

## \*\*\*\* Rio Social Changes 2009-2016: Is There a Pre-Olympic Legacy ?

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Photo: Alexandre Maciel / RIOTUR

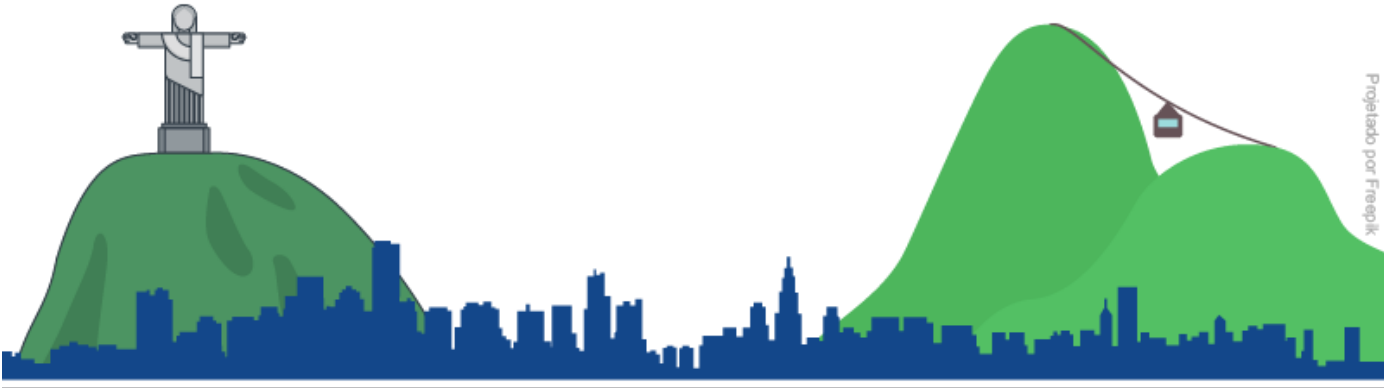
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### About the Project

- The term “Olympic legacy” refers generally to the projection of the gains to be seized by the city after the realization of the event. But **can we already assess significant inflections in the historical series of the municipality of Rio de Janeiro in the period between the announcement and the realization of the event?**
- How the local population has been affected during the period of preparation for the Olympics? **How has changed the home, school, work, transport...?**; Who benefited the most with these changes: men or women, or even young, middle-aged or elderly, and so on?
- The realization of a global event in a territory before nicknamed “splited city” poses enormous challenges in terms of inequality. **What changes reached the base of the social pyramid Rio? The distribution of income, evolved or regressed? And compared to the other cities in the Rio metropolitan area?**
- These are empirical and factual issues to be studied with a vast pool of public microdata still unexplored. **The unprecedented opening of Rio’s household surveys microdata allows a scientifically investigation of the existence or not of a pre-Olympic social legacy.**

[www.fgv.br/fgvsocial/rio2016/en](http://www.fgv.br/fgvsocial/rio2016/en)

# AREAS ANALYZED



Projetado por Freepik

EDUCATION

LABOR

HOUSING

PUB. SERVICES

TRANSPORT

DIGITAL INCLUSION

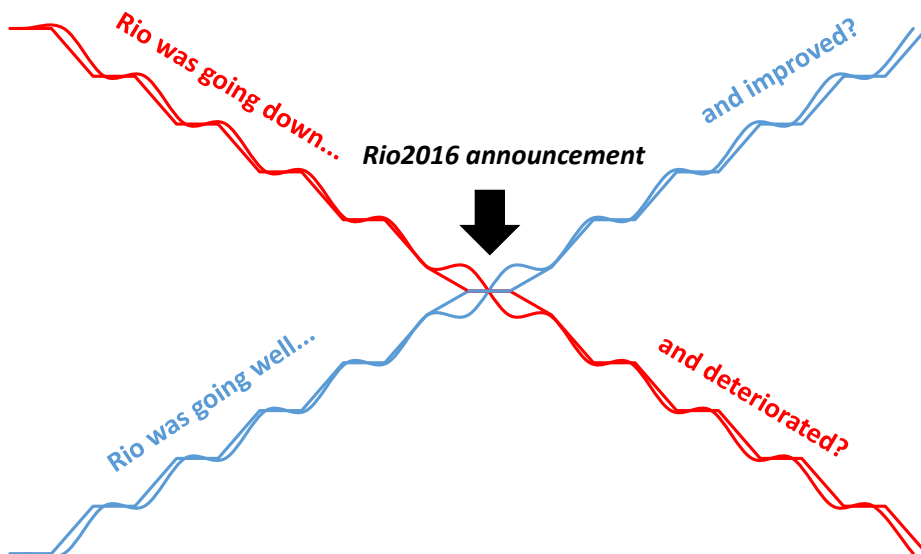
SOCIAL DEVELOP.



