Race, Ethnicity, and Measurement Error

Bruce D. Meyer, University of Chicago, NBER, and AEI

Nikolas Mittag, CERGE-EI

Derek Wu, University of Virginia

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Many Literatures Depend on Program Receipt Differences by Race and Ethnicity

- Large literatures depend on accurate survey data on receipt of social insurance and welfare programs by race and ethnicity
- Research using survey data has found important differences by race and ethnicity in program receipt
  - One group of these papers emphasizes lower receipt of transfers by Black or Hispanic individuals, suggesting that state laws or their administration has led to disparate access to these programs (Gould-Werth and Shaefer 2012; Kuka and Stuart 2021; Forsythe and Yang 2021; U.S. GAO 2022)
  - A second group of papers examines whether Black or Hispanic individuals are overrepresented among program recipients, focusing mostly on means-tested transfers (Moffitt and Gottschalk 2001)
- Other papers have emphasized racial and ethnic differences in measures of poverty and material well-being (Burkhauser et al. 2022; U.S. Census Bureau 2022).

Reports of Program Receipt are Notoriously Inaccurate

- A large literature shows that weighted survey reports understate administrative aggregates for counts of recipients and dollars (Meyer, Mok, and Sullivan 2015; Rothbaum 2015)
- Another literature shows that linked survey and administrative microdata show substantial misreporting, most commonly underreporting (e.g., Marquis and Moore 1990; Hyunh et al. 2002, Meyer and Mittag 2019, 2021)
- Both literatures tend to find that the problem has become worse over time (Gathright and Crabb 2014; Meyer, Mok, and Sullivan 2015)
- While overall error rates are known to be high, distributional analyses along characteristics such as race/ethnicity could still be unbiased if the errors are constant
    - Unlikely to be true given non-classical nature of survey measurement error in program receipt (e.g. Bollinger and David, 1997; Meyer, Mittag, and Goerge 2022)

Addressing the Problem of Survey Error

- For problems of endogeneity, *suspecting* that there may be bias typically prompts researchers to reject OLS and apply IV methods that *may or may not* improve the bias
- For measurement problems, we *have evidence* that there is bias and often *know* methods to improve estimates, yet we currently do not have the same expectation that we should change methods
- On the positive side, recent papers often recognize the problem of high error rates (e.g. Kuka and Stuart, 2021)
- Yet, despite mounting evidence, the problem that errors are related to covariates is usually put aside
- The goal of this paper is to provide evidence that *differences in reporting* between racial and ethnic groups lead to *bias in estimates* of differences between these groups so we should change our expectations about appropriate methods

What this Paper Does

- Surveys the literature on misreporting; very few papers examine misreporting by race and ethnicity
  - Difficult to do with aggregates as they are rarely reported by race and ethnicity or definitions may not be comparable in administrative and survey sources
  - Linked data studies often rely on small samples which make disaggregation unlikely and precision low
  - Differences by race and ethnicity have become of greater interest recently
- Highlights the results of three linked dataset studies, with increasing focus on race and ethnicity
  - Discusses implications and provides suggestions for future use of race and ethnicity data

Surveying the Literature on Racial and Ethnic Differences in Reporting

- Our review today focuses on programs and income sources we have examined in our work as a convenient starting point
- Other research has used linked data to examine Medicaid, pensions, SSI, OASDI, etc. (preliminary summaries below)
  - We will continue to screen the literature for work on further programs and income components
- That being said, the vast majority of studies analyzing the misreporting of program receipt do not examine differences in reporting by race and ethnicity
  - Surprisingly to us, even those that report differences in error rates and/or implications or errors by race and ethnicity generally ignore these differences when describing and discussing their results

Misreporting of Survey SNAP and TANF+GA

Misreporting of SNAP in Illinois and Maryland: Data and Methods

- Meyer, Mittag, and Goerge (2022, *Journal of Human Resources*)
- Surveys analyzed: 2001 ACS, 2002-2005 CPS, and 2001 and 2004 SIPP panels (covering data from Jan 2001-Apr 2005)
- Links surveys to administrative food stamp records in Illinois and Maryland by PIK (essentially anonymized SSNs). Household-level PIK rates are:
  - Admin data: 96% in IL and 98% in MD
  - ACS: 93% in IL and 95% in MD
  - CPS: 68% in IL and 81% in MD
  - SIPP: 71% for both states
- Unit of analysis is household (age 16+) with at least one PIKed member
  - Adjust survey weights for incomplete PIKing using inverse probability weighting at household level
- Reference periods and program definitions match between admin data and survey data
  - ACS is past 12 months, CPS is previous calendar year, and SIPP is four-month period
  - Admin records are at monthly basis so can be easily adjusted to match survey periods

Determinants of False Negatives and Positives in IL and MD: Non-White vs. White

	ACS		CPS		SIPP	
	False Positives	**False Negatives**	**False Positives**	**False Negatives**	**False Positives**	**False Negatives**
Illinois						
Non-White	0.0239***	0.0897**	-0.0046	0.0503		
	(0.0071)	(0.0368)	(0.0098)	(0.0415)		
Maryland						
Non-White	0.0082	0.1110***	-0.0094	0.0509		
	(0.0083)	(0.0422)	(0.0096)	(0.0810)		
Illinois & Maryland						
Non-White					0.0207**	0.0672*
					(0.0083)	(0.0355)

Data: 2008-2012 ACS, 2007-2012 CPS, 2004 and 2008 SIPP Panels linked to New York administrative SNAP and TANF+GA records

Notes: All analyses conducted using household weights adjusted for PIK probability. Standard errors in parentheses. * p<0.1, ** p<0.05, *** p<0.01. Approved for release by the Census Bureau's Disclosure Review Board.

Determinants of Reported and Admin SNAP Receipt in IL and MD: Non-White vs. White

	ACS		CPS		SIPP	
	Survey	**Admin**	**Survey**	**Admin**	**Survey**	**Admin**
Illinois						
Non-White	0.0380**	0.0801***	0.0211	0.0762***		
	(0.0178)	(0.0191)	(0.0133)	(0.0196)		
Diff. Sig?	At 1% level		At 1% level			
Maryland						
Non-White	-0.0055	0.0355	-0.0048	0.0118		
	(0.0187)	(0.0211)	(0.0182)	(0.0261)		
Diff. Sig?	At 5% level		No			
Illinois & Maryland						
Non-White					0.0767***	0.1069***
					(0.0100)	(0.0112)
Diff. Sig?					At 1% level	

Data: 2008-2012 ACS, 2007-2012 CPS, 2004 and 2008 SIPP Panels linked to New York administrative SNAP and TANF+GA records

Notes: All analyses conducted using household weights adjusted for PIK probability. Standard errors in parentheses. * p<0.1, ** p<0.05, *** p<0.01. Approved for release by the Census Bureau's Disclosure Review Board.

