

## **\*8.3 TOP INCOMES' IMPACTS ON INEQUALITY, GROWTH AND SOCIAL WELFARE: IMPLICATIONS OF COMBINING SURVEYS AND INCOME TAX DATA IN BRAZIL**

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\* 7.4 text Drivers of Income Distribution Changes [https://www.cps.fgv.br/cps/bd/curso/Drivers\\_IncomeDistribution\\_Neri\\_Brazil\\_Updated\\_GMD.pdf](https://www.cps.fgv.br/cps/bd/curso/Drivers_IncomeDistribution_Neri_Brazil_Updated_GMD.pdf)

\*\* newspaper short article Top Incomes <https://www.cps.fgv.br/cps/bd/clippings/vc258.pdf>

\*\*\* text Top Incomes1 <https://www.wider.unu.edu/publication/top-incomes%E2%80%99impacts-inequality-growth-and-social-welfare>

## **1. The recent literature on inequality with PIT tables**

### **Other countries**

- Personal income tax (PIT) vs. household surveys and/or national accounts: **inequality is higher than previously thought and rising in the last decades** (Piketty, 2001, Piketty and Saez, 2003, Alvaredo, 2008, Atkinson, Piketty and Saez, 2011)

### **Brazil**

- Interpolation of PIT vs. national accounts and integration of PIT and PNAD sample survey: **inequality, which fell in surveys** (IPEA, 2013), remained **stable 2006-2012** (Medeiros, Souza and Castro, 2014a, b)
- Persistence of inequality 1926-2013 (Souza, 2013), 1933-2013 (Morgan, 2015) and 2007-2014 (Medeiros and Souza, 2017)
- PIT integrated to the PNAD to correct distribution and then adjusted to the total income of the national accounts: stable inequality and average growth according to national accounts (Morgan, 2017)
- PIT in 8 income brackets, opened by sources: **capital incomes explain the stability of inequality 2006-2012**, since they have a growing participation in the PIT, although with some deconcentration within filers (Medeiros and Castro, 2018)

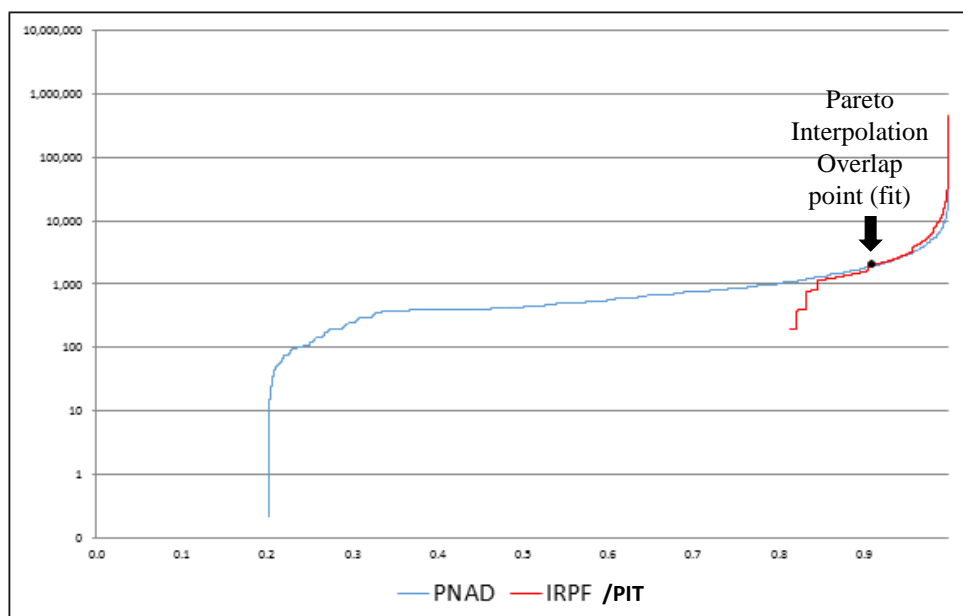
### **Several countries, including Brazil** (World Inequality Report 2018 - coordinate: Alvaredo, Chancel, Piketty, Saez and Zucman)

- Brazil (Morgan series) stable at the “**high-inequality frontier**” with Latin America, Middle East and Sub-Saharan Africa
- Russia, India, USA, Canada, China and Europe with inequality rising since 1980: “**toward the frontier**”?

