

Urban tourism accessibility: exploring impacts of space-time dynamics in Warsaw, Kraków, Gdańsk, and Wrocław

Tourism has been increasingly important in the global economy, social life and space. Cities have become one of the most important tourist destinations in the world. An essential requirement for the development, not only of tourism but also of most sectors of economy, is the development of transport infrastructure and adequate accessibility of areas. Increased tourism, including tourist flows, and other city users is forcing decision makers to improve transport systems. The improvement of accessibility and its quality for tourists in the urban areas is high on the agenda for scientists, urban planners and policy makers. We would like to test and verify the different mode of transport which could be used by tourist in different times of a day, week and year to obtain knowledge about the role of accessibility in urban tourism with impact of space-time budget, visitation duration and transport mode.

We pose as the most important questions of the proposed project following elements:

Q 1 how do space-time constraints impact urban tourism accessibility?

Q 2 How many attractions can a tourist visit in a city given space-time constraints?

Because in previous studies, if accessibility was examined, it is either external, or after one route (selected people - tourists) or to one specific object, our goal will be to include new elements, primarily as part of trip-chaining accessibility. We would like to know: how many facilities and how much time is available during a given visit in a given budget, depending on the location of the hotel, tourist attractions, the means of transport used, the waiting time for entering the facility and the duration of the visit.

The role of transport in tourism is significant and emphasized by many authors; it is a component of tourism development, tourism theories and concepts and tourism product (Cardenas, Tabares, 1998, Prideaux 2000, Lew 2004). Potential accessibility is rarely studied even though it is used as a management tool in engineering, geography, and urban planning. Typically, realized accessibility is studied by using surveys or GPS units. However, this is based on small samples of individuals and is expensive.

After analysis of the scientific literature we could conclude the accessibility analysis has so far focused on:

- regional and national scale
- accessibility to tourist destinations using basic methods (e.g. travel time, isochrones)
- rural attractions, such as national parks
- urban tourism is understudied (per Ashworth)
- local/city scale accessibility based on small samples of individuals using surveys or GPS units
- simple metrics of travel time or distance in tourism accessibility studies, need more advanced methods.

Our interest is not in siting new facilities but rather in finding sets of existing facilities that maximize an accessibility criteria. Our goal is to develop a new model to fill this research gap. Therefore, a new integrated assessment approach is developed which is aimed at:

(1) examining accessibility for tourism attractions with respect to the various assumptions, features and spatial differences and

(2) at evaluating the effectiveness and representativeness of the accessibility and its quality for spatial planning and management.

The developed approach and new methods for tourism research will be validated based on four case studies: in Warsaw, Kraków, Gdańsk, and Wrocław (as four the most important touristic cities in Poland). These cities exhibit heterogenic parameters of spatial structure, tourist attractiveness, similar problems with overtourism which makes them an interesting subject of a comparative study.

The proposed approach extends on space-time accessibility data processing, modelling and simulation tools which are already applied in transport research. However, in detailed city using and especially in the tourism field they have been not used yet. They are combined in an innovative way which constitutes an important element of scientific novelty. Beyond combining existing methods and approaches, new models will be developed. The expected results will add to the current body of knowledge in the field of tourism, urban planning, spatial management with respect to control and diminished overtourism and other negative aspects of tourist flow in urban areas. From the practical point of view transport accessibility studies can support processes decision-making transport planning in cities.