Public Transfers and Intergenerational Equity in Brazil

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Relation between public transfers and intergenerational equity

1. Increasing size/political power of adults/elderly favored expansion of public transfers to the elderly at the expense of children´s welfare (Preston 1984)

2. Negative relation between proportion of elderly and public investments in children (Poterba 1998)

3. Altruism and externalities effects would make elderly voters to support investments in children (Poterba 1998)

Relation between public transfers and intergenerational equity

4. Investments in education precede the development of social security (Becker and Murphy 1988)

5. Dual system of social states favored the urban middle class in the format sector. Urban middle-class provided the needed skilled labor force and got protection at older ages (Filgueiras 2005; Draibe 2007)

Research Questions

1. Any historical relations between public transfers and the relative well-being of children and the elderly in Brazil?
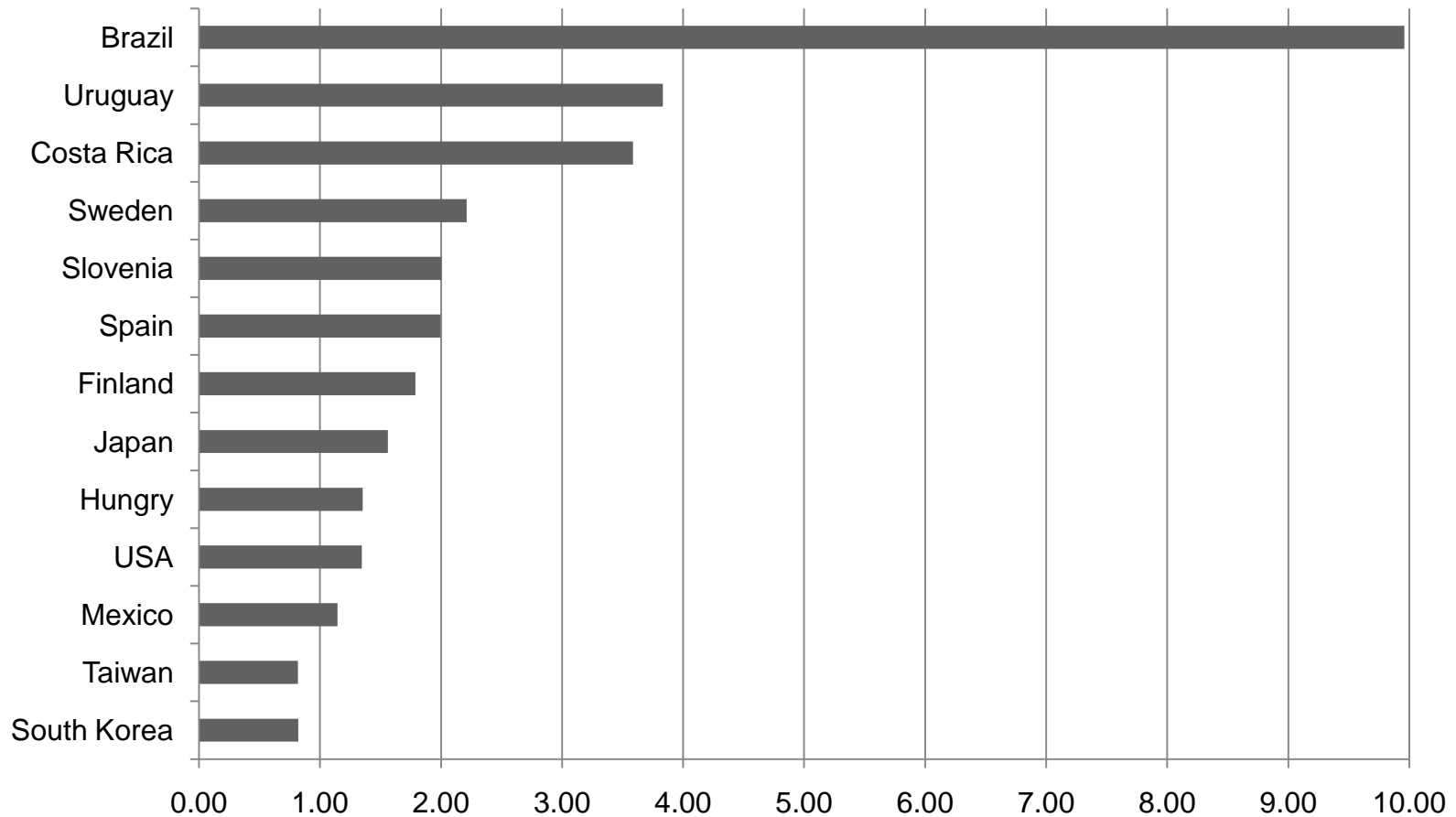
   – Public transfers and poverty incidence

2. Who has paid for possible welfare gains among the elderly: younger generations or the elderly themselves?

Why is it important?

1. Little is know about these issues in emerging economies

2. Brazil is an outlier among emerging economies:

   1. Population age distribution is changing very fast

   2. Persistent high levels of inequality and poverty

   3. The public sector allocates a larger fraction of net public transfers to the elderly than to children

Compared to older and wealthier countries, Brazil has larger net public flows directed to the elderly relative to children

Ratio of net public transfers: elderly to children (Turra, Queiroz, Rios-Neto forthcoming)

Public transfers and poverty incidence in Brazil:
age, period and cohort components
(Turra, Rocha and Wajnman, 2010)

Poverty incidence in Brazil

Poverty rates reduced more than fivefold over the last three decades (53% to 9.5%). Both generational and period changes:

– Macroeconomic measures to stabilize the economy during the 1990s

– Demographic changes – reduction in family size and dependency ratio within the households

– Progressive increase in human capital and female labor force participation rates

– The 1988 federal constitution and the expansion of non-contributory pension benefits and cash transfer programs (Bolsa Familia and BPC)

