Abstract

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Investigating the Effects of Psychological Factors on Commuting Mode Choice Behaviour.

This paper utilizes socio-psychometric survey data to investigate the influence of attitudes, affective appraisal and habit formation on commuting mode choice. The data-set was collected in 2009–2010 in Edmonton, Alberta. In addition to conventional socio-economic, demographic and modal attributes, the survey gathered psychological information regarding habitual behavior, affective appraisal and personal attitudes. Different psychometric tools were used to capture psychological factors affecting mode choice. Habitual behavior was measured using Verplanken’s response-frequency questionnaire. Affective appraisal was indirectly estimated using the Osgood’s semantic differential. Five-point Likert scales were used to measure attitude. The structural equation modelling (SEM) approach was used to investigate the effects of psychological factors on mode choice behavior. SEM captures the latent nature of psychological factors and uses path diagrams 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.