Measuring Economic Security Using Linked Consumer Expenditure and Administrative Data

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Motivation

- Obtaining an accurate picture of the economic security of the elderly is a critical issue for both researchers and policymakers
- Much of the past work on economic security relies on survey income sources which are prone to income underreporting
  - About half of private pension recipients and those receiving SNAP do not report it in surveys and a substantial share of SSI recipients do not report
- Recent studies that link administrative data to major Census Surveys have found that incomes of the elderly are often much higher than reported in the survey data alone, while the impact of SSA programs is often different as well
- Another approach to improving income measurement through linkage is to examine consumption as it may be a better indicator of economic well-being than income.

Our Contributions

- We provide the most accurate examination to date of post-tax and in-kind transfer income of the elderly using the Comprehensive Income Dataset (CID).
  - Link the Consumer Expenditure (CE) survey to administrative tax records and program data
- First to examine the role of key income sources in reducing consumption poverty for the elderly
  - Using administrative data on earnings and program receipt provides a more accurate picture on the impact of these income categories on consumption.

Outline

1. Overview of data
2. Summary of how we combine survey and administrative data to construct resource measures
3. Evaluating a blended income measure by comparing weighted totals of select income categories to publicly available aggregate data
4. Comparing income and expenditure distributions
5. The difference in poverty across key resource measures and elderly demographic subgroups
6. Examine the effect of key income sources on income and consumption poverty rates

Data: The CE Survey, Samples, Admin Data, and Linkage

The Consumer Expenditure (CE) Survey and our sample

- Use the Interview component of the Consumer Expenditure (CE) Survey
  - The reference period is the 12 months prior to the interview month for income and the 3 months prior to the interview month for expenditures
  - We use surveys conducted in January thru April 2015 to 2017
  - These are survey months for which the reference period for income closely aligns with the previous calendar year
- Link administrative records using Protected Identification Keys (PIKs)
  - Our CE sample consists of individuals in Consumer Units (CUs) that have at least one member linked to a PIK, an unambiguous state indicator, and are interviewed in the first and fourth interview wave (because those are the interviews when income is reported)
  - Re-weight to account for our sample choice
- For our analysis of the impact of SNAP on poverty, we restrict the sample to those for whom we have administrative SNAP data

Administrative Data Sources

Income Source	Administrative Source	Income Unit	Income Frequency	States Covered
Earnings	W-2 (IRS), Form 1040 (IRS)	Individual & Tax Unit	Annual	All
AGI & Other Cash	Form 1040 (IRS)	Tax Unit	Annual	All
Retirement Income	Form 1099-R (IRS)	Individual	Annual	All
Social Security	PHUS & MBR (SSA)	Individual	Monthly	All
SSI	SSR (SSA)	Individual	Monthly	All
Veterans' Benefits	US VETS Data	Individual	Annual	All
Taxes (simulated)	Form 1040 (IRS)	Tax Unit	Annual	All
SNAP	State Agencies	Household	Monthly	20+ States
Housing Assistance	PIC & TRACS (HUD)	Household	Monthly	All

Constructing Resource Measures by Combining Survey & Administrative Data

Income Concept

- Our income concept of interest is post-tax, post-transfer income. Components include:
  - Pre-tax money income (e.g., earnings, asset income, retirement income, taxable transfers like OASDI and UI, non-taxable transfers like SSI and TANF, other cash income)
  - Tax liabilities and credits
  - Select in-kind transfers (specifically housing assistance and SNAP)
- We aim to create a survey-only version (relying on survey responses only) and blended version (combining survey and administrative data) of this income concept

Blending Pre-Tax Money Income

- Vast majority of CUs file tax returns. For these CUs, we use AGI reported on Form 1040 as a starting point
- But, admin AGI is net of deductions and may miss some jobs and informal income sources
  - Therefore, we continue to use survey analog of AGI when it is higher and reflects income plausibly missed in admin records
- We cannot perfectly align survey income components with admin AGI concept so we modify admin AGI to create AGI* to match better
- We continue to use survey AGI* when higher only if survey earnings are non-imputed and at least one of the following holds:
  - Administrative Data (W2s or 1040s) missing entire CU; CU member primarily self-employed or works in a "high-tip" industry

Blending Pre-Tax Money Income (cont.)

- For non-filers in CUs, we don't have 1040 AGI so begin with survey post-tax, post-transfer income as our baseline and substitute admin data whenever possible to create blended income
- We also account for additional cash income sources that aren't accounted for in AGI*

Incorporating Taxes and In-Kind Transfers

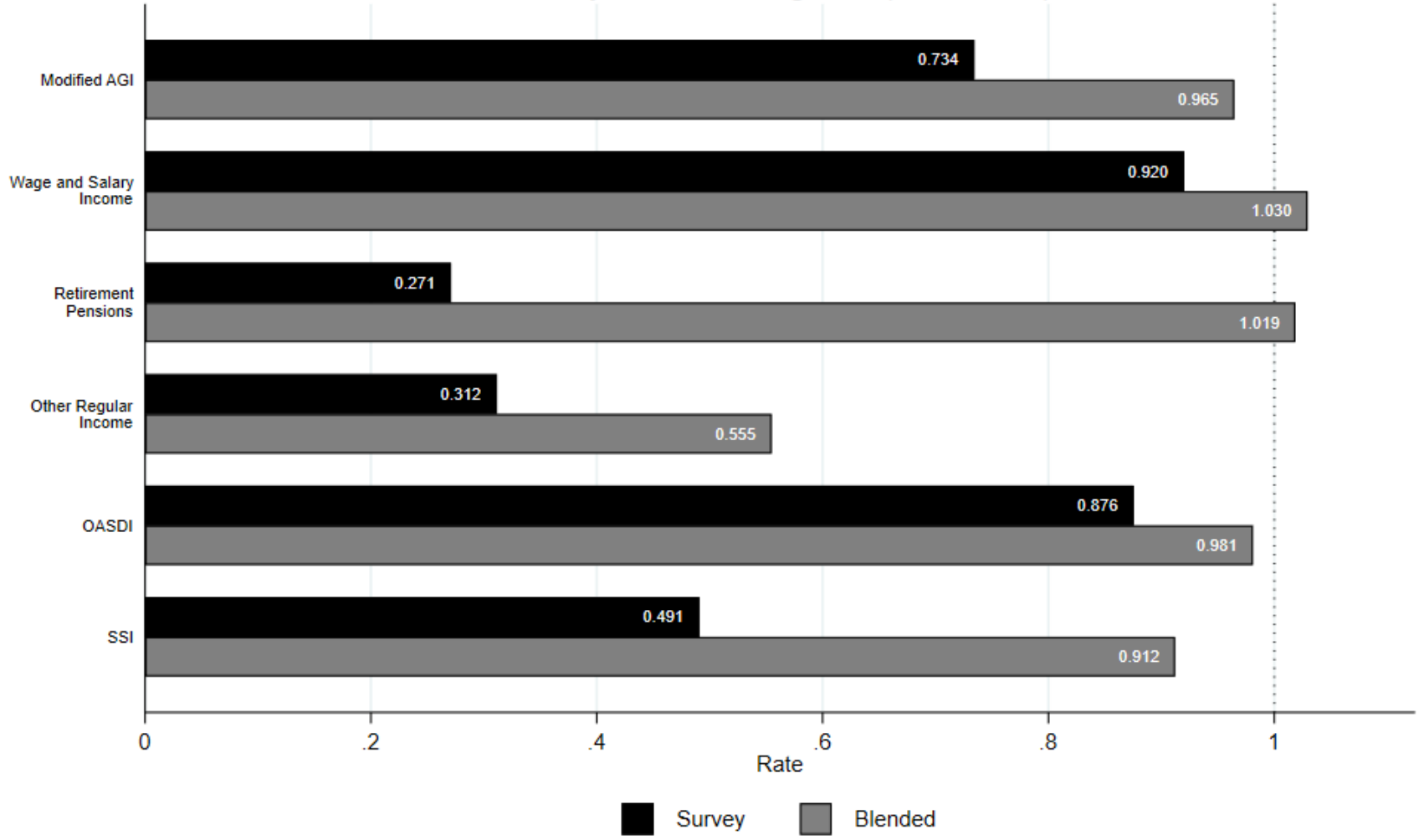
- Add tax liabilities and credits based on 1040 variables (for non-filers use W2s and other forms) using TAXSIM

