Abstract

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Investigating the Effects of Psychological Factors Measured in a Semantic Scale on Commuting Mode Choice Behaviour.

This paper investigates socio-psychometric data measured in a semantic scale to explicitly capture attitudes, affective appraisal and habit formation and their influences on commuting mode choice. The dataset was collected in 2009-2010 in Edmonton, Alberta. In addition to common socioeconomic, demographic and modal attributes, the survey gathered psychological information regarding habitual behaviour, affective appraisal and personal attitudes. Different psychometric tools are used to capture psychological factors affecting mode choice. Habitual behaviour is measured by using Verplanken's response-frequency questionnaire. Affective appraisal is indirectly estimated using the Osgood's semantic differential scale. A five-point Likert scale is used to measure attitude. The Structural Equation Modelling (SEM) approach is used to investigate the effects of psychological factors measured by means of semantic scales on mode choice behaviour. SEM captures the latent nature of psychological factors and uses path diagram to identify the directionality as well as intensity of the relationships. The investigation reveals that passengers have positive emotions towards their chosen mode. Further, evidence of the superiority of the car as a travel alternative was established in terms of strong habit towards it, such that passengers would use the car for almost every single trip.