

New Evidence-Based Tools to Improve Performance of Public Assistance Programs: Collaborative Partnerships between the Census Bureau and State Agencies

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Introduction

- Great recession of 2007-2010 has exacerbated the economic instability of many U.S. families
 - Growth in participation in means-tested SNAP, WIC and TANF public assistance programs
- Renewed Congressional interest in “evidence-based evaluation” of these programs
 - Programs are funded by federal block grants and administered at the state level
 - Need for robust data infrastructure to support evaluation efforts

Introduction

- The Census Bureau has infrastructure in place to house and anonymize state-level SNAP, WIC and TANF administrative records and make these data available to researchers. We are
 - working with states to receive and process administrative records.
 - linking program participants' information from administrative files to the same individuals' records in survey data.
 - using these linked data to help states gain more information about their programs.
 - generating academic research.

Introduction

- 2020 Decennial Census Research, Testing and Operations
- Census – USDA Joint Statistical Project
 - Work with Economic Research Service and Food and Nutrition Service
 - Producing table packages and data visualizations to provide states with more information about their programs
- State TANF agencies
 - Early stages of developing data products in line with program structure

Public Assistance Programs

- SNAP
 - Helps low-income individuals and families buy food
 - Served 21,853,023 households in FY 2016
- WIC
 - Helps low-income pregnant and breastfeeding women, and children up to age 5 buy food
 - Served 1,839,613 women, 1,878,323 infants and 3,984,403 children in FY 2016

Public Assistance Programs

- TANF
 - Time-limited assistance for low-income families with children
 - Eligibility and implementation vary substantially by state
 - Can include cash assistance, work supports and/or child care assistance
 - Served 2,812,877 families in FY 2016

Data

- American Community Survey (ACS)
 - Annual individual-level data
- 2.3 million US households observed annually
 - Sample in every state and county
 - Variety of demographic, social and economic information for each individual residing in a household
 - Link ACS to administrative records (AR)

Data

- States securely provide SNAP, WIC and TANF administrative records to the Census Bureau
- Census personnel with Title 13 and Title 26 confidentiality clearance use personally identifiable information (PII) from the files to assign a unique anonymous identifier for each individual
- PII is removed before researchers can access the file

Status of State SNAP Data

State	Agreement Signed	Data Processed	Table Package Delivered
Arizona	Yes	Yes	
Colorado	Yes	Yes	Yes
Florida	Yes		
Hawaii	Yes	Yes	Yes
Idaho	Yes	Yes	
Illinois	Yes	Yes	Yes
Indiana	Yes	Yes	
Kentucky	Yes	Yes	
Maryland	Yes	Yes	Yes
Michigan	Yes		
Mississippi	Yes		
Nevada	Yes		
New Jersey	Yes	Yes	Yes
New York	Yes	Yes	Yes
North Dakota	Yes		
Oregon	Yes	Yes	Yes
Tennessee	Yes	Yes	
Virginia	Yes	Yes	Yes
Utah	Yes		9

Methods

- “Estimated eligible” – individuals and/or families in the ACS whom we model as meeting eligibility guidelines
 - Based on information on income, assets, program enrollment, and family and/or household relationships
- “Eligible participants” – individuals who appear in the ACS, and who also appear in the linked administrative records

Methods

- “Modeled eligible non-participants” – individuals whom our models say may be eligible, but who do not appear in the linked administrative records
- Information on modeled eligible and participating individuals by an array of social, demographic and economic variables
 - Race/ethnicity, age, employment status, educational attainment, county, and more
 - Here I’ll focus on English language proficiency

SNAP Results

Table 1 : Estimated Supplemental Nutrition Assistance Program (SNAP) Eligibility and Participation Rates by Race, Hispanic Ethnicity, and English Language Ability

