

ABSTRACT

Digital telecommunication services continue to grow in line with the increasing adoption of technology, particularly among Generation Z, known as digital natives. In response to this trend, Telkomsel launched by.U, a mobile digital service designed to meet the needs of Generation Z, who prioritize flexibility, convenience, and personalized digital experiences. However, user distribution data shows that by.U adoption is evenly spread across generations and is even dominated by Generation X. This phenomenon highlights a potential gap between marketing strategies aimed at Generation Z and actual adoption behaviour in the field, indicating the need for further investigation into the factors influencing by.U adoption among Generation Z.

This study aims to analyse the extent to which Perceived Usefulness, Perceived Ease of Use, Compatibility, Complexity, Hedonic Motivation, and Perceived Value influence Usage Behavior, with Attitude towards Using as a mediating variable. The research model integrates the Technology Acceptance Model (TAM) and Diffusion of Innovation (DOI) theory. A quantitative method was used, involving an online survey distributed to 400 active by.U users within the Generation Z demographic.

Data were analysed using the Partial Least Squares Structural Equation Modelling (PLS-SEM) approach. The results show that Attitude towards Using is the strongest determinant of Usage Behaviour. Hedonic Motivation, Compatibility, and Perceived Ease of Use have positive and significant effects on user attitudes. In contrast, Perceived Usefulness does not significantly influence behaviour or attitude, while Complexity shows a significant positive effect—contrary to the initial hypothesis. The Goodness of Fit (GoF) value of 0.729 indicates that the model has a very strong overall fit and can be used reliably for both theoretical and practical conclusions.

This study contributes to the literature on digital service adoption by applying a hybrid TAM-DOI framework in the context of app-based mobile services targeting Generation Z. The findings suggest that emotional and experiential factors have a stronger influence than functional utility, reflecting a shift in digital behaviour among younger users.

Based on these findings, Telkomsel is advised to prioritize the development of enjoyable, flexible, and user-friendly service features that align with the lifestyle of Generation Z. Brand communication should focus more on emotional value and personalization rather than merely on practical usefulness. Future research is encouraged to adopt a longitudinal approach and to include additional variables such as social influence, trust, and perceived risk to gain a more comprehensive understanding of digital adoption behaviour in an evolving technological landscape.

Keywords: *Technology Acceptance Model, Diffusion of Innovation, Generation Z, by.U, Digital Service Adoption*