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Abstract

As the cost of energy rises dramatically across Europe and the rest of the world, coupled with growing concerns about climate change, it is imperative that households adopt technological solutions that will monitor and help reduce their energy use. In-home displays (IHDs) measure energy use and cost in real-time allowing consumers to visualise, understand, analyse, and improve their energy consumption. However, their uptake has been slow despite desperate efforts by consumers to seek ways to escape high energy bills even as energy prices continue their generally upward spiral. This research determines the factors that influence consumer receptivity to IHDs and the extent to which demographic variables moderate their influence.

A research model customised from UTAUT2 (Venkatesh et al., 2012), to best fit in the context of consumer receptivity to IHDs, was used to formulate the hypotheses tested in an attempt to address the research question. An online survey was adopted as the research strategy primarily for its ubiquity. The survey revealed interesting and surprising data that provided new insights into the extent to which demographic variables moderate the effect of the factors that influence consumer receptivity to IHDs.

This study provides statistical evidence that indicates that the following all influence consumer receptivity to IHDs: performance expectancy, effort expectancy, price value, aesthetics design, facilitating conditions and resistance to lifestyle change. The findings of this study show that their effects (with the exception of price value and facilitating conditions) are moderated by familiarity and/or age. Arguably, resistance to lifestyle change is the most problematic; this poses a great challenge to energy efficiency measures targeting behaviour change. Therefore, the immediate focus of most energy efficiency initiatives should be on finding ways to encourage consumers to reshape their energy use behaviour following their interaction with feedback from IHDs. IHD is only a part of the solution; it is ultimately the consumers' responsibility to react to the feedback.