

# ***An Analysis of Poverty Through a Consumption Lens: Research from the U.S. Bureau of Labor Statistics***

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*Co-authored with Thesia Garner and Brett Matsumoto*

*2024 Joint Statistical Meeting*

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*Reimagining Poverty Measurement: Insights from Cutting-Edge Research 8:30 – 10:20 a.m.*

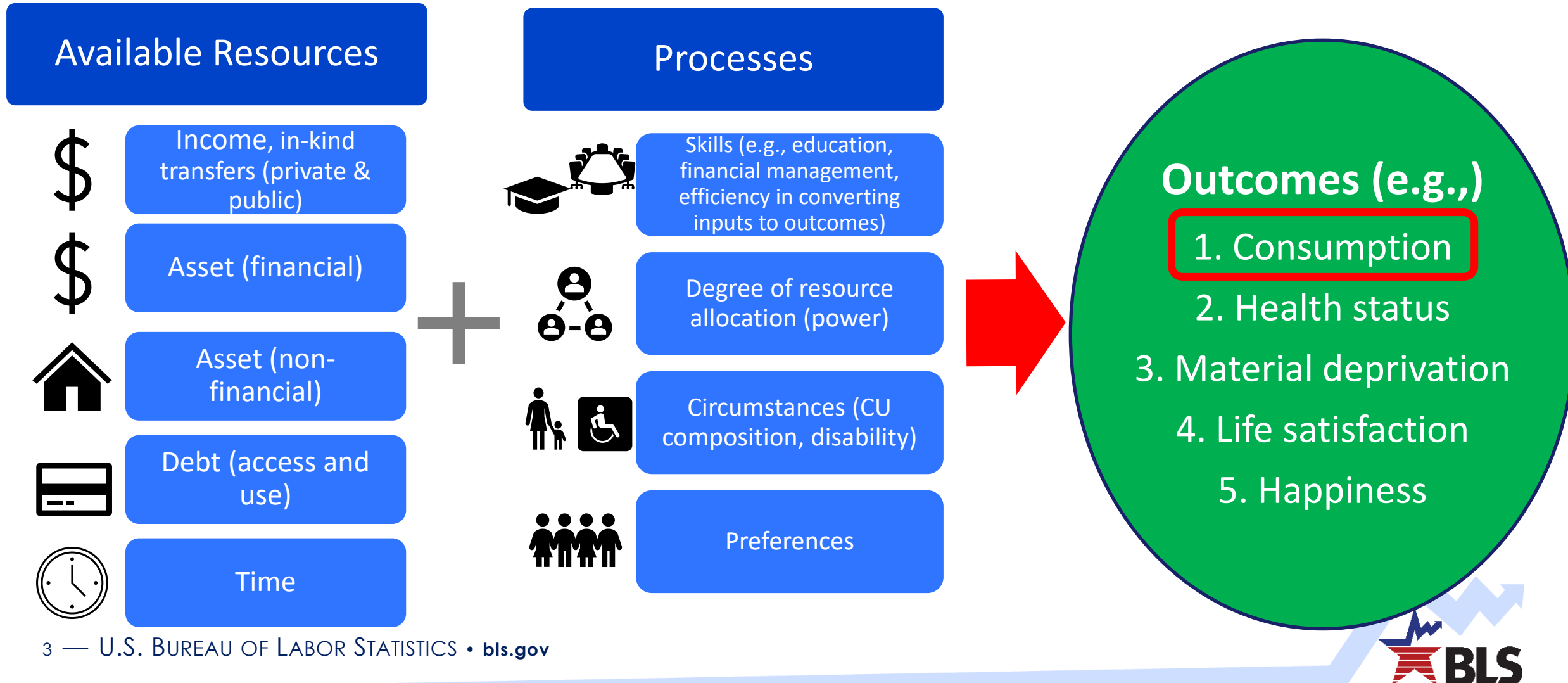


# Disclaimer

This presentation provides a summary of research results. The information is being released for statistical purposes, to inform interested parties, and to encourage discussion of work in progress. The presentation does not represent an existing, or a forthcoming new, official BLS statistical data product or production series.