	Virginia, 2013				Oregon, 2013			
	Eligibility		Participation		Eligibility		Participation	
	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE
State Total	22.5	0.3	67.6	0.6	32.5	0.3	80.5	0.5
<i>Language & Linguistic Isolation (Adults and children)</i>								
English only	22.1	0.3	69.2	0.5	29.6	0.3	79.4	0.5
Spanish, English speaker in home	27.0	1.2	69.0	2.6	48.9	1.7	84.6	2.6
Spanish, no English speaker in home	47.2	3.3	65.9	4.9	67.1	3.5	85.5	3.1
Other, English speaker in home	16.9	0.8	54.1	2.6	30.6	1.6	80.6	2.3
Other, no English speaker in home	33.8	2.2	50.1	4.8	54.3	4.7	83.5	3.7

Sources: American Community Survey (ACS) linked to state SNAP administrative records

Notes: All estimates are weighted.

WIC Results

Table 2: Estimated Special Supplemental Nutrition Assistance Program for Women, Infant and Children (WIC) Eligibility and Participation Rates by Race, Hispanic Ethnicity, and English Language Ability

	Colorado, 2013				Nevada, 2013			
	Eligibility		Participation		Eligibility		Participation	
	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE
State Total	51.7	0.9	58.6	1.5	61.2	1.3	66.4	1.4
English Language Skills (<i>Parents</i>)								
Speaks English Only or Well	49.4	0.9	57.5	1.6	57.5	1.4	64.3	1.8
Does Not Speak English Well ^a	98.0	1.2	70.0	5.0	96.3	1.4	75.5	4.4
Does Not Speak English ^a					95.8	4.1	91.8	5.0

Sources: American Community Survey (ACS) linked to state WIC administrative records

Notes: All estimates are weighted.

^aFor the state of Colorado, the categories of "Does not speak English well" and "Does not speak English" are combined for confidentiality.

TANF Results

Table 3: Percentages of State Populations in Poverty and Participating in Temporary Assistance for Needy Families (TANF)

	State A, 2012						State B, 2014					
	Percentage of Population Below Federal Poverty Line		Percentage of Participating in TANF (of Poverty Population)		Percentage of TANF Participants not Below Federal Poverty Line		Percentage of Population Below Federal Poverty Line		Percentage of Participating in TANF (of Poverty Population)		Percentage of TANF Participants not Below Federal Poverty Line	
	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE
State Total	10.0	0.1	12.3	0.4	31.5	1.3	8.4	0.3	19.5	0.9	41.3	2.7
English language ability												
Speaks English only or very well	13.7	0.3	10.4	0.6	31.5	2.7	6.8	0.5	9.2	1.6	49.2	10.5
Speaks English not very well	15.3	0.6	5.7	0.8	32.1	6.8	9.8	1.3	8.4	3.6	-	-
Does not speak English	14.7	0.8	5.6	1.2	32.7	10.0						

Sources: American Community Survey (ACS) linked to state TANF administrative records

Note: All estimates are weighted using adjusted ACS survey weights.

