Introduction

Brazil is a developing urbanized country, 85% of population live on urban areas, and 47% on Metropolitan Regions. So it was not surprising that the manifestations of June 2013 were motivated by an urban issue. Millions took the streets against fare increases on transportation, so mayors of all major cities revoked the new tariffs.

However it is not clear how this decision impacted society’s welfare. Compared to the literature on the effects of automobile taxes, very few is known about the distributional effects of public transport fare policies. There are very few quantitative evaluation of its distributional benefits, being unclear how pro-poor are these instruments.

Research Problem

• Revocation meant higher fare subsidy:

<table>
<thead>
<tr>
<th>Year</th>
<th>Expenditure mR$</th>
<th>% of Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>660</td>
<td>2.1 %</td>
</tr>
<tr>
<td>2013*</td>
<td>953</td>
<td>2.8 %</td>
</tr>
<tr>
<td>2014*</td>
<td>1,651</td>
<td>4.29 %</td>
</tr>
</tbody>
</table>

* Estimated

• However, journey to work are excessively long, particularly for the very poor, so investments on transit speed might have a very high welfare marginal benefit.

Method

Objective:

Compare the distributional effects of:

Fare reductions × Alternative policy
(Investment on Transit Speed)

Data Source:

Urban OD surveys from different Brazilian cities.
Cities that have carried OD surveys on recent years:

Benefits of Fare Reduction:

Individual annual savings from public transport spending.
Source: Disaggregated data from OD surveys in different Brazilian Cities

Benefits of Speed Increase:

Individual time savings monetized by “Value of Travel Time” (VOT) approach.
VOT is the amount that a person could pay, after receiving the time saving, and just keep the same utility.
Generalized cost of public transportation can be estimated as:

\[ \Gamma_{pt} = \delta \sigma_{VOT} \gamma (Y-C_{pt})^y + \phi X + \phi Y_{pt} + \epsilon_{pt} \]

Comparison of policies:

Compare the impacts on generalized cost of transport of each policy on individual level.
Aggregate results by income groups to see the distributional effects of policies.
Compare the results between different metropolitan regions.

Research Questions

What are the distributional effects of urban transport policies in Brazil?
What were the welfare consequences of fare reductions in 2013?
Who were the main beneficiaries? Could alternative policies have a better performance?
How do the answers from these questions vary for different cities?