– Policy of minimum wage increases

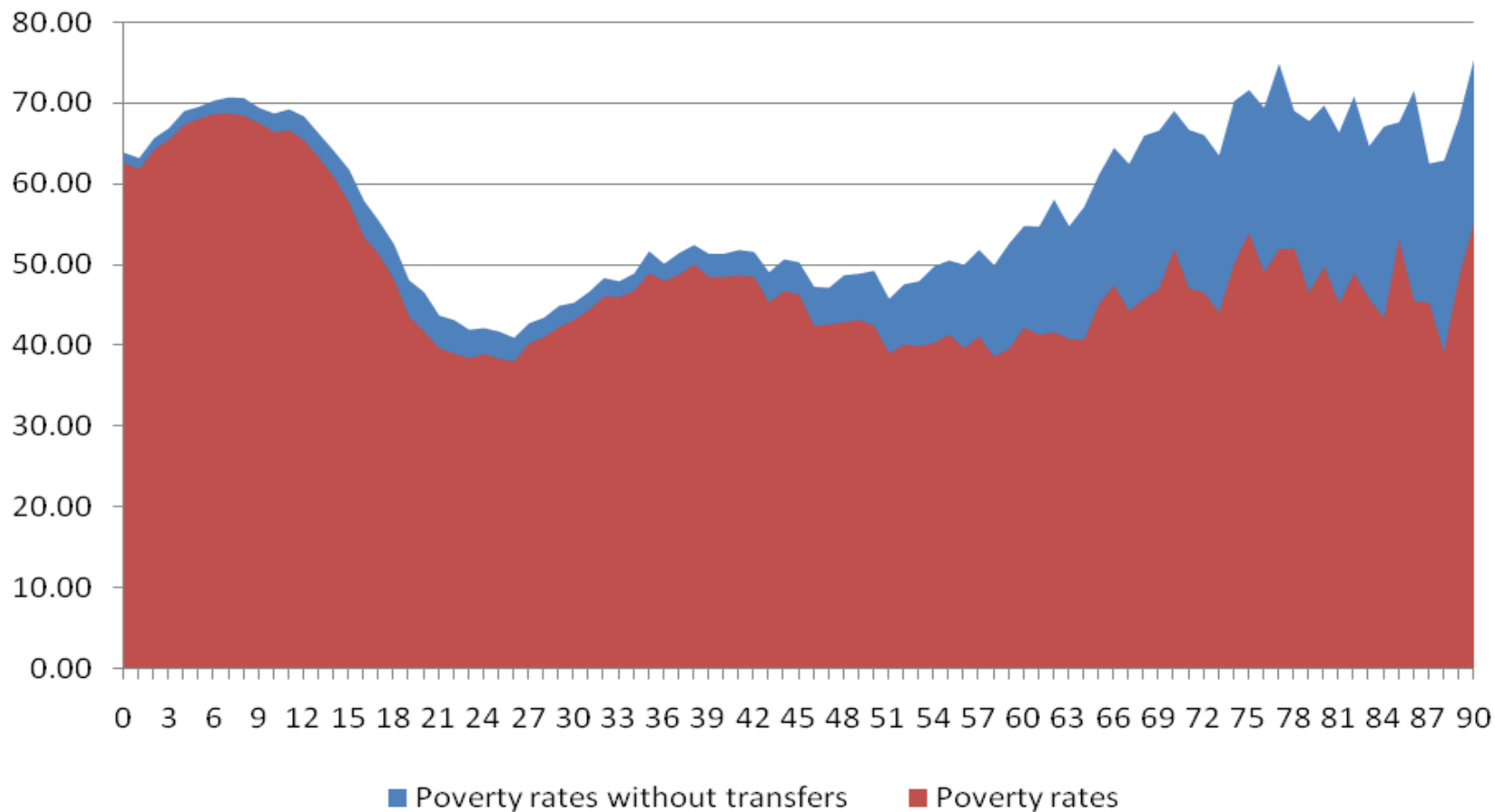Figure 1-Poverty rates by age, with and without transfers (%), 1981
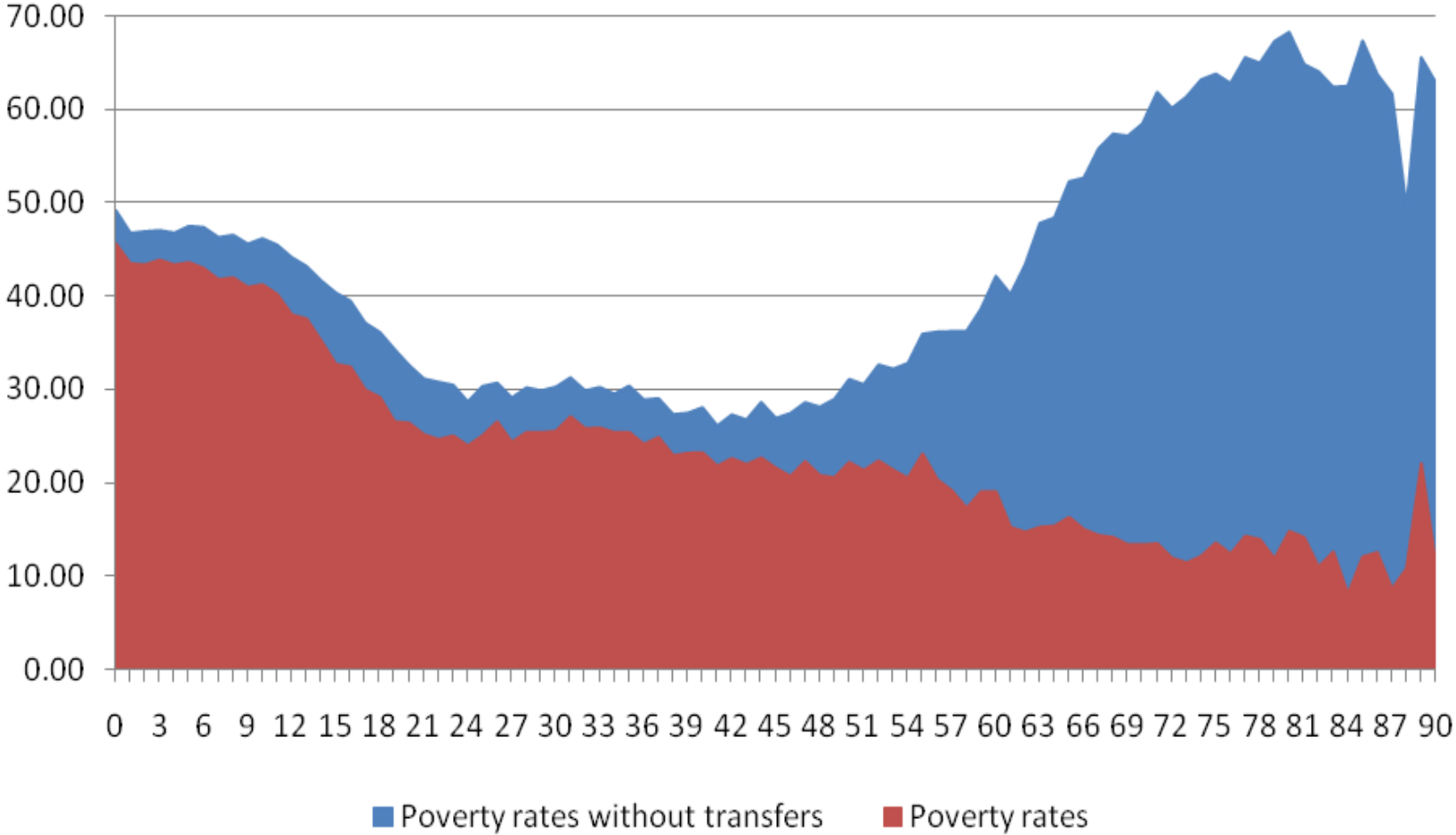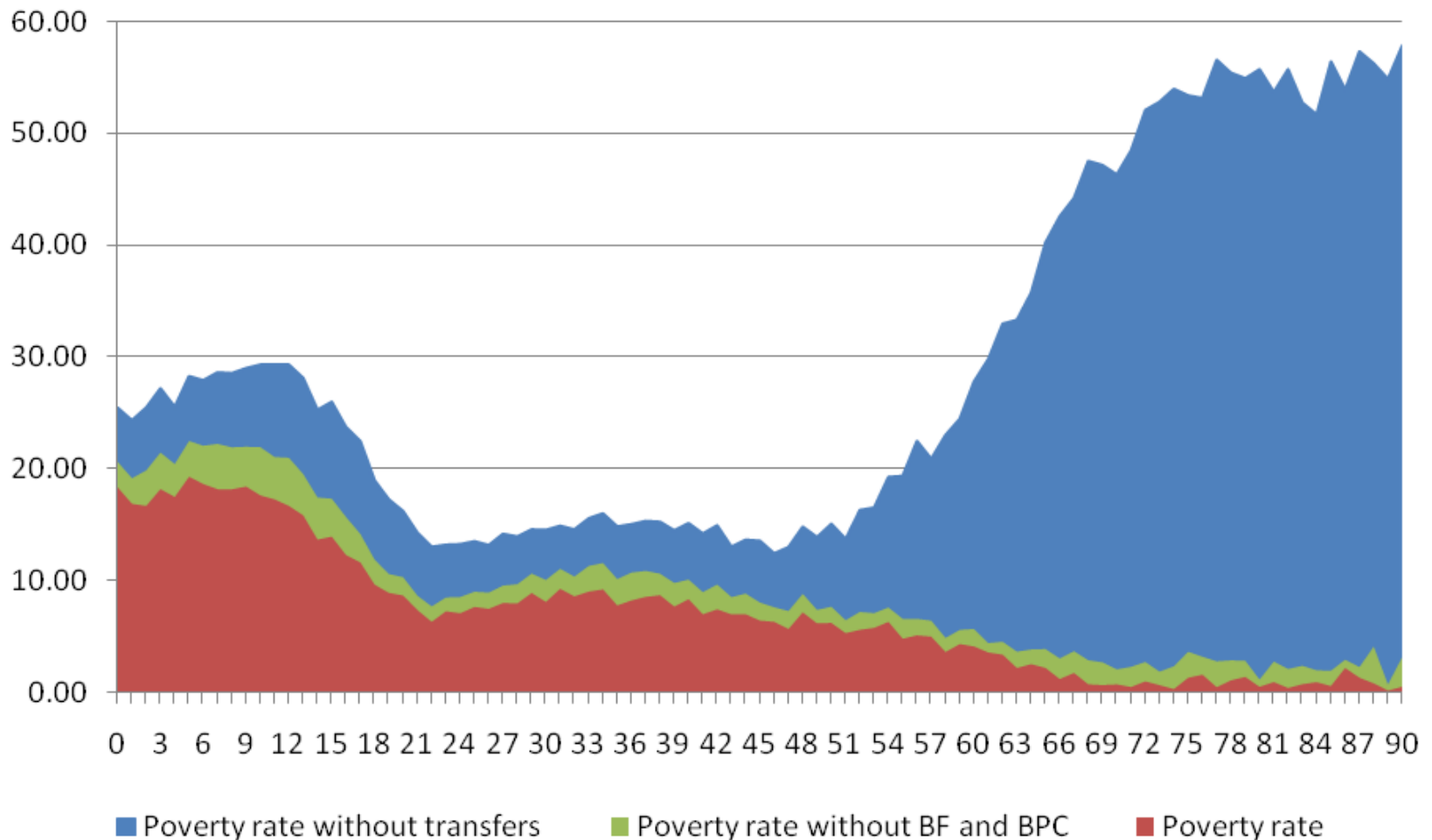
Legend: Poverty rates without transfers ■ Poverty rates ■