Constructing Expenditures and Consumption

- To convert reported expenditures in the CE to a measure of consumption, we make a number of adjustments
  - We convert vehicle and housing spending to a service flow equivalent
  - We impute a rental equivalent for those living in government or subsidized housing
  - We exclude spending that is better interpreted as an investment such as outlays for retirement including pensions and social security

Comparing Weighted Totals to Publicly Available Aggregates

Average Reporting Rates of Blended versus Survey Income Categories (2014-2016)



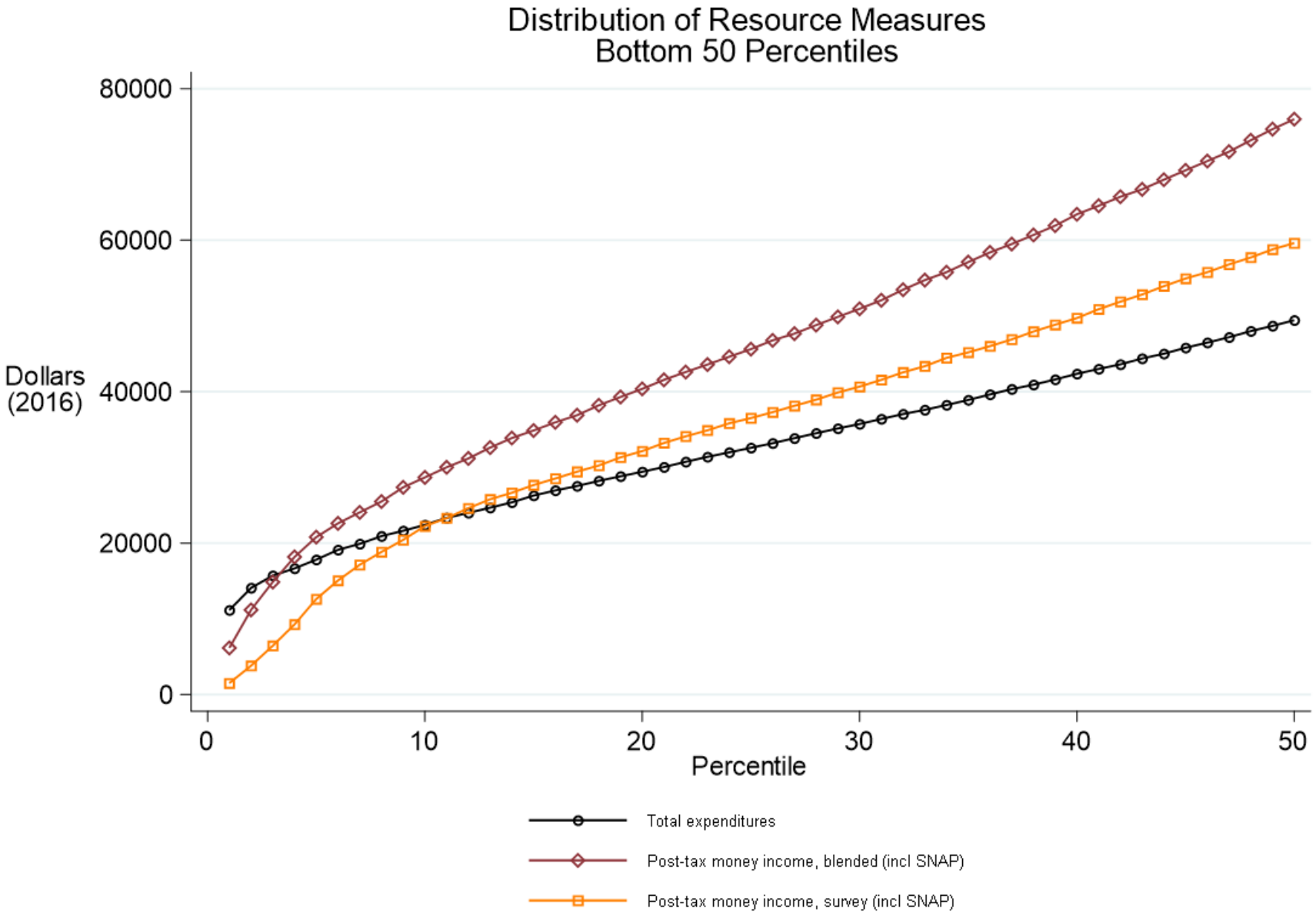
(1) Modified AGI consists of wages and salary income + self employment income + retirement pensions + interest and dividends + rental income and royalties + other REGULAR income + other NONRENTAL income.

(2) While the survey definition of Other Regular Income consists of income components such as VA benefits, Worker's Compensation, UI, child support, and alimony we only have the corresponding administrative sources for VA benefits. Hence, our blended measure is relatively understated.

Comparing Income and Expenditure Distributions

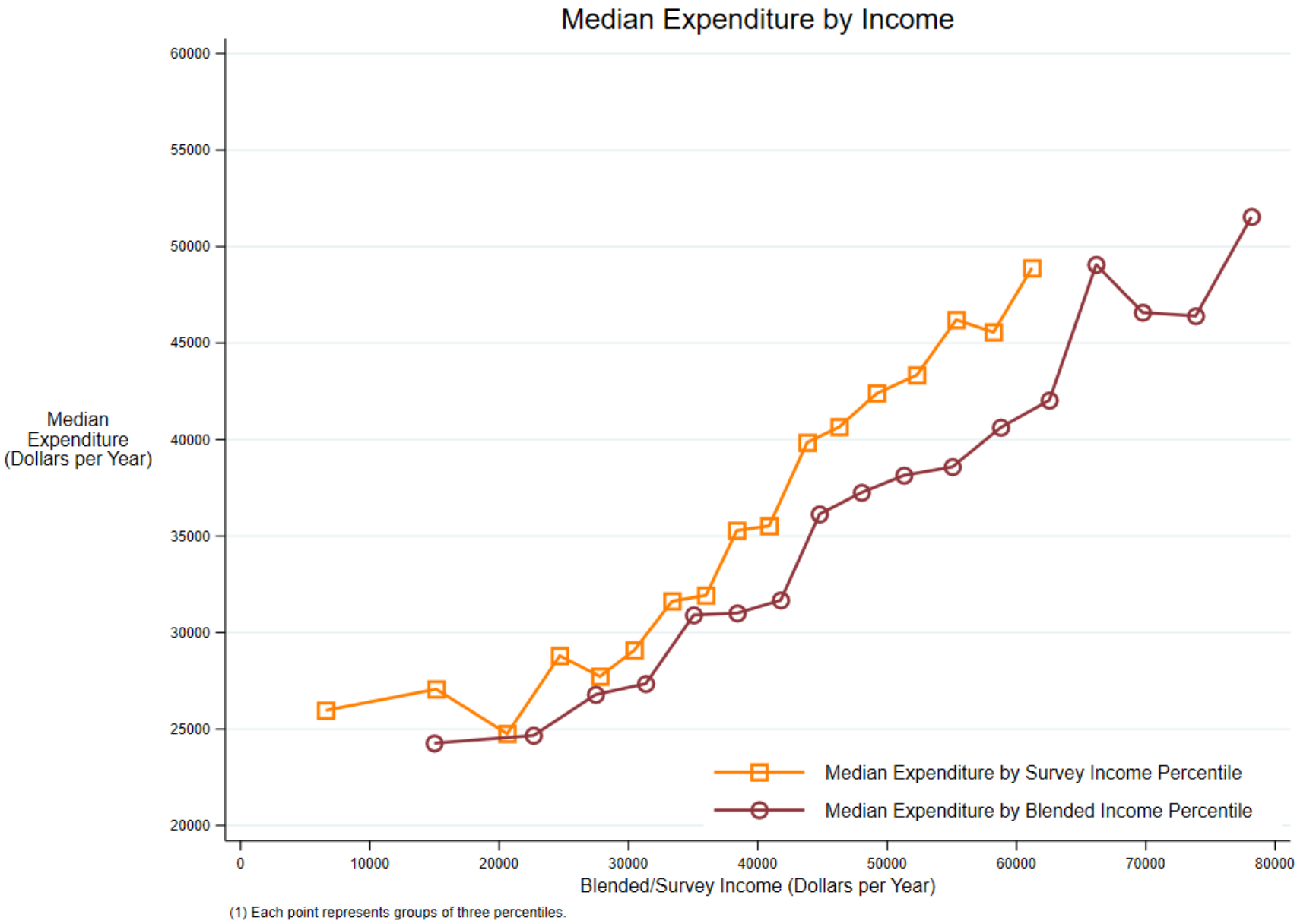
Univariate Distributions of Resource Measures