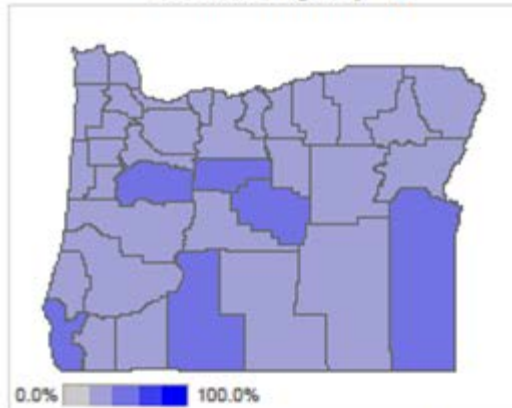
2013 Oregon SNAP Profile

on	Data (2 of 11)	Total Population (3 of 11)	Age (4 of 11)	Race (5 of 11)
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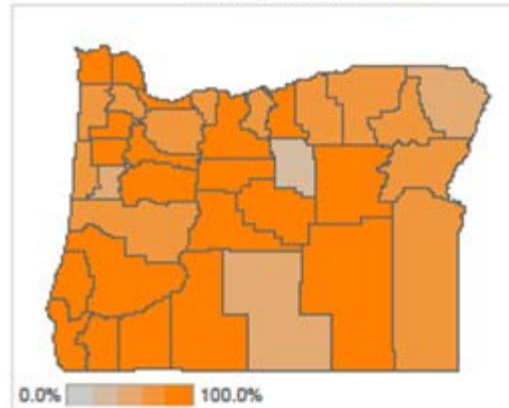
Hover over the apple for instructions:



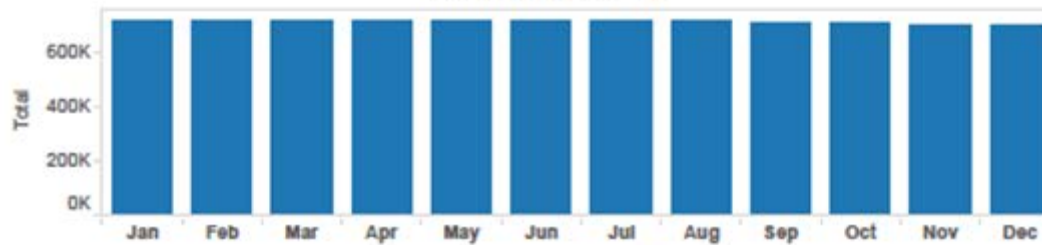
Estimated Eligibility ⓘ



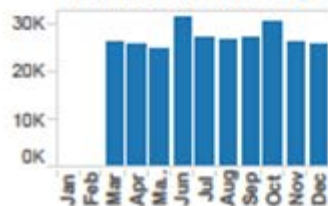
Estimated Access ⓘ



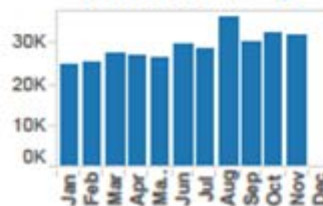
Number of Cases ⓘ



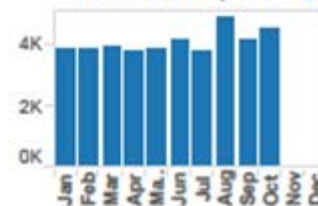
Number of Entries ⓘ



Number of Exits ⓘ



Number of Lapses ⓘ



Conclusion

- These results demonstrate how linked administrative records and survey data can give more information to program administrators
 - *Could particular race/ethnic groups benefit from further outreach by SNAP and WIC ?*
 - *In what geographic areas are rates of participation higher or lower?*
 - *What are the characteristics of program participants as compared to estimated eligible non-participants?*

Possibilities for Future Research

- Record linkage also offers the potential for new academic research on program participation and reporting
 - Survey data contain extensive information on participants social and economic characteristics but suffer from underreporting of benefits reciprocity (Meyer and Goerge 2011; Mittag 2013)
 - Administrative records contain very complete information on reciprocity but few sociodemographic variables

Possibilities for Future Research

- Social scientists at Census are using these data to generate innovative new research, often in collaboration with researchers from other institutions
 - **Scherpf, Newman, and Prell (2015):** When surveys show well-off families participating in transfer programs, it is due to income misreporting and reference period disharmonies (*SNAP records linked to ACS*)
 - **Scherpf & Cerf (2016):** SNAP participants are more likely to exit during periods of local employment growth in industries that have high shares of SNAP participants (*SNAP records linked to 2010 Census*)

Research in Progress: Reassessing Eligibility and Take-up Among the Elderly

(joint with Ben Cerf)

- Many models produce lower estimated SNAP take-up rates at older ages as well as higher eligibility rates—why?
- Several demonstration projects test strategies for improving access rates among the elderly
- We propose and test an alternative explanation