Figure 2- Poverty rates by age, with and without transfers (%), 1995

Legend: Poverty rates without transfers ■ Poverty rates ■

Figure 3-Poverty rates by age, with and without transfers (%), 2008

Legend: Poverty rate without transfers ■ Poverty rate without BF and BPC ■ Poverty rate

An age-period-cohort model for poverty incidence

1. Counterfactual analyses are elegantly instructive, but can be methodologically flawed. One cannot imply causation

2. Most of previous analyses are based on data for a synthetic cohort and thus, ignore the historical determinants of poverty trends

3. We construct an APC model based on hypotheses of how cohort histories have influenced poverty rates (to avoid the identification problem and the use of dummy variables). We use proximate determinants of household income

Methodological considerations

1. Data are grouped in three-year periods and three-year age-groups to reduce sampling variability

2. Separate models for children (0-17) and the elderly (63+)

3. Fit Poisson regression models. We model the number of poor as a function of

    1. a measure of exposure (number of people in each age-period group)

    2. dummy variables for age and period effects

    3. Children: indicators of SES (years of schooling of HH) and demographic changes (support ratio within the household)

    4. Elderly: indicators of life cycle wealth (female labor supply) social protection at older ages (pension coverage rates) and demographic changes (support ratio within the household)

Proportionate Age Distribution of Poverty Rates
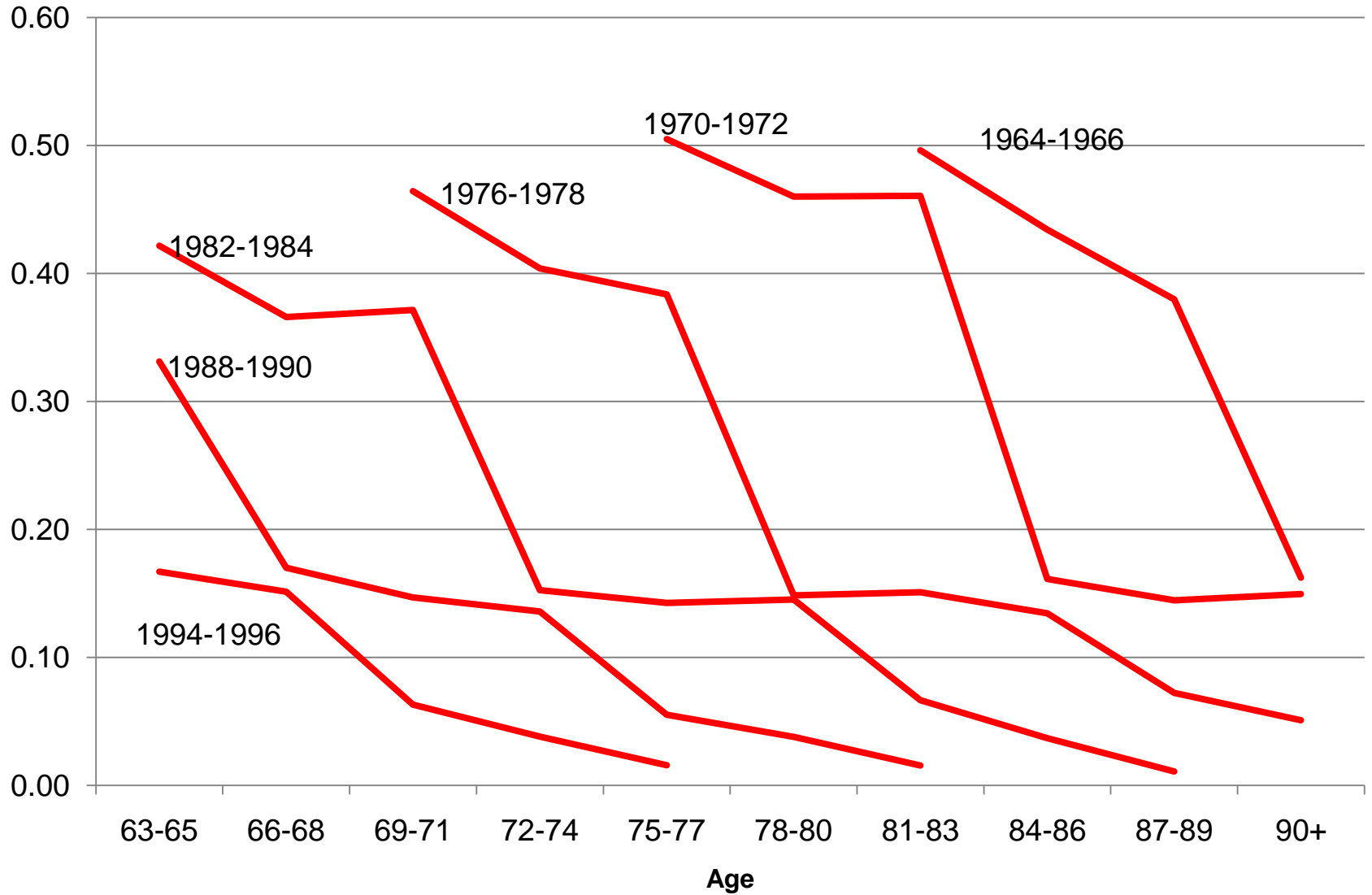## In Brazil, 1981 and 2008
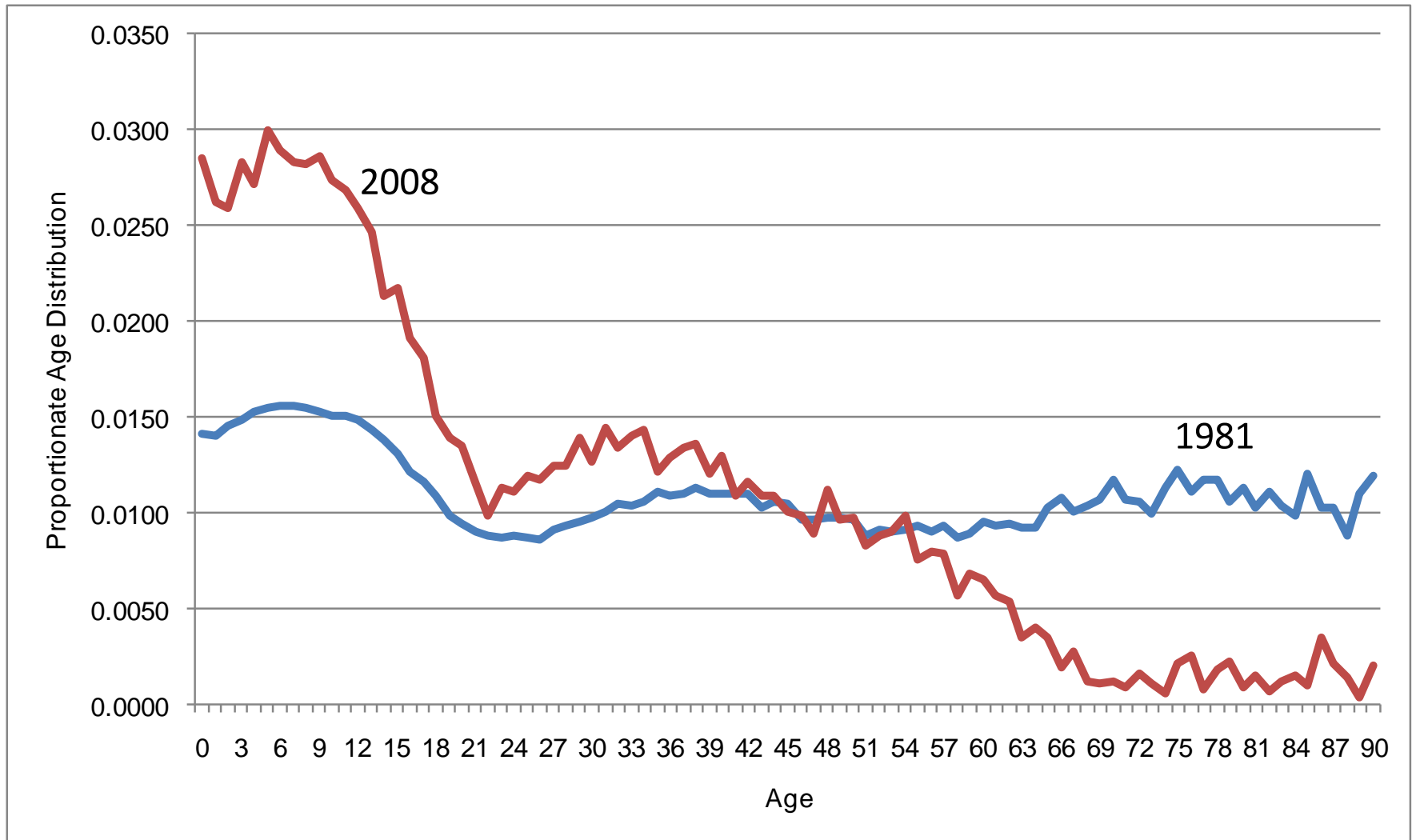
Poverty rates among **children**, Brazil, 1982-2008

