

# Recent Research on the Distributional and Tax Rate Structure of the U.S. Welfare System

A Short Course for the National Tax  
Association, Baltimore

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# Outline

1. Introduction and Motivation
2. The Transfer Program Landscape
3. Program Statistics and Trends
4. Distribution
5. Implications for Marginal Tax Rates
6. Thoughts on Optimality
7. Conclusions: Future Research

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## What this short course is about:

- How the structure of the U.S. means-tested transfer system has changed over the last 30 years
- Which programs have grown and which have declined, and how overall spending has changed
- Which demographic groups have gained and which have lost as a result of these changes in structure

- How these changes in structure have affected different families in different parts of the income distribution within the low income population
- How this evolution of structure has altered work incentives and marginal tax rates within the low income population
- Whether this evolution in distribution and tax rate structure can be explained by relatively simple optimal tax rate models

- To a large degree, a revisit to the old issue of how means-tested transfer programs should be designed
- But will turn to the design issue only at the end; mainly a review of research on what has happened to the structure and tax rates, not why or whether it is good or bad

- Has been recent research on these issues which builds on older research
- This course will survey the new work and how it builds on the old

## What this short course is NOT about:

- Models of the political economy of transfers, voting on transfers
- The effect of transfer programs on work effort, inequality, poverty, income, child outcomes, or any other behavioral outcomes
- There is a small literature on the first and a huge literature on the second (see Economics of Means-Tested Transfers, Vols.I and II, 2016 for reviews of that)

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## The Landscape in 2007

	No.Recips(000)	Expend(mil)
Medicaid	54,800	\$328,900
School Food	40,700	10,900
SNAP	26,500	30,400
EITC	24,600	48,500
WIC	8,300	5,400
SSI	7,400	41,200
Housing	5,100	39,400
TANF	4,100	11,600

## Quick note on the optimal design question:

- Often noted that hard to rationalize this system
- Seems to be a crazy-quilt of different programs for different types of groups, some cash and some in-kind
- Seems not to be the result of some coherent plan, but just programs that were created at different times for different purposes

- Let's talk about each of these programs, and how they have evolved prior to 2007
- E.g., since the 1960s or 1970s
- See how they have come to be what they were in 2007
- Will consider the Great Recession, and Post-Great-Recession, later

## Medicaid:

- Large entitlement program
- Subsidized medical care, zero copay
- Children, institutionalized elderly, other elderly and disabled
- Children: used to be tied to AFDC/TANF, now much less so
- 1980s expansions to non-AFDC individuals; and SCHIP, covering additional children
- Continuing into 1990s, family income eligibility levels for children were raised (e.g., 200% FPL)
- Some parents covered, low income cutoffs

- Buchmueller, Ham, and Shore-Sheppard (2016) discuss the details of reforms of the program as well as the ACA
- Review CHIP as well, and special parts of the program for older and for disabled individuals
- Finkelstein et al. (2015) have new estimates of the insurance value of Medicaid and of shifting of the benefit onto providers, as well as the amount of uncompensated care received by low income families (insurance value = approx. 15% of dollar value)

## SNAP and Other Food Programs:

- SNAP Food allotments, debit card mechanism
- Near-universal, closest to Neg Income Tax (universal eligibility)
- Caseload growing in last few years
- USDA has been actively expanding eligibility
- Relaxed asset eligibility limits
- Simplified eligibility procedures
- Outreach to community to encourage applications
- Automatic eligibility for recipients of other programs

- Hoynes and Schanzenbach (2016) discuss the details of reforms of the program as well as those in the WIC and school programs (School Breakfast and School Lunch)
- Ganong and Liebman (2013) show how the reforms affected the caseload over the 2000s and into the Great Recession, and predict that the caseload will fall in the future
- Ziliak (2015) estimates a caseload model parsing out the relative contributions to caseload growth of reforms, the economy, and other factors

## EITC:

- Tax credit for workers with children, subsidy rate as high as 45% up to \$20,000 (marrieds), then phased out, approximate 21% rate
- **Main expansions of benefit schedule: in 1980s/1990s**
- Distributionally, helps those most in the \$10K-\$30K range
- Generally taken as a refund and used to draw down debt
- Tax credit is not counted as income by other transfer programs

- Nichols and Rothstein (2016) discuss the details of eligibility and tax credit amount calculations
- Also show the distribution of recipients over different parts of the income distribution
- Discuss reasons for growth of caseload and expenditures
  
- Hoynes and Rothstein (2016) consider reforms in the EITC and CTC to expand eligibility to new programs and improve their targeting
  
- Schaefer et al. (2013) show how EITC recipients use it to reduce unsecured debt

## CTC (Child Tax Credit):

- Worth mentioning here even if not as large as EITC
- Tax credit for families with children, but not fully refundable
- Began in 1998
- Generally, get very little refund unless you have tax liability, so the credit typically grows as income grow
- Eventually phased out at a very low rate, families with incomes up to \$100k can get it

## SSI:

- Cash for elderly (65+), blind, disabled (80% of recipients)
- High caseload growth rates, **especially disabled children** but also adults with mental health and back pain (rules; benefits vs wages; medical determination test)
- **Some movement into it from TANF; 2000s restoration of immigrant eligibility**

- Duggan, Kearney, and Rennane (2016) review the types of individuals receiving the program
- Also the history of changes in the assessment and definition of what constitutes disability for the purposes of the program, which is partly responsible for caseload and expenditure growth
- Discuss the growing child recipient population, and whether receiving SSI as a child increases receipt as an adult
- Liebman (2015) analyzes the causes of caseload growth, saying in recent periods it has been demographic, not policy, in nature (increase in LFPR of women, etc.)

## Subsidized Housing:

- Some public housing, but more subsidized rent in private housing market
- Important program in terms of expenditures, less so in terms of caseloads because it is not an entitlement (fixed number of available units far less than demand, waiting lists are years long)
- Universal eligibility but families with children get priority on the waiting list

- Collinson, Ellen, and Ludwig (2016) discuss the structure all types of subsidized housing programs
- Discuss the policy rationale for the non-entitlement nature of the program, which offers large benefits to only a small fraction of the needy population (no good answer)
- Olsen and Ludwig (2013) describe origins in the War on Poverty
- Geyer and Sieg (2013) estimate a model of excess demand for housing based on exits and entrants from the waiting list

## TANF

- Used to be called AFDC
- Cash program for low-income children (mostly) in single parent households but many two-parent as well
- Has drastically declined in importance after 1996 welfare reform (time limits, work requirements, block grant that eliminated entitlement nature)
- 7<sup>th</sup> in terms of recips, 5<sup>th</sup> in terms of expenditure
- Caseload in 2007 only a fraction of what it was in the 1960s

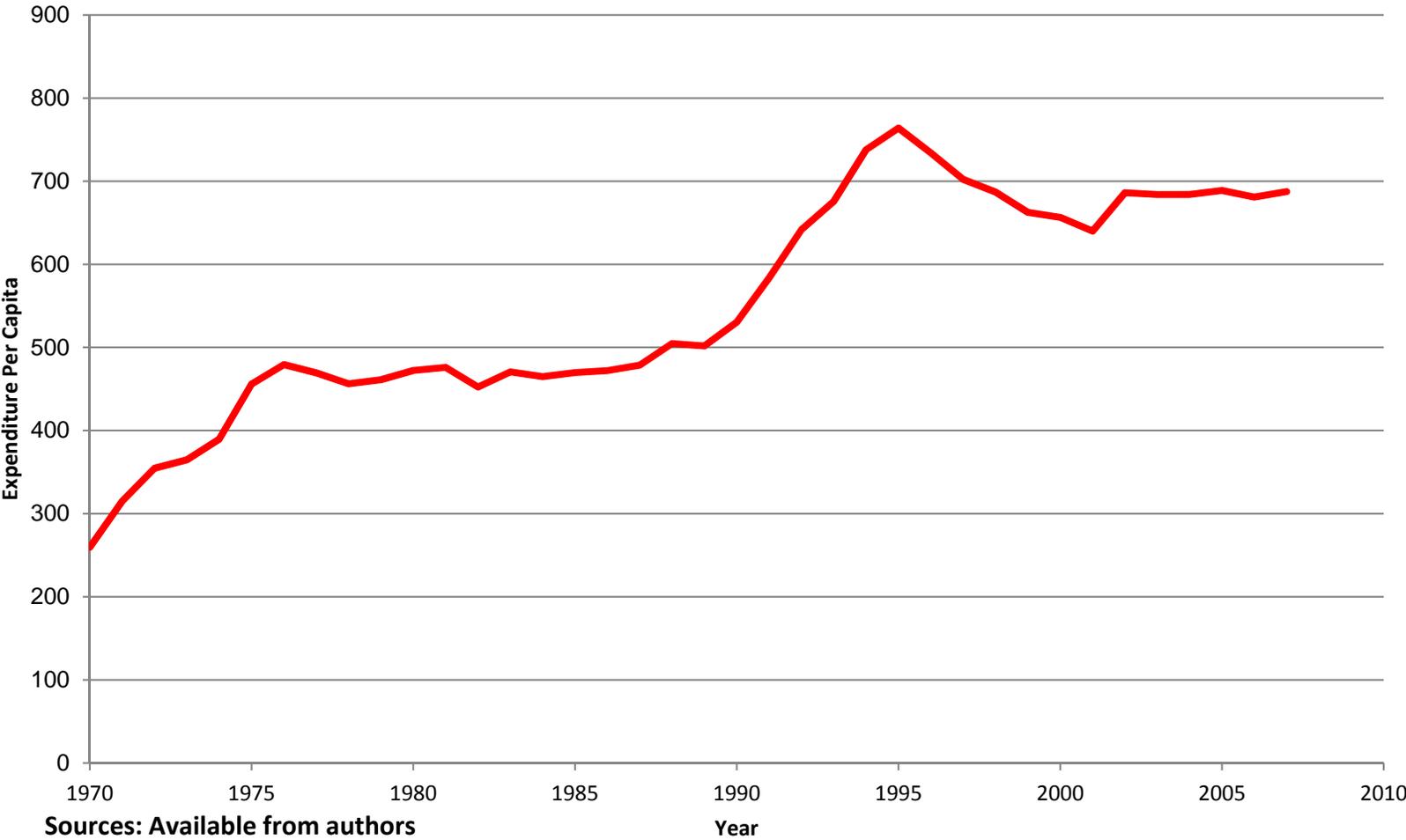
- Ziliak (2016) reviews the history of the program and details the nature of the 1996 welfare reform that restricted the program
- Also discusses the block grant structure and discusses the literature on the political economy of state choices of benefit levels
- Germanis (2015) discusses the ways in which states use the block grant to subsidize non-welfare uses (leakage)
- Bitler and Hoynes (2016) propose reforms in the block grant structure and for different federal rules on uses of the block grant

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- Have already shown 2007 caseloads and expenditures
- Let us examine growth over time
- But best measure from a government expenditure view is growth in expenditures, not caseloads
- So let us look at expenditures
- First: All Non-Medicaid program expenditures