## Motivation

1. Look into details of Personal Income Tax (PIT) and combined surveys-PIT data 2007-15
2. The literature gave little emphasis to **inequality** and **income growth** in PIT tables.
  - Growth has direct effects on **social welfare**
  - It also determines the **change of inequality** over time.
  - **1st moment** of income distribution provides valuable information on measurement issues on the **2<sup>nd</sup> moment (and vice versa)** .

## Individual Monthly Income by Population Quantile in 2007 (R\$)



Logic: If you declare you pay tax so we can use PIT for higher incomes

Source: PNAD (National Household Survey/IBGE) and IRPF (PIT – Personal Income Tax/RFB)

**PNAD and IRPF overlap points:  
Inequality (Gini)**

	2007	2015	total var.	annual var.
PNAD	0.625	0.582	-0.043	-0.005
Fit 0.911	0.698	0.690	-0.008	-0.001
Fit 0.900		0.690	-0.008	-0.001
Fit 0.866		0.690	-0.008	-0.001

**+18,5%**

Source: PNAD/IBGE; IRPF/SRF and Combined databases.

**PNAD and IRPF overlap points:  
Mean Income (constant R\$ at 2015 prices)**

	2007	2015	total % var.	annual % var.
PNAD	1,333	1,521	14.2%	1.7%
Fit 0.911	1,675	2,100	25.4%	2.9%
Fit 0.900		2,107	25.8%	2.9%
Fit 0.866		2,108	25.9%	2.9%

**+38,1%**

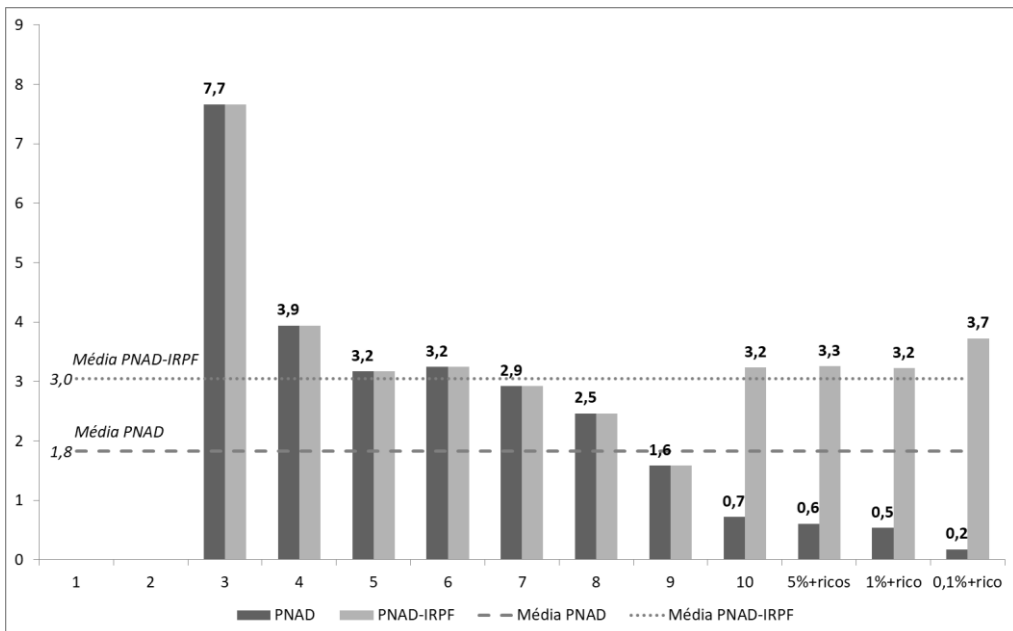
Source: PNAD/IBGE; IRPF/SRF and Combined databases.