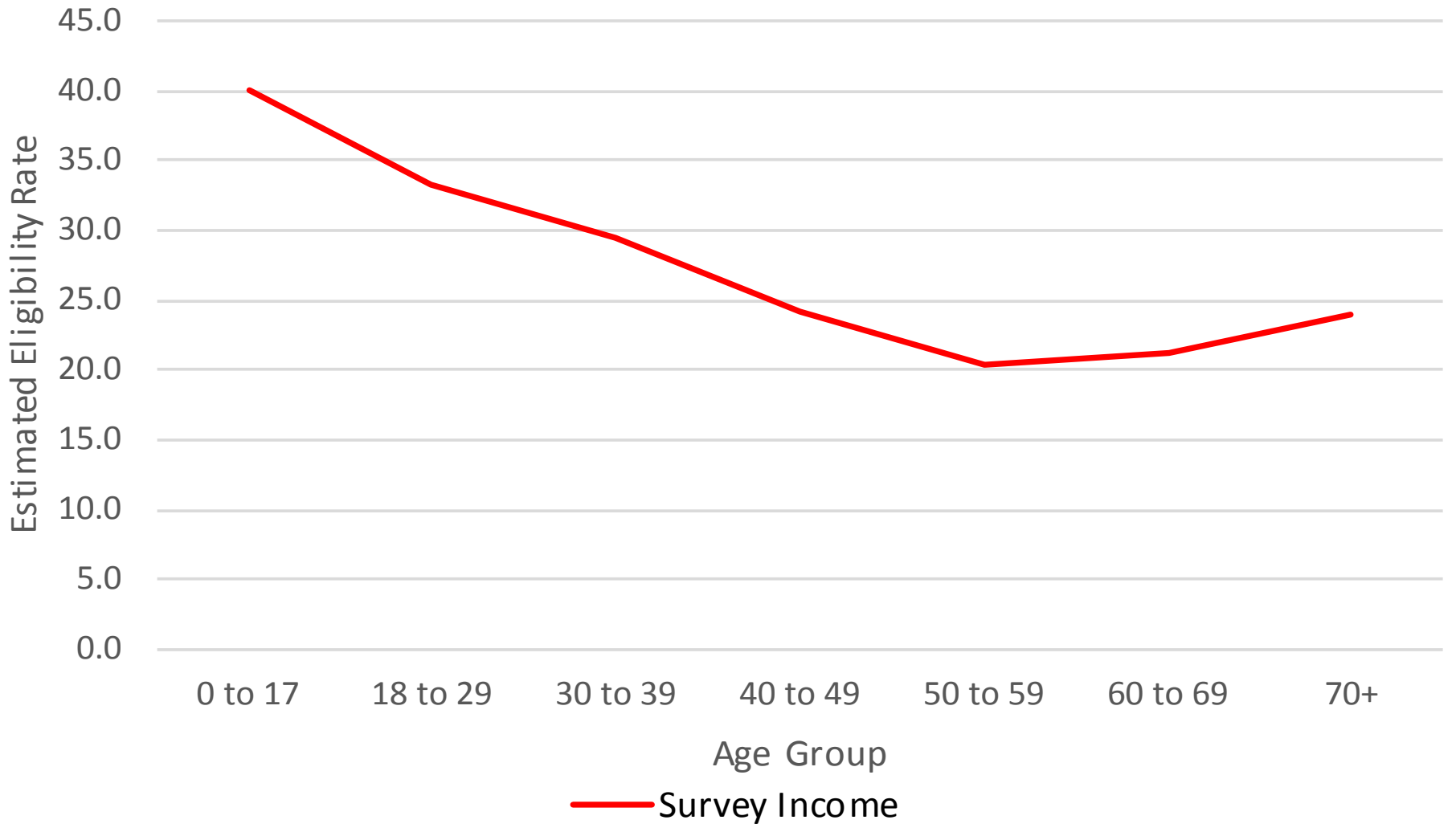
Survey Retirement Income Underreporting

- Defined benefit/annuity payments as well as defined contribution account withdrawals
- Bee and Mitchell (2017) show that retirement income underreporting affects measurement of median household income and poverty rate in the CPS for population 65+
- Bee, Mitchell and O'Hara (2016) show retirement income shortfall in ACS as well

