Intentions to use bike-sharing for holiday cycling: An application of the Theory of Planned Behavior

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Bike-sharing systems are spreading across major cities worldwide, are rapidly growing in their number and size, and are becoming increasingly ‘smart’ in terms of offered services. There are 375 bike-sharing schemes in cities across 33 countries, including cycling cities such as Amsterdam and Copenhagen, and tourist destinations that are not commonly associated with cycling.

While previous researches addressed demand from local residents, this study is the first to explore the behavioral factors underlying the intentions to use this system for recreational cycling by potential tourists during holidays. The case study focuses on the new generation bike-sharing system in Copenhagen (Denmark), which provides electric bicycles equipped with a GPS travel guide. The analytical framework is based on the Theory of Planned Behavior linking behavioral intentions to attitudes, subjective norms and perceived behavioral control. A survey was conducted among an international sample of 655 adults who stated their intentions to use the new bike-sharing system during a hypothetical vacation in Copenhagen.

Addressing factors motivating the intentions to use bike-sharing systems in cities is important from the tourist perspective, as tourists have the possibility to use a healthy and inexpensive transport mode, but also from the societal perspective, as understanding the tourist demand could alleviate the considerable tourist influx on road congestion, public transport, air pollution and noise.

Structural equation models used for the analysis revealed: the interest in using bike-sharing, frequently and for multiple purposes; the relation between holiday cycling and living in a cycling-friendly country, past cycling experience and habitual mode choice; the appeal of electric bicycles to tourists with high interest in bicycle technology, low perceived cycling ease and weak pro-cycling norms.

Keywords: Tourism, new generation bicycle-sharing, holiday cycling, intentions, TPB