Gender-Sensitive Technology Acceptance Modelling of Unmanned Aerial Vehicles Based on Failure Mode and Effect Analysis

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Abstract: The recent increase in Unmanned Aerial Vehicles (UAVs) in various areas, from transportation to public surveillance, is significant. One of the most crucial factors for successfully integrating UAVs is the guarantee of safety and the establishment of trust, which also forms the core foundation for their widespread technological adoption by users and society. Such is a necessary condition for the full exploitation of their industrial and commercial potential. Previous academic studies of UAV adoption have been largely limited to the realm of technology acceptance theory and examination of social and economic problems, with an obvious gap in research concerning the gender dimension. Knowledge of how safety and functionality impressions and ethical acceptability vary between the genders is critical in developing usable and acceptable policies and marketing campaigns that will foster trust in the technology among the public. In recent years, the rapid advancement of Unmanned Aerial Vehicle technology has brought about significant changes in various industries and societal domains. However, as with any technological innovation, it is vital to explore the gender dimension to ensure equitable access, adoption, and respect to possible concerns. This study aims to investigate the gender-based differences in the acceptance of UAV technology by applying the QETAM framework.

Keywords—*UAV, technology acceptance modeling, gender*

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