Data and Methods

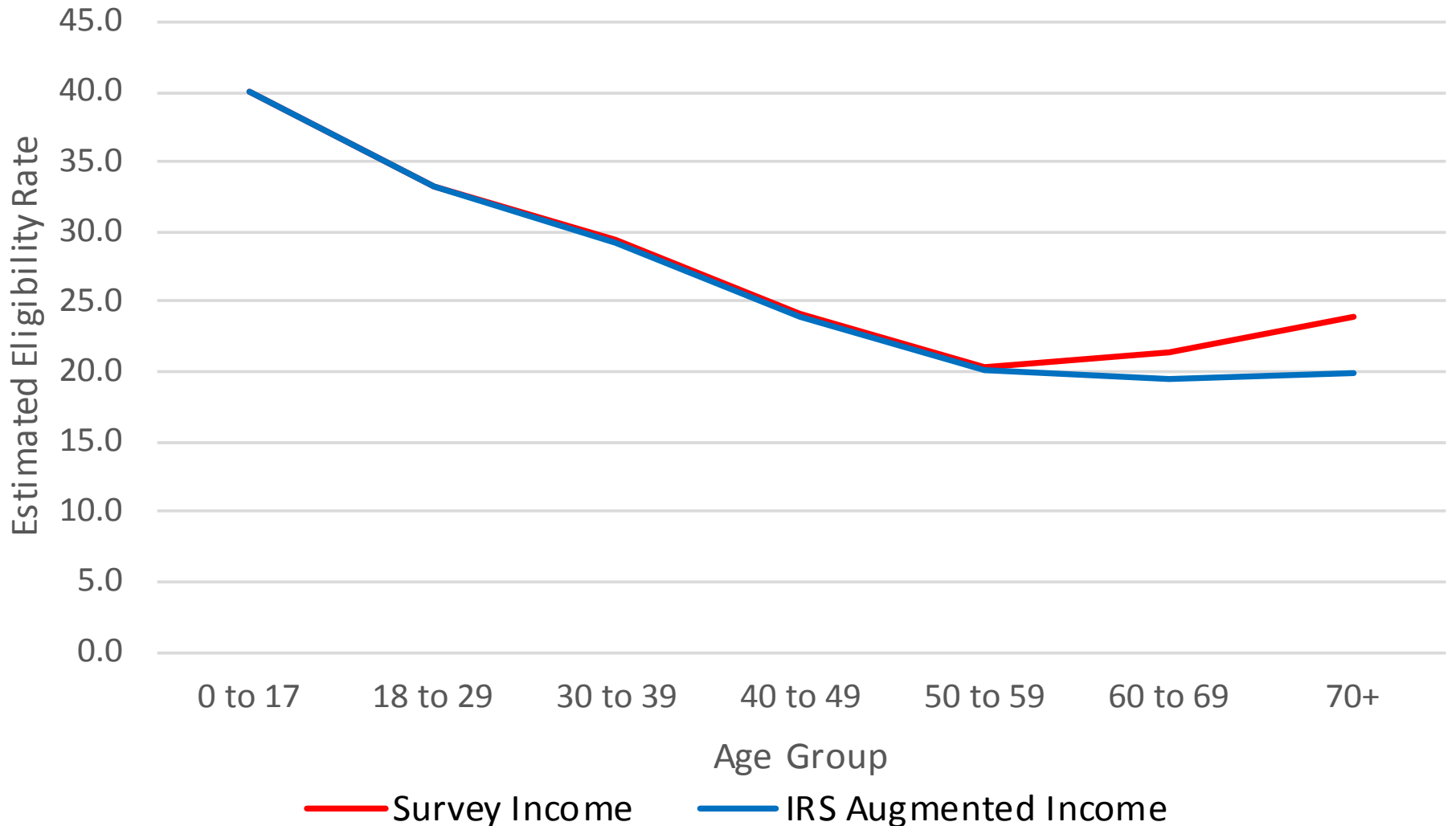
- Link ACS data with state SNAP data and IRS data from Forms 1099-R and 1040
 - measure retirement income from 1099-R
 - measure interest and dividends from 1040
- Run eligibility model with survey income alone
- Swap out two types of survey income for IRS income and rerun model

