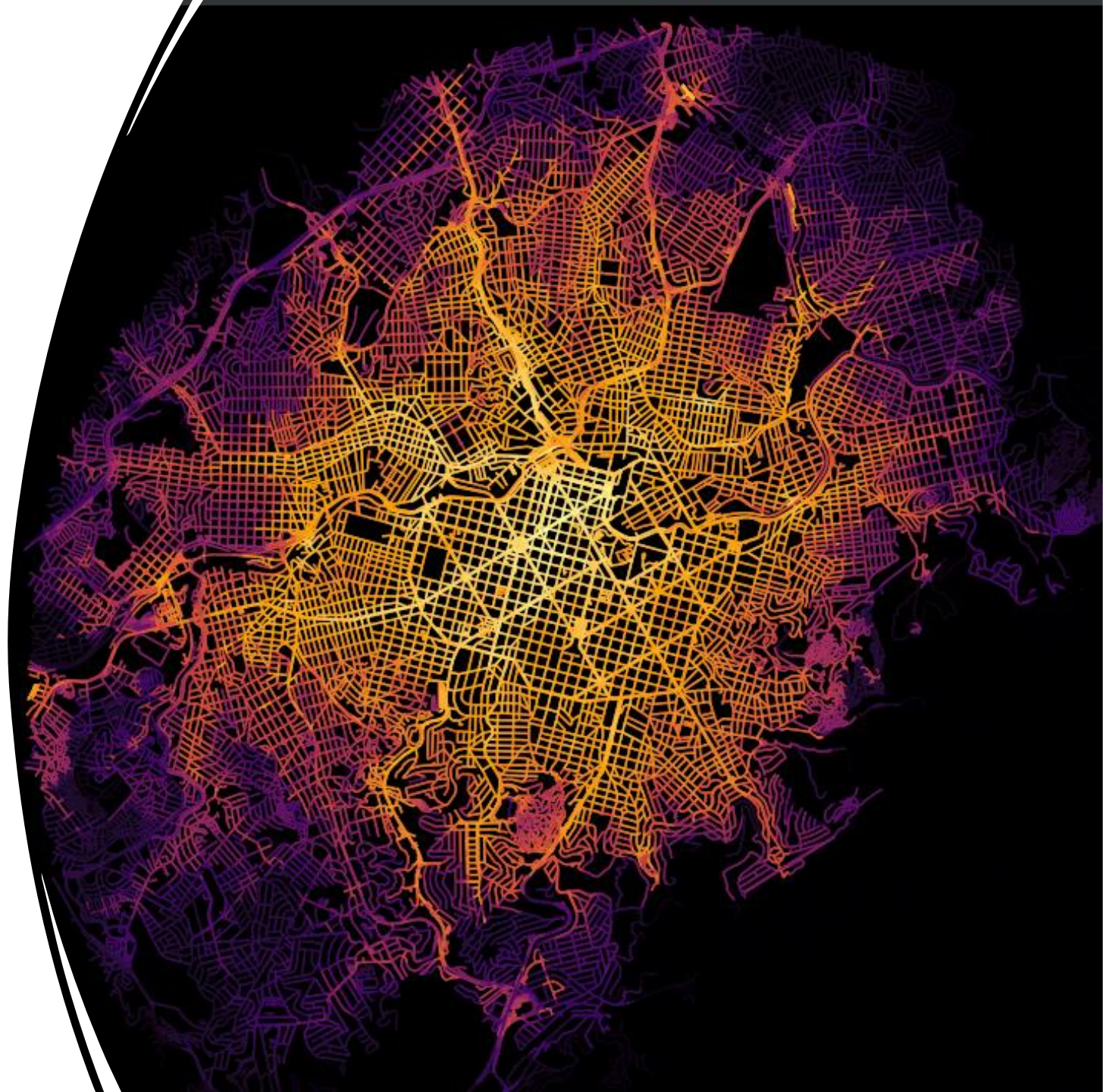
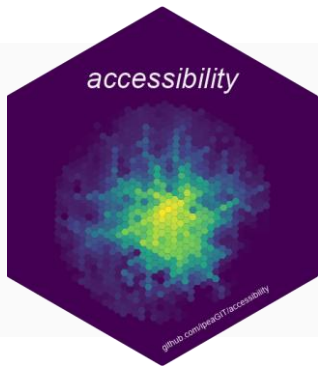


Accessibility inequality and poverty





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()`

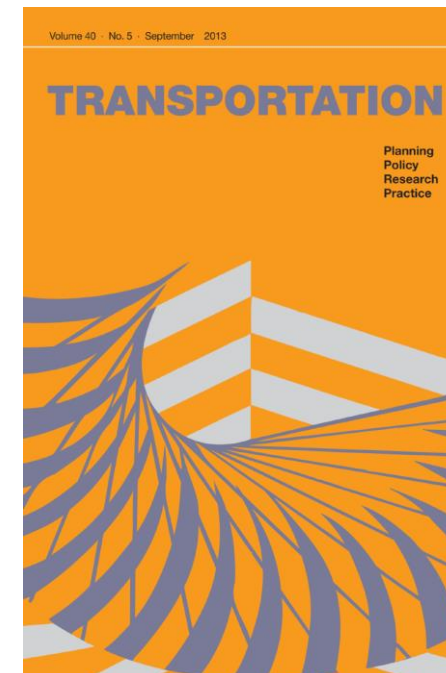
All 3 Foster-Greer-Thorbecke (FGT) poverty measures



Karner, A., Pereira, R. H., & Farber, S. (2024). **Advances and pitfalls in measuring transportation equity.** [Transportation](#)

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.** [Transportation](#)

FGT family of **Poverty** indicators:

FGT_0 : **extent** of poverty

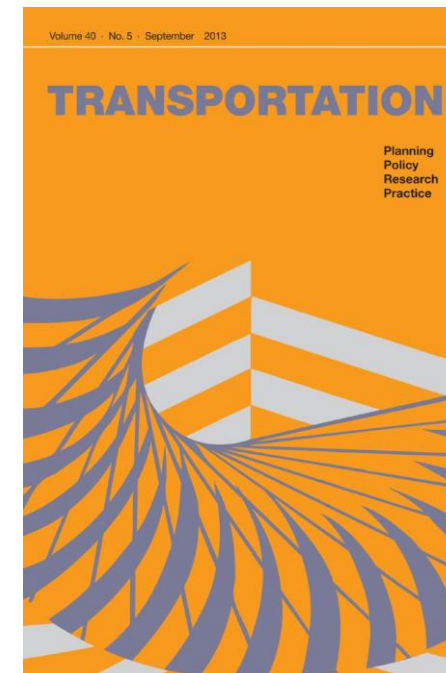
Number of people below poverty line

FGT_1 : **severity** of poverty

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

FGT_2 : **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 rerex with sample data

A crash course on Urban accessibility with R

Rafael H. M. Pereira

 @UrbanDemog