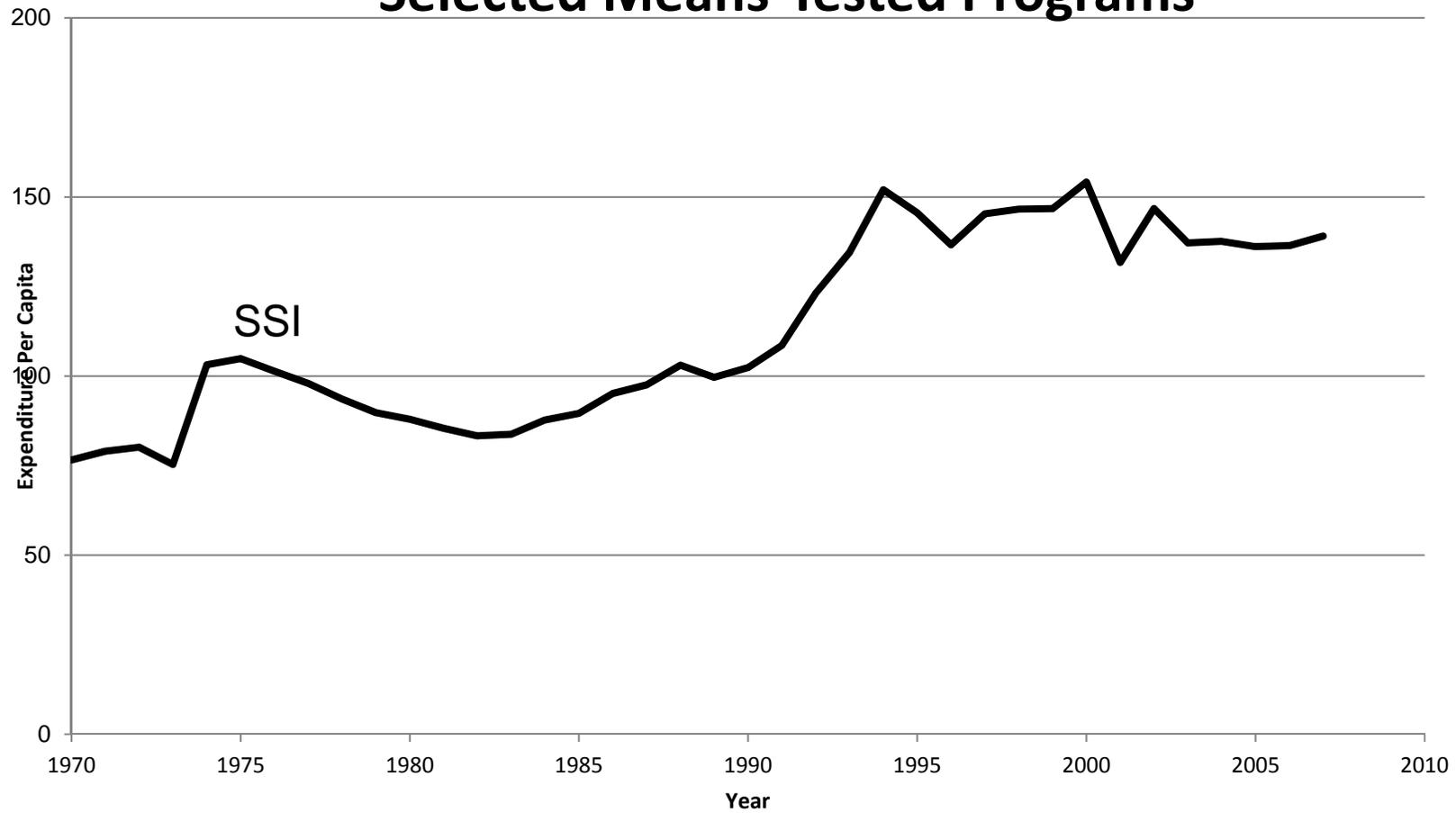
# Non-Medicaid Means-Tested Annual Expenditure Per Capita, 1970-2007



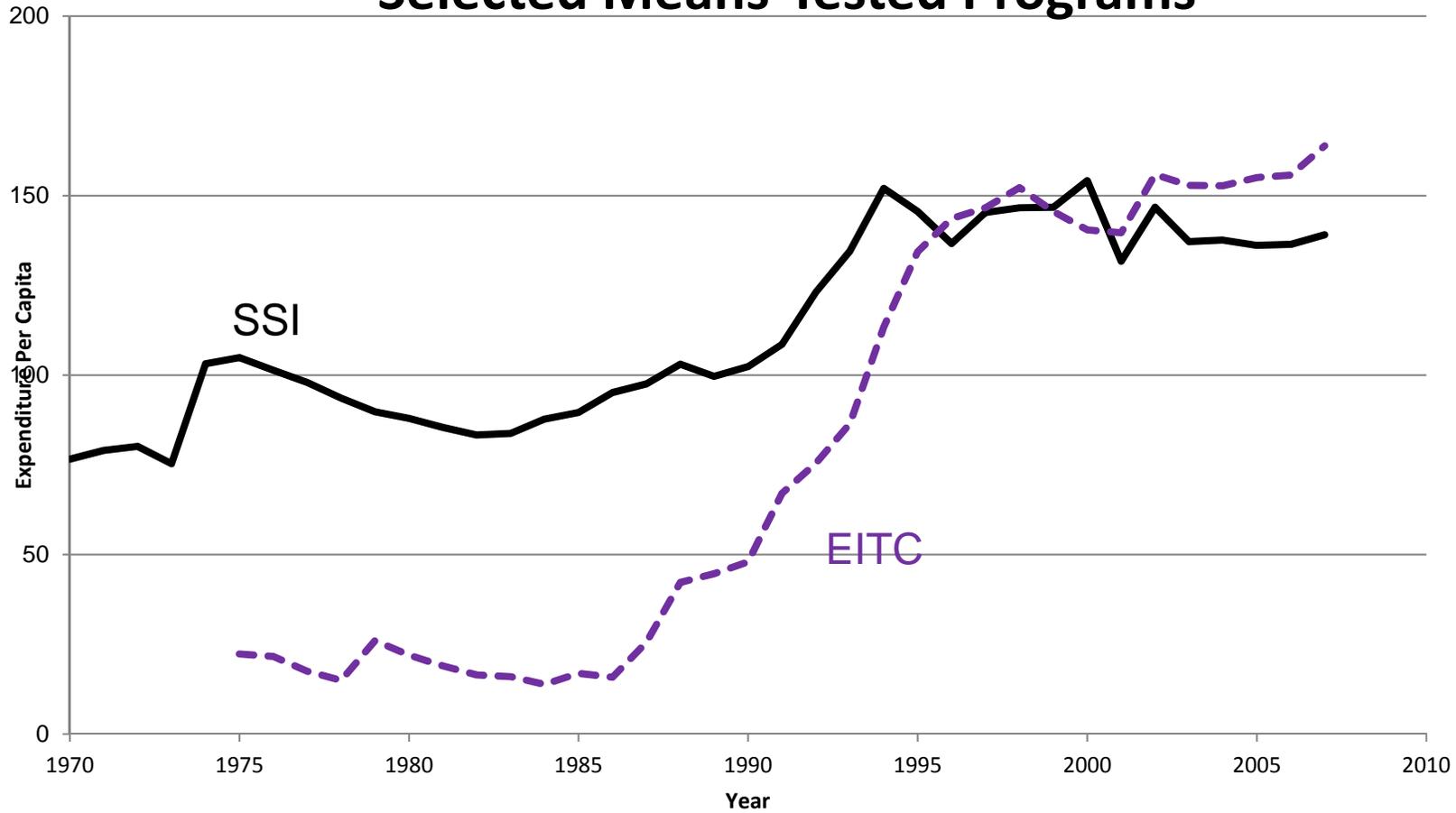
**NO LONG-TERM DECLINE: LONG-TERM INCREASE**

- Which programs were responsible for the growth?
- See Ziliak (2015)

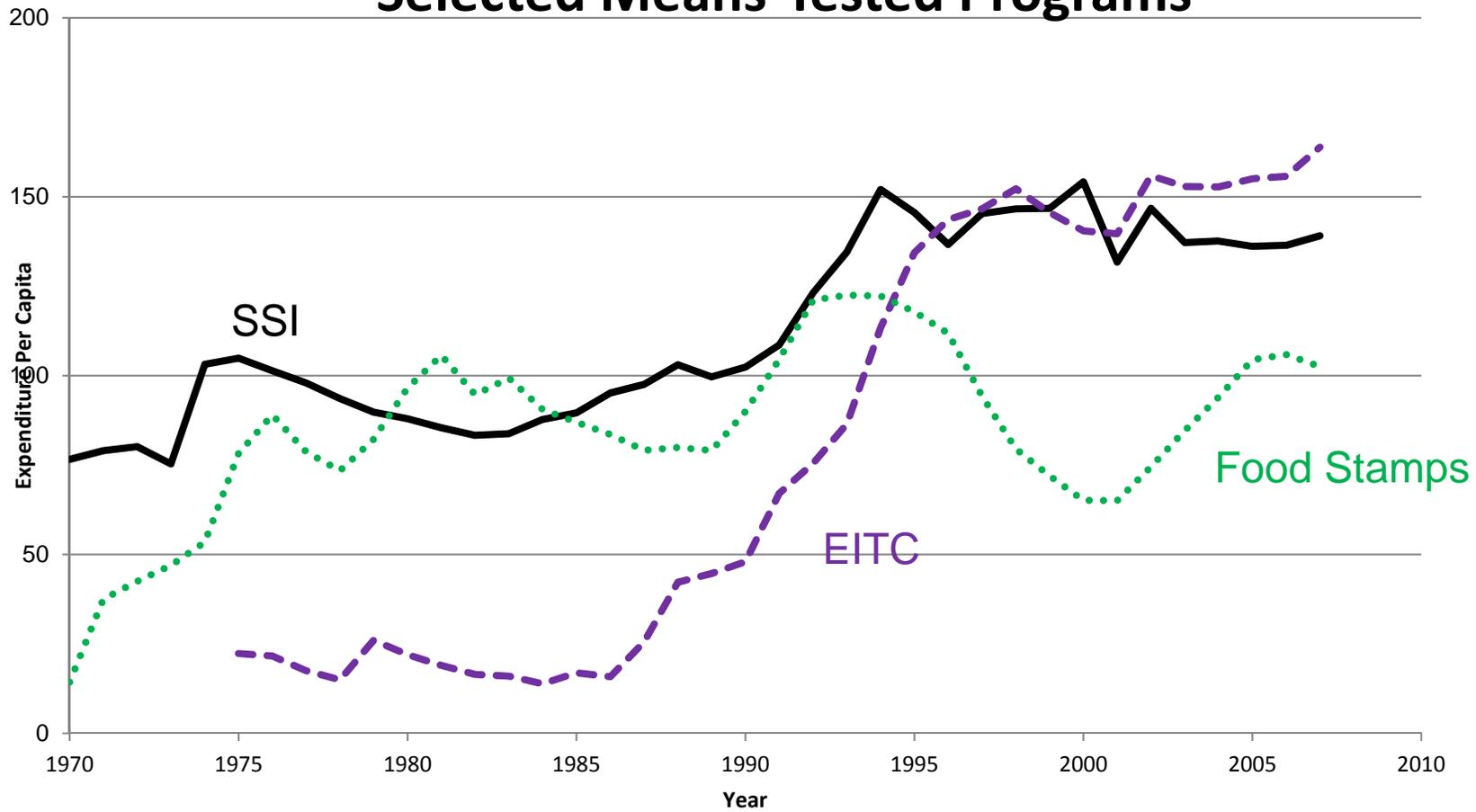
# Annual Expenditure Per Capita, 1970-2007: Selected Means-Tested Programs