Selected Cohorts

1982-1984

1976-1978

1970-1972

1988-1990

1994-1996

age
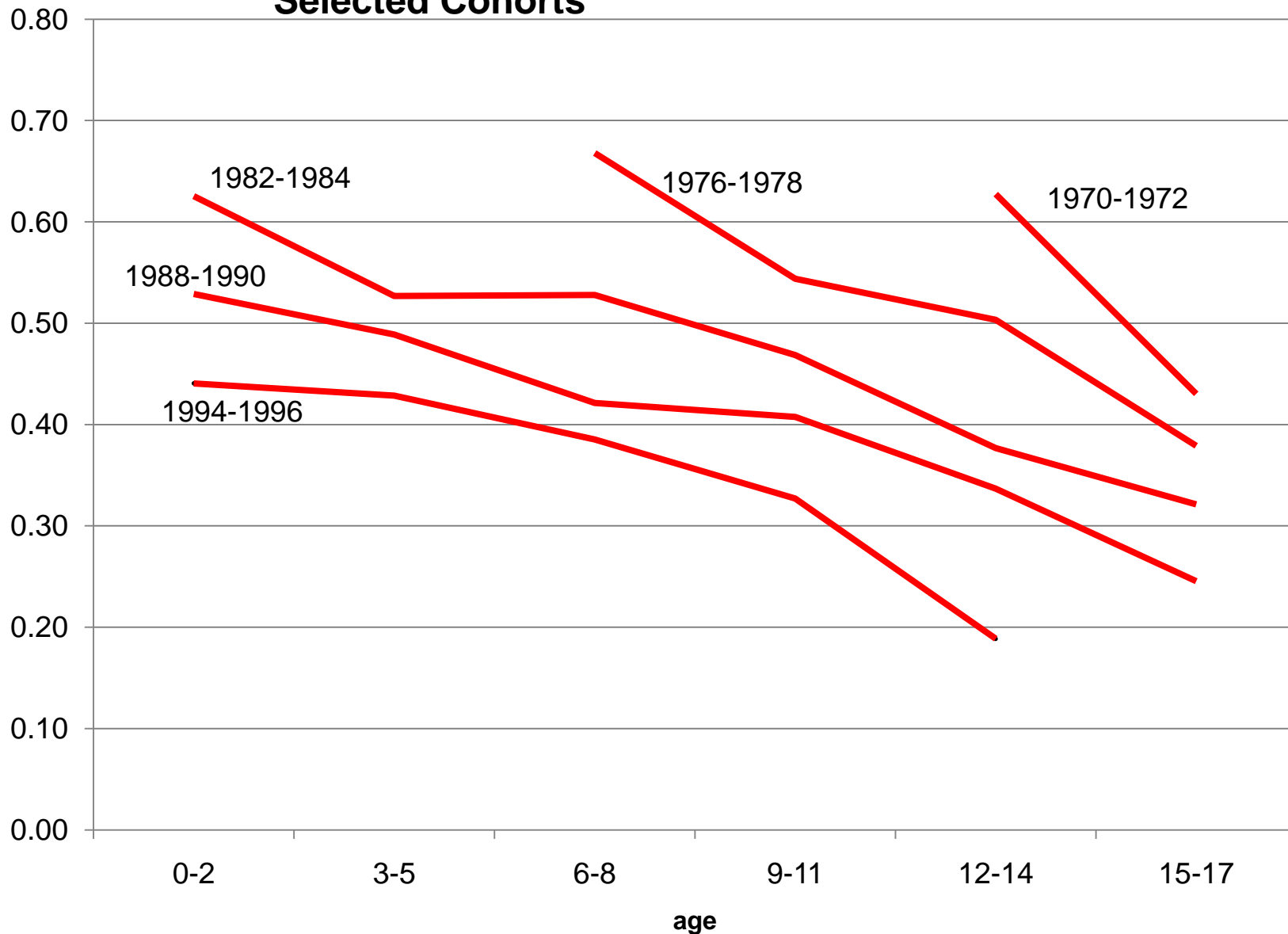
Poverty rates among **elderly**, Brazil, 1982-2008