# Consumption as a Well-being Outcome: A Function of Resources and Processes



# Why Produce Consumption Measures?

## ■ Alternative measure of well-being based on outcomes

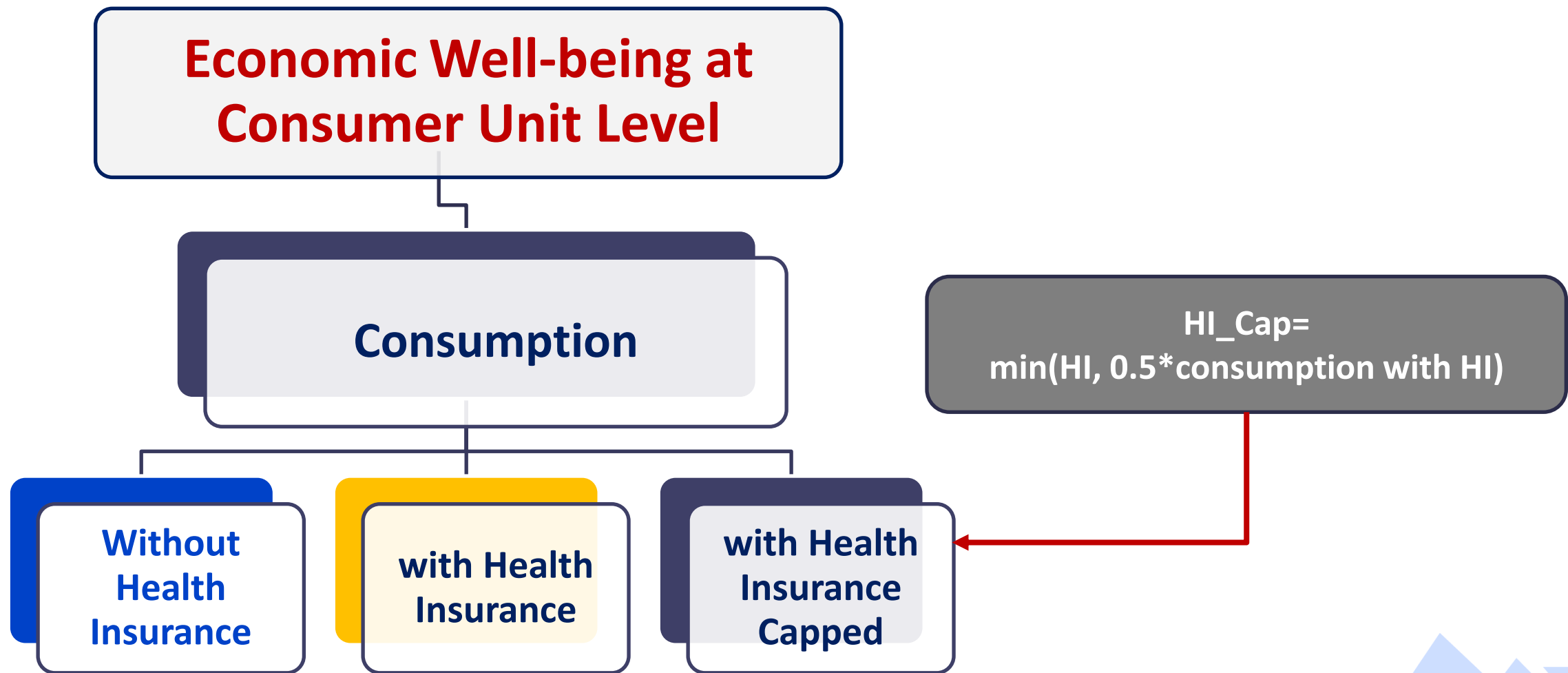
- ▶ Supports work and recommendations
  - CNSTAT Panel An Integrated System of U.S. Household Income, Wealth, and Consumption Data and Statistics to Inform Policy and Research (present)
  - OECD expert groups on distributions of income, consumption, and wealth (micro groups)
- ▶ Allows us to go beyond expenditures: Period of COVID-19 and consumption of home production

## ■ Poverty measurement

- ▶ Supports the work of the Interagency Technical Working Group (ITWG) on Evaluating Alternative Measures of Poverty (2020) and CNSTAT panel (2023) focus on consumption needs for the Principal Poverty Measure

❖ *In addition, have presented earlier work on progressions of our measure and used in inequality and poverty at various venues (e.g., ASSA, SGE, OECD, CNSTAT, FESAC, JSM, SEA). See Monthly Labor Review 2022 for details about comprehensive consumption measure*

# Concepts of Consumption for Poverty Analysis



NOTE: None of these measures include "Education"

# Data and Methods

## ■ Data

- ▶ Base is U.S. Consumer Expenditure Survey Interview, 2019 through 2022
- ▶ Supplemented with data from CE Diary, CPS-ASEC, MEPS Insurance Component, CMS National Health Expenditure Database, USDA Administrative Data, National Center for Education Statistics

## ■ Methods

- ▶ Thresholds
  - Relative threshold based on 60% of median equivalized values
  - Anchored relative threshold, anchored to 2019 and updated using Chained CPI-U
- ▶ Poverty Statistics (Foster-Greer-Thorbecke, 1984)
  - Headcount rates: percent of individuals below the poverty line
  - Average poverty intensity: average poverty gap relative to the threshold (only for poor)
  - Poverty severity: how poor the poorest is relative to the average poor



# Oaxaca-Blinder Decomposition

- Regress poverty in each year on a set of demographic variables:

$$Poverty_{i,t} = \sum_k \beta_t^k X_{i,t}^k + \epsilon_{i,t}$$

- Change in poverty can be decomposed into changes due to demographics and changes in the coefficients:

$$\overline{Poverty}_{t+1} - \overline{Poverty}_t = \sum_k \beta_{t+1}^k (\bar{X}_{t+1}^k - \bar{X}_t^k) + \sum_k \bar{X}_t^k (\beta_{t+1}^k - \beta_t^k)$$

# Moving from Expenditures to Consumption

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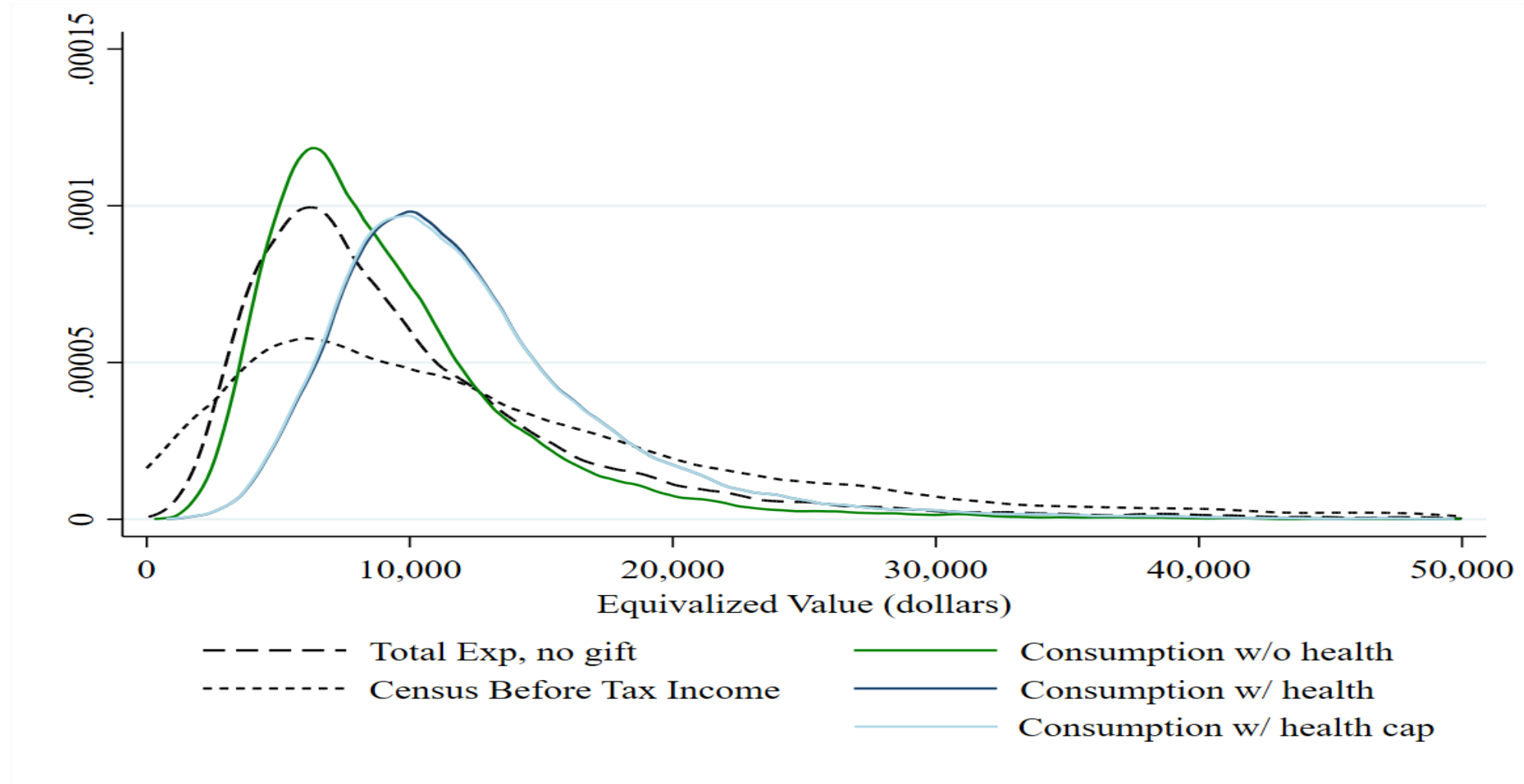