## Looking Through the “X”



announcement had an impact? If yes, for the **Worst?** Or **Better?**



## Evaluation Criteria for the *Carioca* Change 2008-2016<sup>#</sup>

- **1) Evolution** – simple comparison of each indicator before the Rio2016 announcement (2008) with its last available data (typically 2014 or 2016<sup>#</sup>). A sort of competition between the *carioca* society with itself. **How much each dimension changed after the announcement?**
- **2) Conditional Change** – in line with the previous criterion, but **comparing people with similar** sociodemographic characteristics (**sex, age, education, etc.**) at each point of time. In ours competitive analogy, we net out different initial conditions for better assessing the post announcement trajectory.
- **3) Relative Conditional Change** – Goes a step beyond the previous criterion and **compares not only similar people but assesses *carioca's* relative progress with respect the rest of the Metropolitan Area, also known as “Greater Rio”**. Dynamic progress between peers at distinct geographic areas. **It is not enough for the carioca to see his indicators improve, but it has to improve more than for the control group.**

<sup>#</sup> Carioca means born in the city of Rio; Income based measures go up until 2016, while most others indicators reach only 2014.

### the Pattern of Changes changed between before and after Rio2016 announcement?

#### Social Scoreboard – Comparable Changes Before X After 2008

##### 1) Cariocas Changes:

Before Announcement (1992-2008): 18↑ x 6↓

After Announcement (2008-2016<sup>#</sup>): 23↑ x 1↓

##### 2) *Cariocas* Conditional Changes:

Before Announcement (1992-2008): 13↑ x 5↓ and 6 draws

After Announcement (2008-2016<sup>#</sup>): 20↑ x 1↓ and 3 draws

##### 3) *Cariocas* Relative Conditional Changes:

Before Announcement (1992-2008): 7↑ x 10↓ and 7 draws

After Announcement (2008-2016<sup>#</sup>): 18↑ x 1↓ and 5 draws

## Comparative Scoreboard – Change in Rio x Control Group

Area of Interest		1992 to 2008	2008 to 2016 <sup>a</sup>
Pub. Serv.	Sewerage	⇓	⇓
	Sewage in River or Lake	0	⇕
	Piped Water	⇓	⇕
	Garbage Collected Directly	⇕	⇕
	Electricity*	⇕	⇕
Housing and Transport	Three or more inhabitants per bedroom	⇓	⇕
	Financed own house	⇕	0
	Own house with bathroom	⇓	⇕
	Washing machine	⇓	⇕
	Time in Transport (Direct to Work)	⇓	0
Education	Years of Schooling – Total Population	⇓	⇕
	Years of Schooling – 15 years or +	⇓	0
	Years of Schooling – 5 to 14 years	⇓	⇕
	Goes to School – Below 15 years	0	⇕
Labor and Social Develop.	Employee's Contribution for Private Social Security	⇕	⇕
	per capita Household Income – Labor <sup>d</sup>	⇕	⇕
	per capita Household Labor Income – Microentrepreneur <sup>d</sup>	0	⇕
	per capita Household Labor Income – Wage earners <sup>d</sup>	0	⇕
	per capita Household Income – Total <sup>d</sup>	⇕	⇕
	per capita Household Income – Social Security or BPC <sup>d</sup>	0	0
	per capita Household Income – Others Sources <sup>d</sup>	⇓	0
	per capita Household Income – (Total – Economy of Scale 0.5) <sup>d</sup>	⇕	⇕
	Poverty – CPS/FGV Line <sup>d</sup>	0	⇕
	Poverty – US\$1,25/day PPP Line <sup>d</sup>	0	⇕

Out of the 38 indicators 24 can be traced back to assess changes during the period before the Olympic announcement. The table on the left shows a summary of the statistical analysis of the indicators evolution in Rio compared with the control group, strategy detailed in the following slides, confirming the "V" format on the comparison before and after the Olympic announcement.

