Urban sprawl and evolution of accessibility profiles in Chinese cities

Abstract

1 Introduction

1.1 Urban sustainability and public transport accessibility

1.2 Urban sprawl and transit-oriented development

1.3 Homothetic scaling and accessibility profiles

The size and spatial structure of cities are tightly related, as it was shown by [Lemoy and Caruso, 2020] that full population density radial profiles follow a scaling relationship with population. This was coined as "homethetic scaling", as all cities appear then to be scaled versions of another. This property can be derived from the Alonso urban monocentric model [Delloye et al., 2020]. It furthermore holds for a variety of land-uses [Lemoy and Caruso, 2021].

Travel times within large functional urban areas similarly follow some radial scaling patterns: [Mennicken et al., 2019] show that congestions leads to higher transport times the closer to the center, and provide empirical evidence for homothetic scaling of transport access.

1.4 Proposed approach

2 Methods

2.1 Data

2.2 Accessibility measures

3 Results

4 Discussion

References

[Delloye et al., 2020] Delloye, J., Lemoy, R., and Caruso, G. (2020). Alonso and the scaling of urban profiles. *Geographical Analysis*, 52(2):127–154.

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