1. Simulating passenger's shopping behavior at airport with a conceptual agent-based model

Chen, Yimeng (1); Wu, Cheng-Lung (1); Lau, Pong Lung (1); Tang, Nga Yung Agnes (1)
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Author affiliation: (1) School of Aviation, University of New South Wales, Sydney; NSW; 2052, Australia
Abstract: Airport retail revenue has long been recognized as a critical revenue stream to ensure an airport's financial sustainability and stability. However, there is a lack of simulation model on how airport terminal could be better designed to facilitate this vital revenue stream. This paper presents a conceptual agent-based simulation model on passengers shopping behavior in the airport context. This model attempts to investigate the relationship between terminal design and retail performance through different scenarios studies. Results show that finger pier terminal shape can have a negative impact on retail revenue if shops are decentralized. Terminal with centralized shopping areas also performed better than a terminal with decentralized shopping area. Future research directions were proposed at the end to improve the existing simulation model with the aim of making it an essential evaluation tool for future terminal design. © 2018 IEEE (39 refs)
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