Misreporting of SNAP in Illinois and Maryland: Results

- Higher rates of false negatives for non-whites, always negative and of substantial magnitude, significant in ACS and SIPP but not CPS
- Also higher rates of false positives for non-whites in 3 of 5 samples, significantly higher in the ACS in Illinois and the SIPP sample which combines the two states
- Looking at sample of those with income less than twice the poverty line, survey reports indicate that non-whites have lower receipt of SNAP than administrative data indicate (differences significant in 4 of 5 samples)
- Did not set out to examine racial differences in misreporting, but rather race was one of 25 explanatory variables in paper

Misreporting of SNAP and TANF+GA in New York: Data and Methods

- Celhay, Meyer, and Mittag (2023, Working Paper)
- Surveys analyzed: 2008-2012 ACS, 2008-2013 CPS, and 2004 and 2008 SIPP Panels (covering Aug 2008-Dec 2012)
- Link surveys to administrative SNAP and TANF+GA records in New York by PIK. Household-level PIK rates are:
  - 93% in ACS, 91% in CPS, and 95% in SIPP
- Unit of analysis is household with at least one PIKed member, and reference periods and program definitions match between admin data and survey data
- Extends prior IL/MD results by looking at a different state (NY), additional programs (TANF + GA), more recent time period (2008-12), and separate non-white groupings (specifically black non-Hispanic and Hispanic)

Determinants of False Negatives and Positives in NY: Black/Hispanic vs. White

	ACS		CPS		SIPP	
	False Positives	**False Negatives**	**False Positives**	**False Negatives**	**False Positives**	**False Negatives**
SNAP						
Black, Non-Hisp	0.0098***	0.0678***	0.0116***	0.0958***	0.0137***	0.0841***
	(0.0006)	(0.0049)	(0.0031)	(0.0210)	(0.0022)	(0.0135)
Hispanic	0.0085***	0.0410***	0.0139***	0.0554***	0.0044	0.0382**
	(0.0007)	(0.0059)	(0.0031)	(0.0208)	(0.0033)	(0.0171)
TANF + GA						
Black, Non-Hisp	0.0005	0.0877***	0.0015	0.0683	0.0059***	0.0800*
	(0.0006)	(0.0114)	(0.0014)	(0.0451)	(0.0010)	(0.0430)
Hispanic	-0.0028***	0.0467***	-0.0017	0.0744*	-0.0027*	0.0508
	(0.0008)	(0.0145)	(0.0015)	(0.0450)	(0.0014)	(0.0512)

Data: 2008-2012 ACS, 2007-2012 CPS, 2004 and 2008 SIPP Panels linked to New York administrative SNAP and TANF+GA records

Notes: All analyses conducted using household weights adjusted for PIK probability. Standard errors in parentheses. * p<0.1, ** p<0.05, *** p<0.01. Approved for release by the Census Bureau's Disclosure Review Board.

Determinants of Reported and Admin SNAP and TANF+GA Receipt in NY: Black/Hispanic vs. White

	ACS		CPS		SIPP	
	Survey	**Admin**	**Survey**	**Admin**	**Survey**	**Admin**
Determinants of SNAP Receipt						
Black, Non-Hisp	0.1098***	0.1708***	0.0291*	0.1075***	0.0759***	0.1232***
	(0.0038)	(0.0038)	(0.0157)	(0.0160)	(0.0119)	(0.0122)
Diff. Sig?	At 1% level		At 1% level		At 1% level	
Hispanic	0.0987***	0.1405***	0.0743***	0.1445***	0.0697***	0.1096***
	(0.0044)	(0.0044)	(0.0148)	(0.0151)	(0.0156)	(0.0163)
Diff. Sig.?	At 1% level		At 1% level		At 10% level	
Determinants of TANF + GA Receipt						
Black, Non-Hisp	0.0177***	0.0753***	0.0204**	0.0835***	0.0258***	0.0647***
	(0.0022)	(0.0025)	(0.0081)	(0.0102)	(0.0057)	(0.0072)
Diff. Sig.?	At 1% level		At 1% level		At 1% level	
Hispanic	0.0114***	0.0579***	0.0122	0.0761***	-0.0011	0.0286***
	(0.0027)	(0.0030)	(0.0077)	(0.0100)	(0.0070)	(0.0082)
Diff Sig.?	At 1% level		At 1% level		At 1% level	

Data: 2008-2012 ACS, 2007-2012 CPS, 2004 and 2008 SIPP Panels linked to New York administrative SNAP and TANF+GA records

Notes: All analyses conducted using household weights adjusted for PIK probability. Standard errors in parentheses. * p<0.1, ** p<0.05, *** p<0.01. Approved for release by the Census Bureau's Disclosure Review Board.

