



APPLICATION OF DELIVERY DRONE TECHNOLOGY AS A DELIVERY SOLUTION AT URBAN AREA

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ABSTRACT

The potential of drone delivery to become a delivery solution in the big city is currently among the most intensely discussed emerging technologies, likely to expand mobility into the third dimension of low-level airspace. The Covid-19 pandemic has presented a niche that might help elevate this technology into the mainstay of logistics companies. Depending on how quickly the regulatory body allows the technology to advance, hurdles like safety risks, the suitability of the drone technology, related technical factors associate with the failure of the drone delivery operation, and the consumer acceptance towards the technology are currently preventing this futuristic supply chain management solution from becoming a widespread commercial reality. Hence, this study intends to investigate these factors and their relationship with the consumer demographic in influencing the consumer's acceptance of the drone delivery service. A quantitative approach through a mass survey at Cyberjaya, Malaysia, manage to collect 150 complete questionnaires that were analyzed using the Structural Equation Modelling (SEM). The results show that all the constructed assumptions are statistically significant in influencing the consumer's acceptance of the introduction of the drone delivery service. The findings implicate the consumer concern towards the capability of the drone delivery operator to ensure the safety of the operation that includes the issue of the drone technology, safety features, and the drone technical factor that is currently associated with the drone delivery failure. AS such, the introduction of drone delivery should portray a positive image of the benefit of the technology that consumers can experience in improving the lead time of the delivery. Failing to impress the benefits of drone delivery will increase the challenges of drone introduction to the delivery market.

Keywords: *Supply Chain Management; Delivery Solution; Drone Technology; Safety Acceptance; Urban Area*