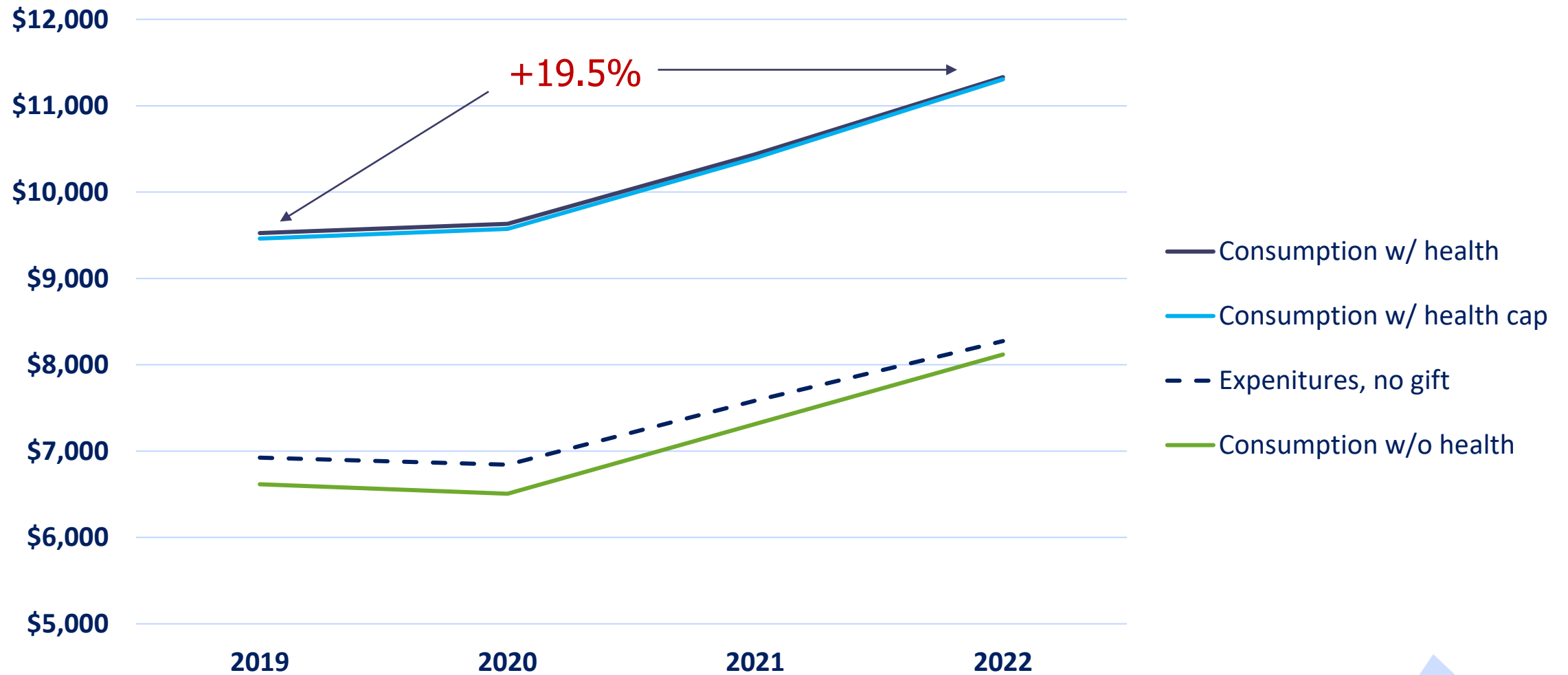
# Consumption Expenditures vs Consumption: Key differences

- Durables – expenditure vs flow of services
- In-kind transfers
- Household Production
- Gifts and barter
- Problem categories (investment vs consumption):
  - ▶ Education
  - ▶ Health
- See Monthly Labor Review article for additional info

# Quarterly Equivalized Consumption, Spending, and Income for 2022



# Over Time: Quarterly Equivalized Medians (Current Year Dollars)



NOTE: Population weighted (FINLW21\*FAM\_SIZE); consumption does not include education.