## Social Scoreboard – Comparable Results

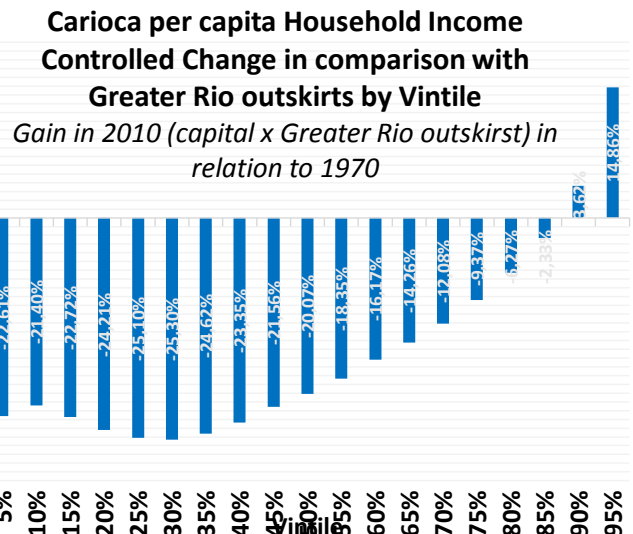
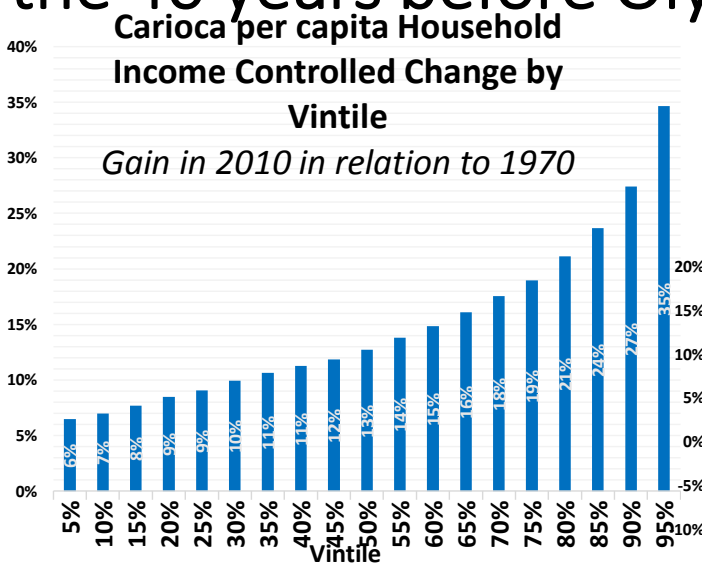
## 3) Cariocas Relative Conditional Changes:

(1992-2008): 7⇕ x 10⇓ & 7 statistical draws

(2008-2014/16<sup>#</sup>): 18⇕ x 1⇓ & 5 draws

# Income based measures go up until 2016, while most others indicators reach only 2014.

# Rio's Social Indicators changed for better in the 40 years before Olympic Announc.?



# Rio's Social Indicators changed for better in the 40 years before Olympic Announc.?

**Results** for the trajectory of 10 social indicators between both periods:

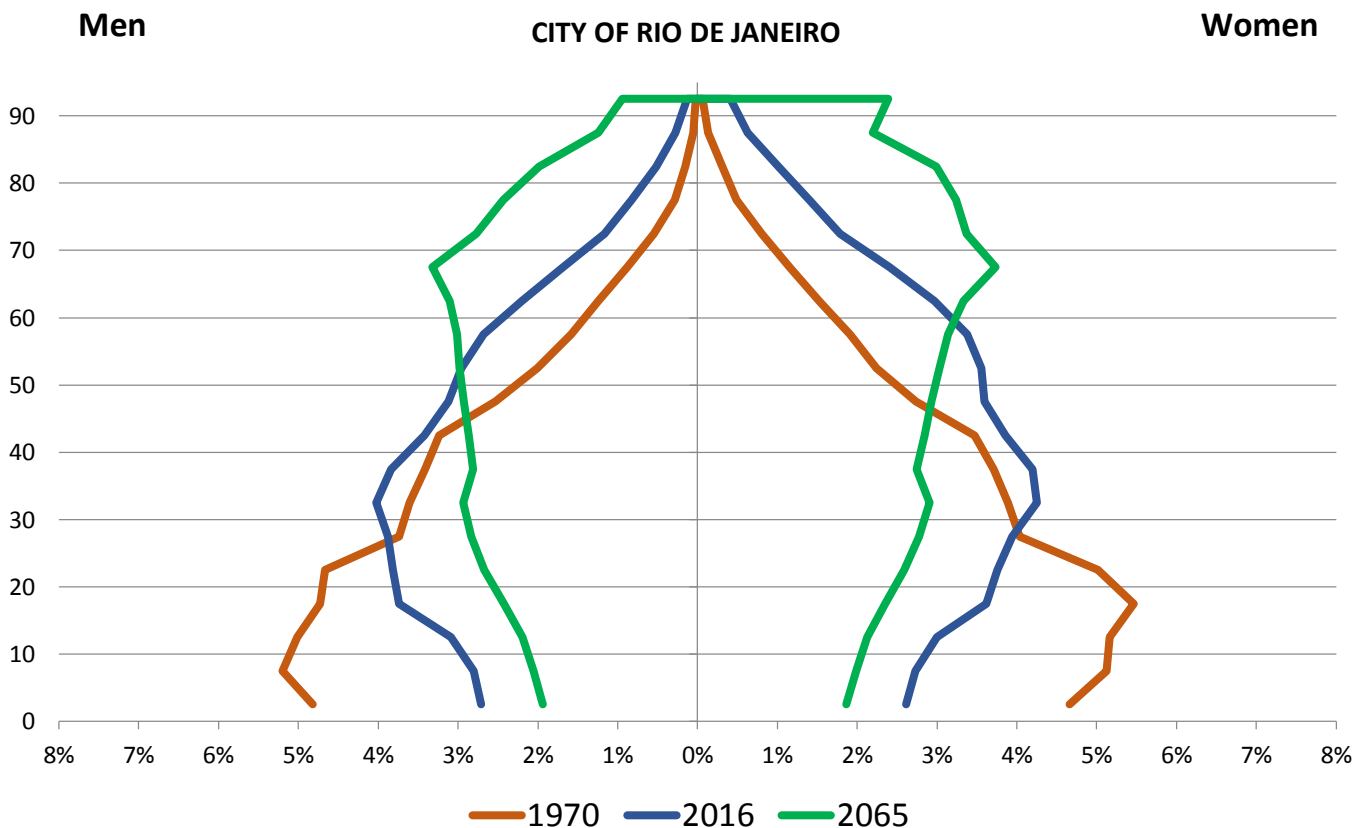
a) There were a **relative worsening bias for Rio** in relation to the control group **in all 10 indicators between 1970 and 2010**.

b) In the other hand, **between 2008 and 2016, the path inverts with Rio's relative improvement in 8 of 10 comparable<sup>##</sup> indicators**.

c) **There is a clear V shaped long term trajectory marked by a relative **worsening** before and **improvement** after the Olympic announcement.**

