Abstract

IoT is considered a next generation digital revolution to connect things with an embedded system to the Internet. The IoT technology is reshaping how people access information; IoT products and services will be a significant part of consumer infrastructure of smart retailing, smart homes, and smart cities, which will change consumers’ lives and their behaviors (Dutton, 2014; Brody and Pureswaran, 2015).

Researchers are taking note of the possible implications of IoT services and debating how to understand the impacts of IoT service on consumer life. As a result, understanding consumer acceptance is a critical aspect of the agenda in order to spread IoT applications to daily life. However, Kim and Kim (2016) argued that lack of user acceptance is one of many obstacles to be overcome for recognition of IoT.

This paper develops and tests factors determining a user’s acceptance of IoT technology and services using an extended UTAUT model including a factor of hindering condition. Given the importance of the new technology and the difficulty of understanding consumer behavior toward new IoT services, this paper aims to develop and test a causal relationship model of factors determining consumer acceptance of IoT technology empirically.

The authors present the hypotheses that we incorporate to extend the UTAUT model to the IoT context from the consumer point of view. The modified UTAUT-H model with a new core variable of a hindering condition. According to the previous researches, many articles cited UTAUT as a general reference to adoption of technology and some researcher tried in furthering UTAUT. Authors are considering the positive and negative factors in dealing with IoT service. The hypotheses H1–H4 are adopted from the original UTAUT model and H5 is an additional hypothesis. While the H4 illustrates a positive aspect of IoT adoption, the H5 shows a negative aspect of adopting IoT. In the UTAUT-H model, there are separate positive and negative paths that affect behavioral intentions. The two contradicting variables such as facilitating condition and hindering condition exist at the same time, affecting consumer behavior separately.

This study is still currently a research-in-progress. We are still on the stage of collecting data to enlarge our data set. Participants in this study are supposed to watch an animation for IoT service scenario, which is based on our daily lives with smartphones, smart cars, smart homes, and smart cities. The target of IoT application is not a specific one but a general application of IoT in our daily life. The participants are expected to answer a series of multi-item questions. A result of the pilot study finds that performance expectancy, social influence, facilitating and hindering conditions have strong effects on behavioral intention to use IoT technologies; however, effort expectancy does not support the relationship with behavioral intention because of unique characteristics of IoT technologies. By end of summer, we expect analyses and results to be ready to present at the AMCIS 2016 conference.