Selected Cohorts

Estimated Period Effects

Period	Children	Elderly
82-84	**1.000**	**1.000**
85-87	0.879	0.987
88-90	0.936	1.106
91-93	**0.903**	**0.555**
94-96	0.836	0.566
97-99	0.876	0.611
00-02	**0.829**	**0.321**
03-05	0.763	0.224
06-08	**0.510**	**0.098**

Estimated cohort effects

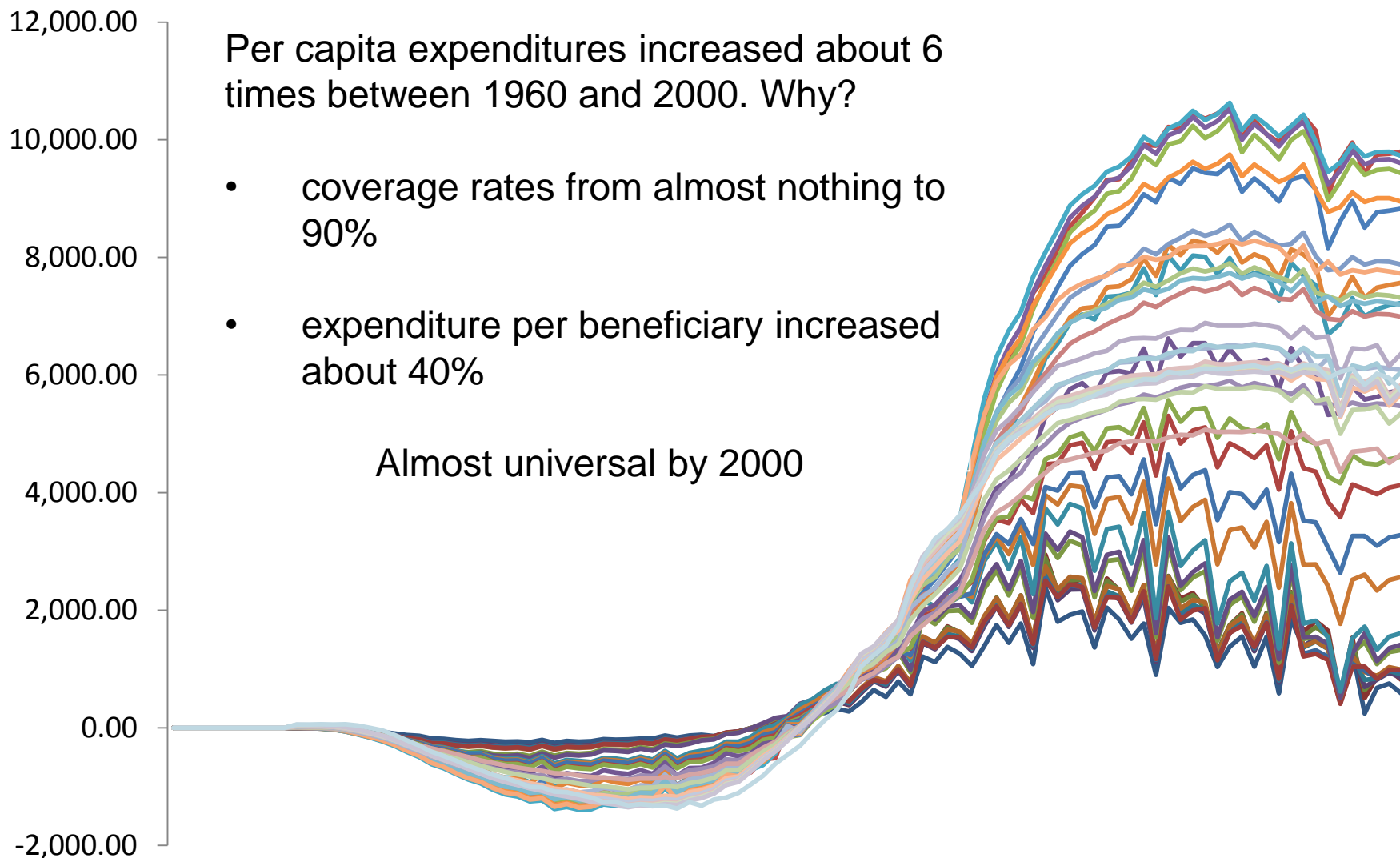| Cohort	Children	Elderly
82-84	1.000	1.000
85-87	0.988	0.814
88-90	0.952	0.713
91-93	0.922	0.717
94-96	0.865	0.667
97-99	0.810	0.619
00-02	0.757	0.582
03-05	0.728	0.553
06-08	**0.718**	**0.528**

Key findings 1

1. Among children: long-term effects - related to gradual changes in the life histories of cohorts - played a major role until 2002

2. Among the elderly: cohort effects + period effects, which are associated with the expansion of social welfare, reduced drastically the percentage living in poverty

Who has paid for welfare gains among the elderly: younger generations or

the elderly themselves?
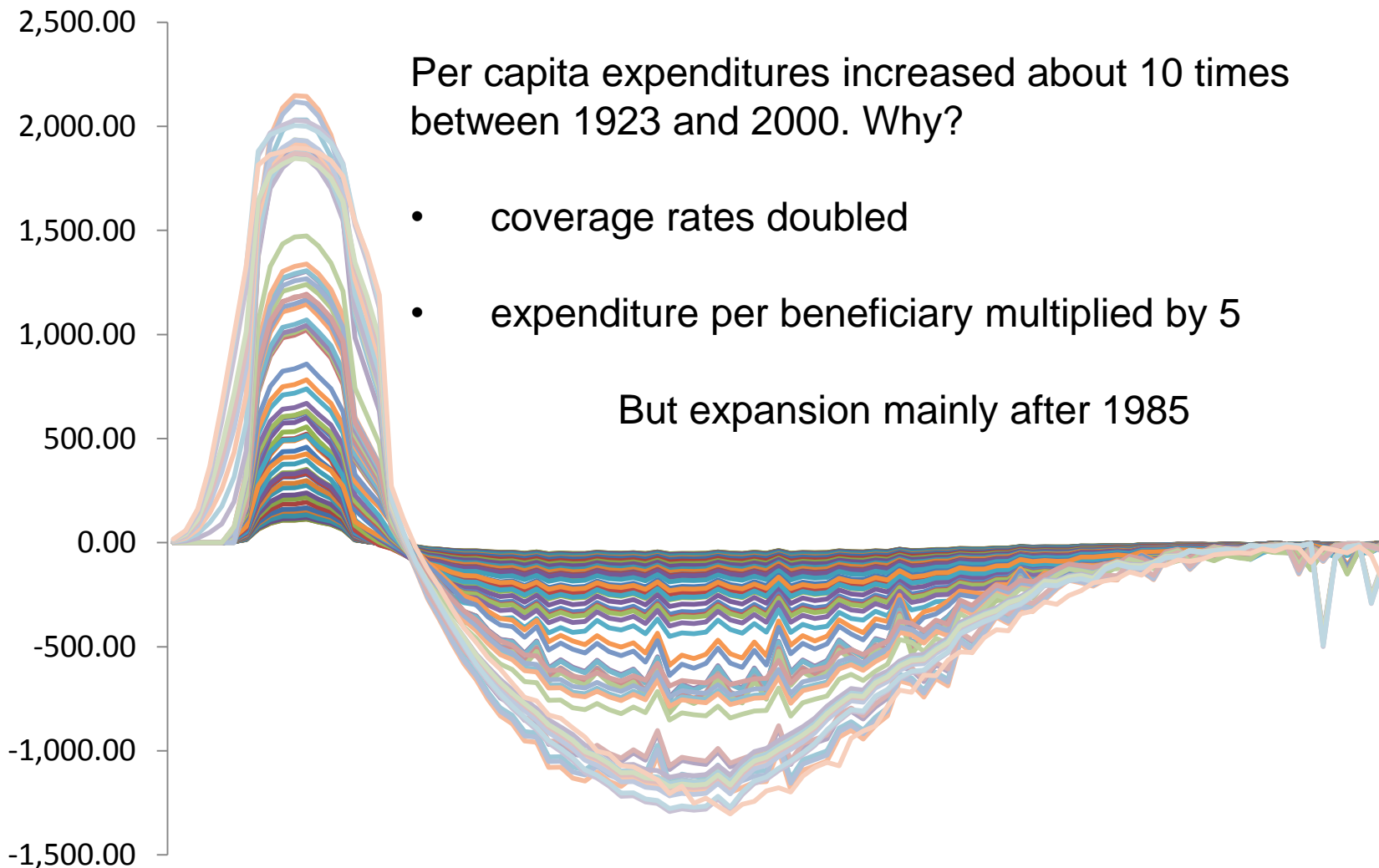
(Araujo, Turra and Queiroz 2010)