- As a part of our analyses comparing income to expenditures, we plot the univariate distributions of three different resource measures:
  - Post-tax money income plus SNAP benefits based on survey data only
  - Post-tax money income plus SNAP benefits obtained by blending administrative data with survey data
  - Yearly expenditures obtained by scaling up quarterly expenditures


Distribution of Resource Measures
Bottom 50 Percentiles
Dollars (2016)
80000
60000
40000
20000
0
0
10
20
30
40
50
Percentile
Total expenditures
Post-tax money income, blended (incl SNAP)
Post-tax money income, survey (incl SNAP)

Joint Distributions of Resource Measures

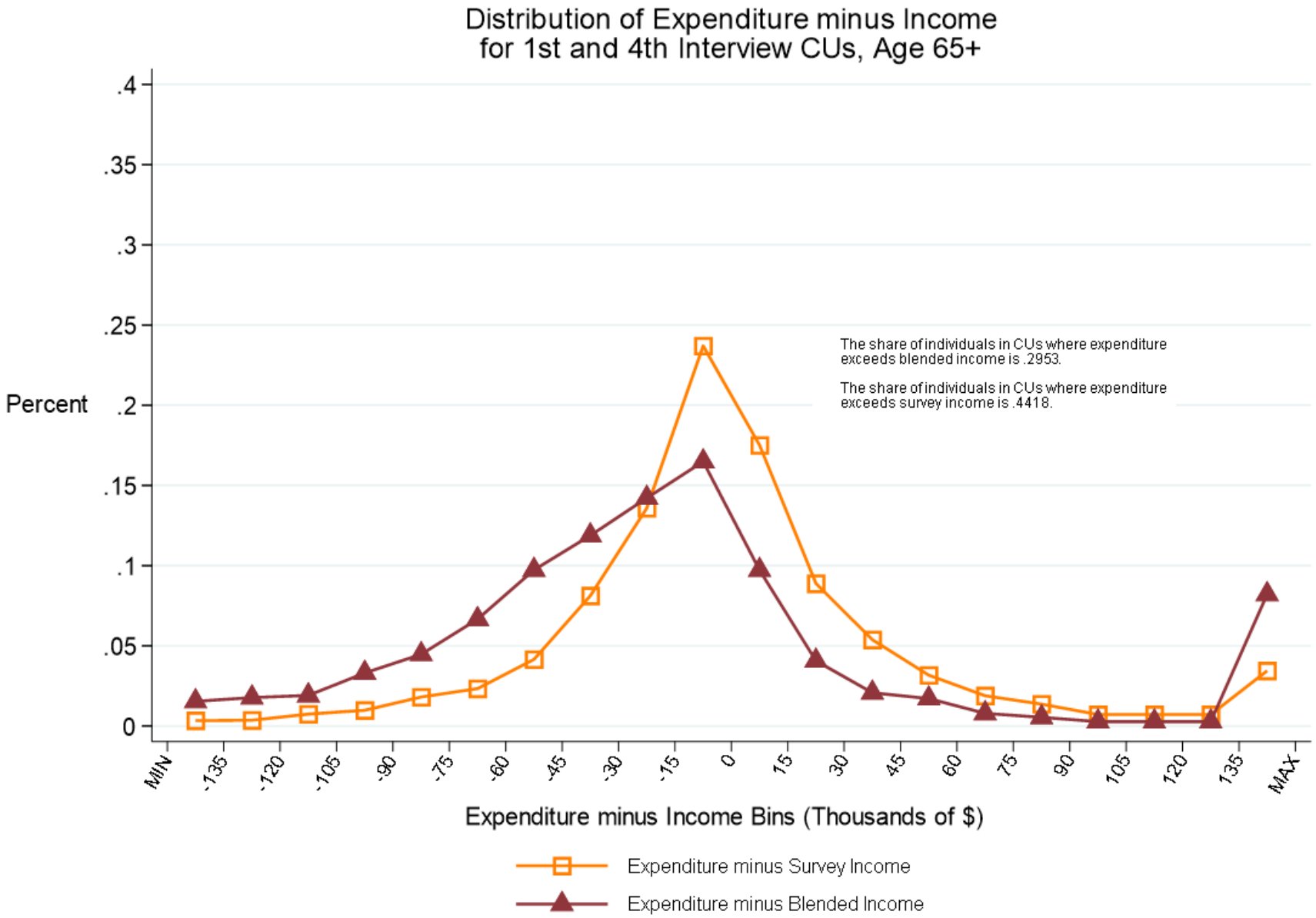
- We create two figures that report the relationship between expenditures and blended/survey income
  - The first figure reports the relationship between median expenditure conditioned on survey and blended income for the lower half of the income distribution
    - Each marker represents groups of three percentiles
  - The second figure plots the discrepancy between mean expenditures below select percentiles of survey and blended income
- Values on the axes are equivalence scaled to a two-adult, two-child family unit and inflation adjusted to 2016 dollars



(1) Each point represents groups of three percentiles.