## PNAD and IRPF overlap points: Social Welfare (Sen 1976)

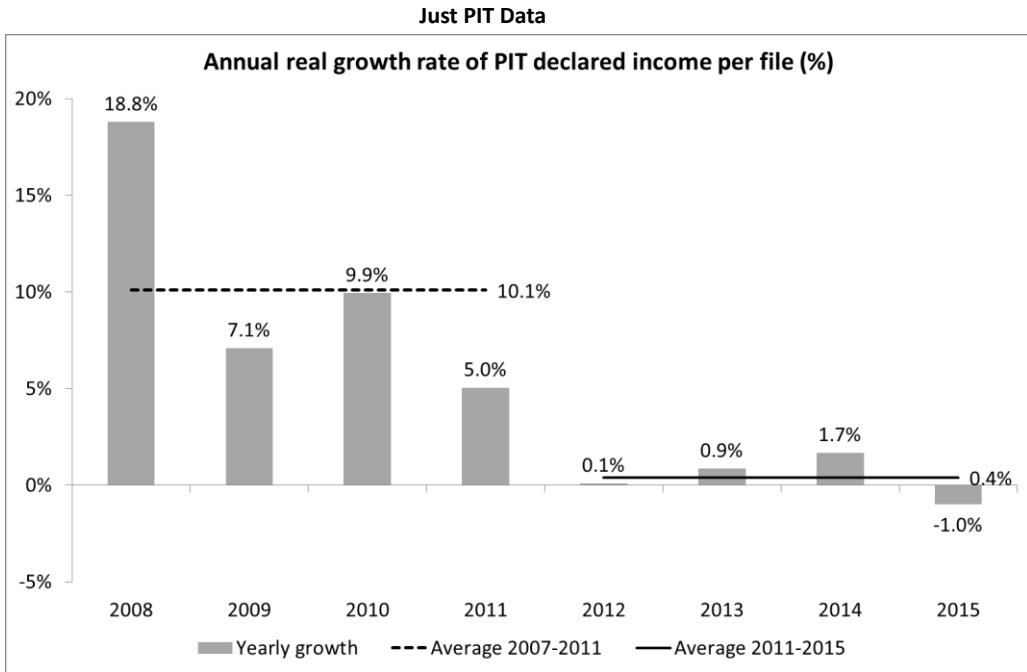
	2007	2015	total var. %	annual var.%
PNAD	500	636	27.2%	3.0%
Fit 0.911	505	651	28.9%	3.2%
Across Bases	1.02%	2.41%	1.7%	0.2%
				<b>+2.36%</b>

Source: IBGE/PNAD and combined PNAD-IRPF databases

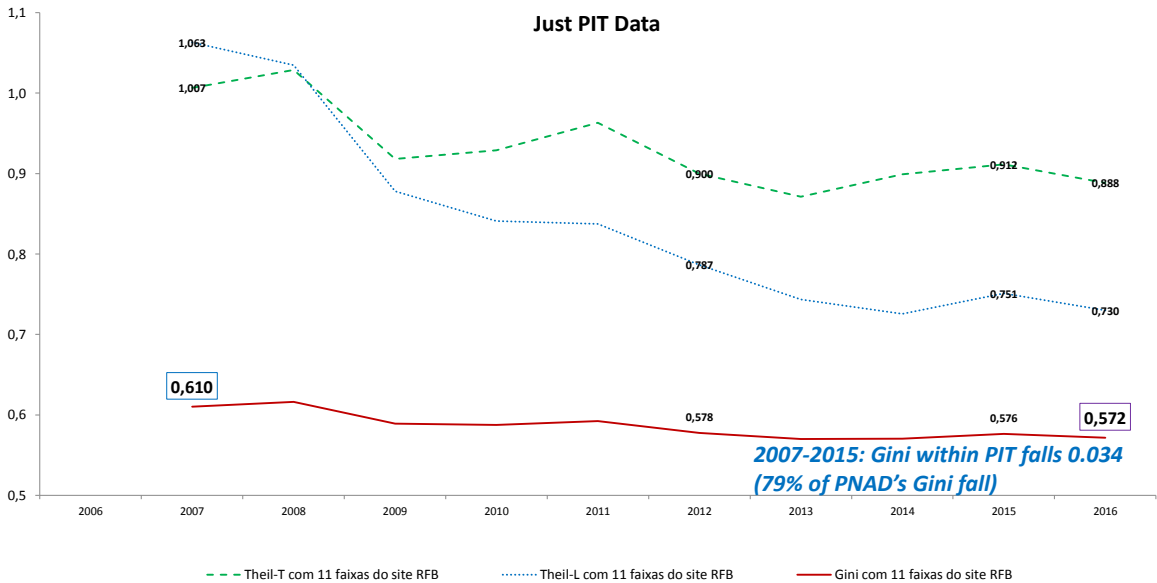
## Real Income growth rate by percentiles (2007-2015)



