

Business as usual, taking the car, or staying at home? Psychological and situational predictors of how German students react to a temporal rail strike

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Introduction

When conducting a study on travel mode choice an unintended natural experiment occurred: after the majority of participants started a one week travel log the German Rail Drivers Association went on strike and reduced the number of available trains by about 50% for two days.

People can react to a strike in three different ways: they either try to maintain their means of transportation, they shift to other modes or they cancel trips. The question addressed in the presented study is, if situational and psychological variables (theory of planned behaviour extended by habits) can explain which of those strategies is applied.

Method

In November 2007 all students of the Ruhr-University Bochum, Germany, were asked for participation in a study that consisted of an online questionnaire recording psychological variables, socio-demographics, situational conditions and a subsequent travel diary (one week). For a sub-sample of participants the travel log included the days of the strike ($N=2.084$). Due to the limited role rail traffic plays on short distances the analysis has been limited to trips longer than 30km.

Results

An analysis of the travel patterns revealed a significant decrease in the number of trips per person per day conducted with PT ($t=7.50$, $df=2083$, $p<.001$) and a significant increase of number of trips with a car ($t=-4.80$, $df=2083$, $p<.001$) during the strike.

For the following analyses only participants were selected that conducted trips longer than 30 km ($N=344$). This group

was divided into people that did not change their travel behavior during the strike ($n=157$), people that cancelled/postponed trips ($n=128$) and people that substituted train trips by car trips ($n=59$).

ANOVAs with post-hoc tests show that people in the substituting group have a significantly lower PBC and less positive attitude to use PT than the other two groups. Furthermore, they have a higher car-availability. People cancelling trips have a stronger PT-habit than the other two groups.

Finally, a multinomial logistic regression with group membership as dependent variable was calculated ("no change" as reference category). Significant predictors of being in the cancelling group were a strong PT-habit and conducting only few trips to the university in general. Significant predictors of substituting the train with the car were a weak PBC for how to use PT, a strong intention to use PT, a strong PT-habit, and a large number of trips in the travel log in general. Car availability was *not* a significant predictor.

Discussion

People with strong PT-habits seem to cancel trips when an unanticipated unavailability of their habituated travel mode occurs whereas people with weaker habits either use the normal means of transportation or switch to the car, if their PBC for bus use is low. This underlines the assumption that strong habits over time lower the ability to effectively cope with situational changes.

Acknowledgements

This research was supported by the German Research Foundation (DFG) Grant MA 1977/8-1 to Ellen Matthies and Anke Blöbaum.