

The air transport industry after the COVID-19: A structural equation modelling-based empirical study considering vaccines' popularity and pandemic-associated risk

Cho Yin Yiu ^a, Kam K.H. Ng ^{a,*}, Qinbiao Li ^a

^a *Department of Aeronautical and Aviation Engineering, The Hong Kong Polytechnic University, Hung Hom, Hong Kong SAR, China*

* *Corresponding author.*

Email Address: cho-yin.yiu@connect.polyu.hk (Cho Yin Yiu), kam.kh.ng@polyu.edu.hk (Kam K.H. Ng), qinbiao.li@connect.polyu.hk (Qinbiao Li)

Acknowledgment

The research is supported by *Department of Aeronautical and Aviation Engineering, The Hong Kong Polytechnic University, Hong Kong SAR*. Our gratitude is also extended to the Research Committee of the *Department of Aeronautical and Aviation Engineering, The Hong Kong Polytechnic University* for support of the project (ZVS9). This study has been granted human ethics approval from the PolyU Institutional Review Board of *The Hong Kong Polytechnic University* (IRB Reference Number: HSEARS20210218003).

Declarations of interest: The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

The air transport industry after the COVID-19: A structural equation modelling-based empirical study considering vaccines' popularity and pandemic-associated risk

Abstract

The air transport industry is suffering from the restriction of borders under the COVID-19 pandemic. Some say the industry may recover with the availability of vaccines, and some might even expect a “travel boom” just after the pandemic. Thus, considering the contributing factors of readiness of vaccines, perceived risk to travel via air transport, health risk propensity, and prevention focus, this study employs the questionnaire surveys to collect the public's view and adopts covariance-based structural equation modelling (CB-SEM) method, to establish the relation of the abovementioned factors to two key performance indicators of the industry – pandemic travel anxiety and the intention to travel. It is hypothesized that the readiness of vaccines would positively influence the public's intention to travel while lowering their travel anxiety. The perceived risk of travelling via air transport should positively and negatively influence the travel anxiety and the travel intention respectively, while that of the health risk propensity would reverse. Also, prevention focus is hypothesized to positively influence both travel anxiety and travel intention. Despite many tourism researchers adopted the same approach to study their industry, most air transport literature adopted forecasting and discussion approaches but not consulting the public's view. Thus, this study contributes by anticipating the future of the air transport industry in the late-/post-pandemic times via field understanding of the consumers' behaviours, and draw some managerial insights to the industry for better preparation for potential similar events in the future.

Keywords: Post-pandemic intention to travel, Vaccines' popularity, Pandemic-associated risks

References

- Dube, K., Nhamo, G., & Chikodzi, D. (2021). COVID-19 pandemic and prospects for recovery of the global aviation industry. *Journal of Air Transport Management*, 92, 102022. <https://doi.org/10.1016/j.jairtraman.2021.102022>
- Lamb, T. L., Winter, S. R., Rice, S., Ruskin, K. J., & Vaughn, A. (2020). Factors that predict passengers willingness to fly during and after the COVID-19 pandemic. *Journal of Air Transport Management*, 89, 101897. <https://doi.org/10.1016/j.jairtraman.2020.101897>
- Neuburger, L., & Egger, R. (2020). Travel risk perception and travel behaviour during the COVID-19 pandemic 2020: a case study of the DACH region. *Current Issues in Tourism*, 1-14. <https://doi.org/10.1080/13683500.2020.1803807>
- Sun, X., Wandelt, S., & Zhang, A. (2021). On the degree of synchronization between air transport connectivity and COVID-19 cases at worldwide level. *Transport Policy*, 105, 115-123. <https://doi.org/10.1016/j.tranpol.2021.03.005>
- Zenker, S., Braun, E., & Gyimóthy, S. (2021). Too afraid to Travel? Development of a Pandemic (COVID-19) Anxiety Travel Scale (PATs). *Tourism Management*, 84, 104286. <https://doi.org/10.1016/j.tourman.2021.104286>