Fonte: Hecksher e Neri (2019) com microdados IBGE/PNAD e tabelas RFB/IRPF. Nota: Adultos com renda zero: 20,2% (2007) e 17,7% (2015).

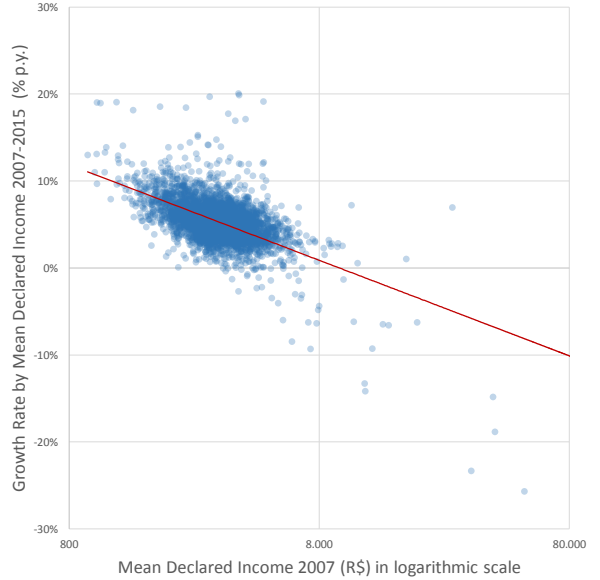
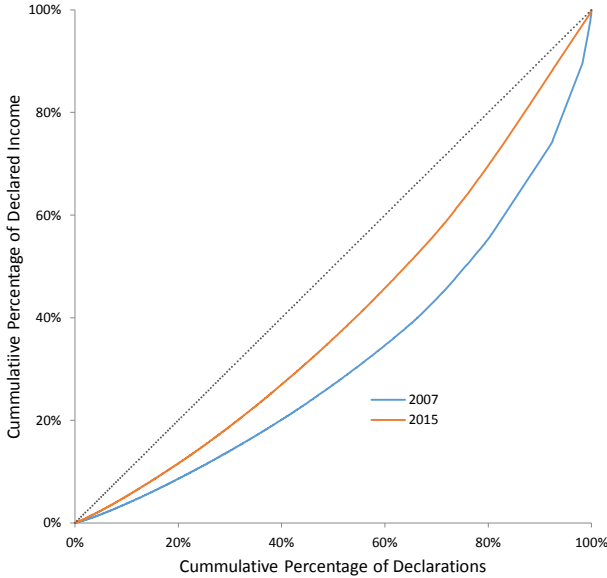


## Income Inequality Just within PIT has fallen



# Income Distribution Within PIT – By Municipality

Just PIT Data



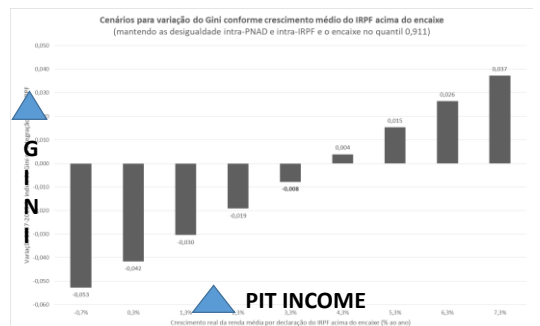
## Summarizing Results

**Static - The level of inequality measure rises** when higher top incomes replace previous lower estimates based on surveys, this same exercise also **increases by construction, the mean and the social welfare levels** associated with it.