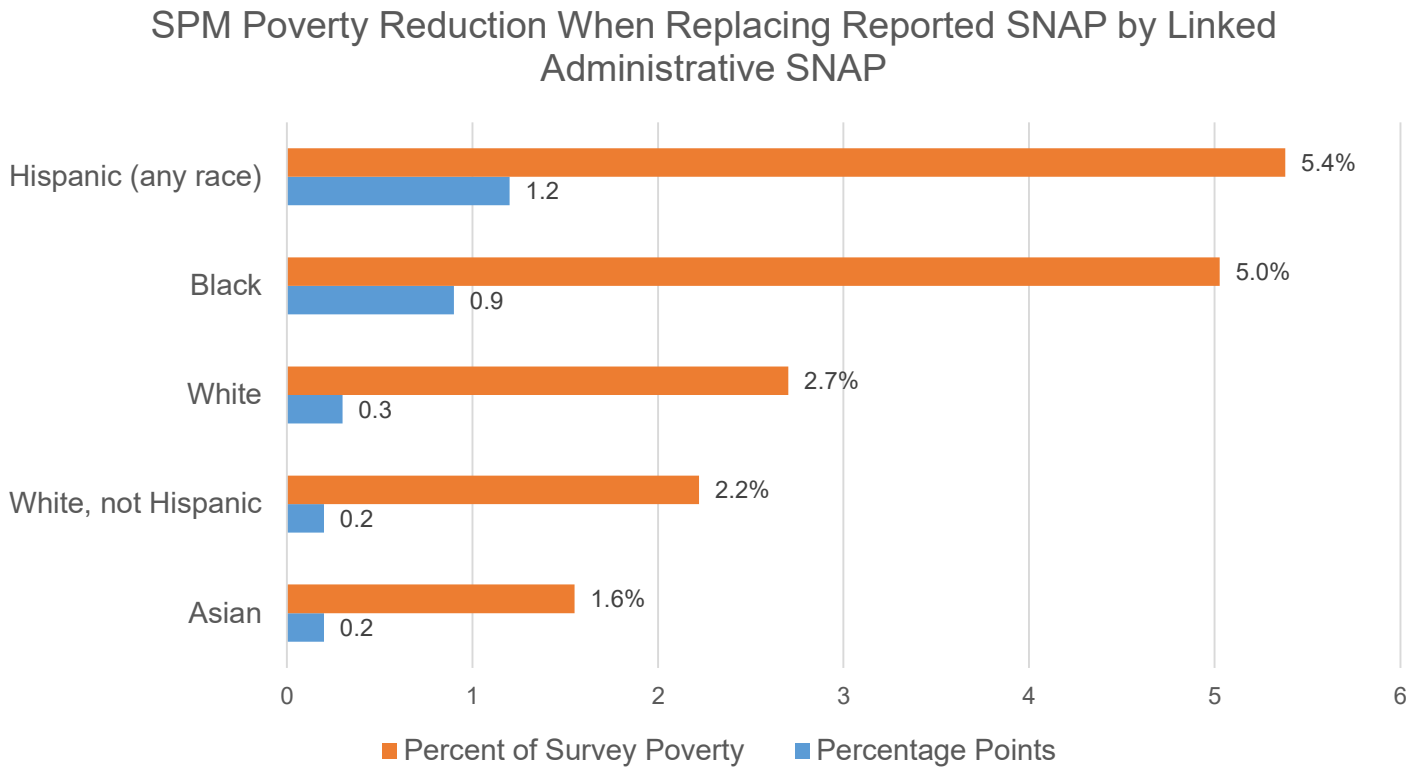
Misreporting of SNAP and TANF+GA in New York: Results

- Continues to find strong evidence of higher false positives and higher false negative rates for black non-Hispanic individuals (relative to white individuals)
  - Differences persist across all three surveys and both programs
- Additionally analyzes Hispanic individuals, documenting the same pattern of higher false positive and false negative rates
  - For SNAP, differences similar across all three surveys
  - For TANF+GA, false negatives are higher, but false positives lower
- Also finds higher receipt rates for both groups in survey than whites – but the differences are even larger when using administrative measures of receipt (always significantly so)
- Taken together, strong patterns so far across three states (IL, MD, NY), two programs (SNAP and TANF/GA), and multiple time periods (spanning 2001-2012) that biases in survey reports are larger for non-white (particularly black and Hispanic) individuals

Misreporting of SNAP and TANF+GA: Results from Other Papers

- Several additional papers use linked data to examine misreporting of SNAP, its consequences, and potential solutions
- To our knowledge, none of these papers discusses results by race
- Yet some papers contain statistics by race that support the patterns of increased error rates and strong biases we document above:
  - False negatives are higher for Blacks: Fox, Heggeness, Pacas, Stevens, 2017
  - Bias in receipt rates appears larger for Blacks and Hispanics than for other groups: Fox, Heggeness, Pacas, Stevens, 2017; Fox, Shantz 2018
  - Error in average amounts reported by true recipients are small overall, but tend to be larger for minorities: Fox, Heggeness, Pacas, Stevens, 2017; Fox, Shantz 2018
  - Bias in measures of poverty larger for Blacks and Hispanics than for other groups: Fox, Heggeness, Pacas, Stevens 2017; Stevens, Fox, Heggeness 2018; Rothbaum, Fox, Shantz 2021 (Hispanic only)

Poverty Reduction When Correcting SNAP (Stevens, Fox, and Heggeness 2018)



Source: Calculated from numbers in Table 5 of Stevens, Fox, Heggeness 2018, which are based on CPS ASEC linked to state SNAP administrative records from Illinois, Maryland, Oregon, and Virginia for calendar years 2009-2015. Percent of Survey may be slightly affected by rounding in the table.

Misreporting of Survey UI

Background on Unemployment Insurance Receipt

- Unemployment Insurance (UI) is a key component of the safety net
  - Countercyclical nature of the program makes it particularly important during economic downturns
  - During 2020, a record $581 billion of UI was paid out under pandemic-induced program expansions
- Recent studies have sought to document disparities in UI receipt across subgroups
  - Gould-Werth & Shaefer (2012), Nichols & Simms (2012), Bitler, Hoynes, & Schanzenbach (2021), Forsythe & Yang (2021), Kuka & Stuart (2021), Skandalis, Marinescu, & Massenkoff (2022)

Misreporting of UI: Data and Methods

- Meyer, Wu, Stadnicki, and Langetieg (2023, Working Paper)
- We obtain administrative UI receipt information from Form 1099-G
  - Use IRS Form W-2 to help calculate UI eligibility
- Link admin records to 2010 data from two Census surveys (2011 CPS ASEC and 2008 SIPP Panel)
  - Both surveys ask respondents about UI receipt and amounts
  - Default reference period for CPS is calendar year; we combine information across multiple waves of the SIPP to construct calendar year receipt
  - Both surveys ask about unemployment, allowing comparison to admin data
- Link records using Protected Identification Keys (PIKs) at individual level
  - CPS sample consists of individuals who have PIKs and are not whole imputed; SIPP sample consist of individuals who have PIKs
  - Re-weight to account for non-random missing PIKs (& whole imputes in CPS); Just under 90 percent of individuals PIKed
- Focus on reference year 2010, during the height of the Great Recession
  - Year with highest amount of benefits paid prior to pandemic
  - Time when UI benefits were particularly important

False Positive and False Negative Misreporting Rates (%) by Race/Ethnicity, CPS and SIPP

	CPS		SIPP	
	False Positives	**False Negatives**	**False Positives**	**False Negatives**
White, non-Hispanic	0.32	33.16	0.93	33.28
Black, non-Hispanic	0.82	49.02	1.63	49.97
Asian, non-Hispanic	0.51	43.27	1.12	45.73
Other, non-Hispanic	0.71	37.28	1.39	35.79
Hispanic	0.76	51.53	1.34	42.24

Data: 2011 CPS ASEC, 2008 SIPP Panel (Waves 5-8), IRS Form 1099-G (2010)
Notes: The Census Bureau's Disclosure Review Board and Disclosure Avoidance Officers have reviewed this information product for unauthorized disclosure of confidential information and have approved the disclosure avoidance practices applied to this release. This research was performed at a Federal Statistical Research Data Center under FSRDC Project Number 2597 (CBDRB-FY23-041).