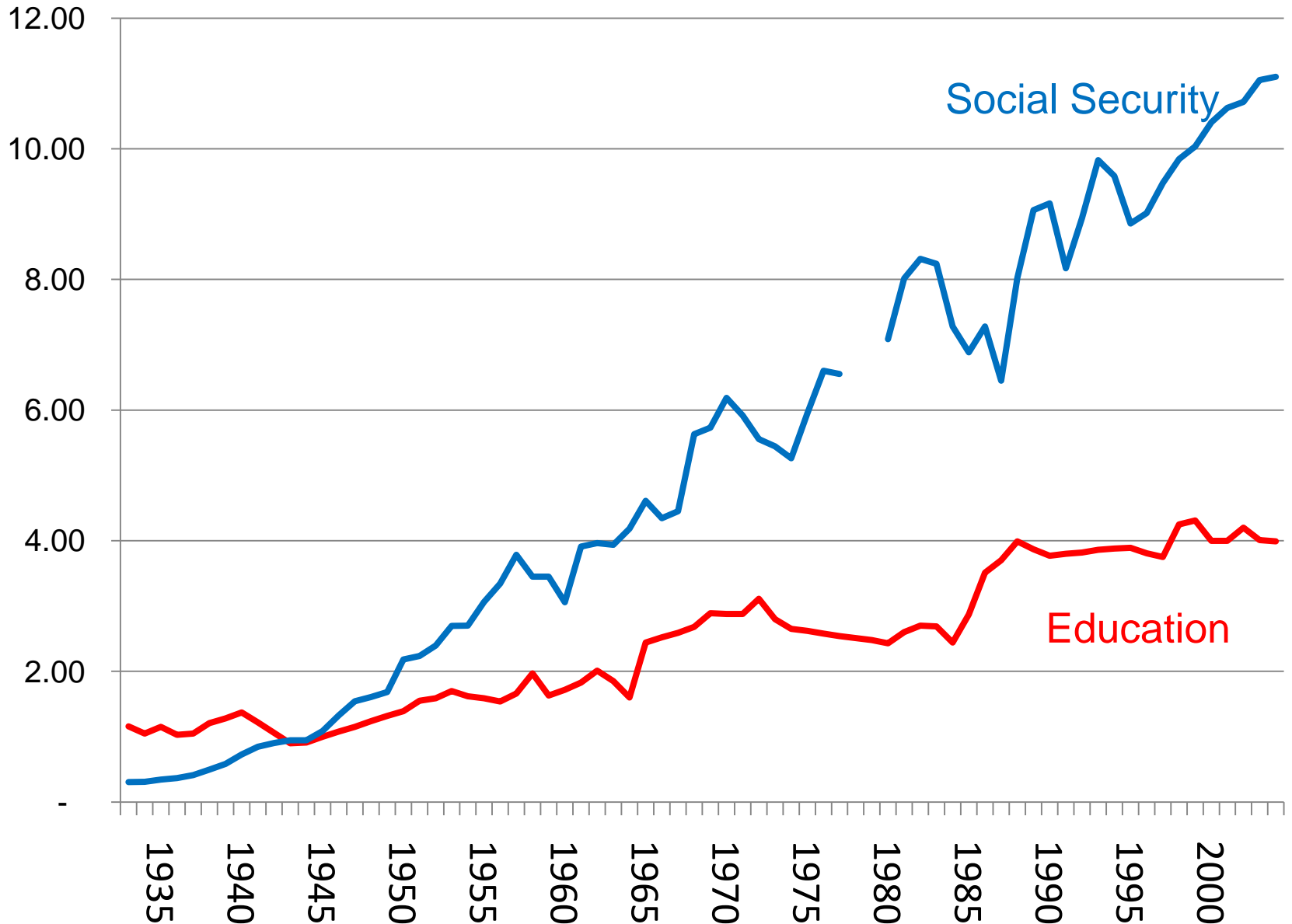# Net transfers on social security: 1960 to 2000
(Araujo, Turra and Queiroz 2010)

Per capita expenditures increased about 6 times between 1960 and 2000. Why?

- coverage rates from almost nothing to 90%

- expenditure per beneficiary increased about 40%

Almost universal by 2000

Net transfers on education: 1923 to 2000
(Araujo, Turra and Queiroz 2010)

Per capita expenditures increased about 10 times between 1923 and 2000. Why?