Income Reporting and SNAP Eligibility Estimates



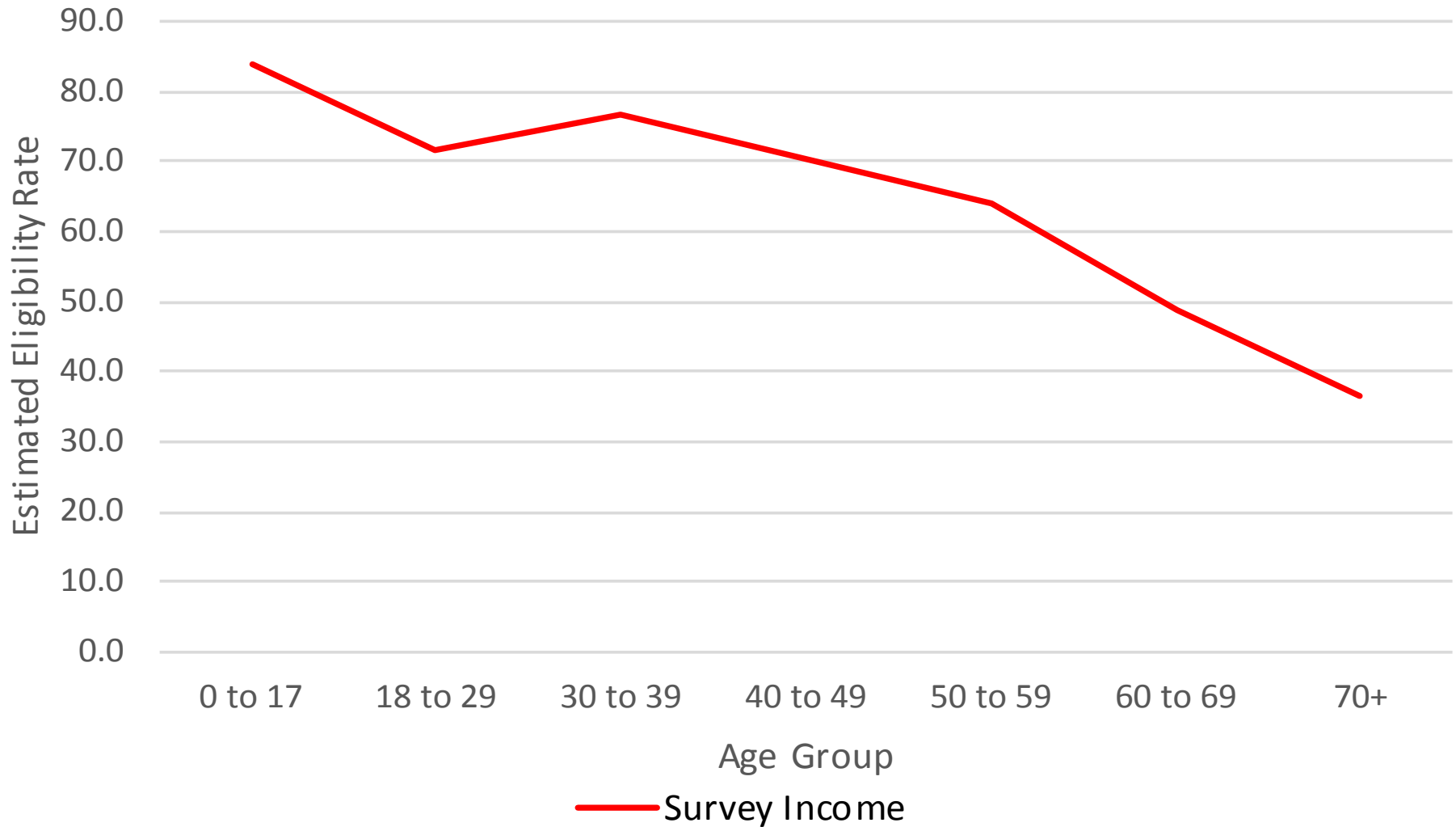
Source: 2013 ACS-IRS-SNAP records

Income Reporting and SNAP Eligibility Estimates



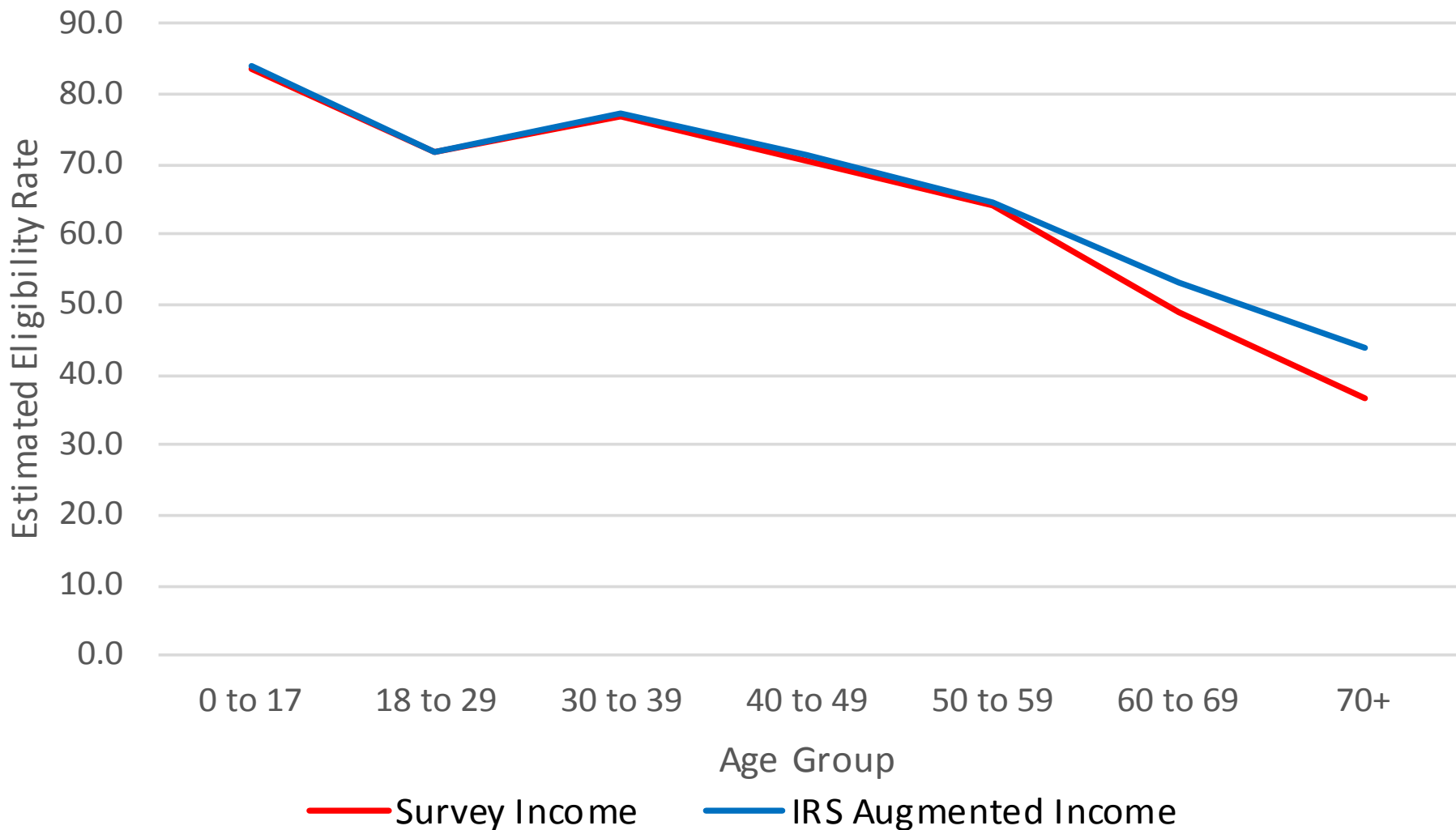
Source: 2013 ACS-IRS-SNAP records

Income Reporting and SNAP Take-Up Estimates



Source: 2013 ACS-IRS-SNAP records

Income Reporting and SNAP Take-Up Estimates



Source: 2013 ACS-IRS-SNAP records

Thank you!

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More information on methods

SNAP eligibility model (Newman and Scherpf 2013)

1. Model "SNAP Units" by segmenting ACS households and ACS subfamilies into the smallest possible groups of people for whom eligibility might be assessed
2. Calculate the total income during the ACS reference period for each SNAP Unit and convert it into average monthly income
3. Subtract the eligible deductions that can be modeled using the ACS, including a "standard deduction" and a deduction for shelter expenses are then subtracted
4. Compare the resulting net income to the weighted average of poverty thresholds in place during the 12 months preceding the ACS interview date

SNAP eligibility model (Newman and Scherpf 2013)

- The modeled SNAP Unit is considered eligible if:
 - Total income is less than or equal to 165% of the poverty threshold AND total income minus deductions is less than or equal to 100% of the poverty threshold;
 - OR someone in the SNAP Unit received public assistance;
 - OR someone in the SNAP Unit received SSI benefits;
 - OR total income is less than or equal to 165% of the poverty threshold AND there is an elderly household member.
- Modeled SNAP Units meeting the criteria above are recoded as ineligible if:
 - They have more than two cars;
 - OR they are working age, in college, and do not meet exceptions that allow students to participate in the program;
 - OR the SNAP unit is made up entirely of non-citizens.

WIC eligibility model

- The population targeted for the WIC program is limited to pregnant or breastfeeding women and infants and children ages 0 to 4 years
- ACS does not have information on pregnancy or breastfeeding so we estimate WIC eligibility only for infants and children
- In practice, only the income of a child's parent or parents typically is used to determine one's eligibility. For simplicity, to measure income, we sum the incomes of related adults within a child's household and exclude income of unrelated adults.

WIC eligibility model

- An infant or child is considered eligible if:
 - He or she is enrolled in Medicaid
 - OR his or her family received any income from a public assistance program such as SNAP or TANF
 - OR his or her family's income is below 185% of the federal poverty threshold, taking into account family size

TANF eligibility model

- The target population for the TANF program is very low-income families with minor-aged children
- There is a great deal of state-level variability in eligibility criteria
- For simplicity, we treat an individual as potentially eligible if he or she is a member of a family that:
 - Includes children aged 17 and under
 - Has a total family income 150% or less of the annual national poverty threshold for a given family size
 - We define family income as the total of the personal income of all family members aged 14 and up

TANF eligibility model

- In practice, the population that is eligible for TANF is quite limited, and the constraints on eligibility vary considerably from state to state
 - Subject to a five year time limit on benefit receipt
- Our TANF eligibility model may therefore be less accurate than our SNAP and WIC models
 - People who appear eligible based on our very simple model may not in fact be eligible