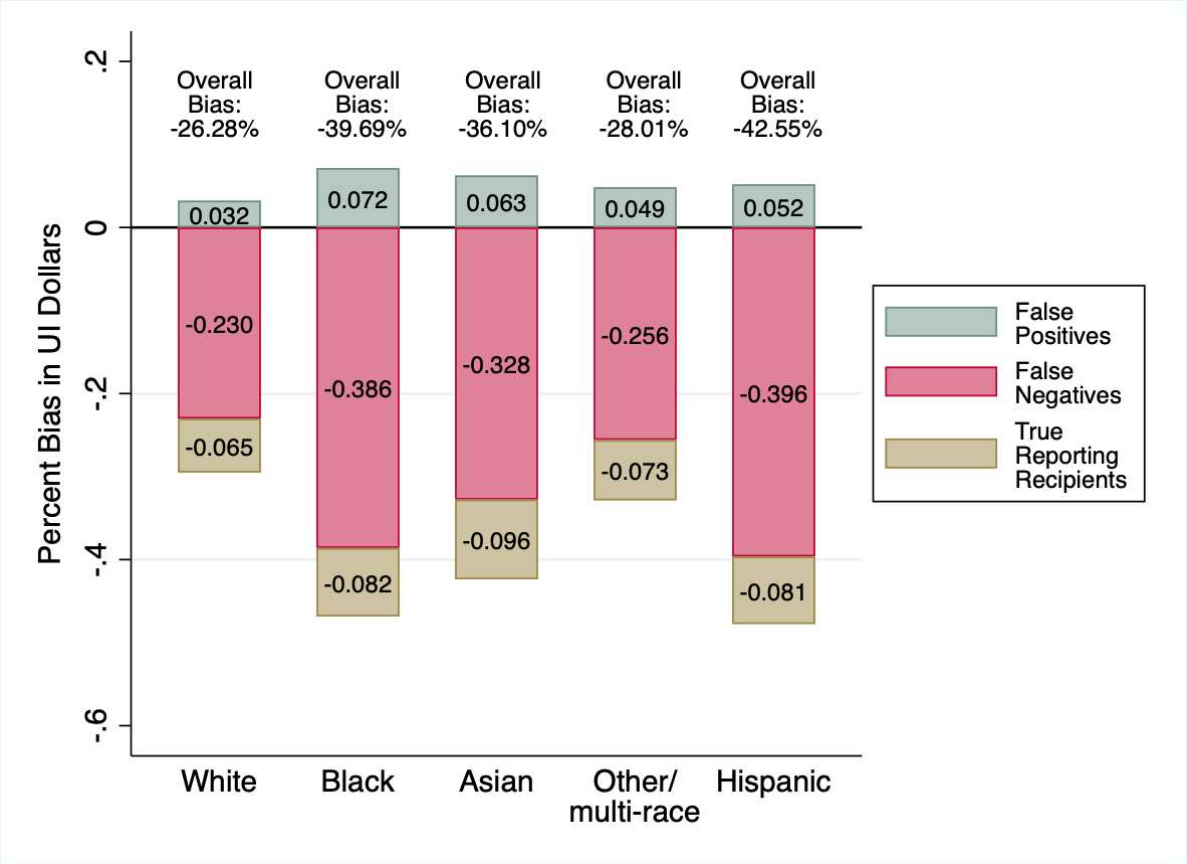
Determinants of False Negatives and Positives: Race/Ethnicity Groups vs. White

	CPS		SIPP	
	False Positives	**False Negatives**	**False Positives**	**False Negatives**
Black, Non-Hisp	0.0036***	0.0945***	0.0023**	0.1100***
	(0.0009)	(0.0150)	(0.0009)	(0.0200)
Asian, Non-Hisp	0.0031**	0.1120***	0.0012	0.0866**
	(0.0013)	(0.0282)	(0.0014)	(0.0368)
Other, Non-Hisp	0.0025	0.0661**	0.0017	0.0639**
	(0.0016)	(0.0294)	(0.0020)	(0.0316)
Hispanic	0.0037***	0.1190***	0.0015	0.0583***
	(0.0009)	(0.0154)	(0.0011)	(0.0205)

Data: 2011 CPS, 2008 SIPP Panel (Waves 5-8), IRS Form 1099-G (2010)

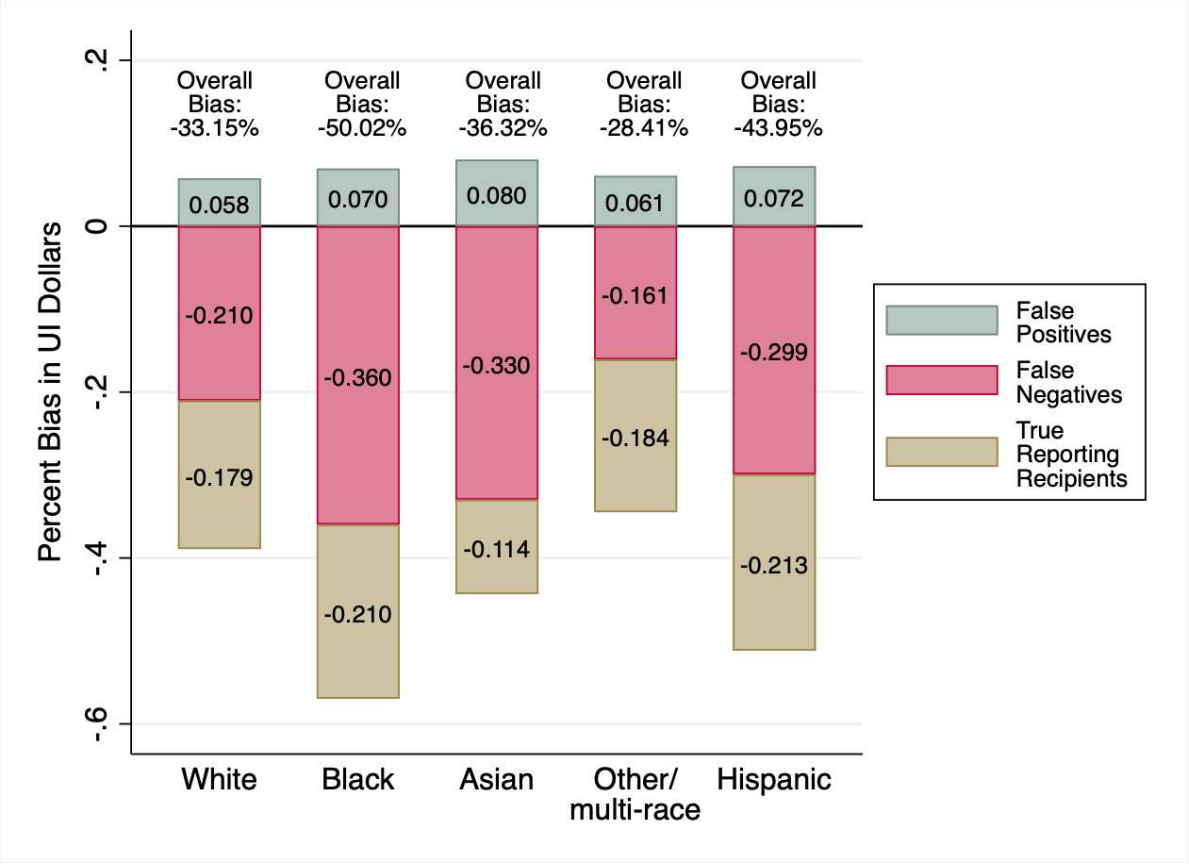
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Decomposition of Bias in Reported Survey UI Benefits ($): By Race/Ethnicity in CPS



