Chapter 21
Enhancing Online Repurchase Intention via Application of Big Data Analytics in E-Commerce

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ABSTRACT

Based on the empirical research, this chapter investigated the impact of big data-based techniques typically used in big-data driven E-commerce such as information search, recommendation system, dynamic pricing, and personalisation on the online repurchase intention in Malaysia. This study also investigated the mediating effect on customer satisfaction. Therefore this study utilised the quantitative research method with an explanatory study to predict the link between dependent and independent variables. Additionally, the snowball sample method was used to select a sample size of 318 working adults in Klang Valley. Next, a self-administered online questionnaire was used to collect the necessary data. The IB, SPSS 22 software was then used to assess the reliability and normality of the variables at the first stage. Next, the Confirmatory Factor Analysis and Structural Equation Modelling were examined via IBM SSS AMOS 22. The findings showed that the big data analytic factors like information search, recommendation system, dynamic pricing, and personalisation had a positive significant impact on customers' repurchase intention. Nonetheless, the mediation effect of customer satisfaction on information search, recommendation system, and dynamic pricing did not encourage the repurchase intention. Then, this chapter discussed the managerial implication, limitations, and future research scope. Finally, this study suggested strategies to enhance online repurchase intention via application of big-data analytics in E-commerce.

INTRODUCTION

In 2019, the global retail E-commerce sales amounted to US$ 3.53 trillion and the E-retail revenues are expected to further increase to US$ 6.54 trillion in 2022. Online shopping is one of the world's most common online operations however, the utilisation differs based on a specific area (Statista, 2019). In a joint study by Google-TNS (2018), Southeast Asia's internet economy is slated to worth more than US$240 billion by 2025, which is US$40 billion more than what was first projected in 2018. Additionally, by 2025, E-commerce is predicted to worth US$102 billion, which would make up more than 40 per cent of the total worth of the internet economy in the region. Malaysia is an attractive market for E-commerce in Southeast Asia because of its dynamic economy and developed infrastructure for digital technologies. Malaysia has ~ 25.84 million active internet users and the population has extremely high rates of mobile phone penetration. Malaysia has a total of 32.25 million people and 25 million of them are social media users, 40.24 million have mobile subscriptions, and 24 million of the population use social media on their mobile devices. Consumers spent an average of US$125 on online shopping in 2018 and the figure is expected to more than triple to US$390 in 2025 (Asian Post, 2019).

Although the E-commerce industry in Malaysia is relatively strong, it still faces obstacles to adopt the latest trends or tools in technology, lacks digital marketing skills, and lacks the market-access knowledge, and the regulations in cross-border E-commerce (Safie, Dastane, and Ma'arif, 2019). Besides that, Malaysian consumers still perceive various factors as risks in their online purchasing behaviour (Tham, Dastane, Johari, and Ismail, 2019). As E-commerce steps into a new competitive era, online shopping vendors need to stand out from others and present it well to become the market leader in the domain of online retail. Competition among these companies has become more aggressive, so it is imperative for businesses to identify the factors that enhance online consumer intention to repurchase (Hamza V. K, 2014).

Electronic marketing is a significant revolution in the era of globalisation (Bala M, 2018). Maximum business organisations have been running with technological change over the past decade. Big Data is a technology that enables large data sets to be unstructured and captured almost in real-time, and to be stored, processed, and combined in large quantities of different types of data from different sources (Brünink, 2016). Big data analytics methods are helpful for the large quantity of information that comes from heterogeneous sources of data such as textbooks, audio, video, social media, general data, and artificial intelligence (Villarejo R, 2019). According to (Chen, 2008; Haba and Dastane, 2018) it is still a challenge for companies to examine the factors that affect consumer repurchase intention in an online environment. Additionally, with the existence of the internet, online consumers have more access to data and a broad range of products and services As such, an information search is imperative for online shopping sites to provide reliable and accurate information (L. G. Pee, 2018). Furthermore, (Yan, 2018) found that the recommendation system provided consumers with the most suitable data and more pleasant shopping experiences. Besides that, (Alireza, 2019) identified a technique to personalise the features of online shopping according to the personality of the consumer, which may encourage repurchase intention. Therefore, it is highly significant to explore and completely comprehend the shift, which is presently taking place in the domain of internet shopping. Hence, a study should be conducted to examine Big Data analytics enables businesses to predict repurchase intention and enable them to concentrate on strategically focused online shopping activities, and (Merve, 2015; S.Vijayarani, 2016), improve customer satisfaction, and repurchase intention.

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