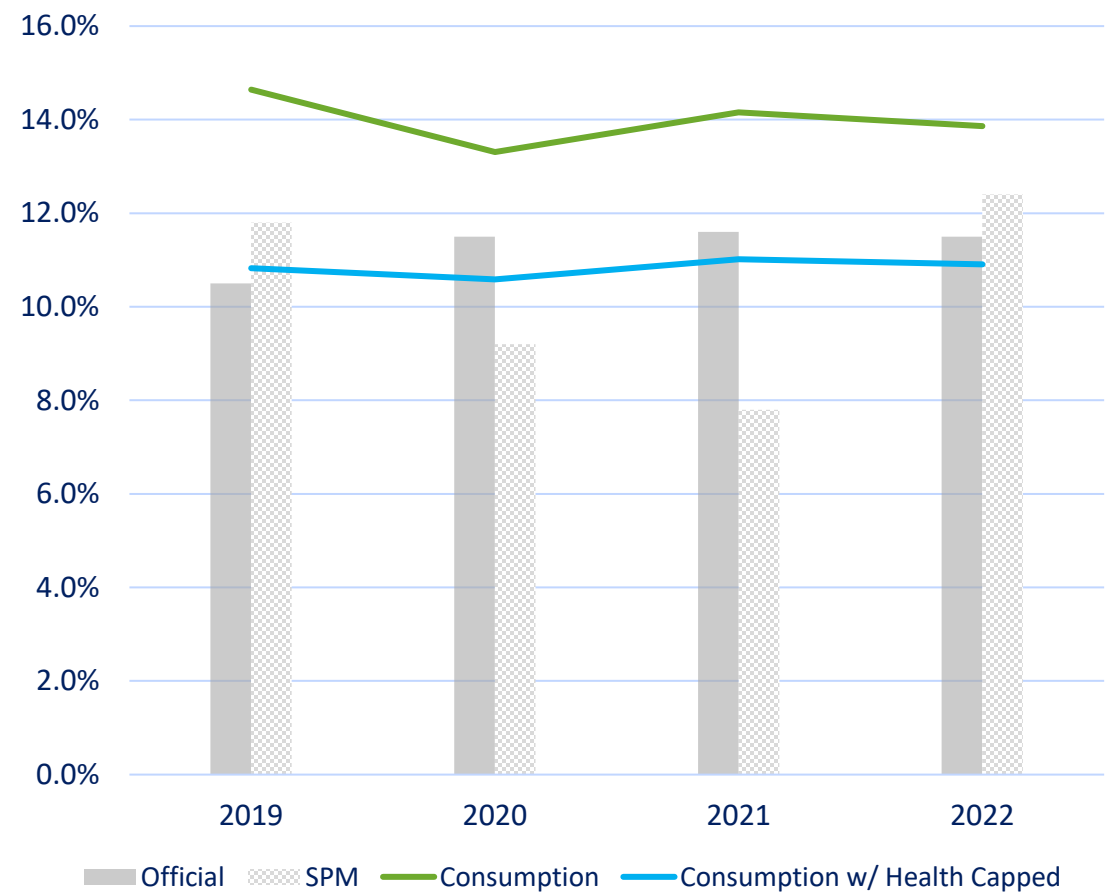


# Poverty Analysis

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# Poverty Rates based on Relative Threshold for Total Population: Consumption without vs Consumption with Health Capped



2019			
		Con w/ HI Poor	
		No	Yes
Con Poor	No	82.2%	3.1%
	Yes	7.0%	7.7%

2022			
		Con w/ HI Poor	
		No	Yes
Con Poor	No	82.7%	3.5%
	Yes	6.4%	7.4%

NOTE: Thresholds based on quarterly adult equivalized values; population weighted (FINLWT21\*Cusize); consumption with health insurance capped at 50% of total; measures do not include education



# Crosstabulation Demographics, 2022

## ■ Age

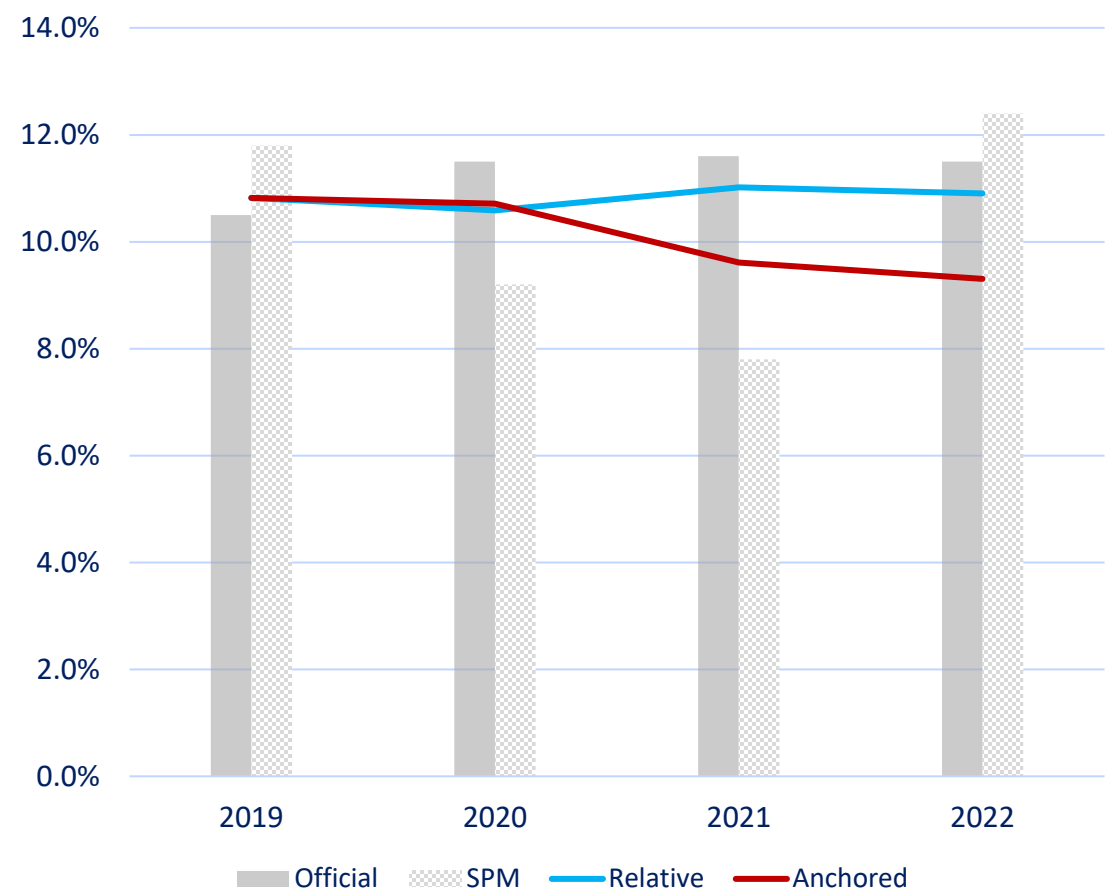
Under 18				18 to 64				Over 64			
		Con w/ HI Poor				Con w/ HI Poor				Con w/ HI Poor	
		No	Yes			No	Yes			No	Yes
Con Poor	No	77.9%	4.7%	Con Poor	No	82.6%	3.9%	Con Poor	No	89.2%	0.4%
	Yes	8.9%	8.5%		Yes	5.2%	8.3%		Yes	7.4%	3.0%

