Travel behaviour in the Arabian Emirates - Findings from household travel surveys and comparison to Western patterns

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Abstract
The central Middle East region has been booming breathtakingly in recent years. The rapid economic and population growth, particularly in the United Arab Emirates and Qatar, has led to a significant change of socio-economy, population structure and cultural conditions. In the same time the traffic situation has dramatically worsened as the transport supply could not keep pace with the development of traffic volumes and change in travel characteristics. This holds in particular for Dubai, where a foresighted planning of the transport infrastructure was neglected over years.

In order to lay the foundation for the establishment and calibration of transportation models comprehensive surveys have been undertaken in the region since 2006. The core of those are two household travel surveys which were conducted with the collaboration of the authors in Qatar (2006) and Dubai (2007), comprising a total of 6,700 households. In the case of Qatar the researchers had to start from scratch as the survey was the first of its kind in the Emirate. Both household travel surveys yielded remarkable results in terms of how field surveys have to be carried out and, above all, in terms of how people travel.

The first section of the article gives a consolidated summary of the operational aspects of the two surveys. This includes the highlighting of special features and challenges of local travel behaviour research: how to approach fringe groups and special living quarters (e.g. worker compounds)? How to handle the problem of the frequent flat-sharing communities and large households? How to deal with cultural regulations and expectations, in particular with regard to religious constraints and the interviewing of women?

In contrast to Western countries there is a clear social differentiation between native locals and non-locals, which have a share of 85% of the residential population - with an upward trend. These expatriates are a heterogeneous group ranging from white-collar high-educated consultants over old-established merchants and retailers to a great number of service people and construction workers (hard hats). Patterns and key indicators of travel behaviour differ significantly between the population groups and reflect cultural area, economic status, and social cohesion.

The article addresses the empirical findings of the household surveys and includes a comparison with results of such surveys in the US and Germany. Noticeable differences could be detected, among others, in trip rates per person group, temporal and gender-specific distribution of activities and use of modes. Trip-making patterns suggest that there is something what might be called group-specific division of work.

Mode choice and vehicle ownership were furthermore investigated in-depth by a stated preference survey. The aim of that survey was first to derive model parameters for new forms of transit supply like the metro being currently under construction and coast-to-coast speed ferry services. While mode choice is generally dominated by car today, the adherence to car differs among the population groups. In addition to the pull factor of an attractive transit system the potential abandonment of car was explored by a car ownership experiment.
The central Middle East may serve as an example for emerging nations, but it's even more. The unparalleled population structure and the extremely fast developments in almost all areas of life generate a unique diversity in travel behaviour. Our article gives a substantial insight.