- coverage rates doubled

- expenditure per beneficiary multiplied by 5
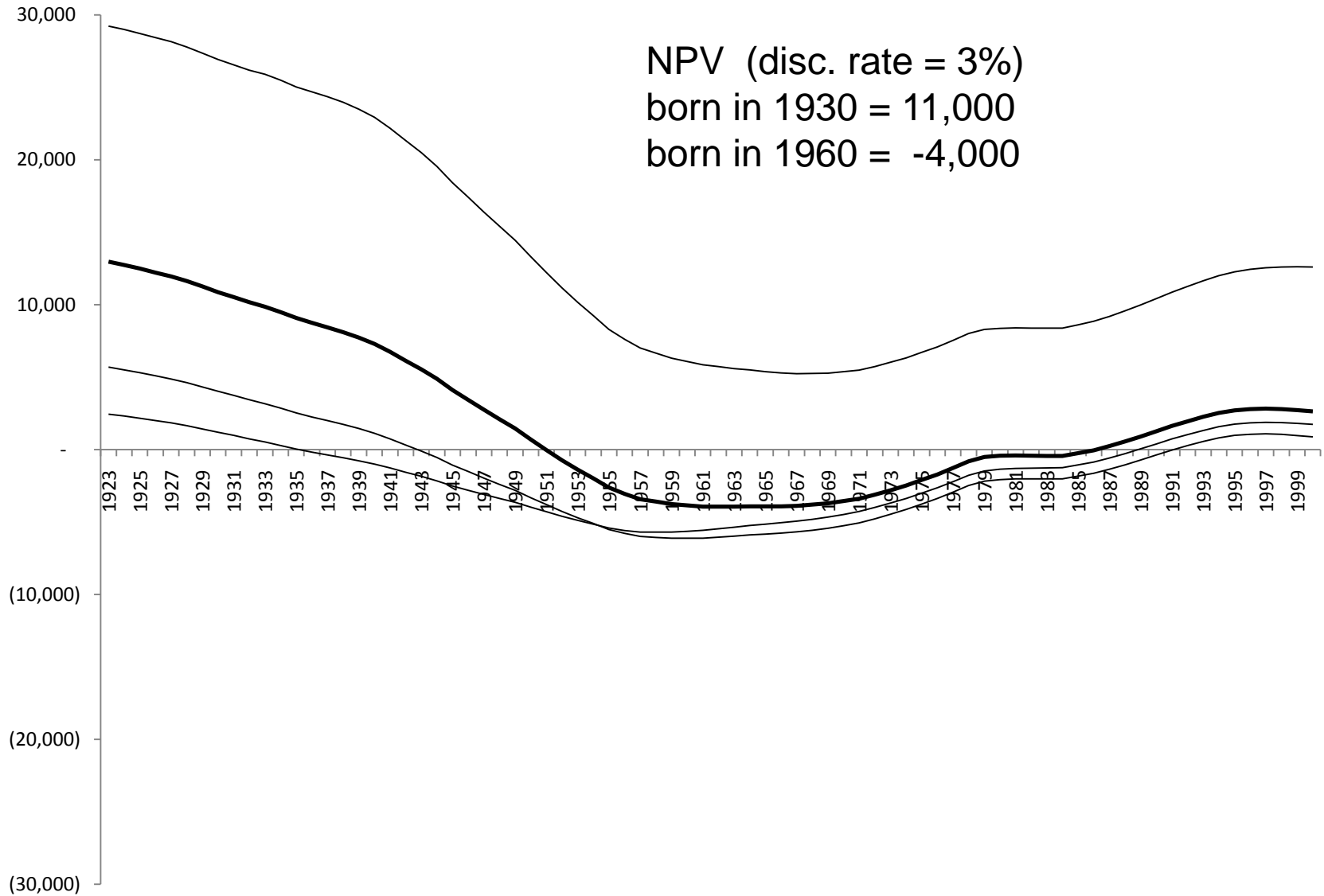
But expansion mainly after 1985

Public Expenditure as % of GDP: 1933 to 2004

Net present value of public transfers: cohorts born from 1923 to 2000
(Araujo, Turra and Queiroz 2010)

NPV (disc. rate = 3%)
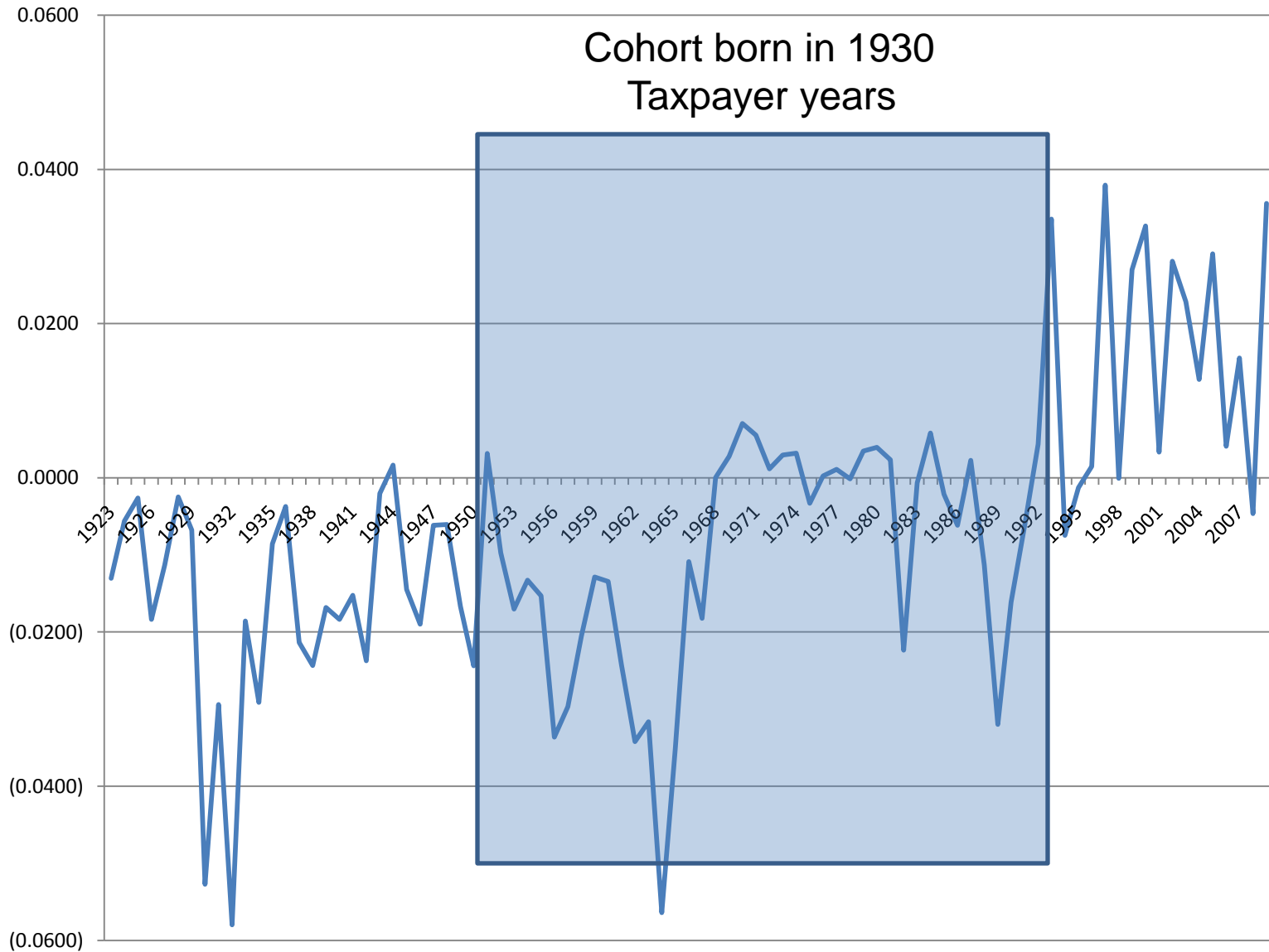born in 1930 = 11,000
born in 1960 = -4,000