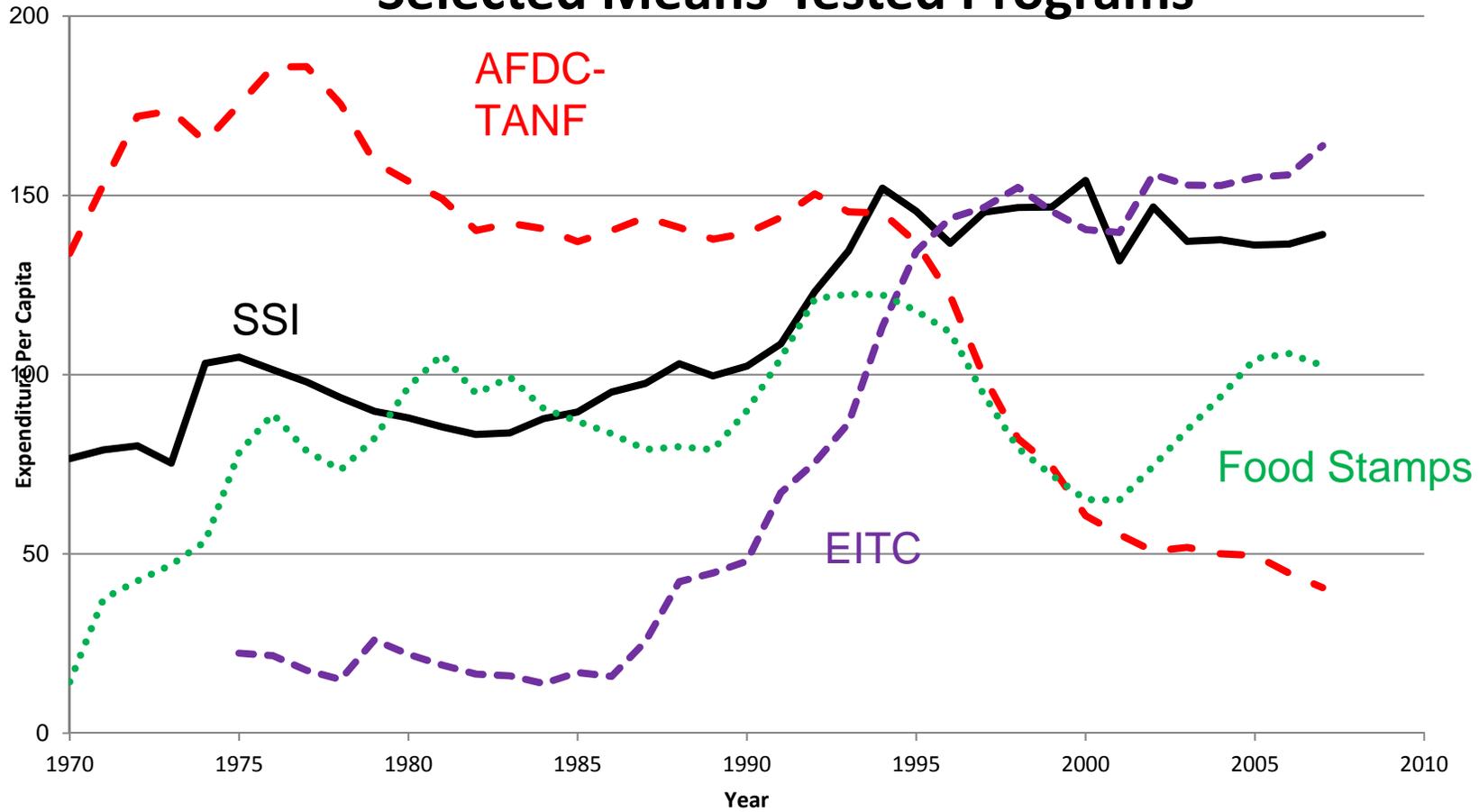
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# Annual Expenditure Per Capita, 1970-2007: Selected Means-Tested Programs



- **So:**
- **Up:** SSI (esp since 1990), Food Stamps (since the 1980s; cyclical), EITC (since the late 1980s)
- **Down:** AFDC/TANF

## Some Clear Take-Aways:

- In-Kind Transfers rising (SNAP, Medicaid, Subsidized Housing (not shown))
- Unrestricted Cash Transfers falling (TANF)
- But Cash Transfers up if two kinds are met:
  - (1) Are working or
  - (2) Are disabled or elderly

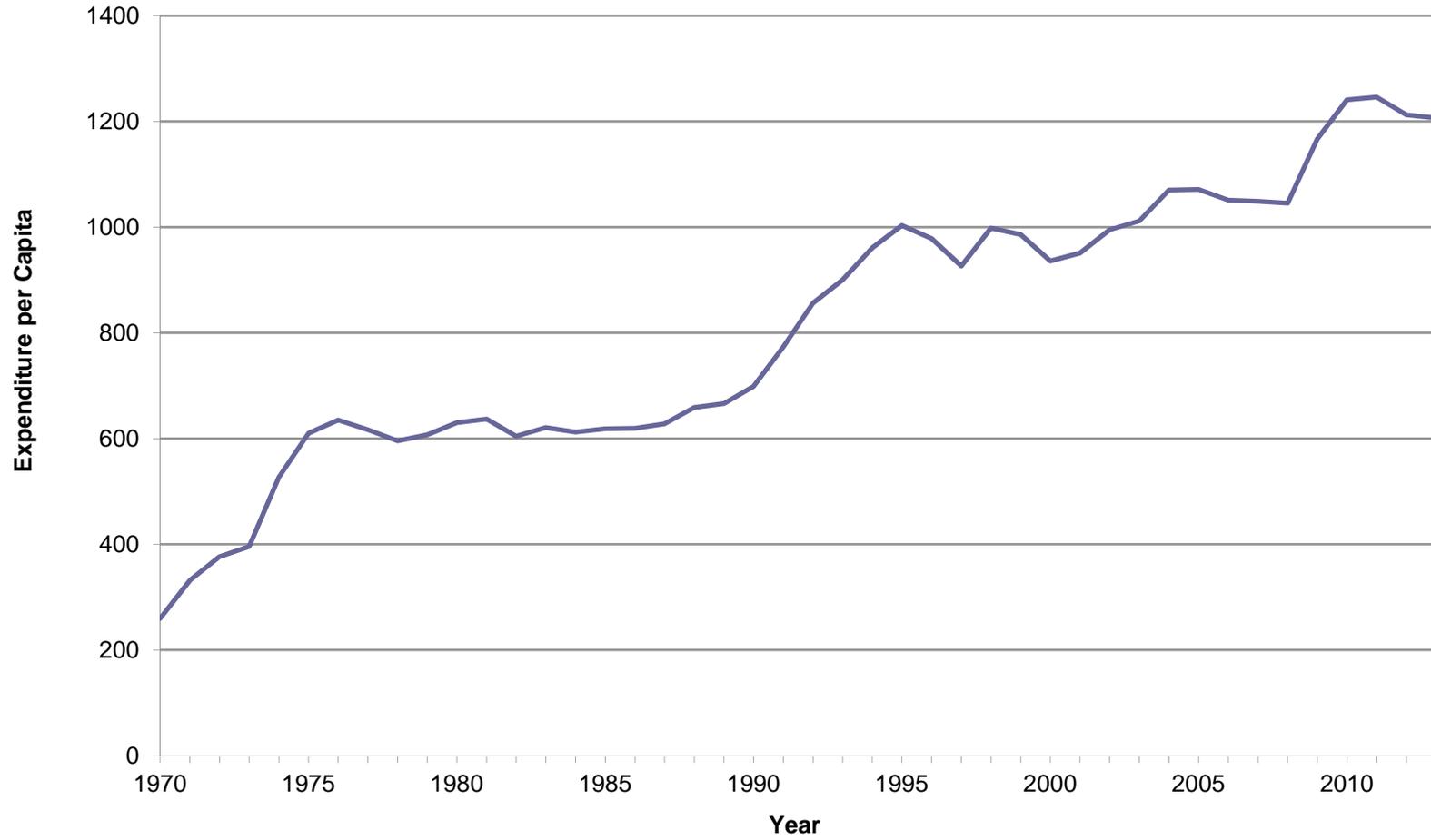
# Great Recession and Beyond

- Extend analysis beyond 2007
- Great Recession:
  - (1) Automatic increases in transfers when income falls (exception: EITC and CTC)
  - (2) Special Congressional supplements: SNAP, EITC, CTC, TANF, Medicaid, et al.

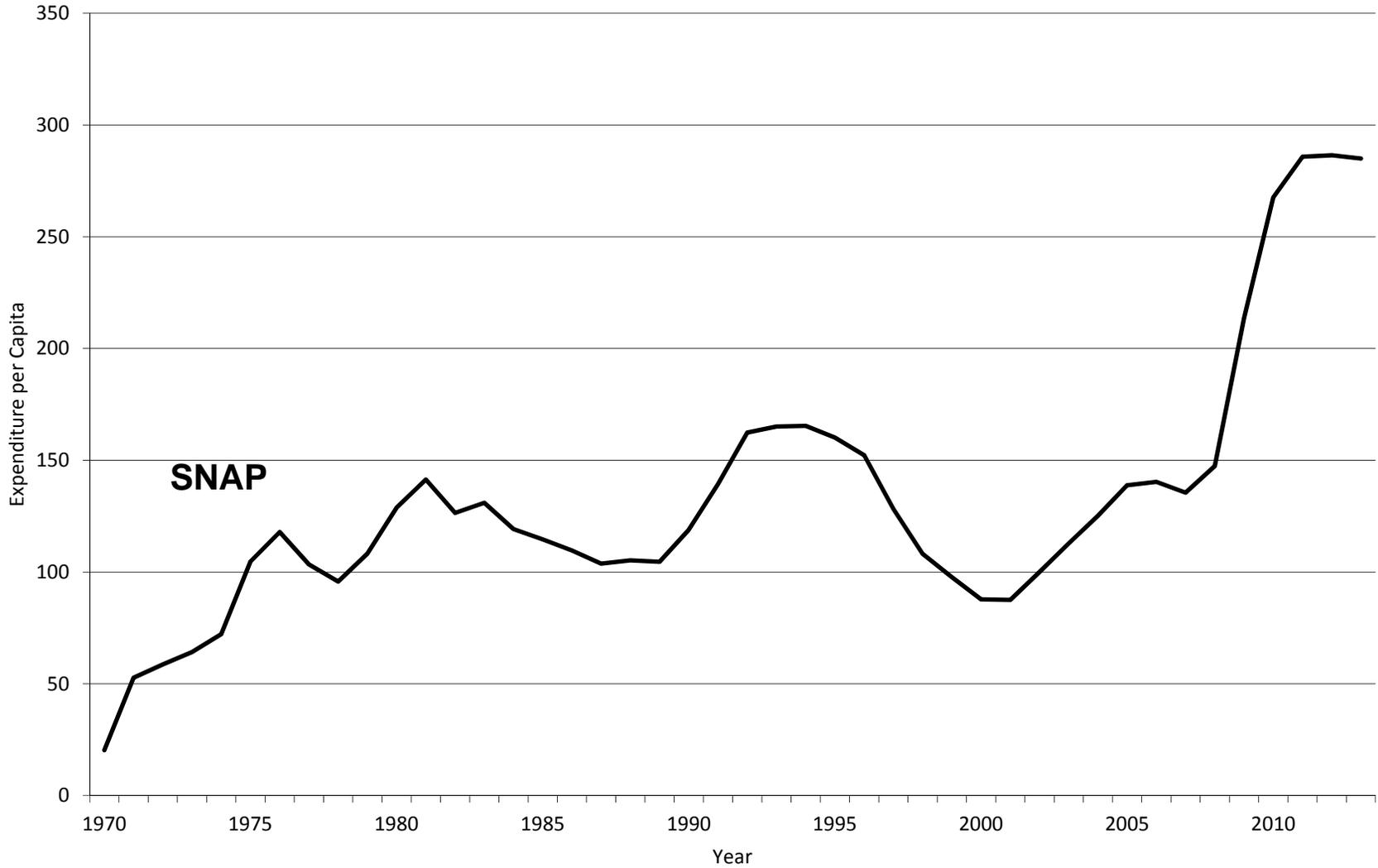
Anderson et al. (2015), Bitler and Hoynes (2015), Moffitt (2013), Burkhauser et al. (NTJ, 2015):

- (Relative) consensus: major, unprecedented response, huge increases in caseloads
- Some disagreement on whether it was the same response as in previous recessions (per percentage point increase in the Unemployment Rate)