Comparisons of Expenditures minus Income

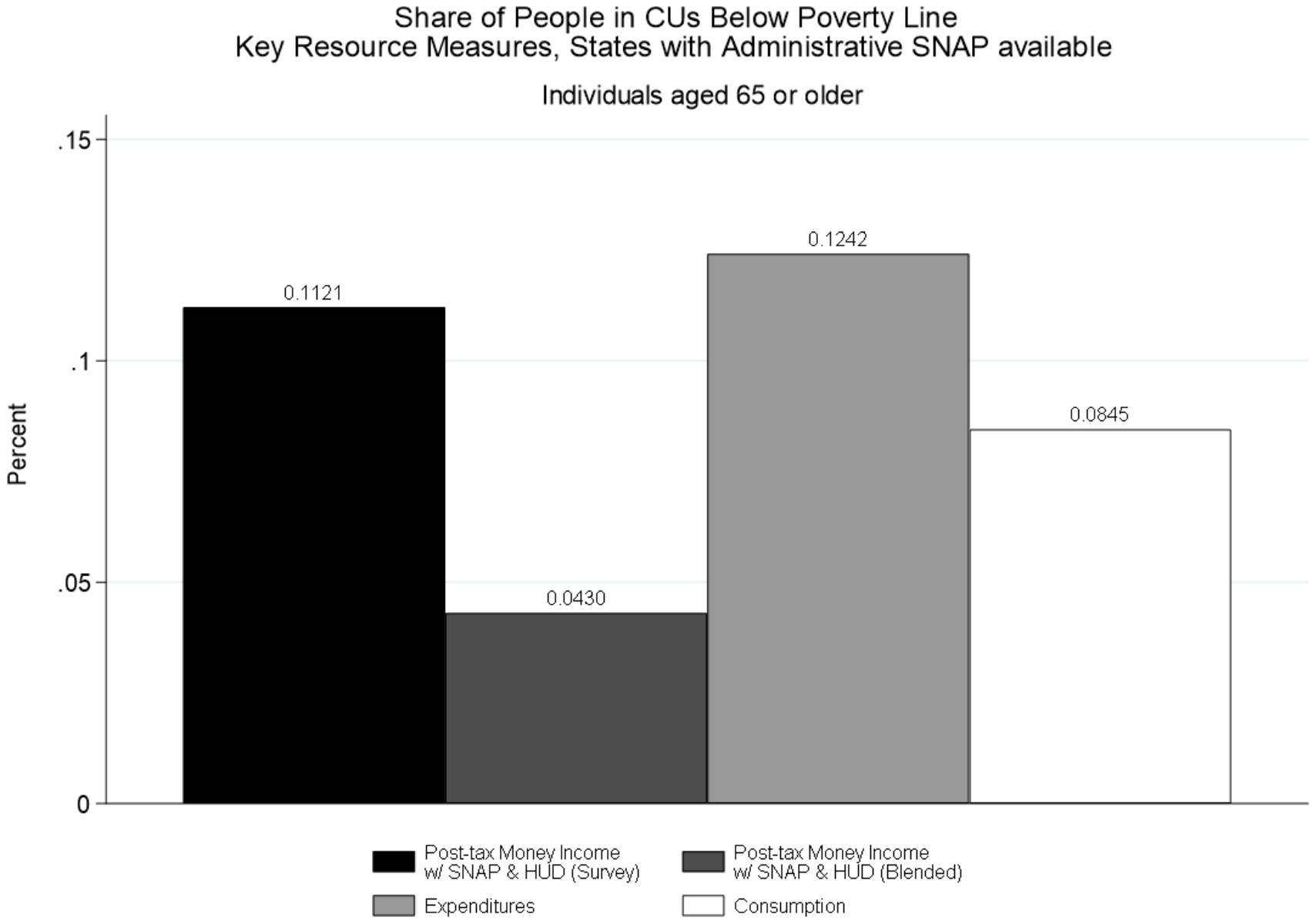
- As part of our analysis looking at individual differences between expenditure and income, we compare the distributions of expenditure minus blended and survey income across samples containing individuals interviewed in the 1st and 4th wave
- We plot the densities of expenditures minus blended and survey income for those aged 65 or older
  - The vertical axis is the percent of individuals is the Percent of CUs, Size Weighted
  - The horizontal axis is expenditure minus income bins in the thousands of dollars
  - The markers are at the midpoint of each bin


Distribution of Expenditure minus Income
for 1st and 4th Interview CUs, Age 65+
Percent
.4
.35
.3
.25
.2
.15
.1
.05
0
The share of individuals in CUs where expenditure exceeds blended income is .2953.
The share of individuals in CUs where expenditure exceeds survey income is .4418.
MIN
-135
-120
-105
-90
-75
-60
-45
-30
-15
0
15
30
45
60
75
90
105
120
135
MAX
Expenditure minus Income Bins (Thousands of $)
Expenditure minus Survey Income
Expenditure minus Blended Income

Income and Consumption Poverty Measures

Poverty Measures in the CE

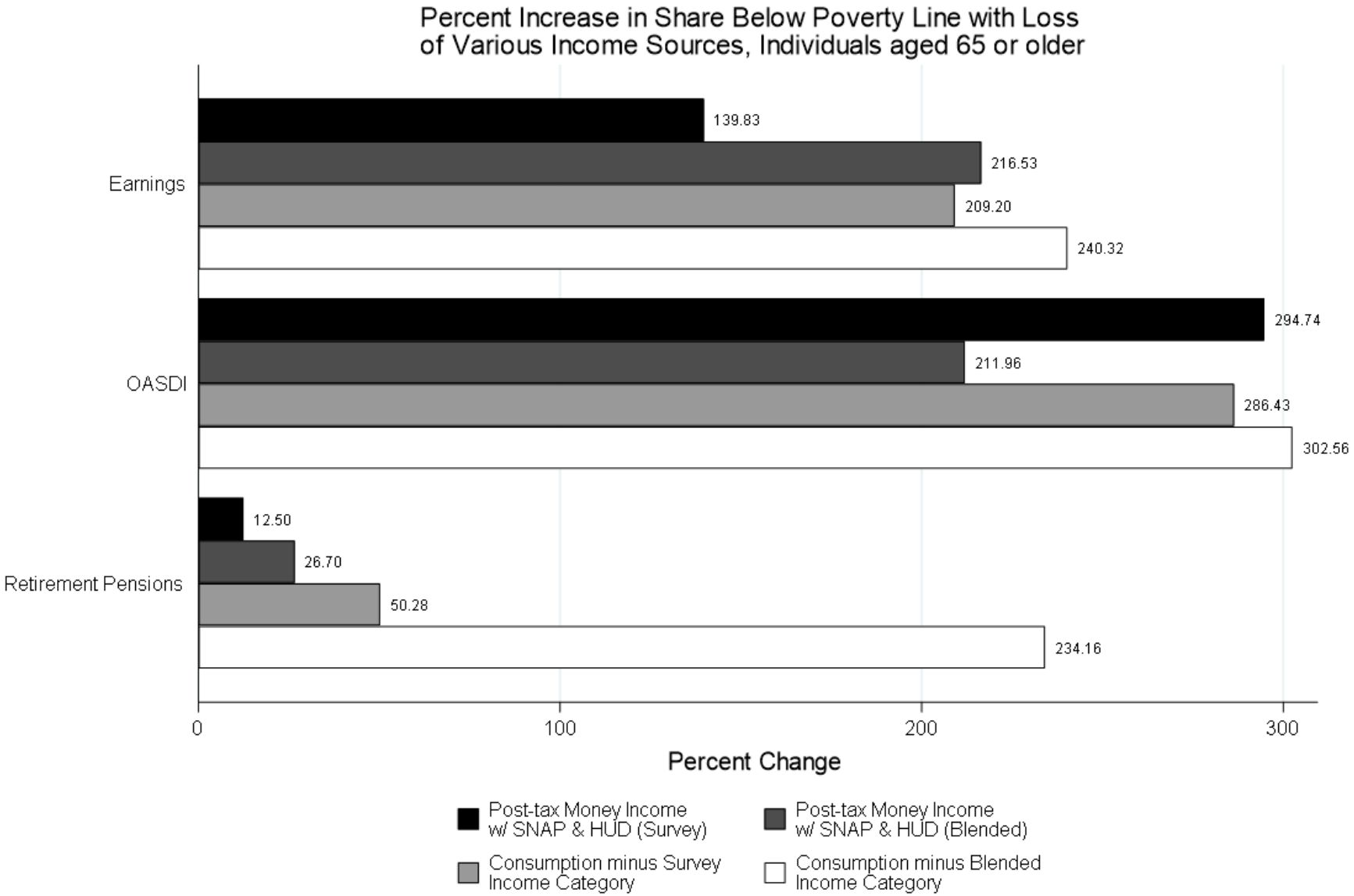
- In order to evaluate our income and consumption poverty measures, we calculate the share of individuals in CUs below select multiples of the poverty line across four different series, all of which are inflation and equivalence scale adjusted
  - Post-tax money income plus SNAP plus Housing (entirely survey based)
  - Post-tax money income plus SNAP plus Housing (blended)
  - Expenditures
  - Consumption (includes housing subsidies, rental equivalent for owned homes and cars)
- To establish our poverty line, we begin from the SPM threshold for reference year 2016, as provided by the BLS
- We produce these results for those 65 or older
  - Also do for those in consumer units with someone 65 or older