## ■ Work Status

Employed				Retired				Unemployed or Not Working			
		Con w/ HI Poor				Con w/ HI Poor				Con w/ HI Poor	
		No	Yes			No	Yes			No	Yes
Con Poor	No	83.8%	4.0%	Con Poor	No	86.8%	0.3%	Con Poor	No	51.6%	2.9%
	Yes	5.1%	7.0%		Yes	8.5%	4.4%		Yes	23.1%	22.4%

NOTE: Thresholds based on quarterly adult equivalized values; population weighted (FINLWT21\*Cusize); consumption with health insurance capped at 50% of total; measures do not include education

# Consumption with Health Insurance Capped Poverty Rates for Total Population: Relative vs Anchored Thresholds



2021			
		Anchored	
		No	Yes
Relative	No	89.0	0.0%
	Yes	1.4%	9.6%

2022			
		Anchored	
		No	Yes
Relative	No	89.1%	0.0%
	Yes	1.6%	9.3%

NOTE: Thresholds based on quarterly adult equivalized values; population weighted (FINLWT21\*Cuize); consumption with health insurance capped at 50% of total; measures do not include education



# Crosstabulation Demographics, 2022

## ■ Age

Under 18				18 to 64				Over 64			
		Anchored				Anchored				Anchored	
		No	Yes			No	Yes			No	Yes
Relative	No	86.7%	0.0%	Relative	No	87.8%	0.0%	Relative	No	96.6%	0.0%
	Yes	2.1%	11.2%		Yes	1.7%	10.5%		Yes	0.6%	2.8%

## ■ Work Status

Employed				Retired				Unemployed or Not Working			
		Anchored				Anchored				Anchored	
		No	Yes			No	Yes			No	Yes
Relative	No	88.9%	0.0%	Relative	No	95.3%	0.0%	Relative	No	74.6%	0.0%
	Yes	1.6%	9.5%		Yes	0.6%	4.1%		Yes	4.9%	20.5%

NOTE: Thresholds based on quarterly adult equivalized values; population weighted (FINLWT21\*Csuzie); consumption with health insurance capped at 50% of total; measures do not include education



# Consumption with Health Insurance Capped

## Poverty Statistics for Total Population

### (Anchored Thresholds)

Year	Head Count	Average Intensity	Severity
2019	10.8%	2.1%	0.7%
2020	10.7%	2.2%	0.7%
2021	9.6%	1.8%	0.6%
2022	9.3%	1.7%	0.5%

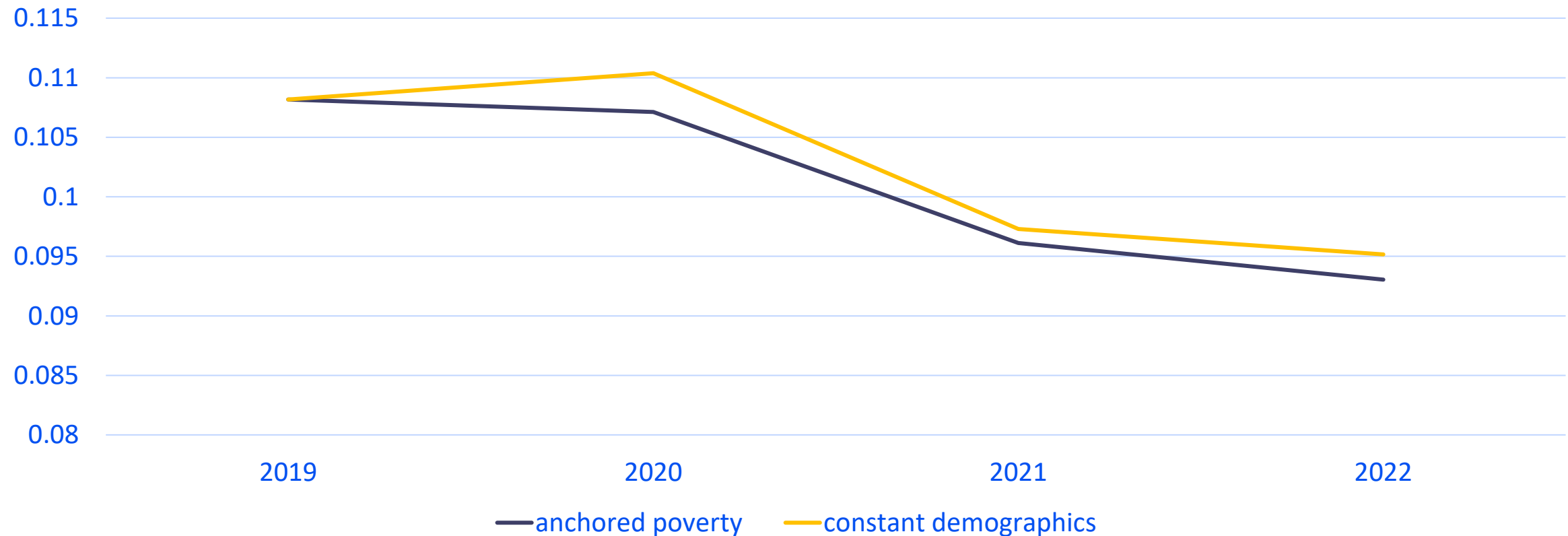
NOTE: Thresholds based on quarterly adult equivalized values; population weighted (FINLWT21\*Csizs); consumption with health insurance capped at 50% of total; measures do not include education