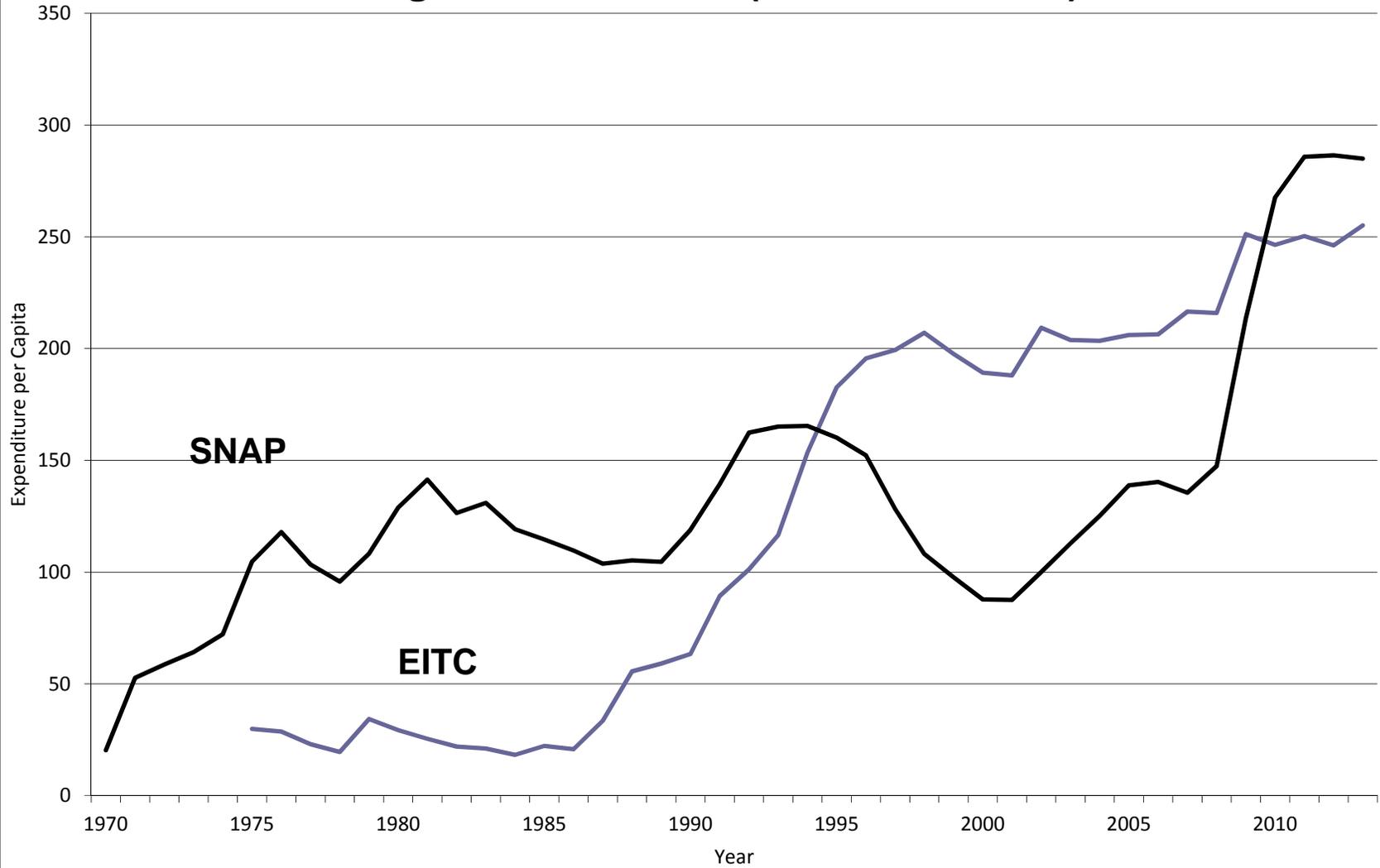
## Annual Expenditure per Capita, Non-Medicaid Means-Tested Programs, 1970-2013 (real 2009 dollars)



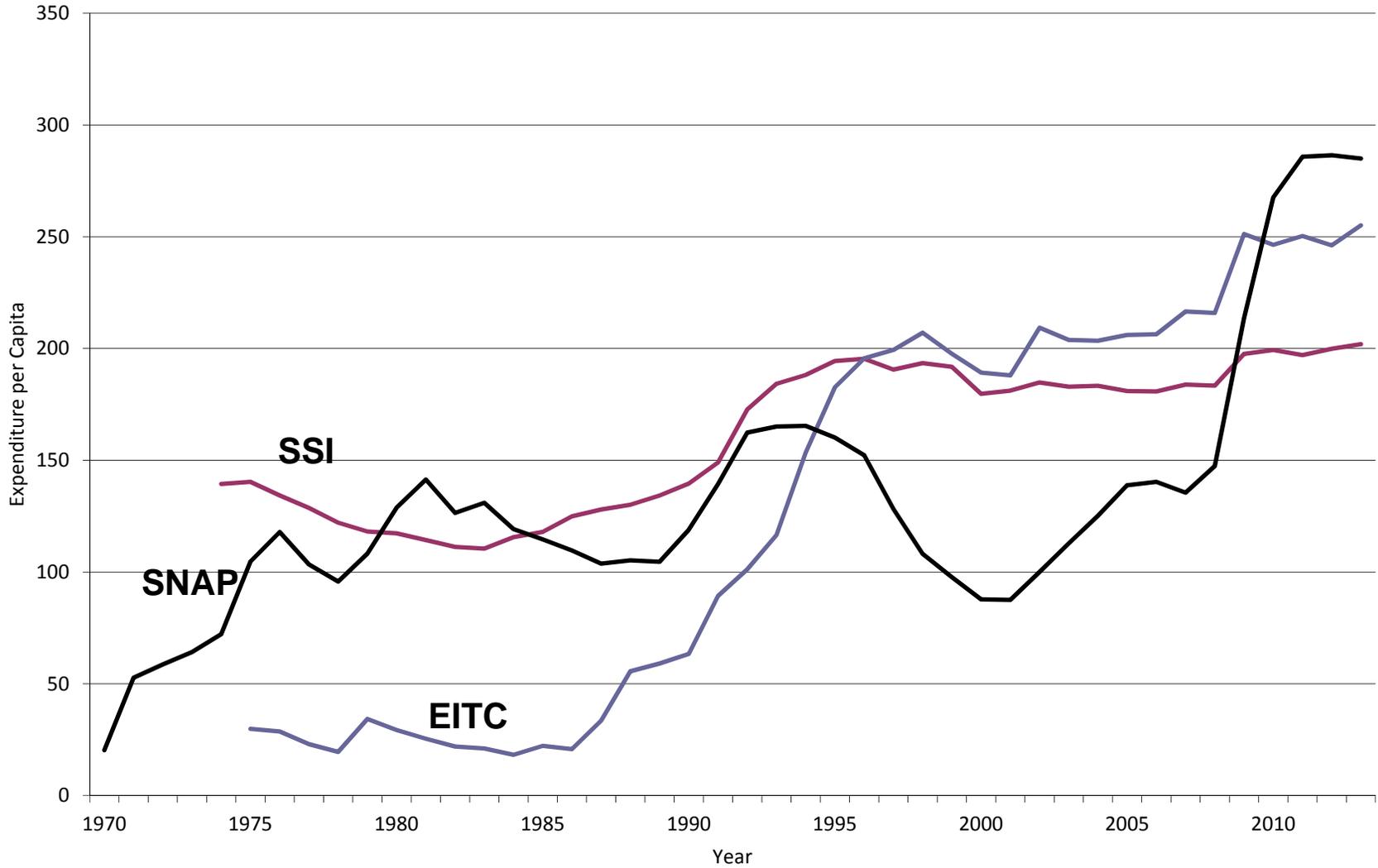
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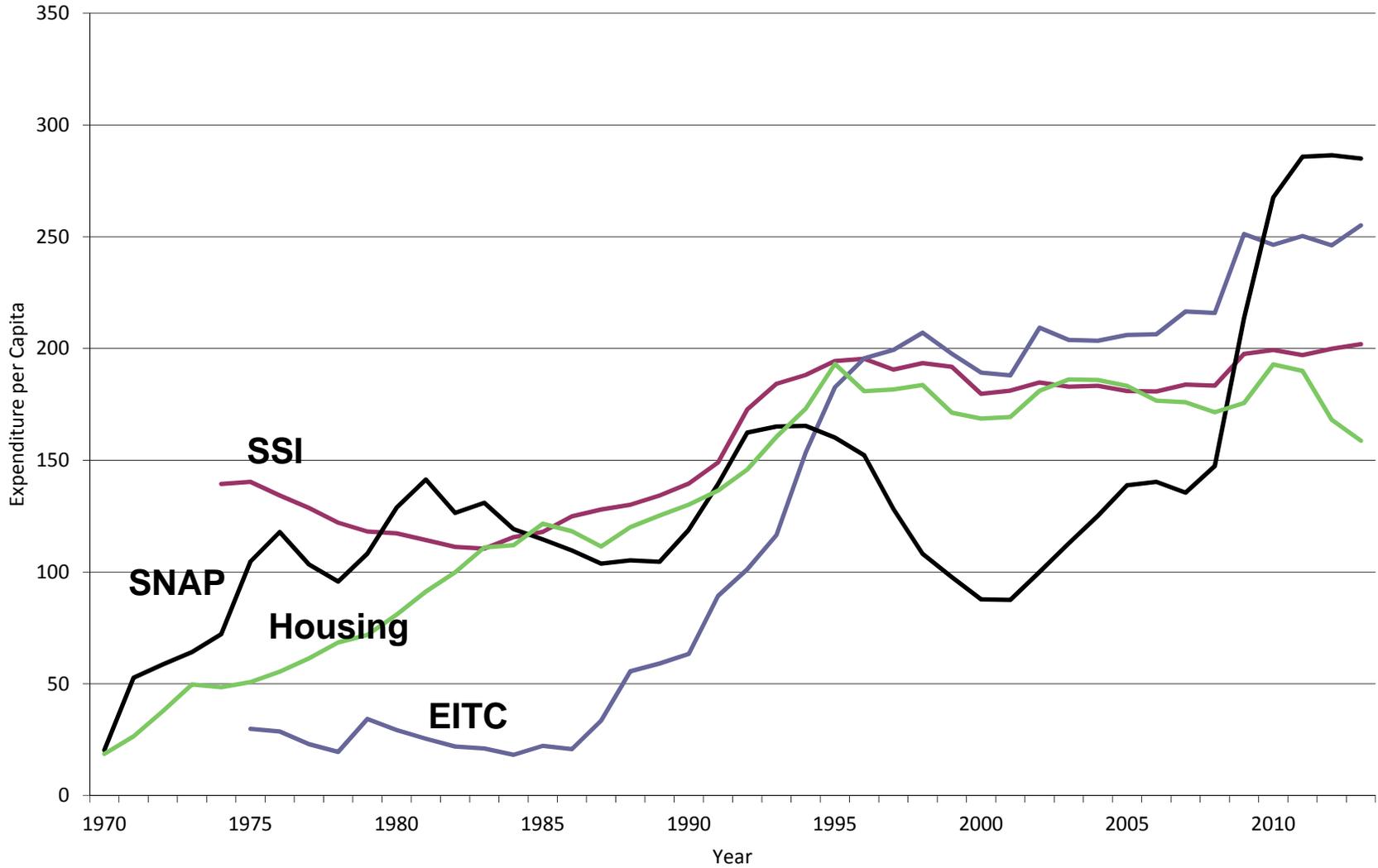
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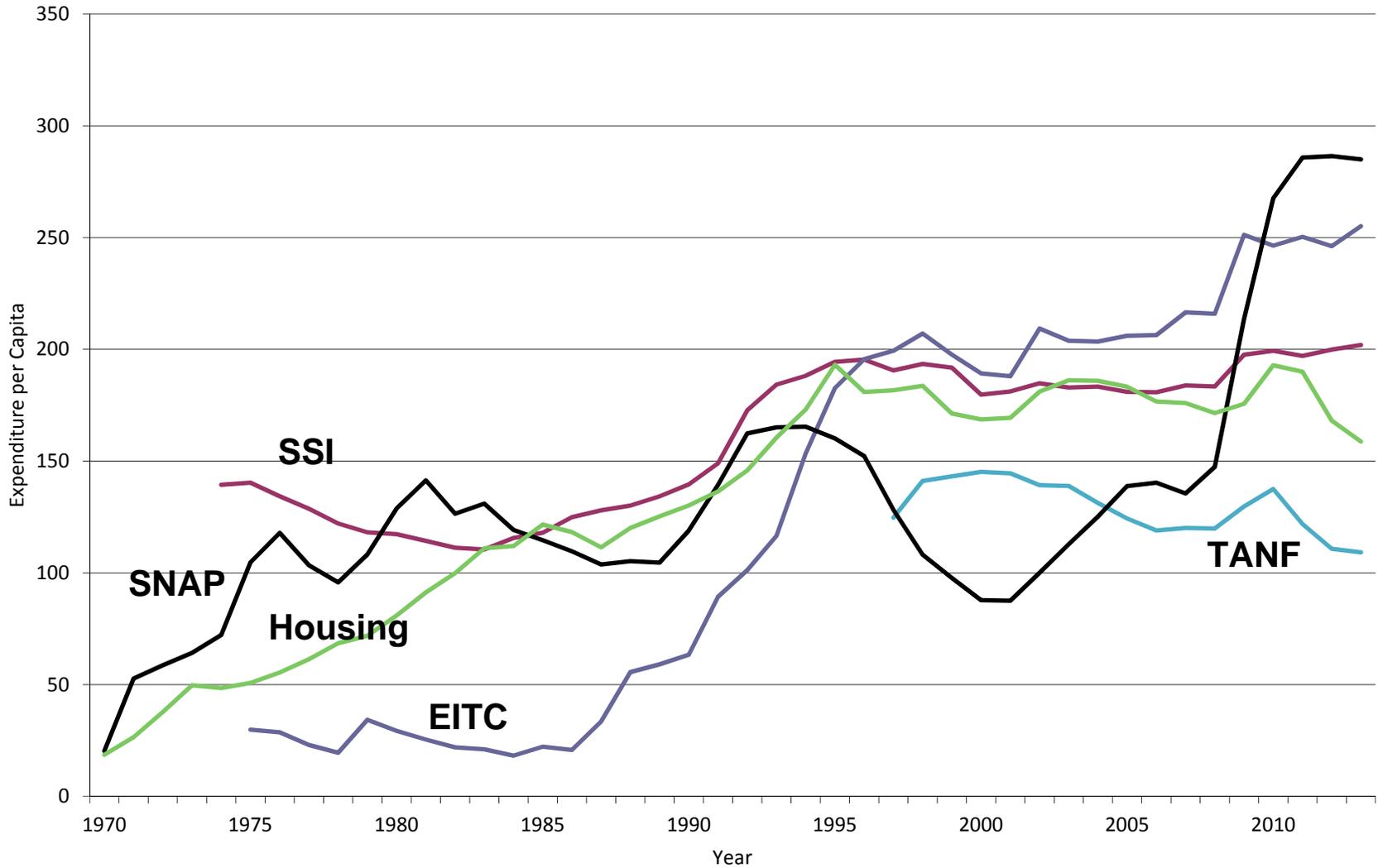
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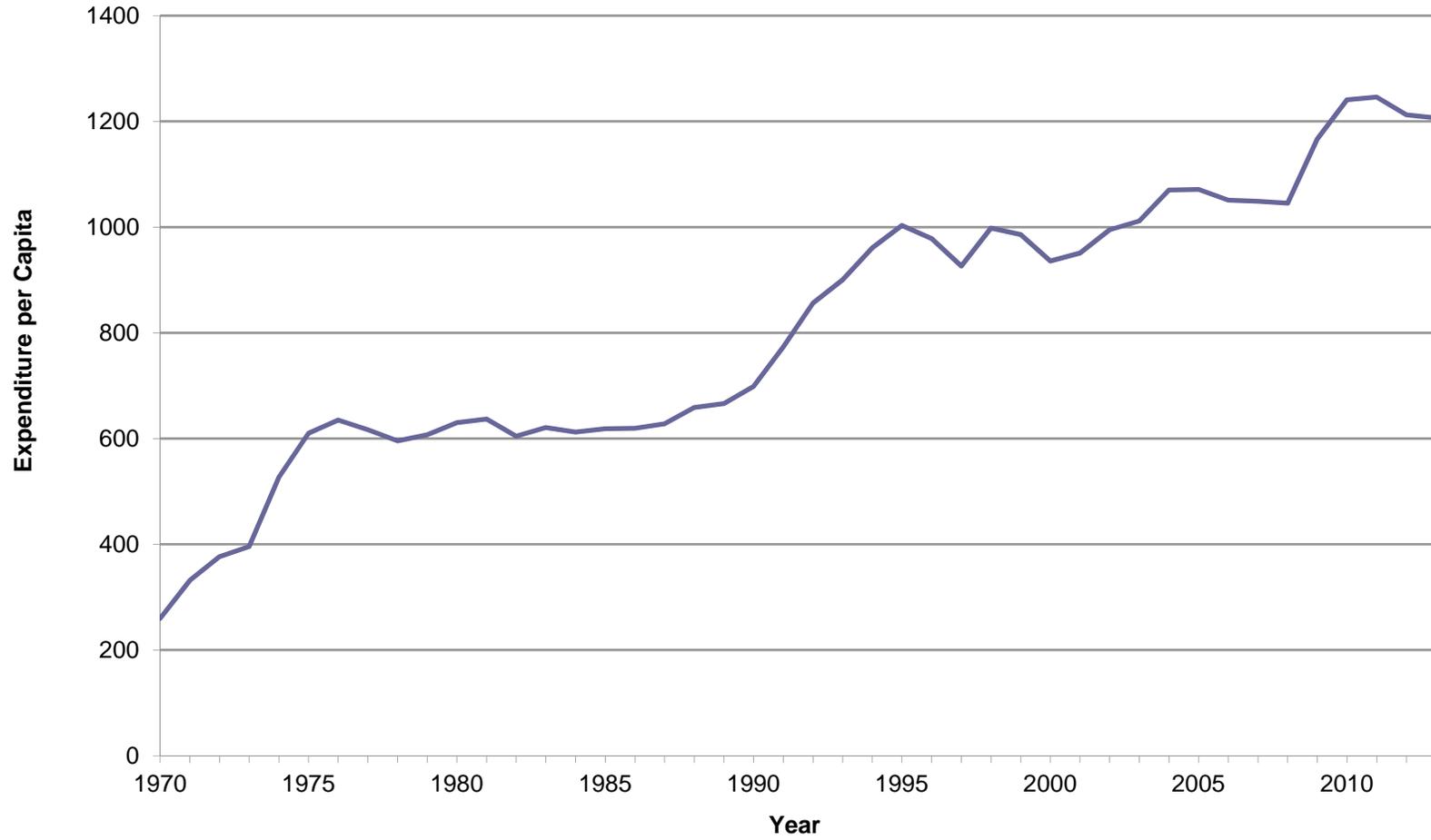
## Expenditure per Capita, Non-Medicaid Means Tested Programs, 1970-2013 (real 2009 dollars)



