	0.93
American Indian and Alaska Native alone	58,479	52,525	0.90
Asian alone	202,805	186,301	0.92
Native Hawaiian and Other Pacific Islander alone	6,901	6,064	0.88
Some Other Race alone	154,027	132,479	0.86
Two or More races	123,852	116,204	0.94
Ethnicity			
Hispanic or Latino	610,015	543,675	0.89
Not Hispanic or Latino	4,120,592	3,904,970	0.95
Educational Attainment (population 25 and older)			
Less than high school graduate	428,375	392,566	0.92
High school graduate (includes equivalency)	976,835	921,957	0.94
Some college, associate's degree	952,039	906,864	0.95
Bachelor's degree or higher	937,548	896,382	0.96
Citizenship			
Citizen	4,484,679	4,250,430	0.95
Non-citizen	245,928	198,215	0.81
Marital Status (population 18 and older)			
Married or previously married	2,825,360	2,685,952	0.95
Never married	834,188	765,628	0.92
Employment Status (population 16 and older)			
Employed	2,157,120	2,039,928	0.95
Unemployed	222,445	207,780	0.93
Not in labor force	1,409,054	1,324,838	0.94
Urban/Rural			
Urban	3,160,596	2,964,064	0.94
Rural	1,570,011	1,484,581	0.95
Region			
Northeast	919,297	865,699	0.94
Midwest	1,339,685	1,279,474	0.96
South	1,478,706	1,388,703	0.94
West	992,919	914,769	0.92

Source: PIK-linked 2011 ACS person records. PIK rate is unweighted.

Note: "Married or previously married" includes persons that are widowed, divorced, separate, and married.

Figure 1: ACS Income Question

47 INCOME IN THE PAST 12 MONTHS

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

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

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

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

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

Yes → No

TOTAL AMOUNT for past 12 months

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

Yes → No

TOTAL AMOUNT for past 12 months Loss

c. Interest, dividends, net rental income, royalty income, or income from estates and trusts. Report even small amounts credited to an account.

Yes → No

TOTAL AMOUNT for past 12 months Loss

d. Social Security or Railroad Retirement.

Yes → No

TOTAL AMOUNT for past 12 months

e. Supplemental Security Income (SSI).

Yes → No

TOTAL AMOUNT for past 12 months

f. Any public assistance or welfare payments from the state or local welfare office.

Yes → No

TOTAL AMOUNT for past 12 months

g. Retirement, survivor, or disability pensions. Do NOT include Social Security.

Yes → No

TOTAL AMOUNT for past 12 months

h. Any other sources of income received regularly such as Veterans' (VA) payments, unemployment compensation, child support or alimony. Do NOT include lump sum payments such as money from an inheritance or the sale of a home.

Yes → No

TOTAL AMOUNT for past 12 months

Figure 2: Distributions of Log Wages from the ACS and W-2 among Linked ACS Respondents