Source: 2011 CPS ASEC, IRS Forms 1040 (Tax Year 2010 and Calendar Year 2011 Filings), and 1099-G (Tax Year 2010)
All results were approved for release by the IRS SOI Disclosure Review Board and the U.S. Census Bureau, authorization number CBDRB-FY21-CES014-038 and CBDRB-FY23-041

Decomposition of Bias in Reported Survey UI Benefits ($): By Race/Ethnicity in SIPP



Source: 2011 CPS ASEC, IRS Forms 1040 (Tax Year 2010 and Calendar Year 2011 Filings), and 1099-G (Tax Year 2010)
All results were approved for release by the IRS SOI Disclosure Review Board and the U.S. Census Bureau, authorization number CBDRB-FY21-CES014-038 and CBDRB-FY23-041

Selected Coefficients in Probit Models of UI Receipt (CPS)

	Full Sample			Monetarily eligible using 2010 survey wages and unemployed in survey		
	Survey UI	**Admin UI**	**Difference**	**Survey UI**	**Admin UI**	**Difference**
Black, non-Hispanic	0.006	0.028***	0.020***	0.006	0.032	0.024*
	(0.002)	(0.004)	(0.002)	(0.002)	(0.020)	(0.012)
Hispanic	-0.002	0.014***	0.016***	-0.038**	-0.024	0.014
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
	Monetarily eligible on 2009 W-2s and at least 10% drop in 2009 W-2 Wages			**Monetarily eligible on 2009 W-2s and unemployed in survey**		
	Survey UI	**Admin UI**	**Difference**	**Survey UI**	**Admin UI**	**Difference**
Black, non-Hispanic	0.022**	0.076***	0.052***	-0.008	0.004	0.012
	(0.010)	(0.012)	(0.010)	(0.012)	(0.012)	(0.014)
Hispanic	-0.022***	0.034***	0.056***	-0.056***	-0.024	0.032**
	(0.008)	(0.010)	(0.010)	(0.020)	(0.020)	(0.014)

Data: 2011 CPS ASEC, IRS Forms 1099-G (Tax Year 2010), W-2 (Calendar Years 2009, 2010)
Notes: Delta-method standard errors are in parentheses.Stars indicate the significance of regression coefficients: *** p<0.01, ** p<0.05, * p<0.1. The Census Bureau's Disclosure Review Board and Disclosure Avoidance Officers have reviewed this information product for unauthorized disclosure of confidential information and have approved the disclosure avoidance practices applied to this release. This research was performed at a Federal Statistical Research Data Center under FSRDC Project Number 2597 (CBDRB-FY23-041).

Selected Coefficients in Probit Models of UI Receipt (SIPP)

	Full Sample			Monetarily eligible using 2010 survey wages and unemployed in survey		
	Survey UI	**Admin UI**	**Difference**	**Survey UI**	**Admin UI**	**Difference**
Black, non-Hispanic	-0.004	0.018***	0.020***	0.026	0.022	-0.002
	(0.004)	(0.004)	(0.004)	(0.022)	(0.022)	(0.020)
Hispanic	0.008*	0.024***	0.018***	0.032	0.078***	0.046**
	(0.004)	(0.006)	(0.004)	(0.022)	(0.024)	(0.020)
	Monetarily eligible on 2009 W-2s and at least 10% drop in 2009 W-2 Wages			**Monetarily eligible on 2009 W-2s and unemployed in survey**		
	Survey UI	**Admin UI**	**Difference**	**Survey UI**	**Admin UI**	**Difference**
Black, non-Hispanic	-0.007	0.058***	0.064***	0.014	0.038*	0.024
	(0.013)	(0.016)	(0.014)	(0.022)	(0.022)	(0.020)
Hispanic	0.034**	0.088***	0.054***	0.028	0.074***	0.048**
	(0.014)	(0.018)	(0.014)	(0.022)	(0.024)	(0.020)

Data: 2008 SIPP Panel, Waves 5-8, IRS Forms 1099-G (Tax Year 2010), W-2 (Calendar Years 2009, 2010)
Notes: Delta-method standard errors are in parentheses.Stars indicate the significance of regression coefficients: *** p<0.01, ** p<0.05, * p<0.1. The Census Bureau's Disclosure Review Board and Disclosure Avoidance Officers have reviewed this information product for unauthorized disclosure of confidential information and have approved the disclosure avoidance practices applied to this release. This research was performed at a Federal Statistical Research Data Center under FSRDC Project Number 2597 (CBDRB-FY23-041).