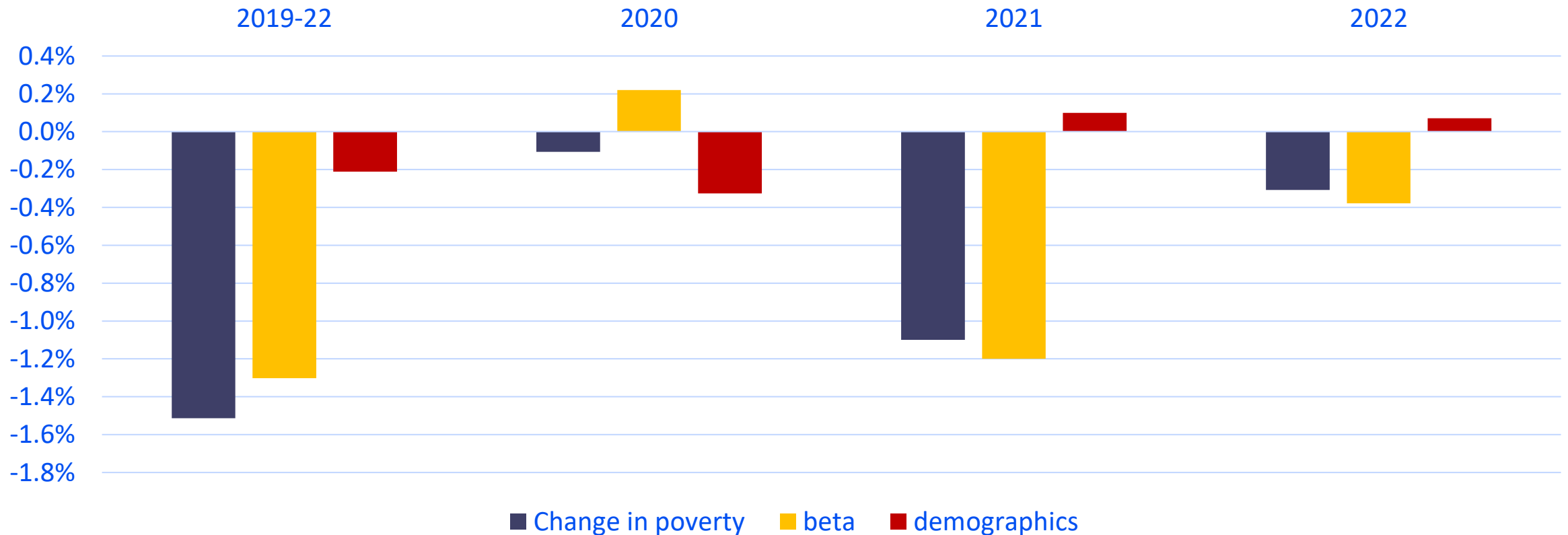
# Oaxaca-Blinder Decomposition

- Decomposition for anchored poverty for consumption with health capped.
- Regression includes controls for: race/ethnicity, gender, work status, education, housing tenure, marriage status, family size, presence of child by age of children, over 65 indicator, urban/rural, division, and quintile of state covid response (Oxford COVID-19 Government Response Tracker).

# Effect of Changing Demographics



# Decomposition of the change in poverty



# Regression Coefficients: Education

Category	2019	2020	2021	2022
Less than HS	-	-	-	-
HS grad	-0.113***	-0.101***	-0.089***	-0.116***
Some college or Associates	-0.152***	-0.138***	-0.130***	-0.153***
Bachelor's degree	-0.183***	-0.156***	-0.146***	-0.178***
Advanced degree	-0.184***	-0.159***	-0.141***	-0.161***

# Regression Coefficients: presence/age of children

Category	2019	2020	2021	2022
No Children	-	-	-	-
At least 1 child under 6	-0.062***	-0.032**	-0.082***	-0.054***
At least 1 child 6-13, none under 6	-0.067***	-0.033***	-0.096***	-0.044***
At least 1 child 14-17, none under 14	-0.038***	-0.032**	-0.077***	-0.048***

# Regression Coefficient: State COVID response

Category	2019	2020	2021	2022
1 <sup>st</sup> quintile	-	-	-	-
2 <sup>nd</sup> quintile	-0.024**	-0.017	-0.009	-0.015
3 <sup>rd</sup> quintile	-0.011	-0.000	-0.011	-0.022*
4 <sup>th</sup> quintile	0.001	-0.004	-0.036***	-0.035**
5 <sup>th</sup> quintile	-0.005	-0.044***	-0.056***	-0.075***

# Next Steps

## ■ Data improvements

- ▶ Add value of home production for own consumption
- ▶ Continuing research on health insurance
- ▶ Consider the treatment of education

## ■ Research

- ▶ Impact of “shutdown” and “stay-at-home” policies on economic well-being
- ▶ Impact of COVID specific benefits on economic well-being
- ▶ Expand analysis to other subpopulations impacted by COVID



# Contact

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# Data Sources for *Current Consumption Measure*

## For Most Goods and Services:

### *U.S. Consumer Expenditure Survey Interview*

- Time period: (T)Q2 to (T+1)Q1 to represent T year
- Interviewed up to 4 times, 3-month recall
- Consumer unit (CU)
- Out-of-pocket spending for most goods and services
- Rental equivalence for owned shelter
- Rent paid & characteristics to impute market rents when in-kind rental assistance
- Stock of cars and trucks to produce flow of services

