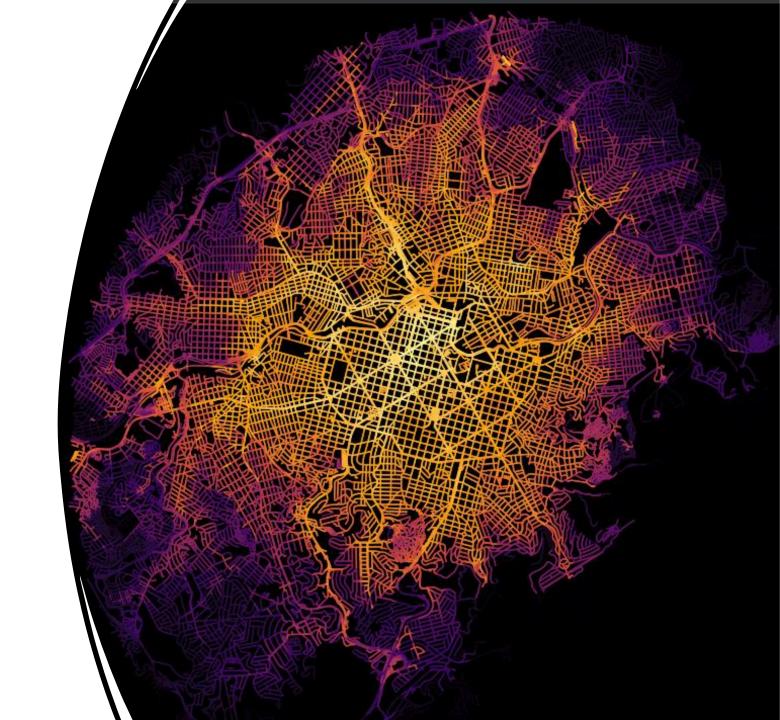
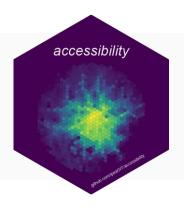
Accessibility inequality and poverty





accessibility: transport accessibility metrics

CRAN 1.4.0

downloads 15K

GitHub code

https://ipeagit.github.io/accessibility

Inequality indicators:

- concentration_index()
- gini_index()
- palma_ratio()
- theil_t()

Poverty indicators:

fgt_poverty()

All 3 Foster-Greer-Thorbecke (FGT) poverty measures

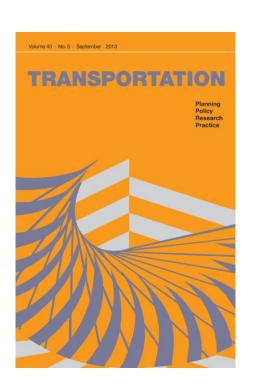




Karner, A., Pereira, R. H., & Farber, S. (2024). Advances and pitfalls in measuring transportation equity. <u>Transportation</u>

Inequality indicators:

- 1. Gini index it ignores groups' rankings*
- 2. Theil index ! only Ok for categorical groups*
- 3. Palma ratio ignores variations within groups
- 4. Concentration index
 - Same intuition as Gini/Lorenz *but* population along the x-axis is ordered by a socioeconomic variable
 - Varies from -1 to 1







Karner, A., Pereira, R. H., & Farber, S. (2024). Advances and pitfalls in measuring transportation equity. <u>Transportation</u>

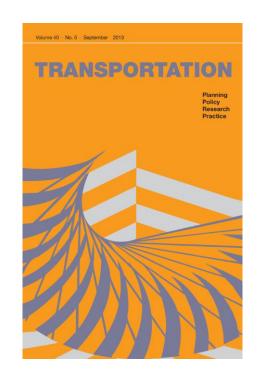
FGT family of **Poverty indicators**:

FGT₀: *extent* of poverty

Number of people below poverty line

FGT₁: *severity* of poverty

Average percent distance between the poverty line and the accessibility of individuals below it



FGT₂: **extent** and **severity**

The number of people below the poverty line weighted by the size of the accessibility shortfall (higher weight on the poverty of the poorest)



Lets' code





Link to reprex with sample data

A crash course on Urban accessibility with R

Rafael H. M. Pereira

