

Title: Flying to your home yard: the mediation and moderation model of the intention to employ drones for last-mile delivery

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Abstract: Drones will become part of daily lives similar to smartphones becoming a staple of modern living. Nonetheless, only several past studies investigated the intention to utilise drones for parcel delivery however, the intention to use drones among online shoppers was not fully explored. The study attempts to investigate the factors influencing the intention to use drones for last-mile delivery. A total of 292 data were gathered via an online survey among online shoppers applying a snowball sampling method. Since the study operationalised the measures as composites, a combination of reflective and formative measurement, and the study focusses on predictive purposes, partial least squares structural equation modelling with SmartPLS 4 was applied to test the model developed based on the stimulus-organism-response model. The analysis found that all the direct hypotheses were found supported. Moreover, Green support, green desire and pro-environmental behaviour positively and sequentially mediated future orientation and intention, whereas technology anxiety and perceived safety moderated the relationship between pro-environmental behaviour and intention. The respondents only limit to the online shoppers in Malaysia which based on purposive sampling method, thus the findings cannot be generalized to another countries. Besides enriching the literature on drone studies, the findings provided practical insights to online platforms and drone operators to develop an effective strategy to encourage online shoppers to shift from conventional delivery to drone delivery. The study developed a new model for drone delivery studies using the S-O-R model in introducing orientation towards the future and green support as the stimulus, green desire as an organism and pro-environmental behaviour and usage intention as a response. The study introduced multiple sequential mediators, also contributing to the S-O-R model to predict online shoppers' behaviour towards drones as a tool for last-mile delivery. Another important contribution, technology anxiety and perceived safety were confirmed to have a moderation effect for the relationship between pro-environmental behaviour and intention to use drones for last-mile delivery.

Keywords: Online shoppers, Intention to use drone, S-O-R theory, Pro-environmental behaviour, Last-mile delivery

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