

RESUME

Moving Around a City – Rationality of Travel Mode Choice

The aim of my study is to answer questions related to *explanation of the travel mode choice used by people for regular commuting and what role in their decision making can be attributed to location of their residence, i.e. how the travel mode choice differs in case of traditional urban residents and suburban residents*. I have limited my focus only to the travel modes used by adult residents of the Czech Republic. The reason why to study everyday commuting is the fact that people currently living in western cities spend a lot of time and money commuting and that the aggregate of everyday individual mobility generates an important environmental impact. Thus, this work represents a contribution to dynamically developing areas of sociology of travel and mobility as well as a general contribution to sociology of action.

The choice of methodology in this study is based on the presumption that despite the fact that the travel mode choice represents a routine (social) behaviour, to a certain extent it can be seen as rational. Thus, I try to explain individual mobility by incorporating it into patterns of human motivation, means and goals, i.e. into categories of human action, in a context of specific conditions and situational constraints. The *random utility model* used for the quantitative data analysis is based on a presumption that with high probability individuals would make a choice bringing them the biggest utility and on the *bounded rationality* concept. Such utility includes besides time and money savings also comfort, privacy, sense of authority or power related to the use of individual travel modes.

I study the travel mode choice from two perspectives: a) *statistical* and b) *behavioural*. Statistical analysis based on the random utility model and using the *multinomial logit model* brings a static picture of the travel mode choice. Using this model I explain the travel mode choice based on situational constraints and differences between social groups. The differences between behaviour of social groups are related to the fact that situational constraints limit different social groups to a different extent. Statistical analysis reveals also the differences between groups consisting “only” of different lifestyles and types of mobility related to them. Using the statistical analysis I am unable to explain how the situational constraints lead to different behaviour in different individuals and also the part of behaviour that cannot be explained using the constraints, thus I add a qualitative study providing us with the necessary behavioural explanation. Results of this analysis using biographic and semi-structured interviews on conditions related to the change of place of residence show that for different types of population accessibility represents a factor of different importance. Also, the qualitative analysis explains the causal mechanism in which specific conditions or constraints lead to a change of behaviour patterns stored in the stock of knowledge from which they are retrieved in analogical situations. The manner of adaptation of routines in relation to specific situational constraints shows that despite the fact that the travel mode choice represents automatic behaviour it can be relatively reliably explained using the bounded rationality models. However, in certain individuals the travel mode choice can be explained only through unreflected reproduction of a habit as a natural part of a certain habitus. Summarizing both types of findings of this study, we may claim that the everyday travel mode choice depends to a large extent on constraints that cannot be influenced by individuals. The first travel mode choice constraint is the amount of time and money available to the individual. Further factors explaining why some people use their car while others use public transport include public transport services, civic facilities in the place of residence and nature of their job and mobility requirements related to its performance. From the financial point of view, the travel mode choice is limited by costs of individual travel modes on one hand and by the personal income of an individual on the other. Rich people can – to a certain extent – ignore the costs as well as other types of constraints and indeed they do. We can also observe that the situational constraints influence lower-income individuals and women more. Even when we control for influence of their income, professional status or the need to select the time and destination of their journey flexibly, men drive their car or bicycle more frequently than women. It is possible that when compared to women, men prefer autonomy, privacy, risk, etc. or that they drive cars – representing a scarce

source in majority of households – more frequently than women because of their better negotiating position. When modelling the influence of personal income, no travel mode choice can be easily related to the level of education or age. In the qualitative study I have focused on what type of residence people prefer. It is a fact that residents in locations with good civic facilities and public transport services use public transport more frequently, while people from areas with lower levels of civic facilities and public transport prefer cars. Looking into preferred characteristics of their place of residence I have identified four types of individuals. The first group includes people for whom accessibility represents an important factor when choosing their residence and thus they live in compact urban developments as they do not drive, cannot afford to drive or do not want to drive. The second group ignores accessibility as a characteristic of their place of residence because they want to use their car anyway or they are willing to accept the lower level of accessibility as a price for living in their own house with a garden. Thus, they live in suburban locations with lower levels of civic facilities and public transport services. The third group comprises individuals declaring that accessibility is an important factor for them; however they do not take it into account when selecting their place of residence. As their expectations are not met and they suffer from a disproportional increase of their travel time and lack of comfort when using the public transport they start to drive their car more frequently or plan their travel very meticulously. Members of the fourth group use their car frequently despite that fact that they live in a place with good public transport service and civic facilities. They systematically ignore the supply of alternative travel modes.

An answer to the question why some people drive their car despite of alternative supply can be found in general classification of rationality present in their behaviour. Regardless of the travel modes we can see completely different spheres of rationality in the observed behaviour types and we can use different theoretical concepts of behaviour to explain them. The first sphere is the *travel mode choice rationality based on constraints*. The second sphere is the *sphere of a consistent lifestyle* including not only the travel mode choice but also the nature of residence choice. The third sphere includes the travel mode choice as an unreflected *habit sphere* being a part of habitus.

According to the three spheres of rationality related to the travel mode choice we can identify different factors of individual transport development: a) differences in the nature of individual travel modes and their attractiveness related to individual economic and professional constraints, b) real willingness of many people to live in residential locations with a lower accessibility and lower level of services, and c) a habit to drive a car automatically regardless of conditions as a natural part of habitus of economic middle and upper classes.

Differentiation of these factors leads to different implications when considering possibilities of overturning the current increasing trend of car transport. Firstly, it is a question of price or other regulation changing attractiveness of the individual alternatives. Secondly, there are factors related to preference of suburban lifestyle including not only normative and cultural patterns but also significant differences in real estate prices in internal cities and suburban locations. I believe that without a policy creating favourable conditions in internal cities and without a public debate about negative influences of suburban living this trend can be hardly slowed down. In the last case of the habit to use a car regardless of available alternatives as a part of habitus of economic middle and upper classes the discussion about possible changes is the most demanding. However, this study shows that majority of people make their travel mode choices taking into account real possibilities and constraints and thus that it is possible to influence their behaviour through economic and other types of regulation.