

Report on invited session at TRA 2014

Urban Travel Behaviour Trends: Challenges to Transport Policy in Europe

The invited session organized by TG Ecopol and TG Mobility at TRA 2014 (Paris, France) on Tuesday 15 April. The topic was “Urban Travel Behaviour Trends: Challenges to Transport Policy in Europe”. It was chaired by Elisabete Arsenio (LNEC, Portugal), and moderated by Anne Aguiléra (Ifsttar, France).

Summary

Around three quarters of the population of Europe live in urban areas and these will continue to drive Europe's economy. A great potential exists for energy savings, smart, green and socially inclusive transport policies. As such, this session has focused on the case of urban/metropolitan areas.

The aim of the session was to discuss the range of emerging challenges to transport policy in Europe. The session will evaluate the contribution of actual and forthcoming changes in passenger travel behaviour in cities and metropolitan areas to achieve sustainable mobility futures. We aim to increase awareness of transport researchers and all stakeholders in the field of transport and mobility regarding the synergies and obstacles to more sustainable travel behavior.

Programme and organisation

The session was organised around 1 introduction and 3 presentations followed by a final discussion/debate with a panelist and with the audience around the following questions:

- 1- What are the key drivers and trends in passenger transport in European urban/metropolitan areas?
- 2- What can be the role of ICT for a more sustainable travel? How to promote behavioural changes?
- 3- What are the set of challenges to transport policy in Europe?

Detailed programme and timeline

- Introduction to Urban travel behaviour trends: Challenges to transport policy in Europe – key questions, by Elisabete Arsenio (10 minutes)
- Presentations – 25 min
 1. New behaviour, new mobility concepts and sustainable transport (Wolfgang Schade, Claus Doll, Johannes Hartwig, Fraunhofer Institute for Systems and Innovation Research ISI, Germany)
 2. Future older travelers: changes and challenges (Alexandra Millonig, Austrian Institute of Technology)
 3. “Exploring the role of social influence variables on travel behaviour: facing to European transport policies (Floridea Di Ciommo, Transport Research Centre-TRANSyT-UPM))
- Panel discussion with Cristina Pronello (Politecnico Di Torino) and debate with audience – 40 min

Introduction (Elisabete Arsenio)

Dr. Elisabete Arsenio started by welcoming all participants of invited session and referred that the session was an initiative of ECTRI TG Transport Economics and Policies and TG Mobility.

The performance of the transport system is influenced by several different key drivers of different nature: economic, social, environmental, technology related and, also policies and transport governance models. Population growth stagnation and ageing of society in Europe is identified in all studies' projections. Other foreseen impacts such as those from ICT, electromobility, evolution of energy prices and changes in lifestyles can shape or influence future mobility patterns. Our current challenge (as researchers, policy makers, stakeholders, citizens, etc.) is also to help promoting desirable behavioural changes such as a shift from car travel to more use of public transport and walking and cycling through convergent cross-sectorial policy moves towards sustainable mobility futures. For this purpose, more research is required for understanding passengers' needs and the factors that can trigger people's change in behavior.

A debate focusing in cities and metropolitan areas is justified by the fact that more than 80% of the population in Europe is expected to live in cities by 2050. The following three key questions were covered by the invited speakers and session debate:

What are the key drivers and trends in passenger transport?

What can be the role of ICT for a more sustainable travel? How to promote behavioural changes?

What are the set of challenges to transport policy in Europe?

During the debate, the range of emerging challenges to transport policy in Europe will be discussed as a means to contribute to identify key topics for European research in the field of sustainable travel behaviour and policies.

At the end, she also invited participants to the website of FP7 OPTIMISM- **Optimising Passenger Transport Information to Materialize Insights for Sustainable Mobility**. WP3 Deliverables covered future trends and their requirements for future transport. The potential of ICT solutions to enhance co-modality and to decarbonise EU's passenger' transport was also studied in OPTIMISM. Empirical evidence on mobility impacts of ICT options is scarce and the uncertainty on the decarbonisation impacts in large.