## Beyond the Great Recession:

- Expenditures have fallen but not back to 2007 levels
- Resuming upward trend
- Medicaid important (ACA)
- Repeat Figure:

## Annual Expenditure per Capita, Non-Medicaid Means-Tested Programs, 1970-2013 (real 2009 dollars)



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- Implications of the change in structure? (in-kind vs cash, disabled vs non-disabled, EITC-CTC conditioning on work, etc.)
- Ben-Shalom et al. (2012), CBPP (2013), Moffitt (2015)
- Distributional changes by:
  - (1) Disability and aged status
  - (2) Family structure (single parent, two-parent, childless)
  - (3) Position in the low-income income distribution

## A priori:

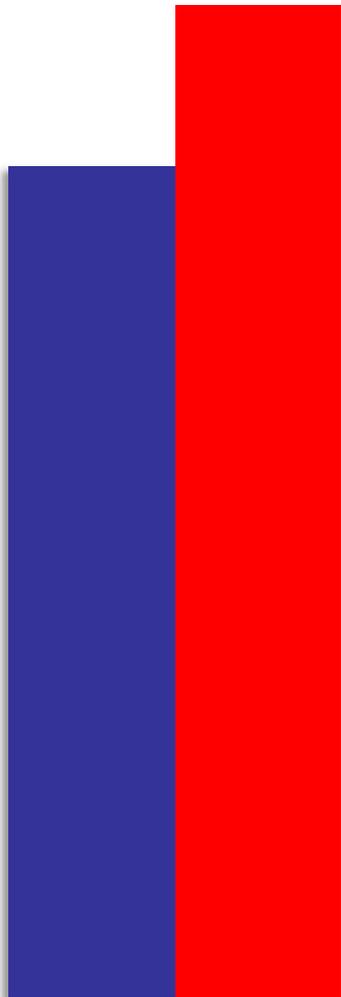
- Rise in SSI: favors disabled and older individuals
- Decline in TANF: disfavors low income families with children (one-parent, two-parent)
- EITC and CTC: favors families with workers

## Method:

- SIPP data over 1984-2013, know monthly receipt of all transfers, and know all demographic and economic characteristics
- Total up all transfer benefits in a month, excluding Medicaid and Medicare, but including social insurance programs (UI, OASI, DI)
- Start pre-Great Recession, 1984-2007

