

Liveable Urban Spaces in Polycentric Territories: A Case Study for Central Italy

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Extended Abstract

Research background, research questions and objectives

In recent years, major cities have increasingly promoted urban policies to achieve a more sustainable environment, especially after the COVID-19 pandemic. Indeed, during lockdowns, with the forced restrictions on people's mobility, spending more time at home has highlighted the centrality of the provision of neighborhood services. In this manner, COVID-19 reopened and boosted the debate on how to radically rethink urban spaces, in metropolitan areas but also in middle cities and polycentric territories. After Paris, with its mayor Hidalgo that launched the slogan of "city 15 minutes away", redefining urban strategies for resilience was also taken up by several Italian cities, including Milan, Rome and Bologna.

The notion of Carlos Moreno's 15-minute city (Moreno et al., 2021) refers to an area where citizens can easily reach essential services through a 15 minutes' walk (or bike ride). The 15-minute city (FMC or 15mC) is an urban planning concept focused on groups of people who have historically been excluded from planning, such as women, children, people with disabilities, and the elderly. Access to schools, green spaces, basic social infrastructures, and complementary activities for residents are considered essential to improve the well-being of local communities.

The ongoing 2021-2027 structural funds programming and the National Recovery and Resilience Plan represent a unique opportunity for a sustainable redefinition of the urban development model in Italy and in other European countries. However, to be successful, public policies and regional planning need to be accompanied by result-oriented monitoring, reporting and evaluation processes. Transparent and spatially detailed information is extremely important to support collective decision-making and to develop evidence-based policies. In this respect, open digital navigation platforms, such as Google Maps and OpenStreetMap (OSM), are becoming increasingly popular among academics and practitioners as a precious source of knowledge, especially when official statistics are difficult or expensive to produce at a detailed spatial granularity.

Against this backdrop, this work aims to construct metrics able to evaluate progress in terms of accessibility to services related to basic needs and amenities, with a focus on mobility. Our case study focuses on the Marche region in Central Italy which is an emblematic example of the polycentric system of towns, rural areas and municipalities characterizing most of the Italian territory.

Based on our results, implications for policy and planning will be discussed. Moreover, we will provide possible avenues for future research and explain how the approach for a proximity metric based on OSM input categories is scalable, i.e., transferable across spatial scales without any significant adjustment.

Methodology, analysis, and results

In this article, we provide a methodology to evaluate proximity to essential services and amenities at the local level. We will provide the results of the implementation of this methodology on a set of municipalities that are considered *service provision centres*, that is centres offering essential services (education, health and mobility) for the surrounding territory, according to the National Strategy for Inner Areas (NSIA) launched by the Italian Government in 2012 for tackling the problems of depopulation and limited access to services in inner areas (Barca et al., 2014).

Our case study focuses on the Marche region in Central Italy which is an emblematic example of the polycentric system of towns, rural areas and municipalities characterizing most of the Italian territory. According to the NSIA methodology, in the Marche region, the urban poles of attraction are 11 while inter-municipal poles of attraction are 2.

An example of the use of OSM geo-data in our analysis can be found in Figure 1.

Figure 1: Two polar cases in the Marche Region: the center of the city of Ancona and a peripheral neighborhood in Porto Recanati (15-minute walking distance to Hotel House)

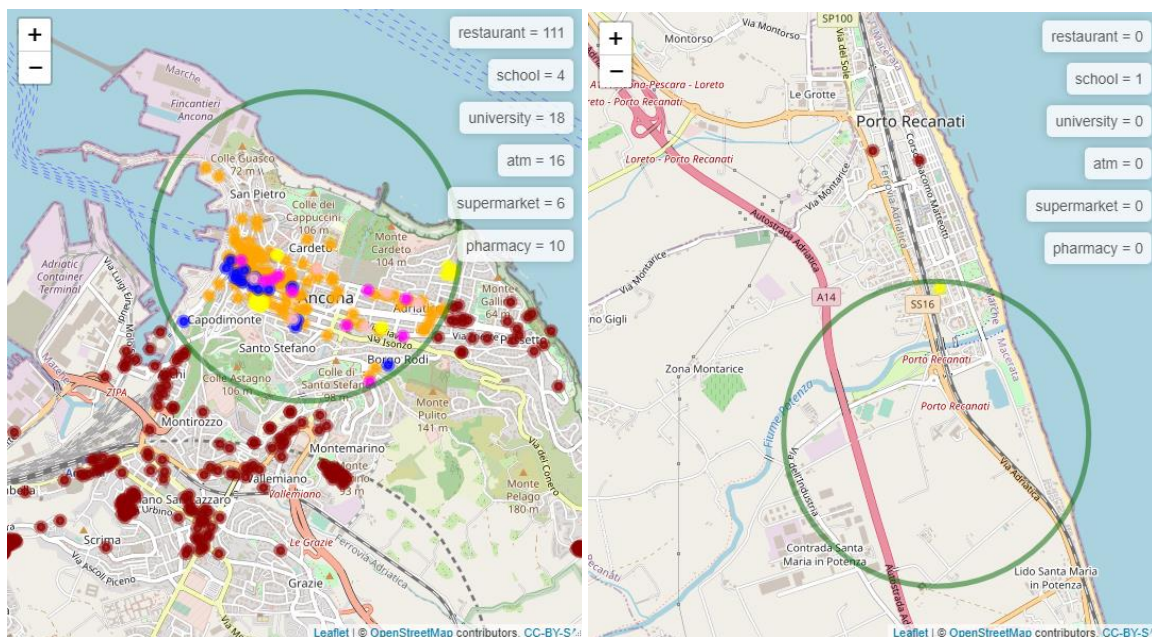


Figure 1 visually displays the distribution of relevant Points of Interests (POIs) based on OSM geo-referenced data. The Figure juxtaposes and provides simple counts for the city centre of Ancona (left panel), and for a well-known example of school and residential segregation in the region, i.e., the Hotel House's neighborhood in the municipality of Porto Recanati (right panel).

Based on OSM data it will be possible to verify whether cities defined as *service provision centres* according to the NSIA methodology, can also be considered 15-minute cities from an intra-urban perspective, that is, according to the notion of Carlos Moreno's 15-minute city.

Conclusion

In many Italian cities, as well as in large European metropolises (in addition to Paris, we can think of Amsterdam and Barcelona) the pandemic has indicated the path to strengthening policies for sustainable mobility, the development of green systems, energy efficiency and resilience to climate change. However, improving the effectiveness of territorial policies in favor of cities and the well-being of the population requires an in-depth knowledge of the characteristics of the territories and their spatial organization in terms of the availability of basic infrastructures and services.

This analysis has provided the first evidence on whether and to what extent middle-sized and small cities in Central Italy are already 15-minute. Based on our results, implications for policy and planning will be discussed. Moreover, we will provide possible avenues for future research and explain how the approach for a proximity metric based on OSM input categories is scalable, i.e., transferable across spatial scales without any significant adjustment.

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