New behaviour, new mobility concepts and sustainable transport (Wolfgang Schade, Claus Doll, Johannes Hartwig)

ISI developed a vision of sustainable transport in Germany, called VIVER. New mobility concepts, including concepts of the sharing economy will foster multi-modal mobility for passenger transport. Innovation system analysis of car-sharing reveals that such integrated mobility concepts are fast developing today, and what we call the Fifth-Mode could emerge in the next years. Since this will also foster the use of more cycling and walking there will be co-benefits for health and the environment of such new mobility concepts, as shown by another study of ISI on behalf of the German Environmental Agency.

Future older travellers: changes and challenges (Alexandra Millonig)

The effects of demographic ageing will have significant impact on transportation services in the future, though ageing does not necessarily come with a constant decrease in health and abilities: medical advances and numerous initiatives promoting active ageing lead to an increasingly heterogeneous group of seniors with different habits, abilities and requirements. As part of the EU project "GOAL – Growing Older, Staying Mobile" the physical and mental characteristics of older people have been analysed in order to identify profiles which represent the range of characteristics to be formed in the population now and in the future.

This contribution has given an introduction to the profiles of older people as well as an assessment of the future development of the profiles. It described the main findings concerning profile-related needs regarding different transportation and information services and proposes specific actions for fulfilling the transport needs of older people.

Exploring the role of social influence variables on travel behaviour: an innovative approach face to European transport policies (Florida Di Ciommo)

To forecast the impacts of new transport policies and investments (new transport infrastructure, fare policies, congestion pricing, etc.), transport planners are particularly interested in analysing transport demand at specific moments and also in understanding the factors that explain modal choices. Changes in mode choice may be due to a mixture of quantitative factors (travel cost and time, income variation and demographical variables, such as age, social status and household size) but contextual attributes (i.e. trip purpose) may also be important. In the transport modelling literature there has been an increasing awareness that socio-economic attributes and quantitative variables are not sufficient to characterize travellers and to forecast their travel behaviour. As a consequence, there is growing interest in investigating new variables and the literature has incorporated attitudes, habit, inertia and awareness in transport models (Ben-Akiva et al., 2002; Cantillo et al., 2007; Cherchi and Manca, 2011; Galdames et al., 2011; Prashker, 1979; Rieser-Schüssler and Axhausen, 2012; Yáñez et al., 2010). Recent studies have also recognized that users' social interactions –as well as their perceptions– may influence travel behaviour, especially when changes to transport systems are introduced (Ben-Akiva et al., 2012; Brock and Durlauf, 2003; Carrasco and Miller, 2006). Notwithstanding, key social influence variables are rarely included directly in travel behaviour models possibly because of the difficulty in measuring the degree of integration of people with respect to their spatial proximity and social environment (social capital). However, the social environment may influence travel behaviour and integrating it in transport behaviour models can help to explain why two apparently identical individuals can make completely different decisions when facing an objectively equal situation.

Synthesis of the discussion

The discussion is introduced by Cristina Pronello. She first highlights that social variables and more generally all variables that are related to the integration of people at the local level (like for instance the participation to social or political activities) have to be better taken into account. The question is: How these variables influence travel behaviour and how can public authorities take them into account? For instance there are strong differences between Italian Regions in terms of social capital.

Regarding elderly people: how does social capital contribute to explain their mobility behaviour? The social network is very important: in particular the more active people are also those who have the largest social network. In addition, those who are more multimodal and/or use car-sharing are also more connected. Hence it is important to encourage elderly people to be involved and active in their community. However it raises the question of the type of residential area (rural/periurban/urban areas) which are different in terms of social capitals and also mobility options.

In many European countries there is a renewed attractiveness of rural areas while some cities are shrinking (like in Germany). In particular rural areas are developing because elderly people choose to live there at least a part of the year (secondary house), like in Spain. In addition some workers choose to live in rural areas and have long commutes or have a secondary residence in the urban area where their job is located. These trends raise specific questions for local authorities in rural areas in terms of access to public services and transportation systems.