Share of People in CUs Below Poverty Line
Key Resource Measures, States with Administrative SNAP available
Individuals aged 65 or older
Percent
.15
.1
.05
0
0.1121
0.0430
0.1242
0.0845
Post-tax Money Income w/ SNAP & HUD (Survey)
Post-tax Money Income w/ SNAP & HUD (Blended)
Expenditures
Consumption

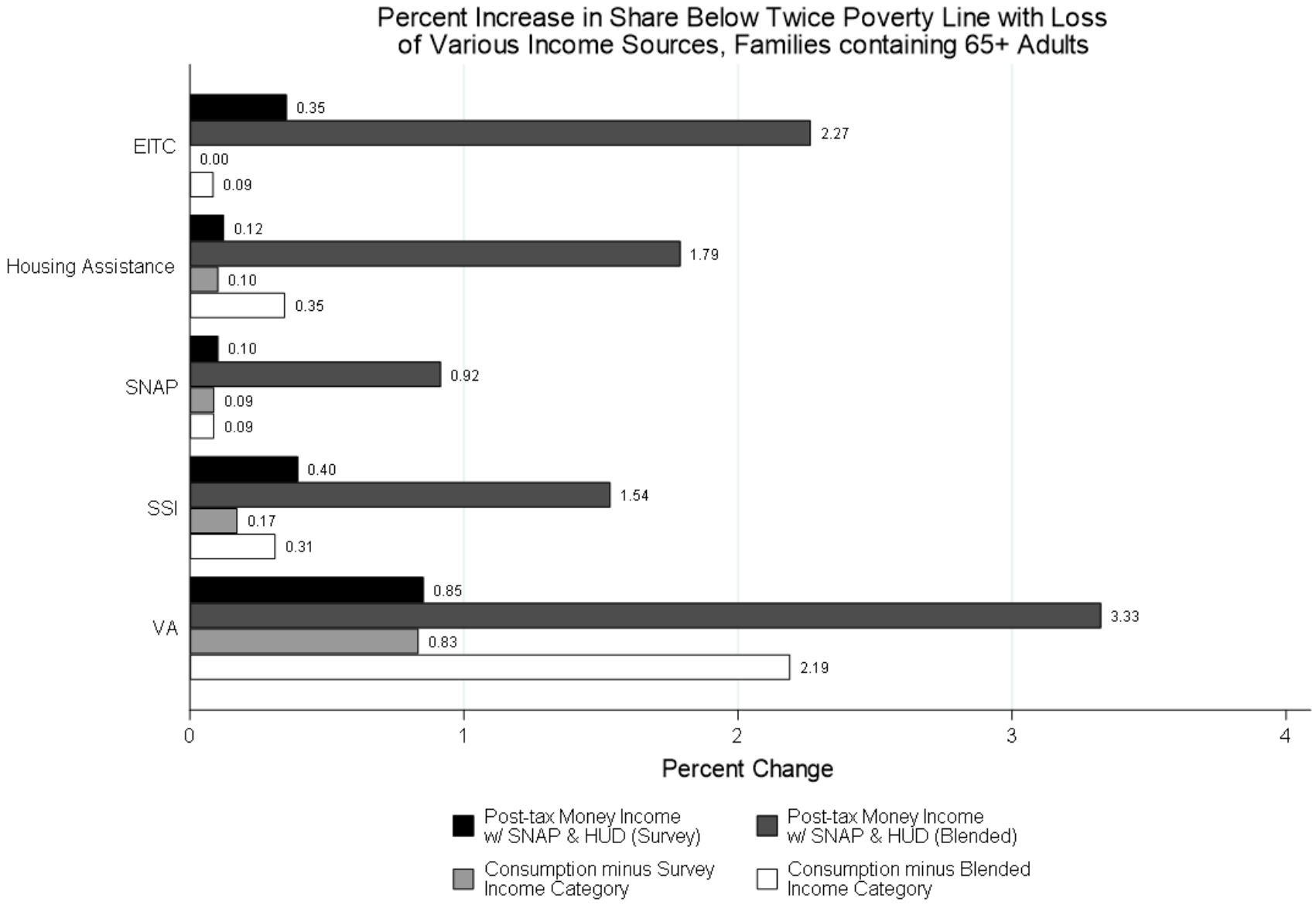
Poverty Reduction of Key Income Sources

What is the poverty reduction of different programs measured using income and consumption?

- To assess the impact of various income sources on poverty reduction, we recalculate share of people below the poverty line after excluding the value of various programs from the following three resource measures, all of which are inflation and equivalence scale adjusted
  - Blended post-tax money income + SNAP + HUD (blended)
  - Survey post-tax money income + SNAP + HUD (survey)
  - Consumption
- To ensure comparability between resource measures, we report versions where we subtract survey income components from survey income, blended income components from blended income and subtract both survey and blended income components from consumption
  - We do this for OASDI, retirement pensions, earnings (sum of wage and salary and self-employment income), SNAP, EITC, CTC, Housing Benefits, Veteran's Disability, SSI, and welfare



These income categories have so large an effect on the share of the population below multiples of the poverty line for many that we display their effects in a separate figure.



(1) The survey category for VA contains all other sources of what the CE defines as regular non-rental income.

Conclusions

- Our results show the feasibility of improving CE Survey income measures and of examining the poverty reduction of transfer programs and other income sources using consumption data
- Material well-being is higher with blended income and consumption than when relying on only survey reported income
- Program effects tend to be larger with blended income and consumption than when relying on only survey reported income
- Refinements of our methods can be made, which will not be speedy because of access issues and the disclosure process

Medical Spending Risk among Retirees by Race

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[4]University of Bristol

July 23, 2023

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Are there racial differences in medical spending?

Who has higher medical expenses?

- White HHs, Black HHs, or Hispanic HHs?
- What portion do Medicare and Medicaid pay for each race?

Who pays more out-of-pocket?

Can we explain these differences?

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Our contributions

- Merge public HRS data with administrative Medicare and Medicaid records
- Decompose racial differences in medical spending

Data

Our dataset captures all medical spending payors

- Public HRS data linked to administrative Medicare and Medicaid records
- Impute other payors from MEPS

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We consider:

- Household with heads ages 65+ between 1999-2012
- White, Black, and Hispanic HHs.