# Average per family monthly transfers to older adults rose from 1983 to 2004

Older Adults



19% growth

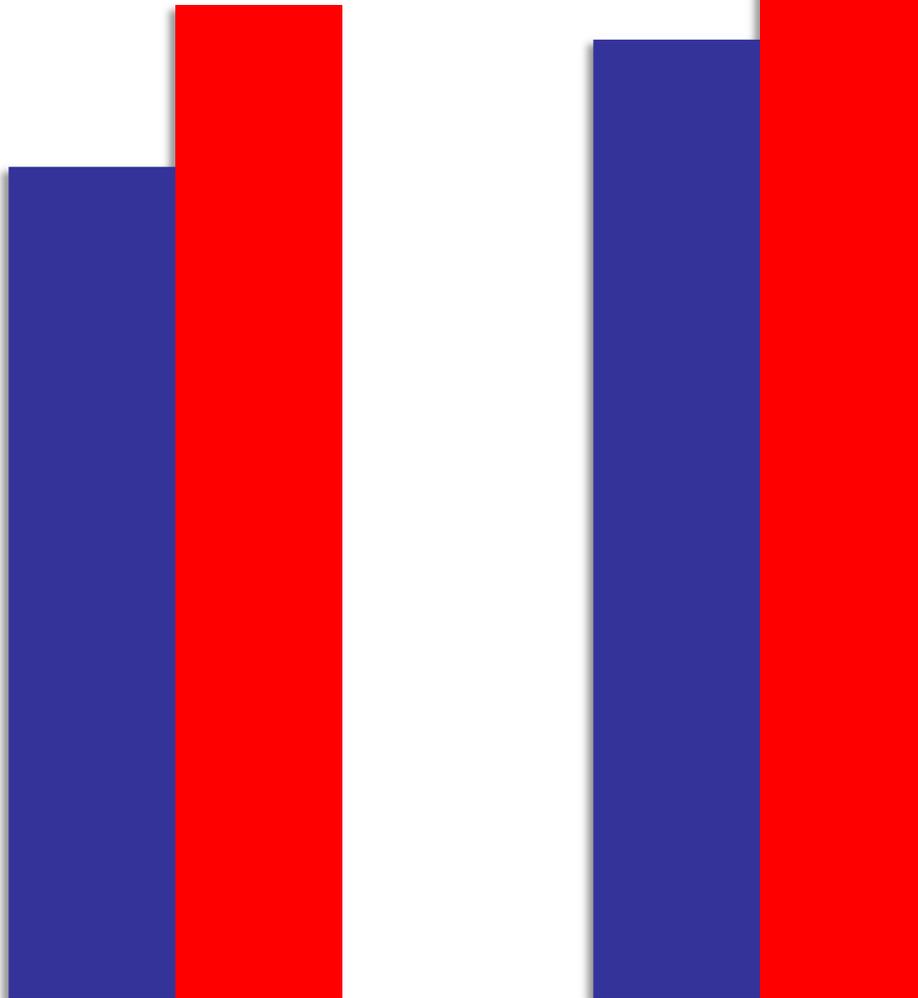
1983

2004

# They also rose for families with disabilities

Older Adults

Families with Disabilities



1983

2004

1983

2004

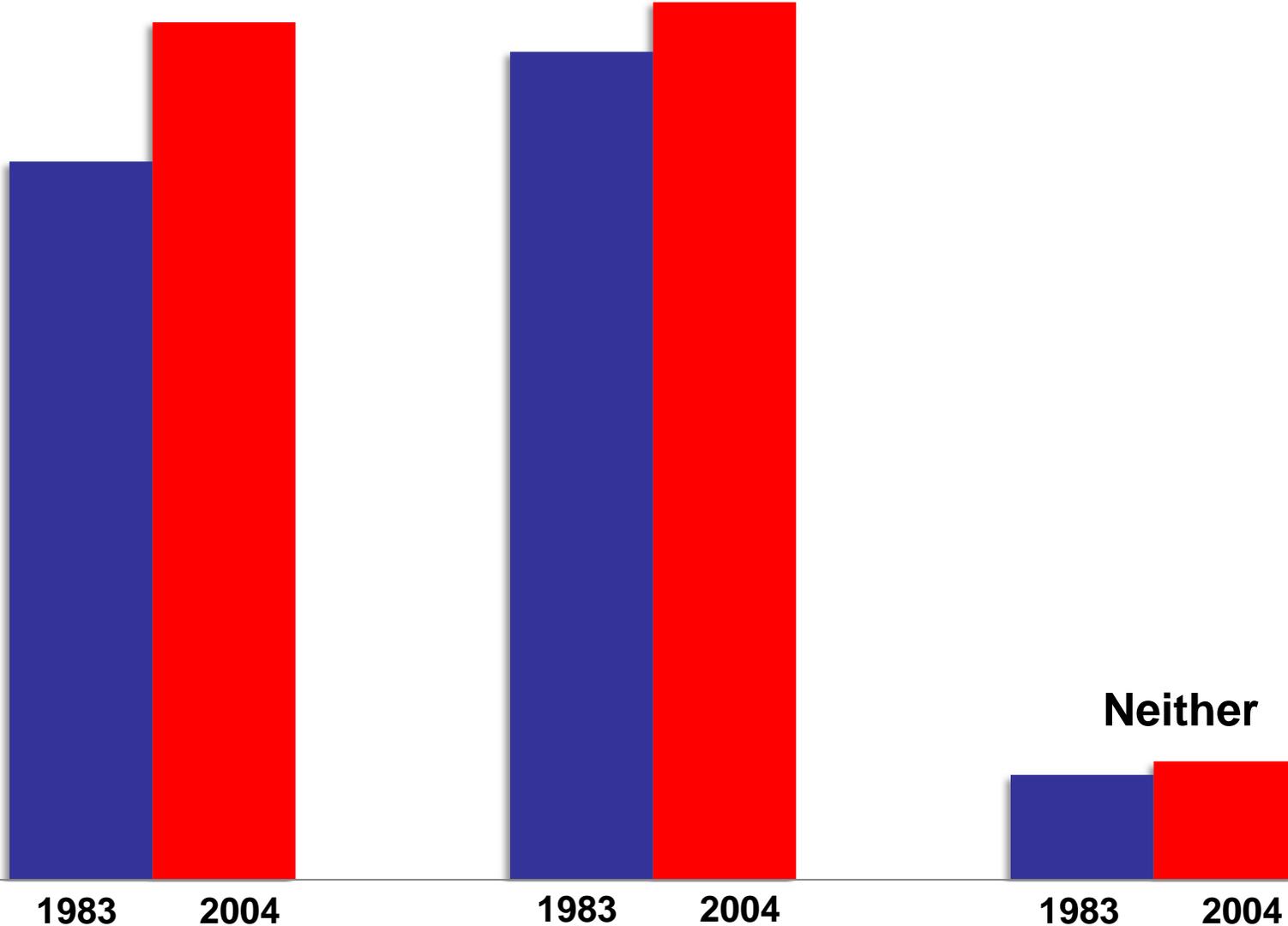
6 Percent Growth

# They also rose for the others but increase was tiny in magnitude

Older Adults

Families with Disabilities

Neither



# But they fell for single-parent families, and the childless receive very little

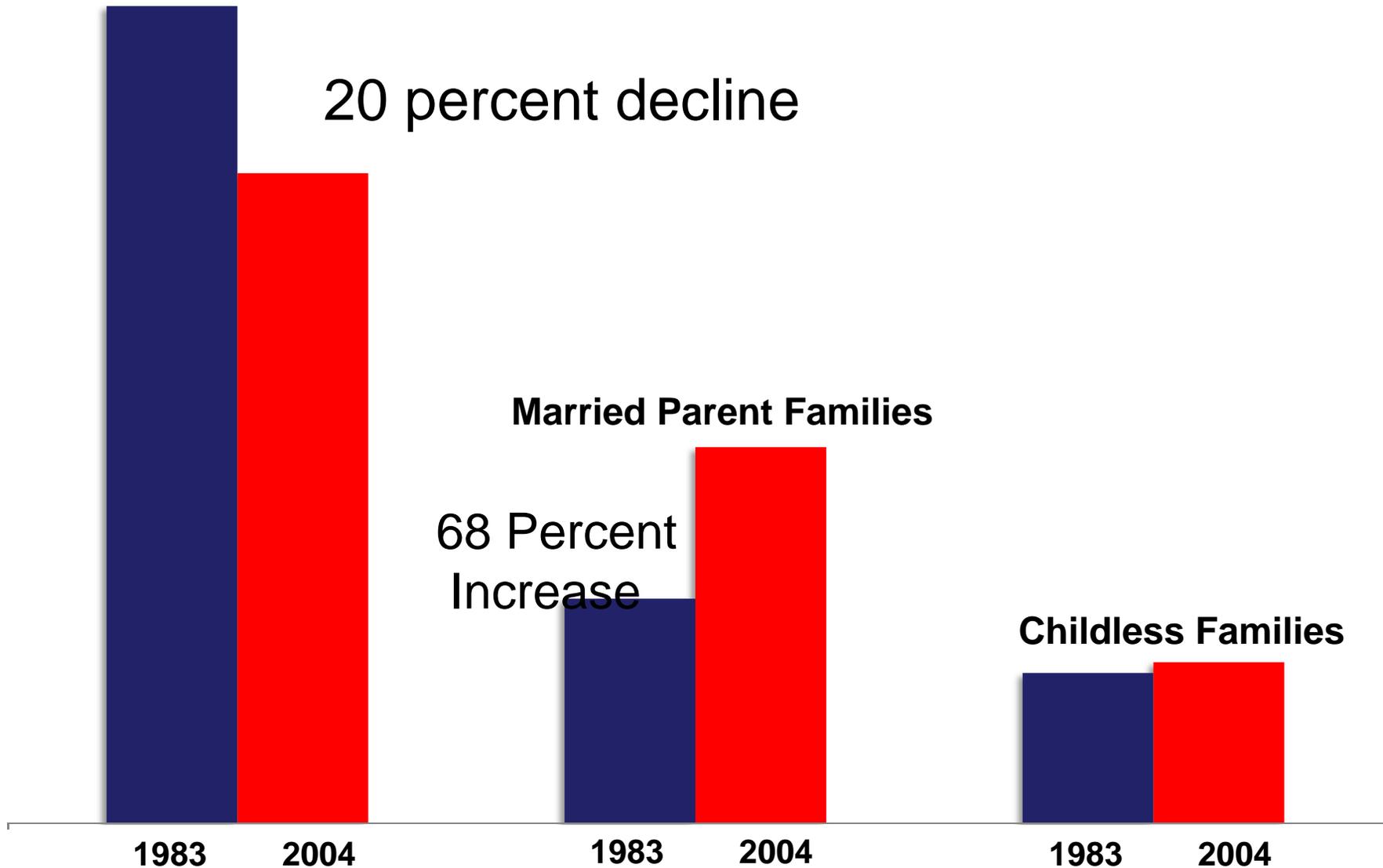
Single Parent Families

20 percent decline

Married Parent Families

68 Percent  
Increase

Childless Families



- Average monthly expends per family (2007 dollars)\*

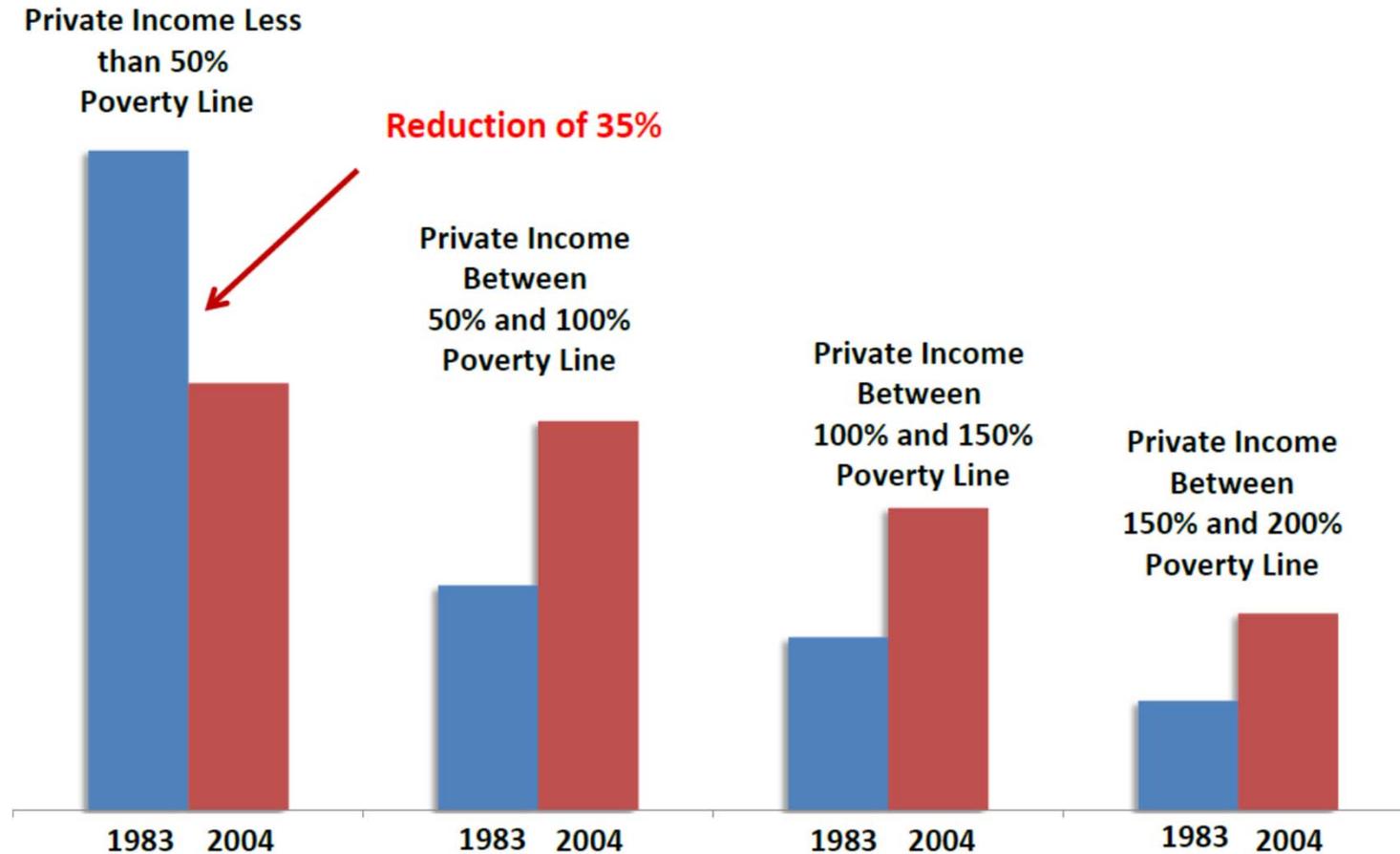
	<u>1984</u>	<u>2004</u>
Single parent	\$600	\$500
Two parent	200	300
Childless	140	150
Elderly	1,200	1,300
Disabled	1,250	1,450