Misreporting of UI: Results

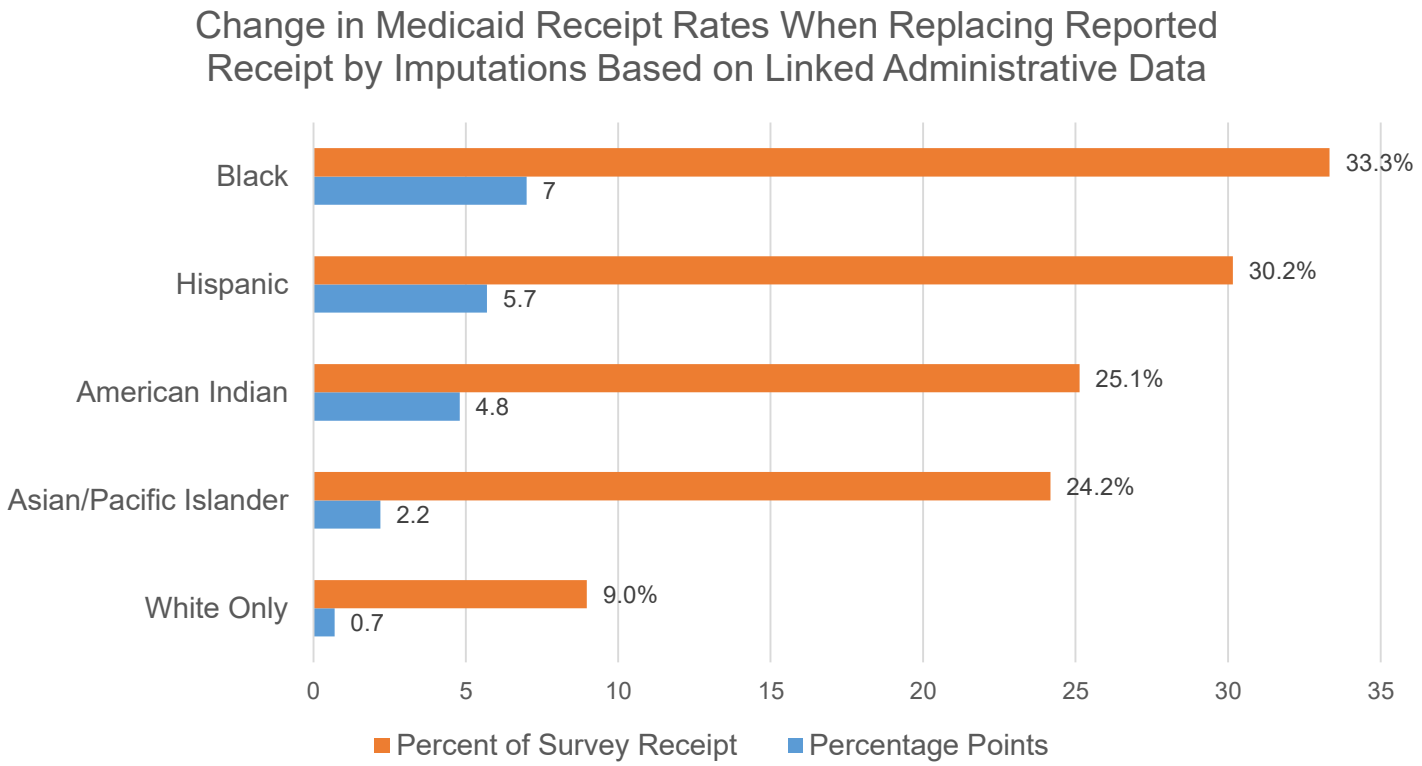
- Survey-reported UI dollars are most understated among Black and Hispanic individuals
  - Differences across subgroups in overall misreporting are driven primarily by differences in false negative rates (i.e., under-reporting at the extensive margin)
  - Gaps in false negative rates between subgroups largely remain statistically significant after controlling for other individual characteristics
- If we rely only on survey reports of UI, we find that the differences in take-up rates between Black and white individuals tend to be statistically insignificant, holding other factors constant
- In contrast, using admin reports of UI leads to statistically significantly higher take-up rates for Blacks relative to whites, ceteris paribus
  - This pattern holds in samples of UI eligible defined in several different ways using survey and/or admin data
- Similar patterns for Hispanics

Misreporting of Other Programs and Income Sources in Surveys

Misreporting of Medicaid and Medicare: Preliminary Overview

- Some studies of Medicaid reporting and coverage linked surveys such as the CPS and ACS to administrative Medicaid data (e.g., MSIS data)
- Similar to studies of SNAP above, most papers do not examine race or ethnicity, but some papers report statistics of interest
- Our review so far is in line with the patterns above:
  - Both false positives and false negatives higher for Blacks and Hispanics (Noon et al. 2019), "any error" higher for minorities (Call et al. 2022)
  - Bias in estimated receipt larger for Blacks and Hispanics than for other groups (Davern et al. 2009)
- Bhaskar et al. (2016) find higher false negative rates of minorities for Medicare

Bias in Medicaid Receipt Rates (Davern, Klermann, and Ziegenfuss 2009)



Source: Calculated from numbers reported in Table 4 of Davern, Klermann, Ziegenfuss, 2009. Their estimates are based on CPS ASEC data for calendar years 2006-2007 where Medicaid receipt was imputed from error models estimated using CPS ASEC data linked to MSIS administrative data for calendar years 2000-2002. Percent of Survey may be slightly affected by rounding in the table.

Misreporting of Social Security and Pension Income: Data and Methods

- Olson (2001) finds Social Security amounts to be more severely misreported by Blacks and Hispanics in SIPP
- Focus on more recent study by Bee and Mitchell (2017, Working Paper)
- Link 2013 CPS ASEC to administrative SSA records on Social Security and retirement income from IRS Form 1099-R (among other admin sources) by PIK. Individual-level PIK rates are ~90% in CPS
- Unit of analysis is PIKed elderly individual (aged 65+) and reference period is calendar year
- In their main text, Bee and Mitchell do not explicitly discuss misreporting of income sources by race, but they disclose numbers in Table 6 (Panels A and B) that enable one to back out false positive and false negative rates by race/ethnicity

False Positive and False Negative Misreporting Rates (%) by Race/Ethnicity

	Social Security		Private Pensions	
	False Positives	**False Negatives**	**False Positives**	**False Negatives**
White	42.4	6.9	9.5	46.0
Black	45.6	13.6	11.2	46.8
Asian	34.4	15.5	8.1	61.6
Hispanic	39.6	14.3	5.6	56.2