Descriptive statistics

Table: Annual Medical Spending by Race

Total spending (in 2014 dollars)			Percentage paid by:			
Spending percentile	Average	Percentage of total	Out-of-pocket	Medicare	Medicaid	Other
Panel A. White Households						
All	23,000	100.0	27.8	59.8	4.1	8.3
95-100%	139,600	30.4	29.8	50.7	11.1	8.4
0-50%	3,700	8.1	33.5	56.0	1.8	8.7
Panel B. Black Households						
All	21,900	100.0	22.1	60.8	11.3	5.8
95-100%	140,800	32.1	10.9	69.6	16.0	3.5
0-50%	2,800	6.4	30.8	54.0	8.1	7.2
Panel C. Hispanic Households						
All	21,400	100.0	14.4	60.2	20.6	4.8
95-100%	142,700	33.0	6.4	71.2	20.7	1.7
0-50%	2,600	6.2	20.2	61.6	11.9	6.3

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White HHs spend the most ($23,00/yr)

- $1,090 more than Black HHs
- $1,540 more than Hispanic HHs

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White HHs spend spend a higher share of costs out-of-pocket (27.8%)

- 5.7 percentage points more than Black HHs
- 13.4 percentage points more than Hispanic HHs

Understanding racial differences in medical spending

Understand racial differences in medical spending

Key racial differences

- White HHs spend more in total
- White HHs spend more out of pocket

Understand racial differences in medical spending

Key racial differences

- White HHs spend more in total
- White HHs spend more out of pocket

Key “potential drivers”/covariates

- Demographics (number of HH members, their age)
- Health (including nursing home use)
- Education
- Income
- Region

Understand racial differences in medical spending

Answer this question using multivariate regression

- Regress spending/oop share on race indicator
- Regress spending/oop share on race indicator + covariates

Assess whether covariates explain racial differences

Table: Gelbach Decomposition of Total Medical Spending Differences by Race

	White vs Black Households			White vs Hispanic Households		
	Specification			Specification		
	Base	Full	Explained	Base	Full	Explained
Race	-1,092**	360	-1,544***	-1,545**	929	-2,376***
	(493)	(479)	(314)	(781)	(777)	(526)
Covariates						
Demographics	No	Yes	-1,528***	No	Yes	-1,482***
			(138)			(157)
Health	No	Yes	1,558***	No	Yes	1,701***
			(285)			(443)
Education	No	Yes	-1,665***	No	Yes	-3,325***
			(159)			(300)
Income	No	Yes	311**	No	Yes	937***
			(158)			(261)
Region	No	Yes	-220***	No	Yes	-207*
			(82)			(121)
Observations	37,395	37,395	37,395	33,384	33,384	33,384
R^2	0.000	0.228		0.000	0.229	

Standard errors in parentheses *p<0.10, **p<0.05, ***p<0.01.

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R^2	0.000	0.228		0.000	0.229	

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Demographics and education explain the (modestly) higher spending of White HHs

Table: Gelbach Decomposition of Out-of-pocket Fraction Differences by Race

	White vs Black Households			White vs Hispanic Households		
	Specification			Specification		
	Base	Full	Explained	Base	Full	Explained
Race	-0.057***	-0.024***	-0.034***	-0.134***	-0.063***	-0.071***
	(0.004)	(0.004)	(0.002)	(0.007)	(0.007)	(0.004)
Covariates						
Demographics	No	Yes	0.016***	No	Yes	0.014***
			(0.001)			(0.002)
Health	No	Yes	-0.019***	No	Yes	-0.028***
			(0.002)			(0.003)
Education	No	Yes	-0.007***	No	Yes	-0.018***
			(0.001)			(0.003)
Income	No	Yes	-0.025***	No	Yes	-0.040***
			(0.001)			(0.002)
Region	No	Yes	0.001*	No	Yes	-0.001
			(0.001)			(0.001)
Observations	36,787	36,787	36,787	32,849	32,849	32,849
R^2	0.005	0.126		0.012	0.132	

Standard errors in parentheses *p<0.10, **p<0.05, ***p<0.01.

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	White vs Black Households			White vs Hispanic Households		
	Specification			Specification		
	Base	Full	Explained	Base	Full	Explained
Race	-0.057***	-0.024***	-0.034***	-0.134***	-0.063***	-0.071***
	(0.004)	(0.004)	(0.002)	(0.007)	(0.007)	(0.004)
Covariates						
Demographics	No	Yes	0.016***	No	Yes	0.014***
			(0.001)			(0.002)
Health	No	Yes	-0.019***	No	Yes	-0.028***
			(0.002)			(0.003)
Education	No	Yes	-0.007***	No	Yes	-0.018***
			(0.001)			(0.003)
Income	No	Yes	-0.025***	No	Yes	-0.040***
			(0.001)			(0.002)
Region	No	Yes	0.001*	No	Yes	-0.001
			(0.001)			(0.001)
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R^2	0.005	0.126		0.012	0.132	

Standard errors in parentheses *p<0.10, **p<0.05, ***p<0.01.

Health and income (mostly) explain the higher out-of-pocket share of White HHs

Conclusion

White HHs have higher total medical spending on average

- But this is fully explained by observable covariates such as HH structure, health status, and education
- No evidence of direct racial inequities in spending (beyond what is explained by education)

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- No evidence of direct racial inequities in spending (beyond what is explained by education)

White HHs pay a higher share of their medical expenses out-of-pocket

- This is partially, but not fully, explained by higher income and better health
- Medicare and Medicaid reduce out-of-pocket spending, especially among Black & Hispanic HHs $\Rightarrow$ redistribution to these groups

August 3rd & 4th, 2023

Improving Financial Security for People with Disabilities through ABLE Accounts

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UCHICAGO URBANLABS INCLUSIVE ECONOMY LAB | Science in Service of Cities.

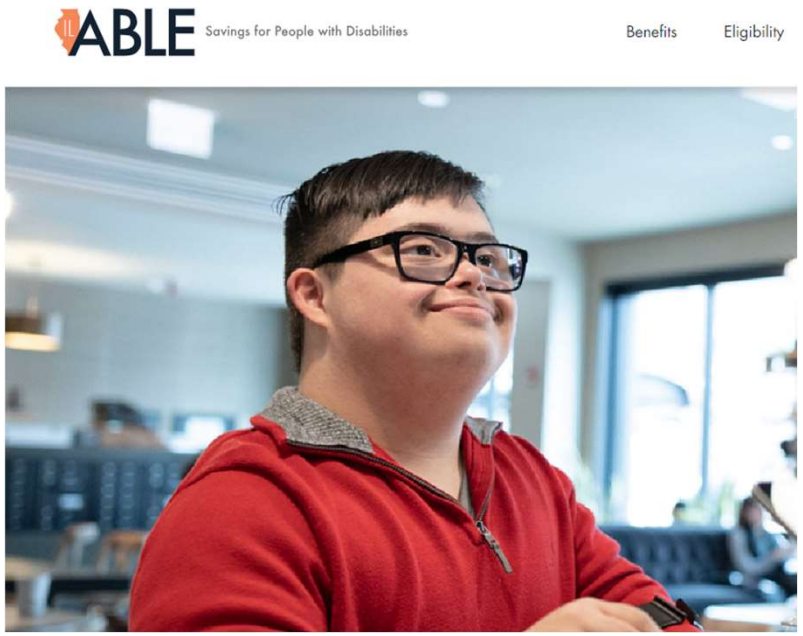
This research was supported by a grant from the U.S. Social Security Administration (SSA) as part of the Retirement and Disability Research Consortium (RDRC). The findings and conclusions are solely those of the authors and do not represent the views of SSA, any agency of the federal government, or the University of Wisconsin-Madison Center for Financial Security.

