Attitudes of key stakeholders towards sustainable urban mobility: Q methodology approach

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Extended abstract

Problem statement

During the last decade, sustainable urban mobility discussion has been accelerated. Transport decision-making has been pushed to respond more to the issues of sustainability; the process has speeded up especially with modern concepts of urban transport mobility planning, strengthening transport demand management and Sustainable Urban Mobility Plans (SUMPs) as its main transport-related strategic documents. Although some positive trends are traceable in terms of paths towards sustainability of some cities, sustainable urban mobility remains one of the unresolved topical concerns, as stressed, e.g., in the EU Urban Mobility package adapted in 2013.

To achieve sustainable urban mobility, local stakeholders including decision-makers and decision-influencers need to be convinced about the sustainable urban mobility vision and the path how to reach it (including non-popular measures). Within the context of governance, urban mobility decisions are influenced by many independent actors besides the political authority of a particular jurisdiction and include administrative officials of other government levels (regional, national, European), representatives of public transport authorities, non-governmental non-profit organisations, academics, business representatives, and journalists. Urban mobility decisions are inevitably dependent on the opinions of these actors and their view on the necessity or even desirability of the sustainable urban mobility paradigm. When identifying with the sustainable urban mobility concept, what do these stakeholders mean by it and which policies do they seek to implement to achieve it? These vital questions need to be answered to help understand ideas shaping the future of our cities.

Research objectives

The aim of our research is to reveal the main viewpoints on the paths towards sustainable urban mobility shared by stakeholders who can, from their job position, effectively influence urban mobility policies. Are there any "opinion coalitions" among these key stakeholders? This is the first study focusing on the segmentation of shared viewpoints of influential stakeholders in terms of urban mobility decision-making in transport research using qualitative analysis, although several studies have been undertaken to segment the viewpoints of transport users, using quantitative and qualitative approaches.

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Methodological approach

The mixed P-Q method statistical technique, combining qualitative and quantitative analysis, was used for identifying shared viewpoints of key stakeholders. Q methodology was introduced by Stephenson (Stephenson, W.: *The study of behavior: Q-technique and its methodology.* Chicago: University of Chicago Press, 1953) as a statistical method to study subjectivity. The aim of the Q method is to reveal typical shared viewpoints on a particular subject within a society. Because Q methodology works with a relatively small sample of respondents (in the order of dozens of respondents) and without the necessity of a random selection of respondents, this method does not seek to quantify the occurrence of the shared viewpoints within the society, but focuses solely on their identification. A qualitative analysis of assessing subjective viewpoints is combined with the quantitative approach of a factor analysis of statements ranked by respondents.

The stakeholders entering our study include individuals who shape transport policies of the largest Czech cities with more than 50 thousand inhabitants, as well as those of smaller cities belonging among the leaders of sustainable urban mobility concept implementation in the Czech context. The stakeholders were identified using a combination of the focus group technique with the snowball sampling method; the data were collected using structured interviews with carefully defined stakeholders.

All together 83 relevant stakeholders from the Czech Republic were identified. Some of them were not able or willing to participate in our research. Finally, we conducted 45 structured interviews between July and November 2018. The interview focused on the respondent´s opinion on the transport policy in the respondent's municipality (or Czech municipalities in general, if the respondent came from a national-wide institution), main transport-related problems in the analysed city / cities, on identification of main players and their role in formulation of sustainable urban mobility visions, main barriers of sustainable mobility measures in different stages of decision-making (planning, implementation and evaluation) in cities, etc. Finally, each respondent organised 42 statements from our Q sample into a quasi-normal distribution according to their point of view – how much they agreed/disagreed/were neutral to them. These so called individual Q-sorts are the main data entering the Q-analysis.

The individual Q sorts were subjected to by-person factor analysis. As the first step, each Q sort was correlated with every other Q sort. The intercorrelation matrix was then factor-analysed using Principal Component Analysis (PCA) to find associations among the different Q sorts.

Chosen results

PCA defined three factors describing the attitudes towards sustainable urban mobility; they together account for 59% of the data variability: Factor 1 can be called "Public transport" (48% of the data variability); Factor 2 can be labelled as "Transport infrastructure" (7%); and Factor 3 as "Motivate people, not push them" (5%).

There is a group of stakeholders (the most numerous group in our sample), who generally believe that "We should support public transport as the main pillar of sustainable mobility". On the other hand, the attitude towards sustainable mobility of the second group of stakeholders may be summarised as "We should build new and improve existing transport infrastructure to create conditions for sustainable mobility". Finally, the last group of stakeholders emphasised that "We should motivate people not to use cars but not push them by regulation". The results generally show that all the revealed distinct viewpoints agree on the unsustainability of extensive private car transport and share a positive attitude towards alternative modes – public transport, walking and cycling. The main distinguishing aspects are the rate of regulation to be applied to decision-making on transport modes used by individuals and

freight transport, faith in public participation in strategic decision-making in the transport agenda, the rate at which to also support car transport, and the rate of social feeling towards individuals with specific transport needs.

Our findings revealed challenges for researchers; above all, to better explain the concept of sustainable mobility and to better support decision-makers and other key stakeholders regarding appropriate steps towards more sustainable mobility in Czech cities. When the first wave of SUMP development in Czechia is finished, we will be able to assess the plans according to the principles of sustainability and to compare them with the findings of our study. We can also assess how important the role of different opinion groups is in local policy-making processes.