**Dynamic - The movement** of these combined estimates present a **slower inequality trend fall** than pure household surveys, at the same time **income mean growth trends rose at a faster pace** which implies **higher social welfare growth rates** than suggested by previous surveys estimates.

**Inequality has fallen in PIT** by itself as in PNAD. Inequality rise depends on datasets are **combined**.

If you declare you pay tax so we can use PIT for higher incomes. **How about exempt incomes?**



## PIT growth boosted by exempt incomes

Type of income	2007	2015	var.2007-2015
Exempt	21.4%	31.3%	+9.9 pp
Exclusive taxation at source	7.9%	9.8%	+1.9 pp
Taxable	70.7%	58.9%	-11.8 pp

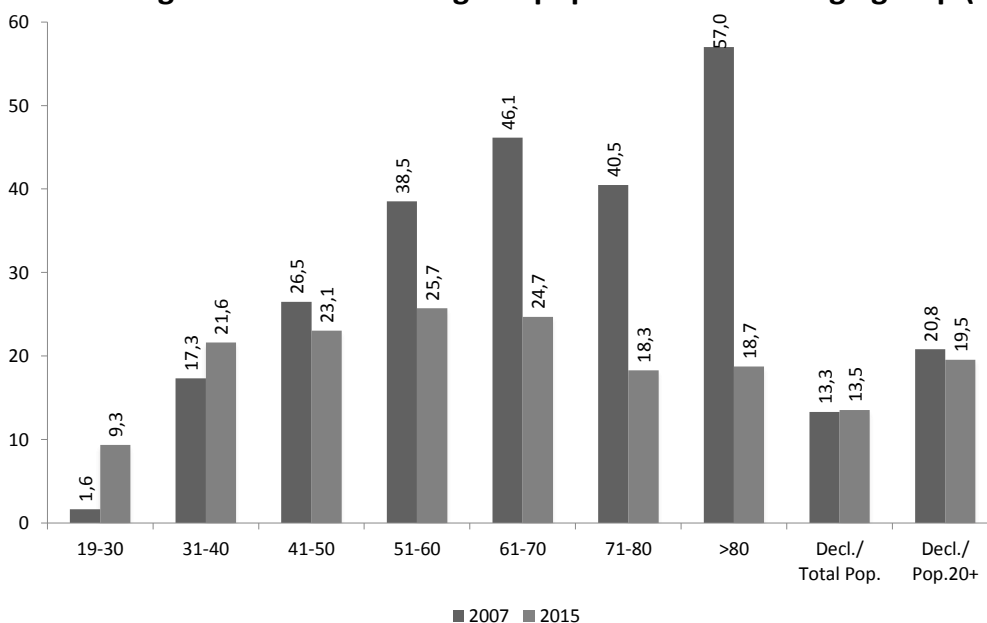
Source: Authors with IRPF/RFB tables.

There is no incompatibility of incentives in over-declaring exempt incomes. In some cases, the declaration of exempt incomes may justify wealth stock without tax cost.

Sources (out of 44) that most increased were **exempt incomes**:

1. **Formalization** of preexisting incomes. **Micro or small business** owner income (+2.43 pp)
2. PIT measurement problems in **financial income**. **Savings account** income (+1.19 pp)
3. **Exempt part of retirement benefit for 65 years and over (+1.32 pp)** Choices of dependents and tax exemptions and **interaction with legal & demographic trends**
4. **Also Deflator differences**

Percentage of PIT filers among the population of each age group (%)



Source: Authors with IRPF/RFB tables.