Motivation and Summary

- ABLE offers people with disabilities opportunity to save money without affecting benefits
- Administrative and survey data point to three key drivers of low take-up rates:
  - Limited Knowledge
  - Administrative Barriers
  - Financial Constraints
- Ongoing novel seeding pilot aims to address these barriers and inform scaled-up interventions

ABLE accounts can help individuals living with a disability to gain financial independence

- For SSI recipients, up to $100K is exempt from the $2,000 resource limit (last raised in 1989)
- Offered since 2017, now across 46 states
- State-administered plans (our study partner: Illinois State Treasurer's Office)
- Despite its advantages, low take-up rates nationally and in Illinois

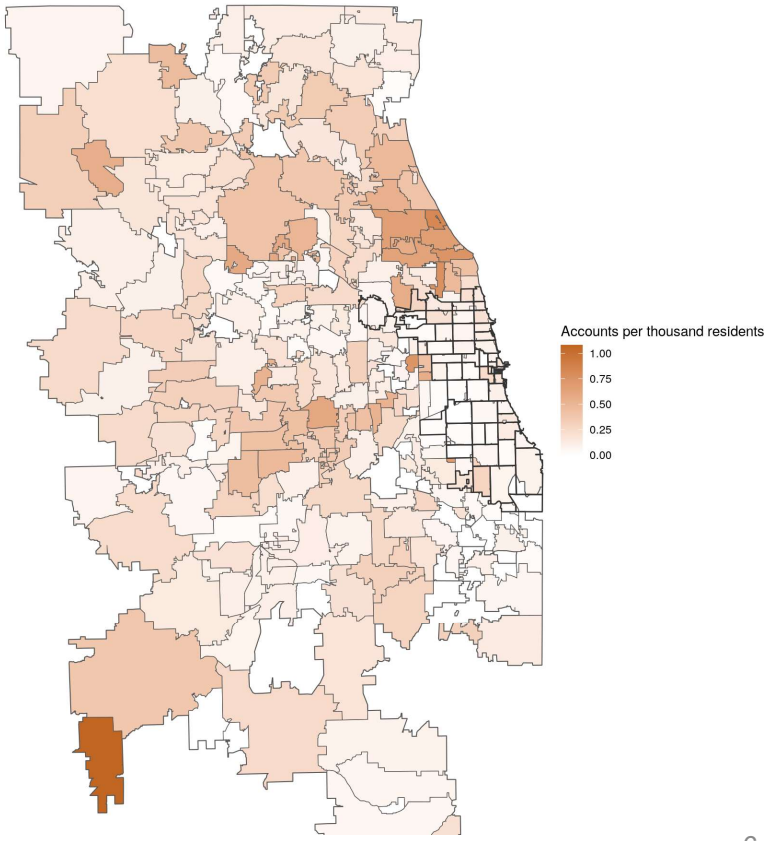


Data sources

- **Administrative data:** 5,963 account beneficiaries and 306,548 transactions spanning January 2017- April 2023
- **Survey**: 2,515 ABLE-eligible respondents in Illinois and Wisconsin to understand their awareness, interest, and participation in the program
- **Seeding initiative**: seed 400 new accounts by end of August with $100 upon completion of a sign-up survey

Administrative data shows low and concentrated account take-up rates

- 16% of account holders live in the top income decile of zip codes and hold 23% of assets held across all ABLE accounts
- Relatively few accounts in Chicago's South and West sides, despite concentration of disability benefits recipients



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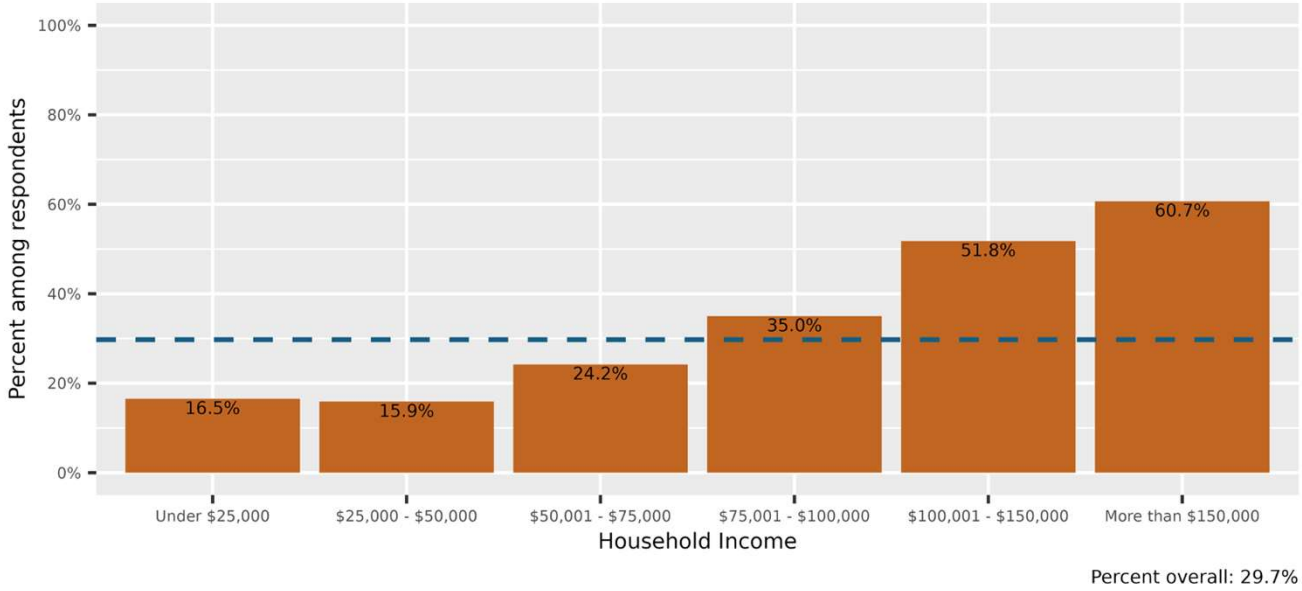
Survey evidence confirms income disparities in take-up rates

- Wealthier households are much more likely to have ABLE accounts



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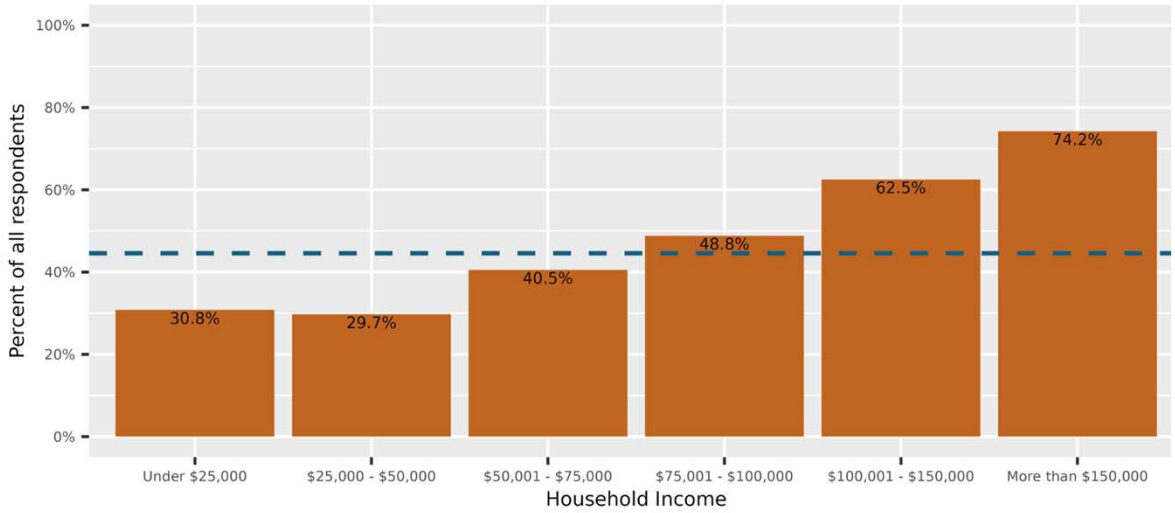
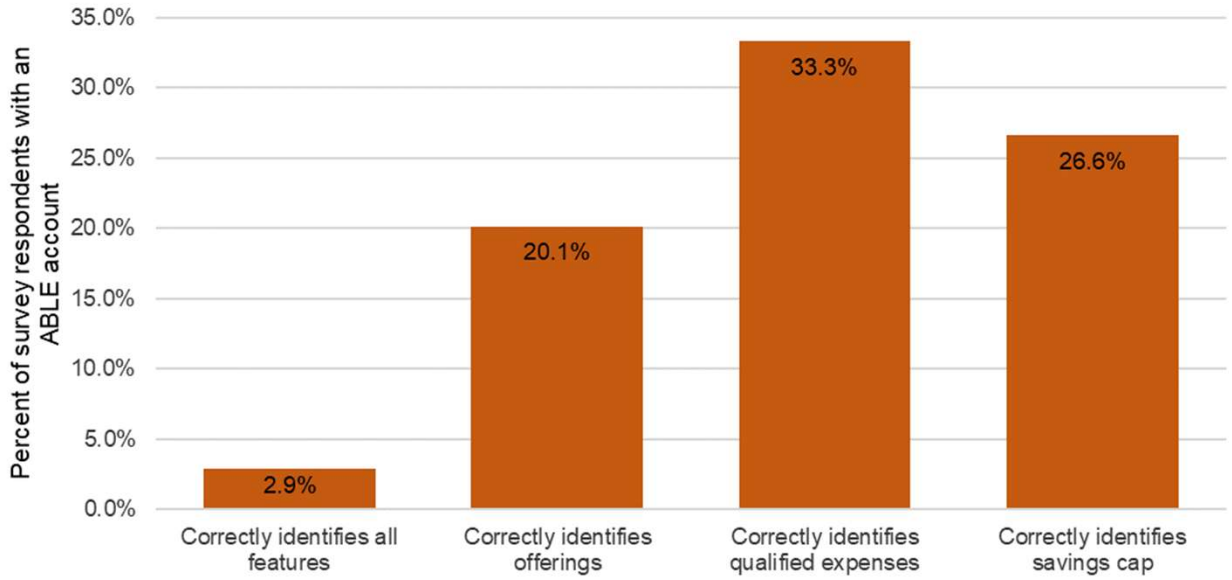
Program awareness is higher among wealthier and better-connected households

