

# Pro-Poor Growth, Social Policies and Labour Market Linkages

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\*12 These Slides

<http://www.cps.fgv.br/cps/bd/curso/12-Pro-Poor-Growth-Social-Policies-and-Labour-Market-Linkages.pdf>

\*\* 13 Paper

<http://www.cps.fgv.br/cps/bd/curso/13-Linkages-Between-Pro-Poor-Growth-Social-Programs-and-Labor-Market-The-Recent-Brazilian-Experience.pdf>

\*\*\*\*14 Technical Appendix

<http://www.cps.fgv.br/cps/bd/curso/14-Linkages-between-Pro-Poor-Growth-Social-Programmes-and-Labour-Market-The-Recent-Brazilian-Experience.pdf>

## Social Welfare Function

- Money-metric social welfare function is derived as:

$$W = u(x^*) = \int_0^{\infty} u(x)w(x)f(x)dx$$

where

- $x^*$  is the equally distributed equivalent level of income
- $u(x)$  is the utility function, increasing in  $x$  and concave
- $w(x)$  is the weight given to the utility of individual with income  $x$ 
  - captures the relative deprivation suffered by individuals (decreasing function of  $x$ )

- should satisfy:  $\int_0^{\infty} w(x)f(x)dx = 1$

- Define  $w(x) = 2[1 - F(x)]$  and  $u(x) = \log(x)$

- Social Welfare Function used in this paper is thus

$$\log(x^*) = 2 \int_0^{\infty} [1 - F(x)] \log(x) f(x) dx$$

where  $x^*$  is the money-metric social welfare.

-  $\mu = \int_0^{\infty} x f(x) dx$  is the mean income

-  $(\mu - x^*)$  is a loss of social welfare caused by inequality.

## Inequality Measure

Decomposition a la Atkinson (1970)

$$\log(x^*) = \log(\mu) - \log(I)$$

Derived Inequality Measure) has a log utility a la Theil and Weights a la Gini = Thini - a new inequality measure

$$\log(I) = 2 \int_0^{\infty} [1 - F(x)] [\log(\mu) - \log(x)] f(x) dx$$

- Remember the Social Welfare Function used in this paper was

$$\log(x^*) = 2 \int_0^{\infty} [1 - F(x)] \log(x) f(x) dx$$

### Pro-Poor Growth (or today Inclusive Growth)

- Growth rate of mean income:  $\gamma = \Delta \ln(\mu)$

- Growth rate of social welfare:  $\gamma^* = \Delta \log(x^*)$

- Growth rate of inequality:  $g = \Delta \log(I)$

where g has a direct intuitive interpretation as the

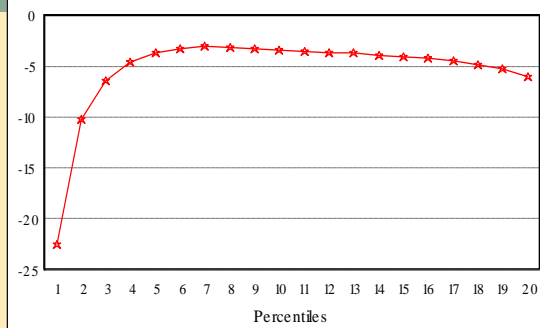
- Pro-poor growth rate (or inclusive growth rate):

- gain (or loss) of social welfare growth rate due to an increase (or decrease) in inequality.  $\gamma^{*c} = \gamma - g$

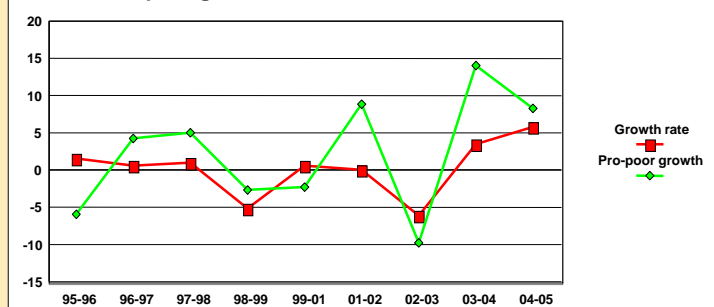
- For example, if mean growth rate is 5% but the pro-poor growth rate is 3%, 2% social welfare growth rate is lost due to an increase in inequality.

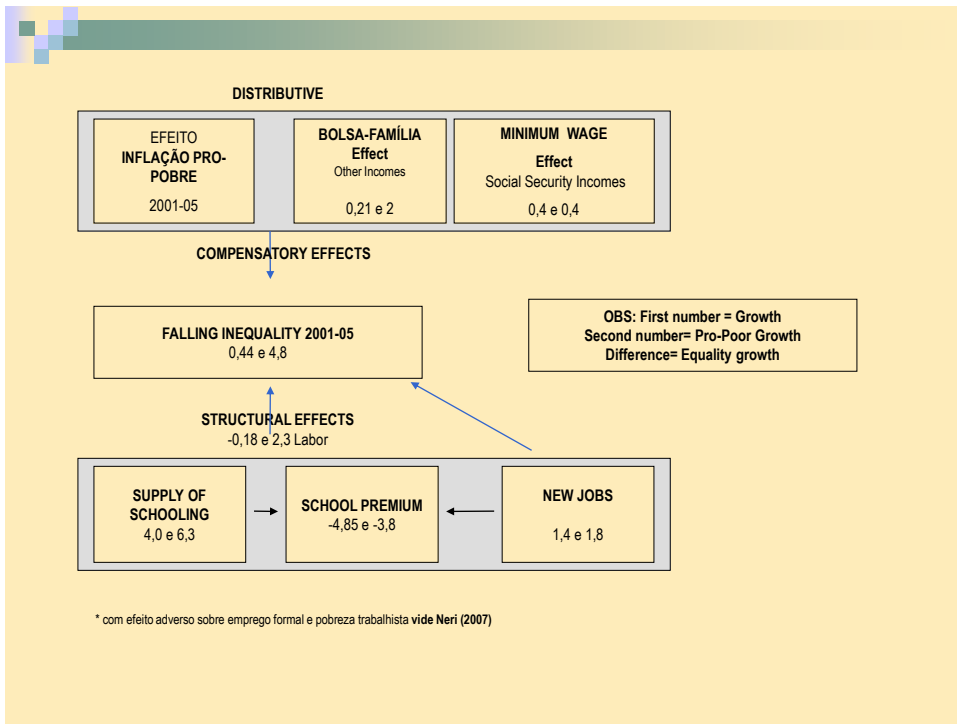
- It measures inequality changes using social welfare changes as its numeraire – convenient.

Growth rate of per capita real income, 2002-03



Pro-poor growth and Growth in Brazil: 1995-2005





## Socio-Demographic Trends

Means

	Children 0-15 years	Adults 16-65 years	Elderly 66 yrs & beyond
<b>Level 1995</b>	<b>0.347</b>	<b>0.596</b>	<b>0.057</b>
<b><i>Pro-Poor SWF</i></b>	<b><i>0.39</i></b>	<b><i>0.54</i></b>	<b><i>0.04</i></b>
<b>Δ1995-2004</b>	<b>-1.960</b>	<b>0.830</b>	<b>1.660</b>
<b><i>Pro-Poor SWF</i></b>	<b><i>-1.64</i></b>	<b><i>0.96</i></b>	<b><i>-0.67</i></b>