And then classify families by levels of Private Income relative to the government poverty line

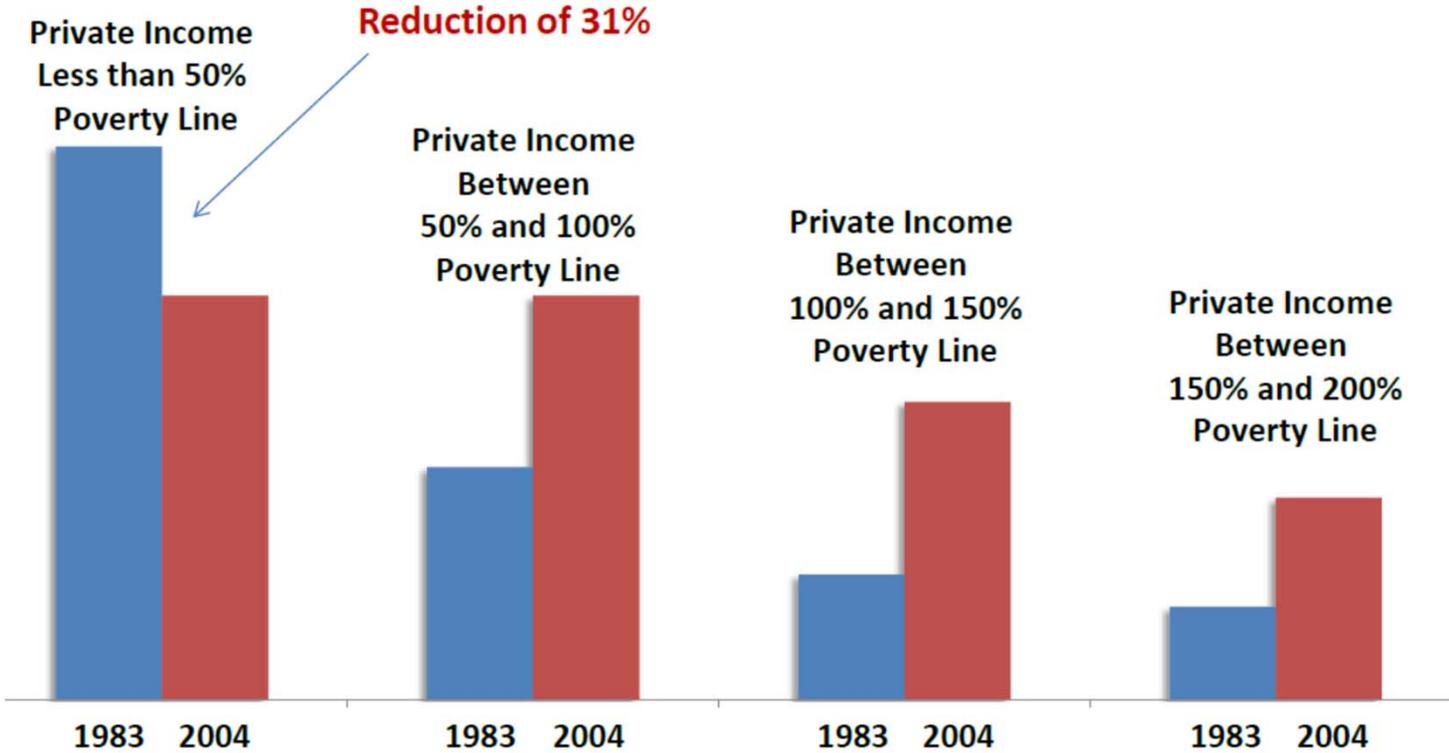
1. 50% of Poverty Line
2. 50% - 100% of Poverty Line
3. 100% - 150% of Poverty Line
4. 150% - 200% of Poverty Line

Results:

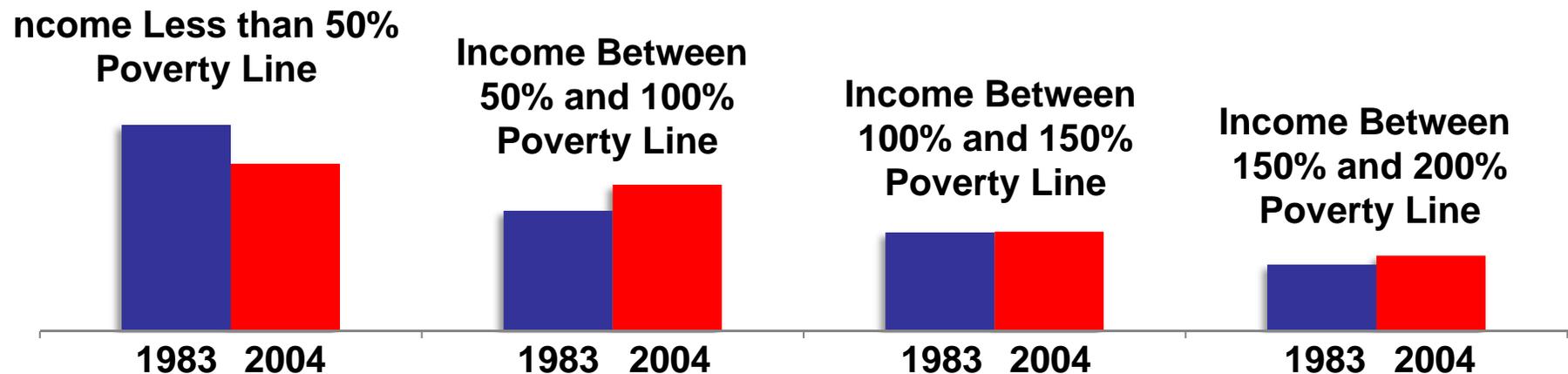
## From 1983 to 2004, Transfers fell for the worst off single-parents and rose for the better off



# The same thing happened for married-parent families

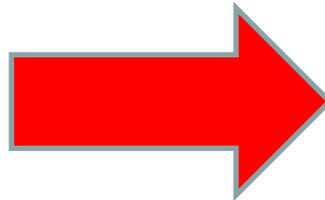


# And for childless families, although the amounts were small



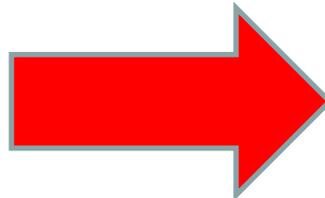
# Redistribution Implications:

Non-Aged,  
Non-Disabled



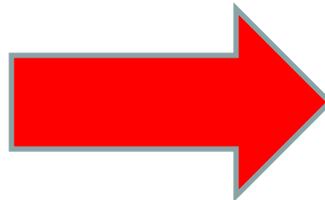
Aged &  
Disabled

Single Parent  
Families



Married Parent  
Families

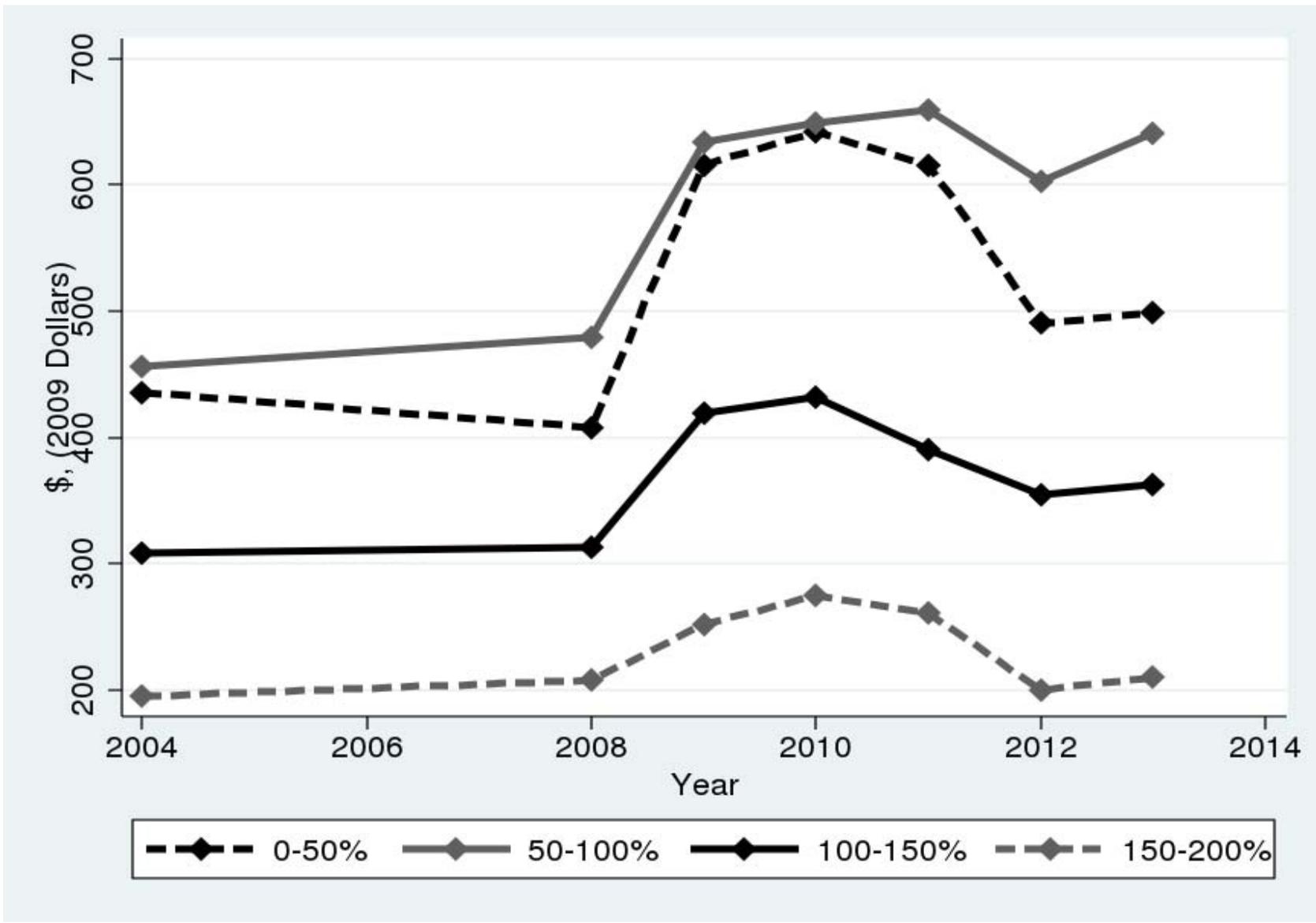
Poorest Families



Barely Poor &  
Almost Poor Families

# Great Recession and Beyond

- Great Recession: Halted these distributional trends
  - (1) Increased benefits broadly distributed to nonelderly nondisabled as well as elderly and disabled
  - (2) To single parent families as well as two-parent
  - (3) To poorest families as well as those up the distribution
- Post-Recession: Partial resumption of *relative* trends



Nonelderly Nondisabled Families, by Private Income  
2004-2013 (Average Monthly Benefits)

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- The first-order obvious implication:
- If you reduce benefits for low earners and increase benefits for higher earners, that has to reduce marginal tax rates (MTRs)
- But that needs to be parsed and some distinctions need to be made
- And magnitudes are important to know

## MTRs in Individual Programs

- See Economic Effects of Means-Tested Transfers, individual chapters
- Also Maag et al. (2012), CBO (2012, 2015), Kosar and Moffitt (forthcoming)

- Medicaid: MTR=0 up to eligibility notch, where MTR=100%
- Has been **no change in that structure over time** but income eligibility levels are risen, pushing the notch up the income distribution
- SNAP: MTR=24%-30% but have a gross income limit which creates a notch
- **No change over time**
- EITC: MTR as low as -45% and about 21% in phaseout range
- **No change over time**