## Supplement Goods and Services:

### *U.S. Consumer Expenditure Survey Diary*

- Time period: (T)Q2 to (T+1)Q1 to represent T year
- Two consecutive 1-week periods
- Consumer unit (CU)
- Out-of-pocket spending for all goods and services, except when away from home overnight or longer

## In-kind Employer Health Insurance Benefits

- Medical Expenditure Panel Survey (MEPS-IC) from the Agency for Healthcare Research and Quality

## Other In-kind Federal Government Benefits

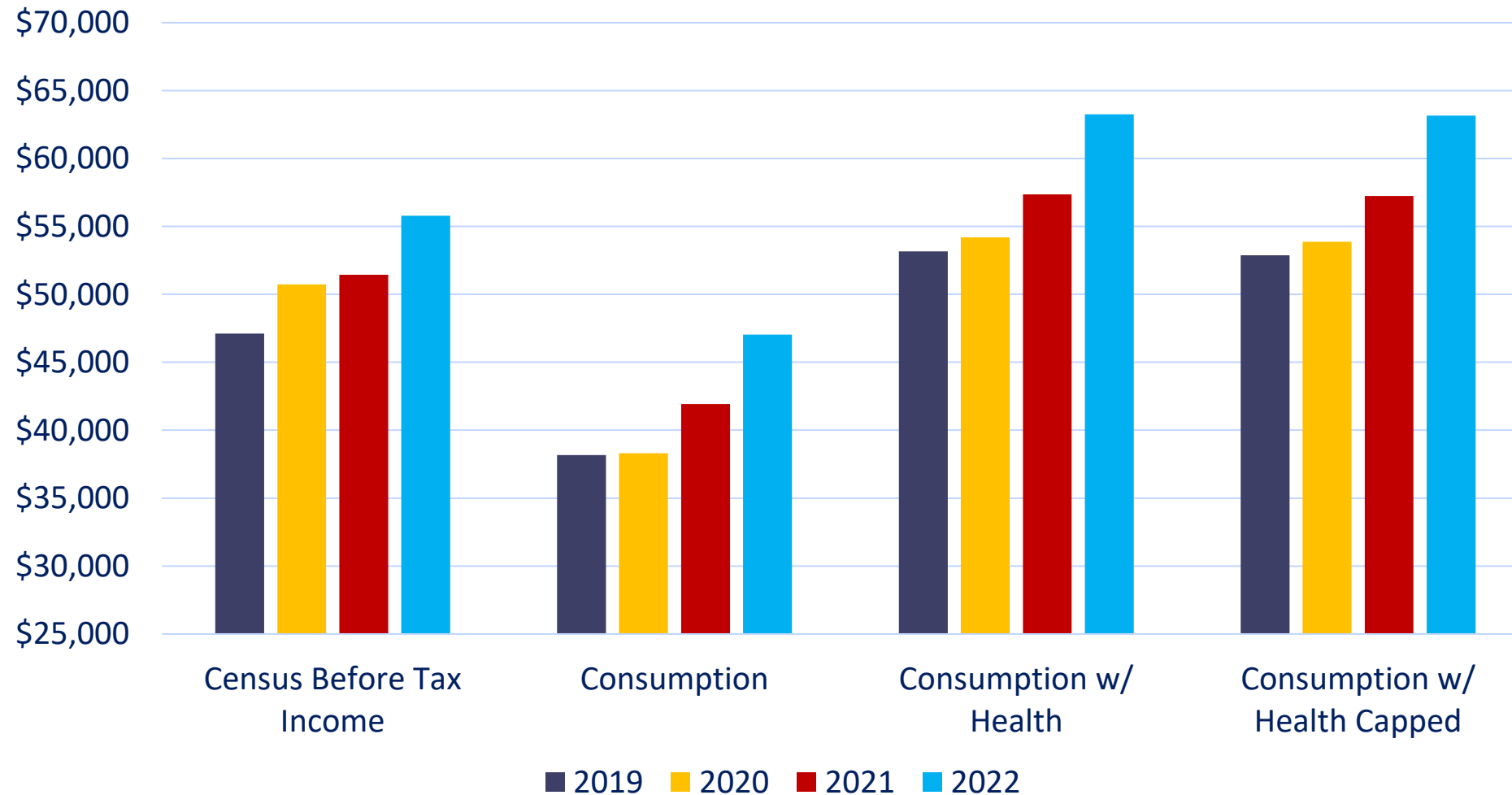
- CPS-ASEC (households/members): reported receipt of government provided in-kind benefits
  - ▶ School meals (NSLP)
  - ▶ Women, infants, and children (WIC)
  - ▶ LIHEAP (receipt and values)
- USDA: food assistance programs
- Center for Medicare and Medicaid Services (CMS) National Health Expenditure (NHE)
  - ▶ Medicare
  - ▶ Medicaid
- National Health Expenditure Tables