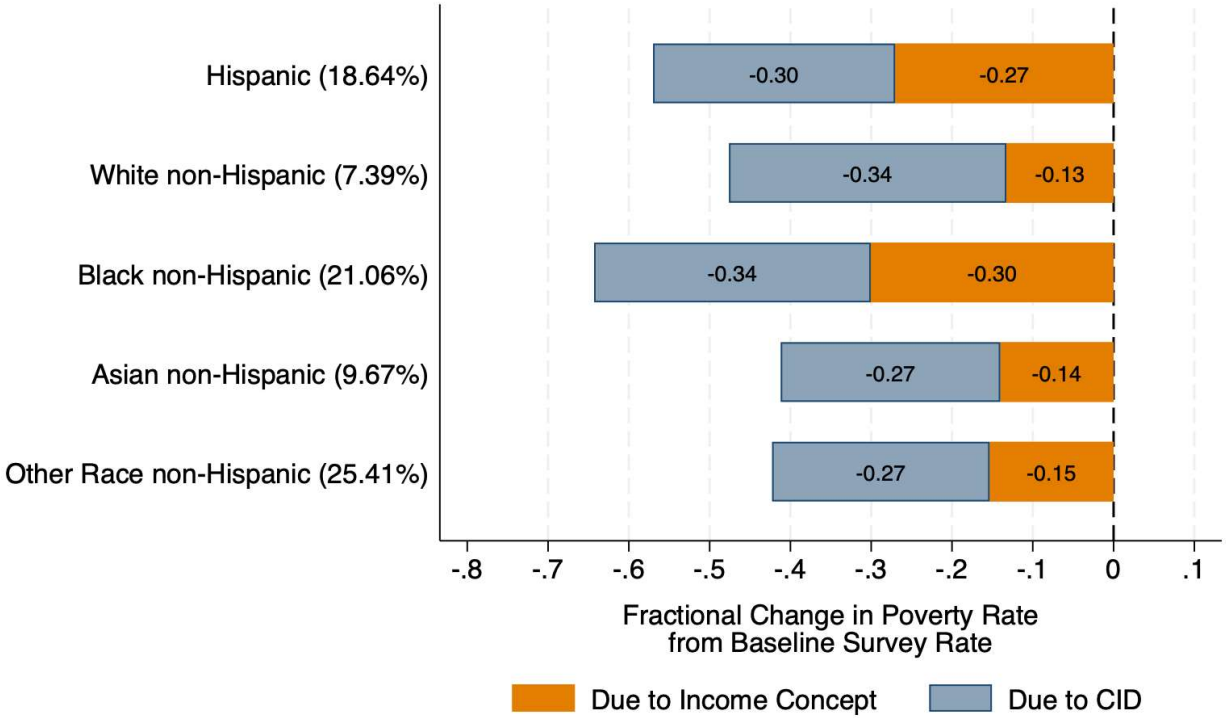
Data: 2013 CPS ASEC linked to SSA and IRS administrative records
Notes: Sample consists of all CPS persons aged 65 and over who are assigned a PIK. All estimates make use of CPS weights adjusted to account for selection into having a PIK.

Misreporting of Social Security and Pension Income: Results

- For two of the most salient income sources for elderly (Social Security and private pensions), black individuals continue to have higher false positive and false negative rates than whites
  - Hispanics have lower false positive rates but higher false negatives rates relative to whites
- But because these income sources are less important for blacks and Hispanics, these biases end up having less of an impact on estimates of poverty

Implications of Differential Biases on Overall Changes in Poverty

- Prior results tend to focus on biases in take-up for particular programs; but taken together these biases can have cumulative effects on poverty and other summary measures of the income distribution (Meyer and Wu 2023)



Source: 2017 CPS ASEC linked to various administrative records)
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Discussion and Conclusions

Summary

- Did not set out to examine racial differences in misreporting, but rather race was one of 25 explanatory variables in JHR paper, 3 of 28 variables in New York paper, and 4 of 45 variables in unemployment insurance project
  - Racial differences in reporting are also secondary in the work on Social Security and private pension reporting
- Race (and Hispanic ethnicity) are probably the most robust determinants of misreporting across these papers – repeatedly these variables have large and statistically significant effects
- Each paper looks at multiple surveys (with exception of Bee and Mitchell), and in one case multiple programs
  - Three surveys: ACS, CPS, SIPP
  - Three samples: IL and MD, New York, National Data
  - Six income sources or programs: SNAP, Public Assistance (TANF + General Assistance combined), Unemployment Insurance, Social Security, private pensions, Medicaid
- Suggests that the differential biases in reporting along race/ethnicity are not limited to a particular setting but are a general phenomenon

Sources of Errors

- We have very limited information on the source of errors
- Combination of field representatives (interviewers) and respondent
- Meyer et al. (2023) finds that salience, recall, heterogeneity in care of respondents/field representatives, stigma, and other factors matter
- May not be that minority respondents are the source of the errors
  - Field representatives may hurry through interviews in minority areas
  - Does seems to be that minority responses are generally lower in accuracy as measured by both false negatives and positives

Implications

- Program receipt is higher for Blacks and Hispanics relative to whites and non-Hispanics than indicated by survey data
- Implies that many papers have understated the relative receipt of these groups
  - Implications for disproportionate use literature
  - Implications for discrimination literature
- Also suggests that poverty differences between minorities and others are likely overstated
- Suggests one should be cautious in interpreting many survey based racial and ethnic differences
- Further highlights the importance of linking survey and administrative data
  - On their own, each source has weaknesses
  - Survey data understate receipt, while administrative data often lack or have erroneous measures of race/ethnicity (as that information is not used to administer programs, etc.)
  - But linking together these records unlocks the ability to conduct accurate distributional analyses of programs along not only racial/ethnic lines but also other characteristics

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Appendix Slides

Determinants of False Negatives and Positives in IL and MD: Non-White vs. White

	ACS		CPS		SIPP
	Illinois	**Maryland**	**Illinois**	**Maryland**	**IL & MD**
Determinants of False Negatives (Probit Average Derivatives)					
Non-White	0.0897**	0.1110***	0.0503	0.0509	0.0672*
	(0.0368)	(0.0422)	(0.0415)	(0.0810)	(0.0355)
Determinants of False Positives (Probit Average Derivatives)					
Non-White	0.0239***	0.0082	-0.0046	-0.0094	0.0207**
	(0.0071)	(0.0083)	(0.0098)	(0.0096)	(0.0083)

Data: 2001 ACS, 2002-2005 CPS, 2001 and 2004 SIPP Panels linked to Illinois and Maryland administrative SNAP records

Notes: All analyses conducted using household weights adjusted for PIK probability. Standard errors in parentheses. * p<0.1, ** p<0.05, *** p<0.01. Approved for release by the Census Bureau's Disclosure Review Board.