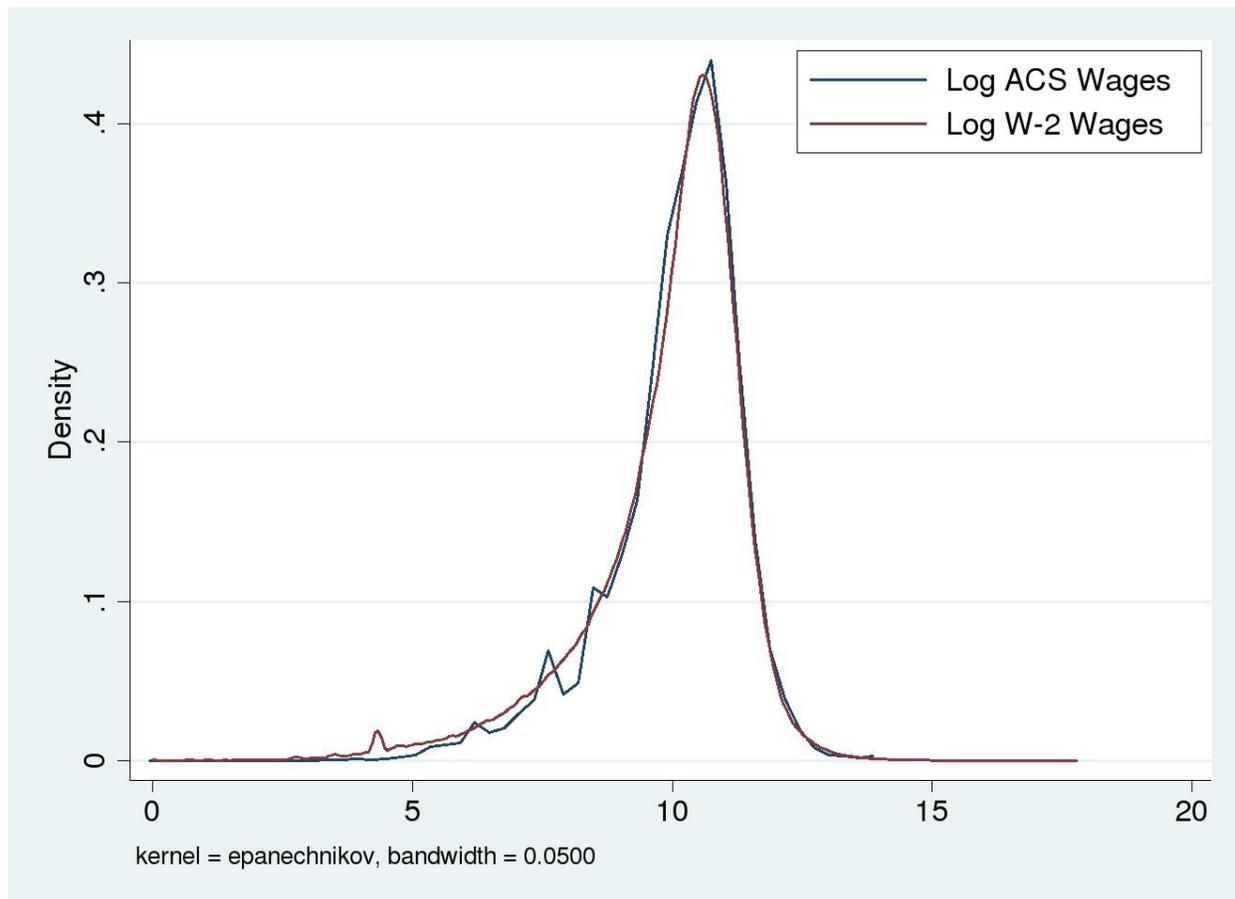


Figure 3: 2011 ACS Wages by PIK-Linked TY2010 IRS W-2 Wages, among Non-Imputed Cases