Health expenditures?
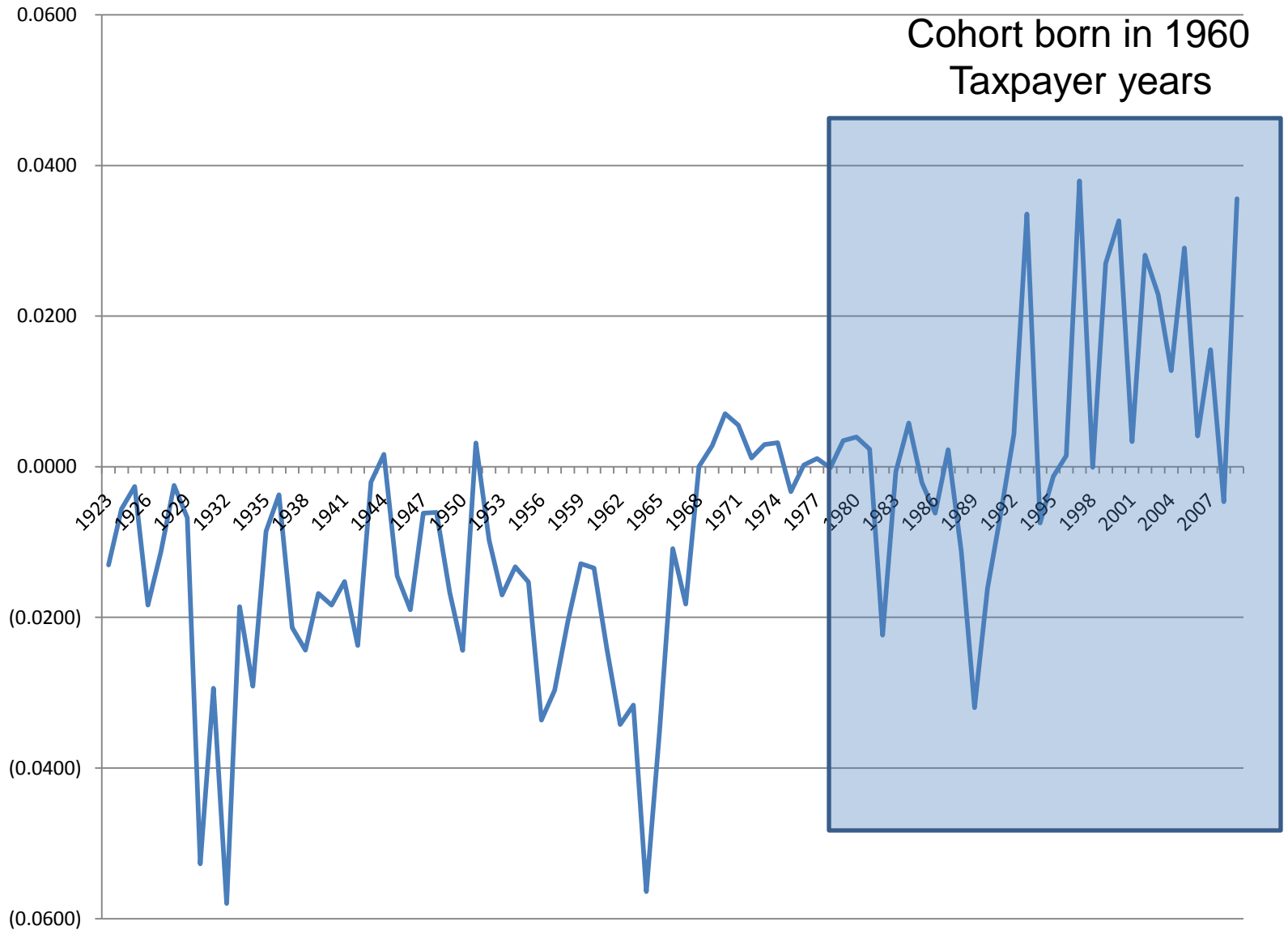
Other Expenditures?

Budget Surplus/Deficit?

Budget Surplus/Deficit as % of GDP: 1923 to 2007
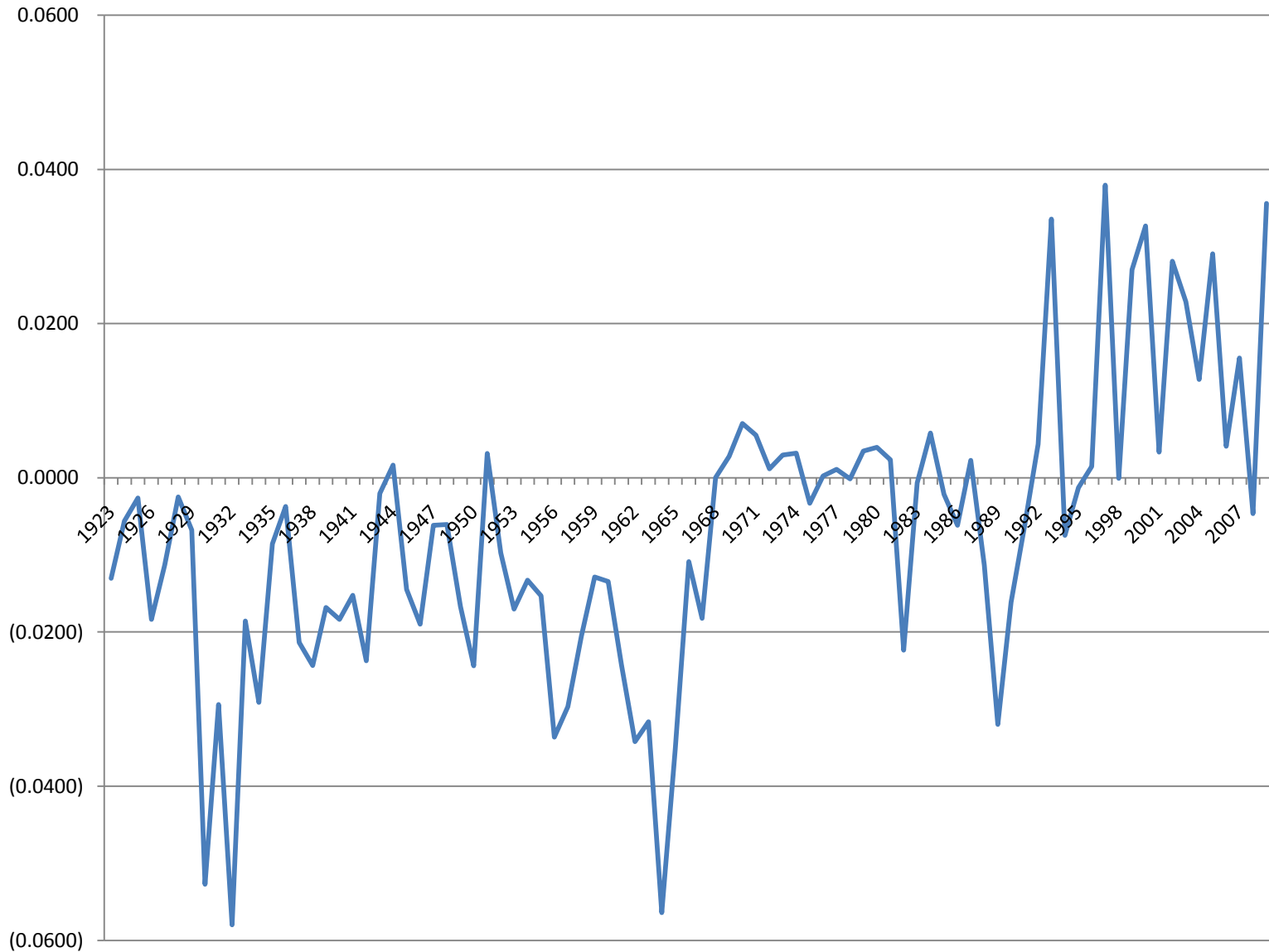
Budget Surplus/Deficit as % of GDP: 1923 to 2007

Budget Surplus/Deficit as % of GDP: 1923 to 2007

Intra-generational transfers?
The "José Sarney" (1930) cohort

	Mean Retirement Benefit	Net Present Value at Birth	% of all retirees in 1997
Age (urban)	3,732	5,848	7.01%
Age (rural)	1,780	4,759	18.65%
Contribution time	7,854	6,058	14.13%
Public servants (central gov.)	21,739	35,251	4.39%

Key findings 2

- Current generation of elderly will have net financial gains (gains with SS + only small losses with education)

- Brazil has a delayed pattern of NPV compared to the US. Current generations of prime age adults responsible for the expansion in education and expansion/generosity of social security

- Despite large differentials in life cycle gains across cohort subgroups, all have experienced positive NPVs for pensions

Discussion

- Why hasn´t the public sector combined both period and cohort measures to reduce poverty among children faster and improve intergenerational equity?

- How we end up spending so much more with the elderly than with children? Historical foundations?

- How to keep public flows for future elderly generations while improving human capital and the wellbeing of children (in a context of population aging)?