Chapter 2
Consumer Psychology and Behavioural Economics in the Adoption of Internet of Things (IoT) Technologies:
A Systematic Review

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ABSTRACT

This chapter employs a systematic review design a structured and replicable method for synthesizing existing research to address identified gaps in the literature. Additionally, by integrating insights from both consumer psychology and behavioural economics, the review aims to explore the complex, multidimensional factors that influence the adoption of IoT technologies. The paper relied exclusively on secondary sources to conduct the systematic review. Furthermore, this study employs a hybrid theoretical

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framework that integrates three well-established models to assess technological influences, evaluate risk and loss aversion from a behavioural economics perspective and to understand behavioural intention, social norms, and perceived control in technology adoption. When studied together, these three models provide a holistic context as to why consumers may embrace or reject technology. Understanding this, enables marketing experts to devise strategies that address factors that may deter consumers from embracing IoT technologies.

1. INTRODUCTION

The rapid proliferation of the Internet of Things (IoT) has ushered in transformative changes across key sectors such as healthcare, retail, transportation, and home automation. IoT refers to an interconnected network of devices that collect, exchange, and analyse data to enhance operational efficiency and create intelligent user experiences (Mouha, 2021). Despite the promise of enhanced functionality and convenience, consumer adoption of IoT technologies has been inconsistent. Compared to 72% of families in developed economies, just 35% of households in developing nations use IoT devices as of 2023 (International Telecommunication Union, 2023). This adoption disparity suggests that technological innovation alone does not account for user engagement. Therefore, and inference could be drawn instead, psychological and behavioural economic factors are instrumental in shaping consumer decisions (Gerli et al. 2022).

Furthermore, while traditional economic models presume rationality and utility maximization, behavioural economics highlights how cognitive biases, heuristics, and emotional influences often lead to decisions that deviate from rational choice paradigms (Negm 2022; Kim & Wang, 2021). For example, concepts like loss aversion, perceived control, and the endowment effect have been shown to influence how consumers evaluate risk and benefit in the context of new technologies like IoT (Ladeira et al., 2024). Additionally, consumer psychology provides vital insights into user attitudes, motivations, and perceived barriers.

Factors such as trust in technology providers, perceived ease of use, social influence, and privacy concerns are consistently identified as key determinants of IoT adoption (Guhr et al., 2020; Kwakye, 2023; Aggarwal & Singh, 2025). Importantly, the privacy paradox where consumers express concerns about data privacy yet continue to adopt data-collecting technologies demonstrates the nuanced interplay between risk perception and behavioural intent (Guhr et al., 2020; Kwakye, 2023).

From a marketing perspective, IoT enables a shift from traditional mass communication to context-aware, real-time engagement driven by user behaviour and predictive analytics (Rane, 2023). This marks a transition from static demographic