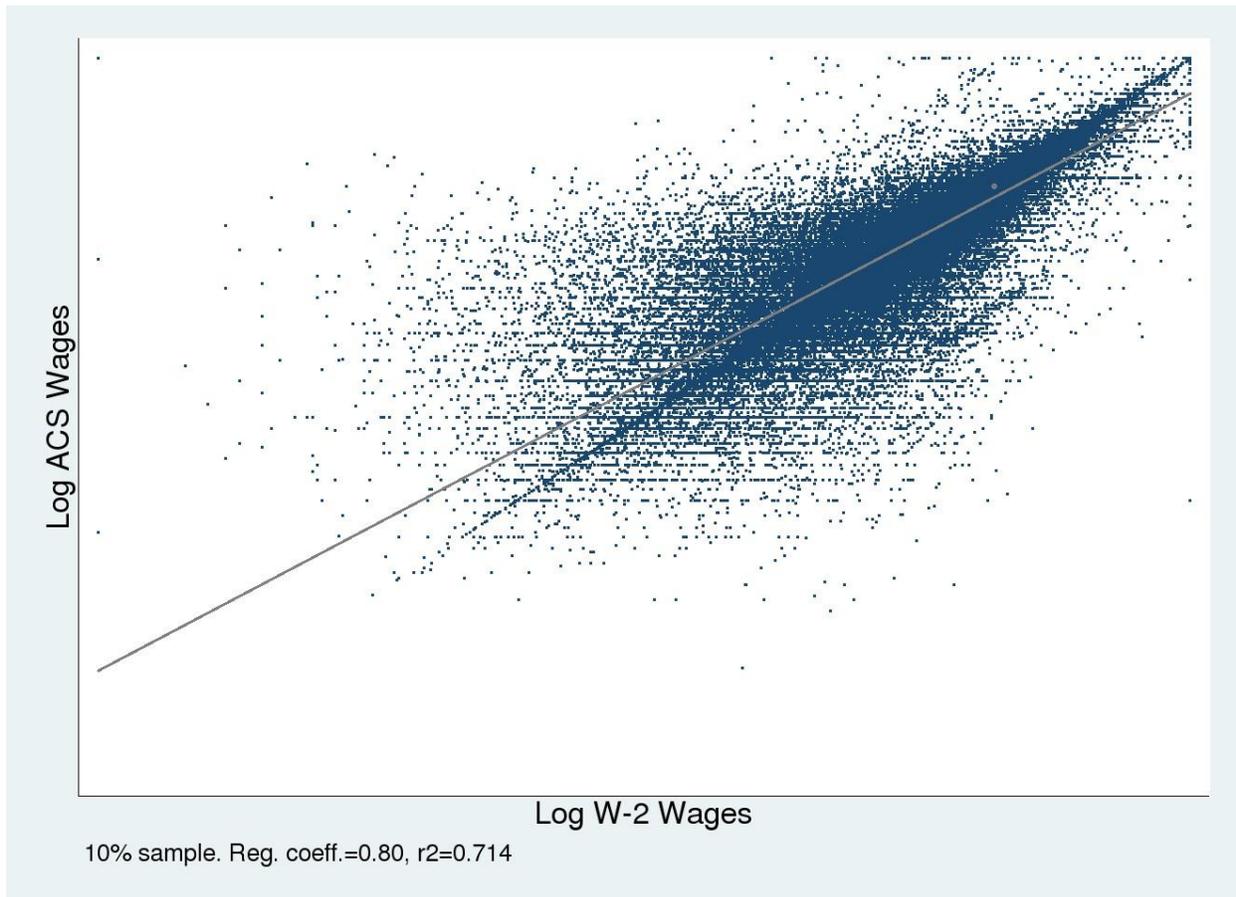


Figure 4: Distributions of Log ACS and 1099-R Amounts among Linked 2011 ACS Respondents

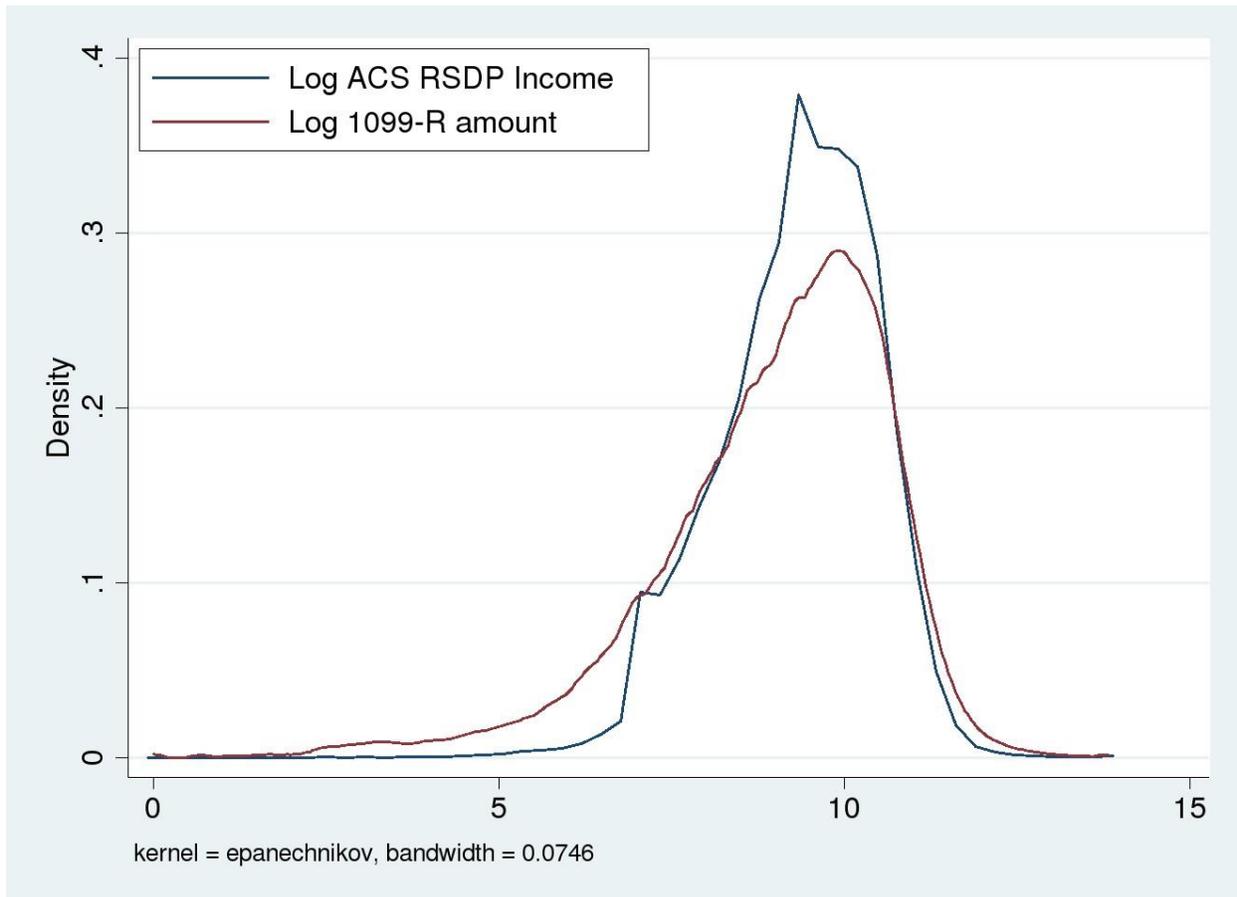


Figure 5: 2011 ACS RSDP Income by PIK-Linked TY2010 IRS 1099-R Amount, among Non- Imputed Cases