Determinants of Reported and Admin SNAP Receipt in IL and MD: Non-White vs. White

	ACS		CPS		SIPP
	Illinois	**Maryland**	**Illinois**	**Maryland**	**IL & MD**
Determinants of Survey Receipt (Probit Marginal Effects)					
Non-White	0.0380**	-0.0055	0.0211	-0.0048	0.0767***
	(0.0178)	(0.0187)	(0.0133)	(0.0182)	(0.0100)
Determinants of Admin Receipt (Probit Marginal Effects)					
Non-White	0.0801***	0.0355	0.0762***	0.0118	0.1069***
	(0.0191)	(0.0211)	(0.0196)	(0.0261)	(0.0112)
Difference Significant?	Yes, 1% level	Yes, 5% level	Yes, 1% level	No	Yes, 1% level

Data: 2001 ACS, 2002-2005 CPS, 2001 and 2004 SIPP Panels linked to Illinois and Maryland administrative SNAP records

Notes: All analyses conducted using household weights adjusted for PIK probability. Standard errors in parentheses. * p<0.1, ** p<0.05, *** p<0.01. Approved for release by the Census Bureau's Disclosure Review Board.

Determinants of False Negatives and Positives in NY: Black/Hispanic vs. White

	ACS		CPS		SIPP	
	SNAP	**TANF + GA**	**SNAP**	**TANF + GA**	**SNAP**	**TANF + GA**
Determinants of False Negatives (Probit Marginal Effects)						
Black, Non-Hisp	0.0678***	0.0877***	0.0958***	0.0683	0.0841***	0.0800*
	(0.0049)	(0.0114)	(0.0210)	(0.0451)	(0.0135)	(0.0430)
Hispanic	0.0410***	0.0467***	0.0554***	0.0744*	0.0382**	0.0508
	(0.0059)	(0.0145)	(0.0208)	(0.0450)	(0.0171)	(0.0512)
Determinants of False Positives (Probit Marginal Effects)						
Black, Non-Hisp	0.0098***	0.0005	0.0116***	0.0015	0.0137***	0.0059***
	(0.0006)	(0.0006)	(0.0031)	(0.0014)	(0.0022)	(0.0010)
Hispanic	0.0085***	-0.0028***	0.0139***	-0.0017	0.0044	-0.0027*
	(0.0007)	(0.0008)	(0.0031)	(0.0015)	(0.0033)	(0.0014)

Data: 2008-2012 ACS, 2007-2012 CPS, 2004 and 2008 SIPP Panels linked to New York administrative SNAP and TANF+GA records

Notes: All analyses conducted using household weights adjusted for PIK probability. Standard errors in parentheses. * p<0.1, ** p<0.05, *** p<0.01. Approved for release by the Census Bureau's Disclosure Review Board.

False Positive and False Negative Misreporting Rates (%) by Demographic Group, CPS and SIPP

	CPS		SIPP	
Demographic Characteristics	**False Positives**	**False Negatives**	**False Positives**	**False Negatives**
Race/Ethnicity				
White, non-Hispanic	0.32	33.16	0.93	33.28
Black, non-Hispanic	0.82	49.02	1.63	49.97
Asian, non-Hispanic	0.51	43.27	1.12	45.73
Other/multi-race, non-Hispanic	0.71	37.28	1.39	35.79
Hispanic	0.65	51.53	1.34	42.24
Family Income Relative to Poverty Line				
0-1x Poverty Line	0.51	52.15	1.21	39.65
1-2x Poverty Line	0.74	36.99	1.26	32.12
2-3x Poverty Line	0.46	35.90	1.22	37.83
3-4x Poverty Line	0.37	38.56	1.02	40.99
> 4x Poverty Line	0.30	36.45	0.92	42.32
Education Level				
Less than High School	0.49	46.76	1.11	36.78
High School Graduate	0.68	40.28	0.97	42.39
Some College	0.37	38.50	1.20	36.29
Bachelor's Degree or Higher	0.24	32.73	1.03	35.12

Data: 2011 CPS ASEC, 2008 SIPP Panel (Waves 5-8), IRS Form 1099-G (2010)
Notes: The Census Bureau's Disclosure Review Board and Disclosure Avoidance Officers have reviewed this information product for unauthorized disclosure of confidential information and have approved the disclosure avoidance practices applied to this release. This research was performed at a Federal Statistical Research Data Center under FSRDC Project Number 2597 (CBDRB-FY23-041).

Robustness Checks

- Incorporating 1040s from processing year 2012 reveals that late filers have a very small effect on the results
- Main results on misreporting of UI in surveys hold after excluding California and New Jersey from sample (which had paid family leave programs in 2010 that were included with UI on Box 1 of 1099-Gs)

Previously Disclosed Results

- Comparing administrative data sources (namely 1099-Gs and 1040s), we estimate that UI dollars on 1040s are nearly a subset of those on 1099-Gs
  - However, 24% of true UI recipients according to 1099-Gs do not report their UI receipt on 1040s, with at least 30% of this group not filing any tax returns despite having taxable incomes above the filing threshold (simulated using linked CPS-IRS data)
- After linking 1099-Gs (the more complete admin source of UI receipt) to CPS and SIPP microdata, we find that:
  - Aggregate UI dollars in both surveys are understated by 36-38%; vast majority of the understatement comes from 39% and 35% of UI recipients not reporting any receipt in the CPS and SIPP, respectively
- In addition, we find that 49% of UI recipients never report being unemployed in the CPS, with 45% of this group reporting that they worked on a full-time basis for entire year

Newly Disclosed Results

- Some robustness checks:
  - Incorporating 1040s from processing year 2012 reveals that late filers have a very small effect on the agreement between UI on 1040s and 1099-Gs
  - Main results on misreporting of UI in surveys hold after excluding California and New Jersey from sample (which had paid family leave programs in 2010 that were included with UI on Box 1 of 1099-Gs)

Newly Disclosed Results (cont.)

- Extending survey misreporting analyses of UI to population subgroups in CPS and SIPP, we find that:
  - Survey-reported UI dollars are most understated among those who have lower levels of education, have lower levels of income, are black or Hispanic, and are elderly
  - Differences across subgroups in overall misreporting are driven primarily by differences in false negative rates (i.e., under-reporting at the extensive margin)
  - Gaps in false negative rates between subgroups (particularly by income and race/ethnicity) largely remain statistically significant after controlling for other covariates
- Replacing survey UI values with admin values leads certain characteristics like black/Hispanic, low income, and lower levels of education to be relatively more positive determinants of benefit receipt
  - Pattern holds for multiple definitions of UI eligibility

Implications

- The differential reporting of survey UI by education, race, ethnicity and income means that the disparities along these dimensions are likely overstated or even reversed