- Awareness was higher (58%) among those involved with organizations (vs 12% who weren't)
- Among seeding survey respondents, 35% learned about ABLE from our recruitment email.



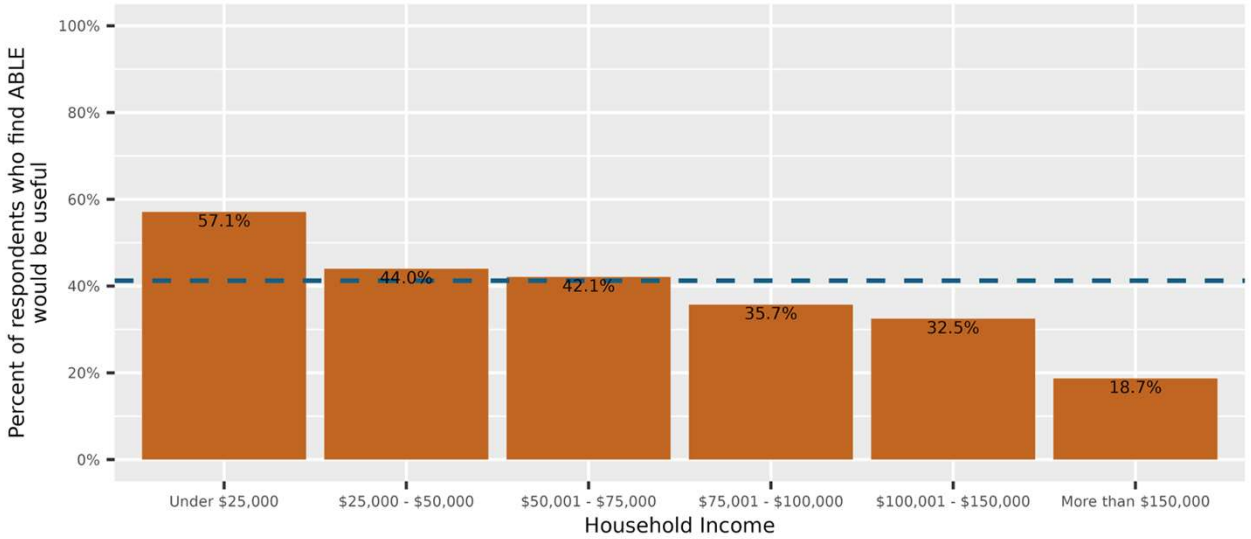
Widespread perceptions of administrative burden and misconceptions about the program

- Across two surveys, only 3% of respondents correctly identified all program features



Low-income households are concerned about not having enough money to contribute

- Similar pattern in seeding survey: 30% of respondents stated “not enough money to save” as a reason for not opening an ABLE account before



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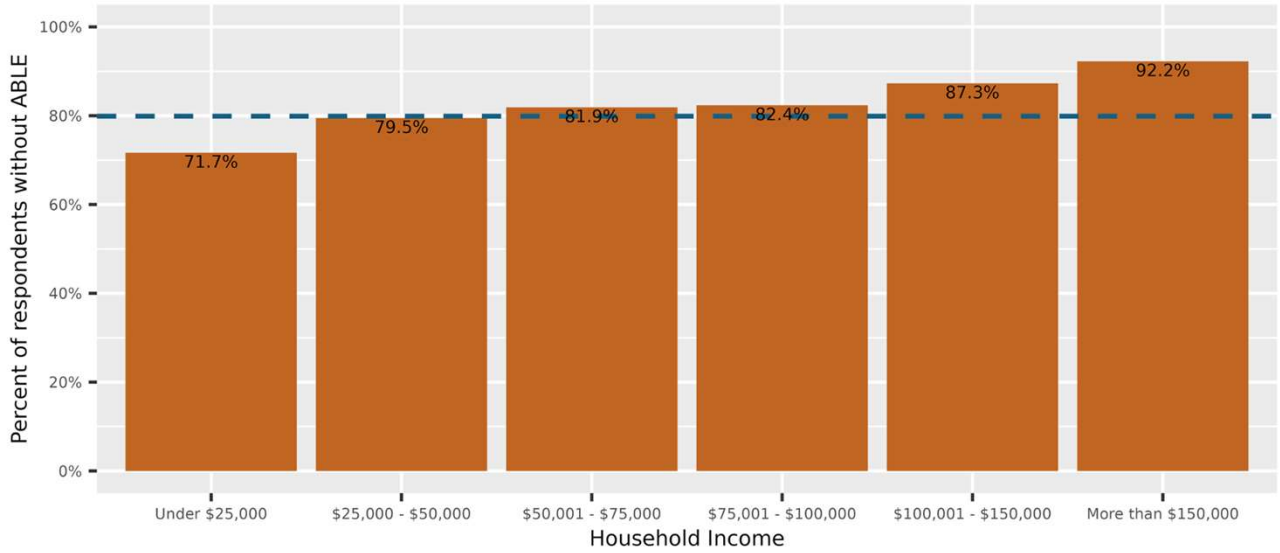
ABLE is highly attractive to people across income categories

- More than 70% of participants across income groups found ABLE accounts to be of potential interest



Ongoing novel seeding initiative

- Starting in late June 2023, we launched an effort to enroll and seed 400 new IL ABLE accounts, with each new account seeded with $100
- First of its kind seeding pilot: upfronting financial benefits to offset perceived administrative burden costs
- Partnered with Arc of Illinois, Easterseals, Progress CIL, Chicago Parks Districts (Special Olympics) so far
- As of July 20, we have received 147 complete survey responses from eligible participants
- The median participant planned to save $1,000 per year in their ABLE account, though the mean was $4,600

Next steps

- Complete seeding of 400 new accounts by end of August
- Will track participants' contributions and withdrawals over next six months
- Will conduct a follow-up survey to better understand their experiences
- Findings can help policymakers design strategies to overcome barriers and promote take-up of ABLE accounts
- Long-term goal is to help people living with a disability:
  - Improve their financial wellbeing and self-sufficiency
  - Improve their employment opportunities and earnings

August 3rd & 4th, 2023

Improving Financial Security for People with Disabilities through ABLE Accounts

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