## College Room and Board

- U.S. Department of Education Statistics



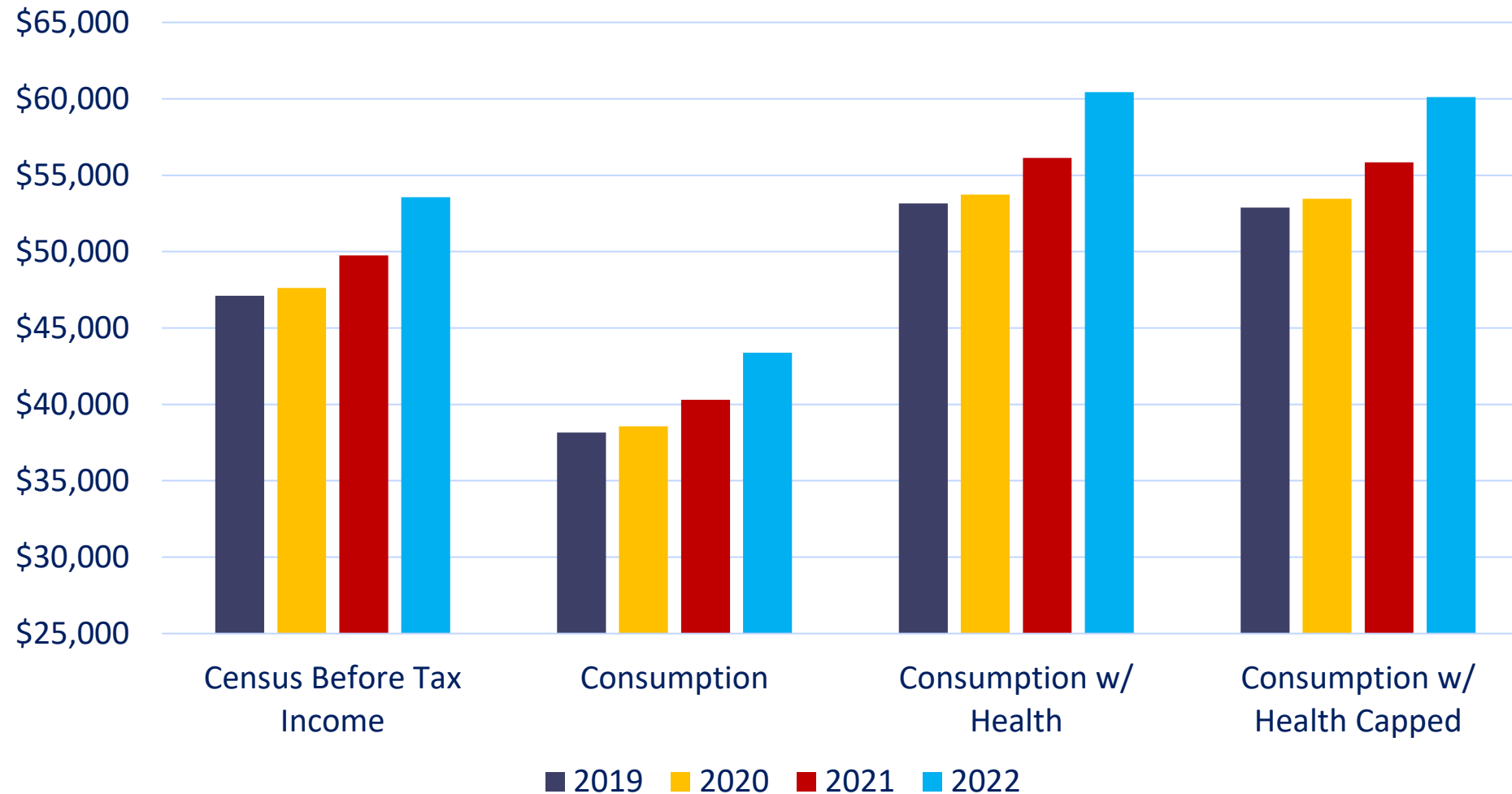
# 2A+2C Relative Thresholds



NOTE: Based on 60% of median; population weighted (FINLWT21\*Csizse); consumption with health insurance capped at 50% of total; measures do not include education



# 2A+2C Anchored Relative Thresholds

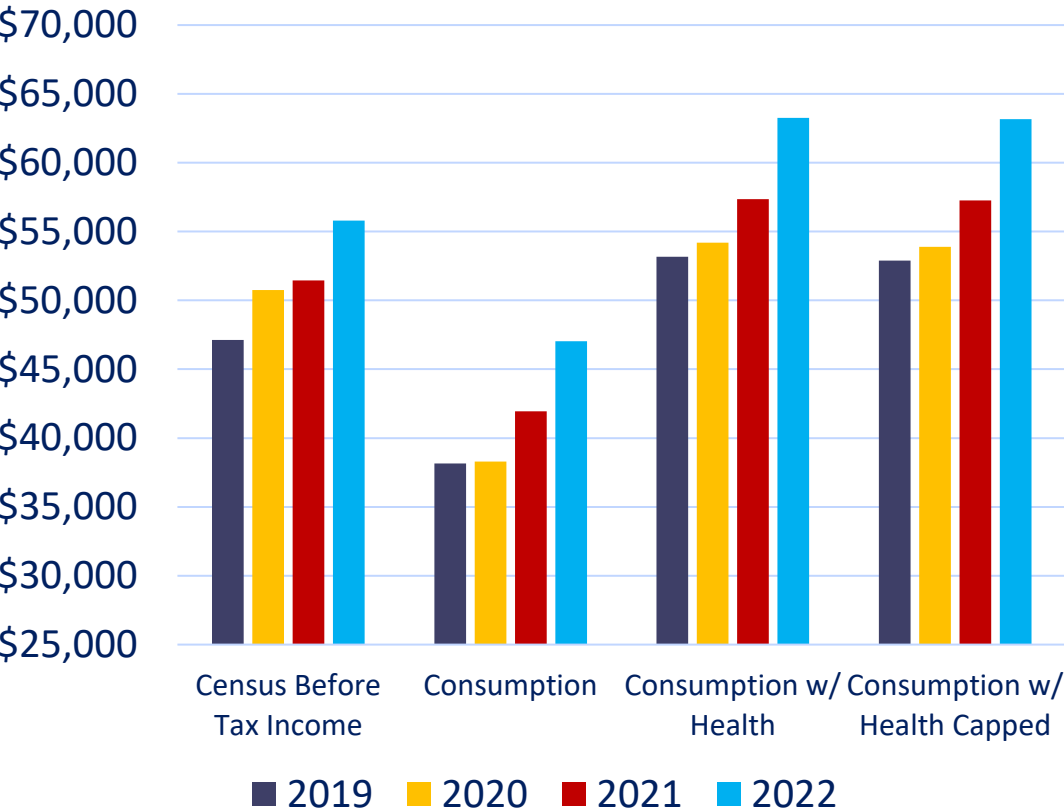


NOTE: Anchored to 2019 relative threshold; updated using Chained CPI-U; population weighted (FINLWT21\*Cusize); consumption with health insurance capped at 50% of total; measures do not include education



# 2 Adults with 2 Child Thresholds

Relative thresholds



Anchored (2019) relative thresholds