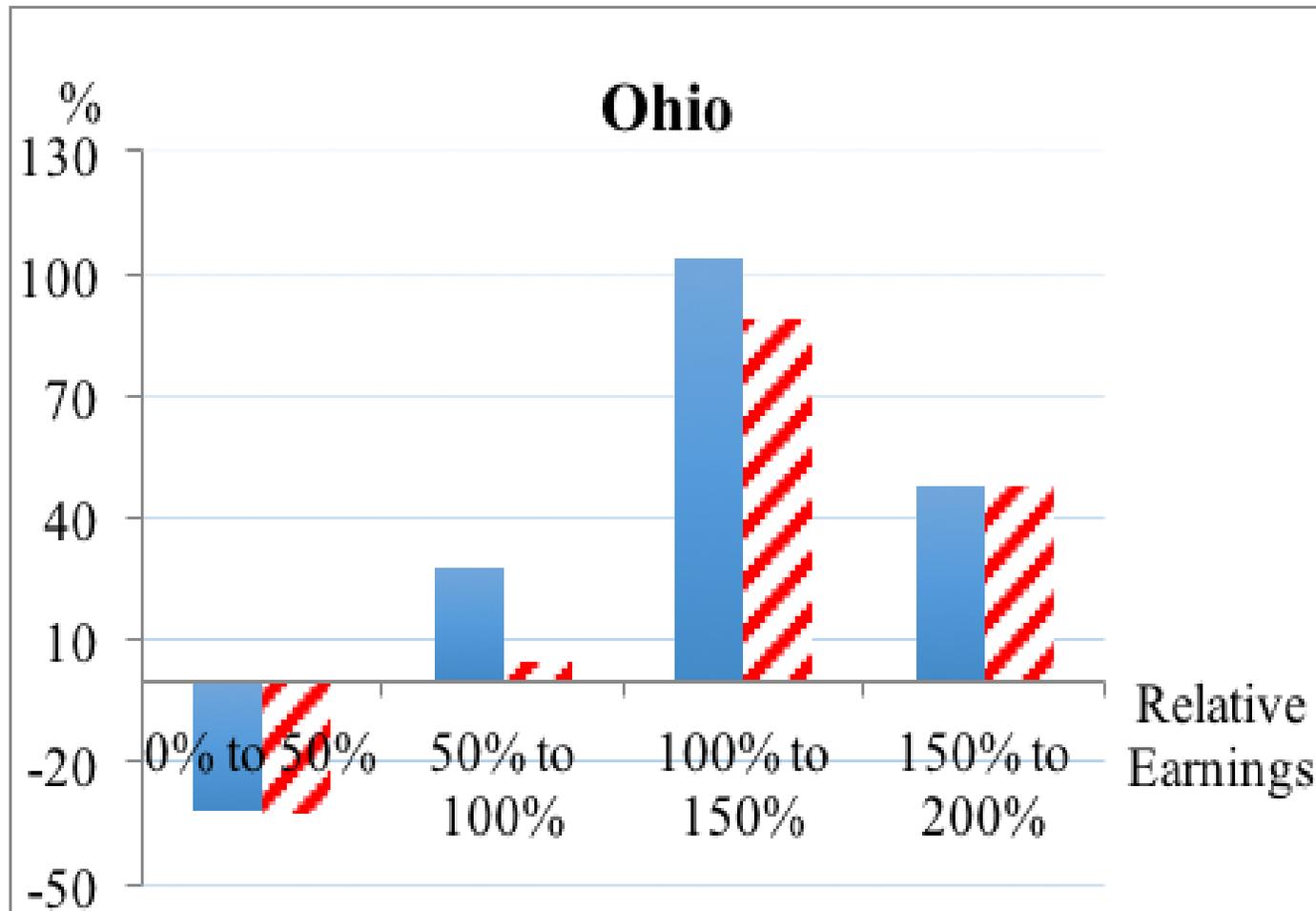
- TANF: MTR=100% pre-1996 and 50% (modal value) post-1996
- So a decline over time
- Subsidized Housing: MTR=10%-30%
- No change over time
- SSI: MTR=50%
- No change over time
- CTC: MTR<0 then >0
- Introduced in 1998, but only minor change since then

## Bottom line:

- Some changes in MTRs over time but not a lot

- Cumulative Marginal Tax Rates (CTRs)
- If receive benefits from more than one program, CTRs obviously higher
- Illustration: Take the two most commonly-received programs
  - (1) Medicaid
  - (2) SNAP
- Medicaid is state-specific, so take one state: Ohio

# Single mother, 2 kids, Taxes+Medicaid+SNAP 1997 (blue) and 2007 (red)



- Let's look across all 51 states and jurisdictions in 2007, calculate median CTRs
- Taxes + Medicaid + SNAP

0-50% FPL	-31%
50%-100% FPL	7%
100%-150% FPL	81%
150%-200% FPL	51%

- But not a great deal of change over time; slight reduction
- Next question: what about families in different combinations of programs?
- The more programs a family participates in, the higher the CTRs, in general
- And the fewer programs, the lower the CTRs

Participation Rates of Nonelderly  
Nondisabled Population, 2004  
(Private Income < 50% FPL)

One program only.....	19%
Two programs only...	14%
Three programs only....	5%
Four programs only.....	3%
No programs.....	59%

- Weighted Average CTRs:  
(Single Parents, 2007)

0-50	FPL	-16%
50-100	FPL	4%
100-150	FPL	55%
150-200	FPL	45%

- But this is only one point in time
- No evidence of this kind for really long-term trends
- An alternative approach: use CPS over past years; sum up their total benefits received; regress it on their private incomes

## Regression-Estimated CTRs

0-50 FPL    50-100 FPL    100-150 FPL

1990	32%	0%	3%
2000	14%	3%	3%
2008	12%	1%	10%

- Decline at bottom due to EITC, TANF, increase in Medicaid income elig point AND decline in TANF caseload
- Increase at top due to EITC and Medicaid
- The bottom and top trends go together

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- Need to think about why the particular redistributions that have occurred, have occurred:
  - (1) Toward the elderly and disabled
  - (2) Toward married parents rather than single parents
  - (3) Away from the poorest and toward those higher up
  - (3') Implied reduction in MTRs at the bottom and increase in MTRs higher up

- Propose to use optimal income tax models to think about the problem
- Those models are usually normative, but can be used as tools for positive analysis if actual structures assumed to be the result of some optimization (admittedly a leap...)
- An absolutely huge literature on optimal redistribution and optimal tax schedules at the bottom of the income distribution
- So can only give a few “thoughts” here, nothing very formal, rather speculative

- Classic model is Mirrlees (1971) and related literature
- Good survey of Mirrlees and subsequent literature is in Piketty and Saez (2013)
- Virtually all models in this literature are “welfarist” in scope, i.e., maximize some sum of individual utilities
- Are some nonwelfarist models, however (Stantcheva and Saez, 2016, model some forms of them)

- Mirrlees (1971) solution generated a negative income tax, i.e., a negative lump-sum transfer at the bottom coupled with a low (though positive) MTR at the bottom
- Will discuss below why the “solution” to that model might have changed, i.e., why there has been a reduction in the size of the lump sum transfer coupled with a reduction in the MTR at the bottom, and why other changes have occurred
- Should probably mention that this was Milton Friedman’s proposal in the early 1970s: cut  $G$  in order to lower  $t$ , holding government expenditure fixed

- Noneconomist view is probably nonwelfarist in nature
- The Deserving Poor and the Undeserving Poor (Katz, 1989)
- Voters perceive the elderly, the disabled, married couples, and workers as more deserving of support
- View nonelderly, nondisabled single parents and nonworkers as undeserving
- Argue that these are based on cultural norms
- In optimal tax model, these are just social welfare weights

- But even here, the question is: what has changed that would lead to the changes we have observed?
- Some ideas have been thrown out:
  - (1) Middle class women work now, so the social norm has changed: poor women are not expected to stay home with children
  - (2) Favorable view of marriage is an (ironic) reaction to decline of marriage (Cherlin, 2010)
  - (3) Growth in the size of the older population leads to a more sympathetic view of them

Etc. All a little ad hoc.

## Political Economy variation

- More of an economic literature here
  - (1) Increase in political strength of older population
  - (2) Decline in political strength of the (very) poor
  - (3) Shifts in income distribution that lead to a change in who the median voter is
  - (4) Median voter's sympathy depends on "distance" from him/her in terms of characteristics (maybe the median voter is white middle class male whose wage has declined...less sympathetic to the poor)

Etc. Would show up in optimal tax model as changes in social welfare weights.

## Incomplete Information Variation

- A stream of literature here (e.g., recent Kuziemko et al., 2015)
  - (1) Voters (median voter?) do not understand extent of inequality or reasons for it
  - (2) More information leads to more redistribution, typically, in these models
  - (3) Has voter information about single mothers, or the poorest families, deteriorated over time?
    - not obvious
    - although maybe declines in  $W$  facing those families are not well perceived

## More conventional view within Mirrlees model

- The elderly and disabled simply have low labor supply elasticities; so you redistribute more
- Probably married couples (at least the primary earners in them) have lower labor supply elasticities than single parents
- But less clear how this explains the decline in transfers to the bottom: maybe need EITC for that (next slide)

But: have those elasticities changed in the direction that would explain changes in distribution?

## View from the optimal earnings subsidy literature

- Diamond (1980), Saez (2002), Laroque (2005): get negative MTRs at the bottom if labor supply “participation” elasticities (i.e., work/no work) are large relative to intensive margin elasticities (how many hours to work, if you work)
- So can get negative MTRs followed by high MTRs in the phaseout region (although not MTRs in excess of 100%)
- The high MTRs in the phaseout region have less negative impact than the negative MTRs at the bottom have positive impacts

- What might have changed that would have made this more attractive than it was before?
- Possible: female intensive margin wage elasticities have declined and moved more toward those of men (Blau and Kahn, 2007)
- Would lead to a growth of the relative importance of participation elasticities for women
- Or perhaps fixed costs of working (the source of high participation elasticities) have risen?
- But: why only families with children? Maybe children create high fixed costs? But fertility has been falling

## Other puzzles

### Rise of In-Kind

- There is an older literature trying to explain in-kind subsidies by something other than pure paternalistic voter preferences (various Zeckhauser papers, e.g.)
- But reason for increase over time not usually considered

### Rise of Work Requirements

- Don't get this from most welfarist models, but there is a small literature which attempts to do so (Besley-Coate, various Blackorby papers)
- Reason for their rise is unclear

# Outline

1. Introduction and Motivation
2. The Transfer Program Landscape
3. Program Statistics and Trends
4. Distribution
5. Implications for Marginal Tax Rates
6. Thoughts on Optimality
7. Conclusions: Future Research

- **Several lacunae in the analysis:**

- Important programs omitted (e.g., child care)

- Not much done with federal or state income taxes, and other taxes, other than EITC and CTC

- **Valuation of in-kind transfers needs more work**

- Considerable work on Medicaid being done now

- But housing, etc., needs more

- Even SNAP: why is it still being traded?

- **Explaining differential growth in expenditures**

Result of changes in caseload and in  
benefits per recipient

Most changes have been a result of the  
former (as a mechanical matter)

Gave the reasons for caseload growth  
previously

More work on determinants of changes in  
participation (conditional on private  
income, family structure, age, and  
disability status)

Have done some of this myself

- Not much work done for older population:  
OASI, SSI, Medicare  
Auerbach et al. (forthcoming) is a start
- Extension of changes in distribution and tax structure to dynamic models with saving  
Again, Auerbach et al. (forthcoming) is a start, but much more can be done
- And I would like to see more work done on factors that could explain the changes over time we have seen

# Recent Research on the Distributional and Tax Rate Structure of the U.S. Welfare System

A Short Course for the National Tax  
Association, Baltimore

November 12, 2016

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