

Balancing how urban structure constraints and influences travel behaviour: the case study of Oporto

Paulo Pinho 1, Cecília Silva 1, Petter Naess 2, José Pedro Reis1, Fernanda Sousa1, Fabrizio Giulietti1, Miguel Torres1

1 CITTA – Research Centre for Territory, Transports and Environment

Faculty of Engineering, University of Oporto, pcpinho@fe.up.pt, ccsilva@fe.up.pt, fabizio@fe.up.pt, ec04103@fe.up.pt,

Phone/fax numbers: 00 351 225081903 - 00 351 225081486

2 Department of Development and Planning

Aalborg University, petter@plan.aau.dk

Phone/fax numbers: 00 45 9940 7216 / 00 45 9815 3788

Despite extensive and worldwide efforts to understand the combined and overall effect of urban structure on the current patterns of urban mobility, we are still quite far away from a consensual perspective on this complex matter. In the current context of growing unsustainable mobility patterns, jeopardizing the quality of life and economic development of many urban areas, it is crucial to find solid evidence to support the formulation of policies for mobility management. This paper brings a new approach to the research on the relationship of urban structure and travel behaviour by using two existing methodologies to study the relationship between urban structure and mobility in Greater Oporto. One methodology uses quantitative and qualitative surveys and analysis to explore the overall relationships as well as the more detailed mechanisms through which the location of residence influence travel behaviour. The other methodology uses the concept of 'structural accessibility' to reveal which travel choices are made available to inhabitants by the urban structure, through the use of activity-based accessibility concepts analysing the ability to reach the main travel generating activities from a given origin. We firmly believe that the combination of these two complementary research methodologies will provide new insight into this research field and into the understanding of the relationship between urban structure and travel behaviour. In this way, the structural and behavioural aspects of mobility patterns will be analysed and compared. This research provides a broad platform of discussion on the relationship of urban structure and travel ranging from how it enables certain travel choices to how it influences the actual travel choices.

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