Chapter 10
Internet of Things in Online Business:
Towards a Conceptual Framework of Online Customer Behavior

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ABSTRACT

Online business, just like other industries, has adopted advanced technology for business performance. Hence, the technology of internet of things (IoT) has been implemented in recent years. IoT acts as a business ecosystem by interconnecting all physical objects and systems to execute tasks efficiently. However, the extent to which customers understand and appreciated this emerging technology is understudied. The purpose of this chapter is therefore to understand the customer acceptance as well as the gratification gained and sought by them via the use of IoT technology. Based on the uses and gratification theory, this study focused on the antecedents in shaping the attitude of online consumers towards IoT applications. Furthermore, it also addresses the willingness of consumers in becoming more knowledgeable of product with the support of IoT technology.

INTRODUCTION

Internet of Things (IoT) in many aspects an unstoppable technology that is transforming many industries significantly. It is one of the major technologies under the fourth industrial revolution, consist of cyber-physical systems, cloud computing, additive production, cognitive computing, and other technological innovations. IoT is defined as the networked system that connects physical devices which serve as information sensor with applications within the Internet (Gubbi, Buyya, Marusic, & Palaniswami, 2013). The interoperability of IoT enables the collection and sharing of data. The Internet of Things (IoT) has introduced evolution on how modern information and communication technologies communicate with physical objects. In a nutshell, IoT is a disruptive digital technologies that changing the way of life for customers and businesses (Murthy & Kumar, 2015).

The fast-emerging IoT disrupts the way business operates, and this includes its role in providing efficient execution of electronic commerce. With the rapid IoT adoption, business firms are investing heavily in intelligent disruptive technologies to increase productivity, innovate old ways and improve cost efficiencies into all business processes, knowledge flows, and information gathering (Murthy & Kumar, 2015). However, business firms are at the initial phase of the new digital transformation development of IoT (Mendonça & Andrade, 2018). Companies have invested to recognize how Industry 4.0 technologies can be fully exploited to enhance their operations and also providing more vales to the customers. However, in particular, how well the consumers know about this emerging technology? Hence, this study aims to examine the readiness and capabilities of online customers in using IoT applications.

BACKGROUND

About Internet of Things

The advent of IoT has influenced the online business to fit into new business changes. Business firms strive to stay competitive and serving customers better by taking advantage of the deployment of IoT in the connected digital market. With higher Internet connectivity, customers are depending on their devices to link to the business systems more frequently than ever before (Murthy & Kumar, 2015). Both customers and businesses are connected with a plethora of devices to a larger extent on a real-time basis (Pflaum & Gölzer, 2018). Customers are becoming more connected and getting familiar with the use of the mobile app (Ho, 2020). They are making contact and communicate with firms for all kinds of business-related matters, ranging from searching products, purchase transactions, customer support, etc. Customers are becoming well versed and using more physical devices that could be linked under IoT technology. For instance, the tracking of the product delivery process became easily traceable with the assistance of IoT sensors and RFID tags. The products' whereabouts and delivery lead time has been more accurate. Similarly, the customers were able to enjoy the benefits of getting access to the exact expected arrival time.

The inclusion of IoT technology into online business is on the verge. A list of current studies has validated that electronic commerce was one of the main industries disrupted by IoT (Bhatnagar & Kumra, 2020; Fu et al., 2020; Shang, Zhang, & Chen, 2012). While the use of IoT in online business is set forth for continued growth, the attitude and perception of customers towards its usefulness need to be taken care of. Online businesses have recognized the change in customer needs. To stay abreast of technology, online business has revamped its procedures and process with the advancement of IoT technology.

Use of Internet of Things in Business

Businesses have sought insightful understanding of online customers' attitudes to understand further how appreciative of customers towards the IoT implementation. Therefore, the acceptance of customers towards IoT is critical to evaluate the usefulness of this technology from the customer perspective. It is pure fact that new technology can lead to the effectiveness of business operations. While IoT is providing unprecedented benefits, the customers have to adapt to this new change and alter their purchasing patterns and attitude. Hence, there is a need to investigate the influence of IoT on molding consumer behavior while shopping online. The new deployment of technology is replacing the operations in elec-

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