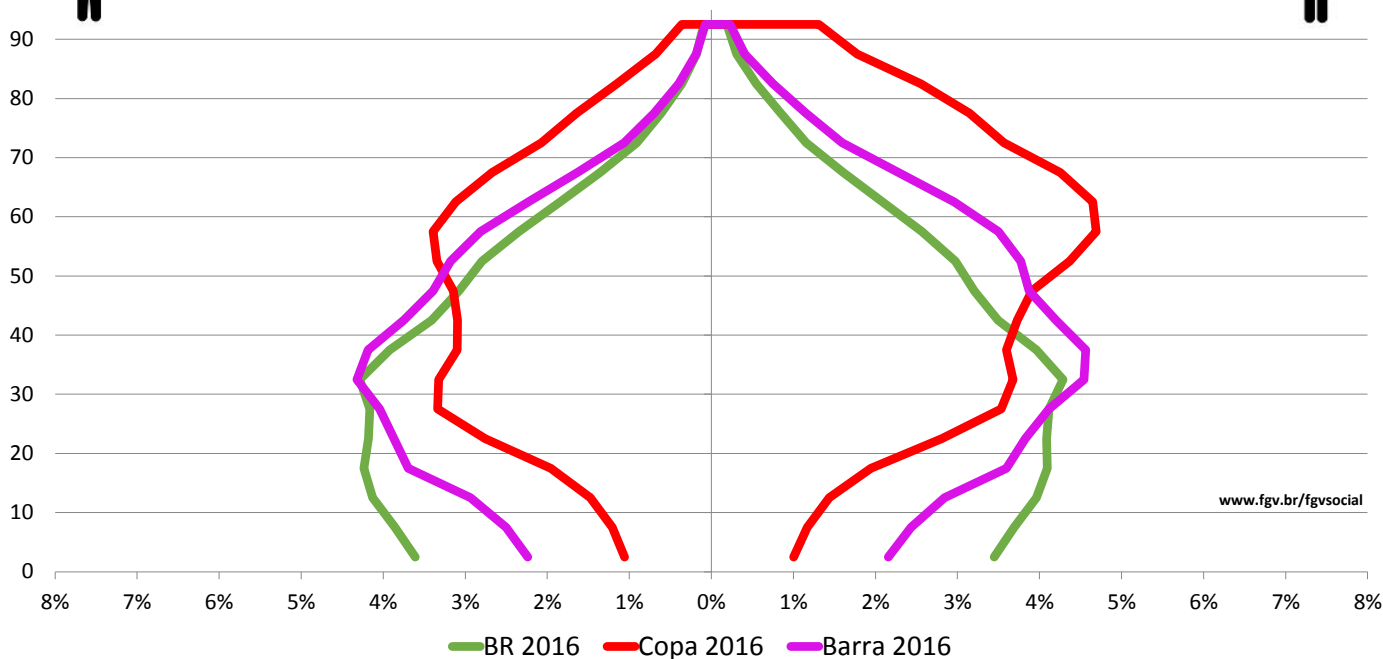
<sup>##</sup> **V** in income, poverty, education, housing, public services and **W** in sewerage and car ownership.

Population by age and sex in Rio (1970-2016-2065)

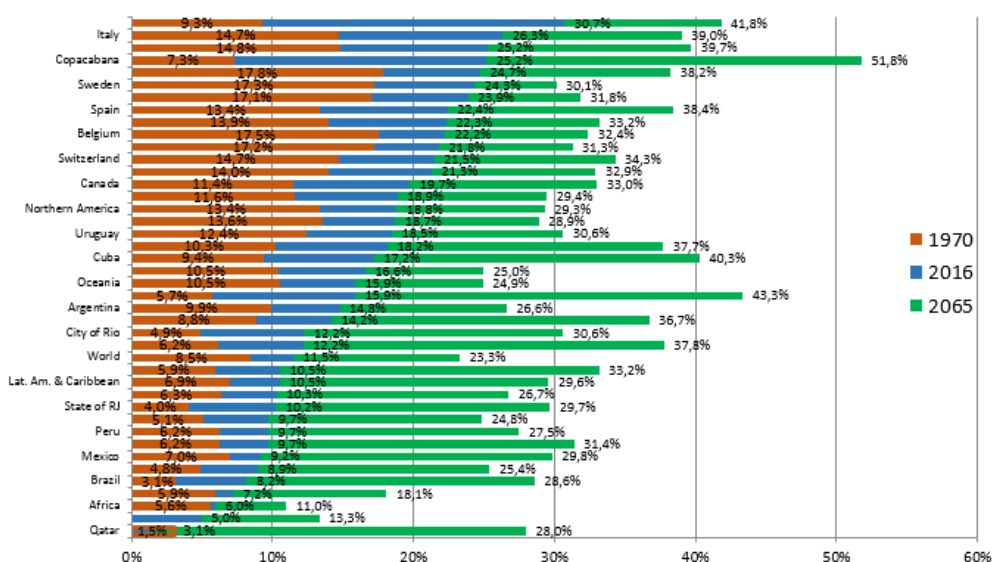




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### Aging in Rio and around the world (1970-2016-2065)



According to demographic forecasts, the problem is the proportion of the working-age population, is now dropping from 2016. **Rio needs a new Post-Olympic project** which improves the quality of education through integral schools and nurseries for the disadvantaged kids. Other line is to attract talents from outside the state a task that the Olympic event might help to achieve.

Source: FGV Social with microdata from IBGE Census and projections by Beltrão & Sugahara (2016) and UN (2016).