Flight ticket booking app on mobile devices: Examining the determinants of individual intention to use

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A R T I C L E   I N F O

A B S T R A C T

In the context of intense market competition, airlines are enriching their business operations by offering flight ticket booking apps that can be downloaded on mobile devices. This study aims to examine the intention of individuals to use such apps, and uses Structural Equation Modelling (SEM) to analyse the data gathered from individuals in Malaysia. Perceived usefulness represents the greatest influence on individuals in respect of their intention to engage with such an app offered on a mobile device. Airline companies should consider using advances in ICT within their overall portfolio of marketing strategies, if they wish to become more competitive in the current market. They should utilise the interactive and attractive features of online channels in order to encourage more individuals to try their flight ticket booking apps on mobile devices. The proposed model could be used as a baseline model in future research.

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1. Introduction

With the progression of Information and Communications Technology (ICT), mobile devices like smartphones allow consumers to access the Internet to retrieve information about a variety of services. Airlines are aware of this benefit, and are enriching their business operations by enhancing their websites and offering flight ticket booking apps that individuals may download onto their mobile devices. The CAPA (2017) has noted that in 2016, there were approximately 68 million airline passengers in Malaysia, and that a further 15% in growth may occur in 2017 as a result of aggressive expansion by the main Malaysian carriers, namely AirAsia, AirAsia X, Malaysia Airlines, and Malindo Air. These carriers accept various payment methods for online flight tickets via PC and flight ticket booking apps on mobile devices, such as credit/debit card (MasterCard, Visa), charge card (American Express), PayPal, iDEAL (available only for EUR currency transaction), and direct debit (Maybank2u.com, CIMB Clicks).

Online booking has been studied extensively in the area of airline management and marketing. However, the use of a mobile phone in this respect has been low, and in 2016, only a small proportion of people in the US (13%) used their mobile phone for booking a holiday online, or for buying a flight ticket this way, because of the challenging nature of the process when compared to doing this through online travel sites on a PC (Parker, 2017). This percentage shows that the large majority of consumers globally, remain reluctant to use e-booking via mobile devices, which implies that website builders for airlines should design a more responsive e-booking platform that can be optimised for mobile use to persuade individuals to book flight ticket via this mechanism. It is observed by Al-Maghrabi et al. (2011), and Amaro and Duarte (2015), that scant empirical research has been conducted in respect of online reservations via mobile devices. Moreover, none whatsoever has been undertaken within the context of developing countries. Hence, the objective of this research is to examine individual intention to use flight ticket booking apps on mobile devices.

The study incorporates the factors derived from the Technology Acceptance Model (TAM) such as perceived usefulness, perceived ease of use, behavioural intention, and actual usage, and the integrated factors of perceived value, perceived trust, subjective norm, and airline image within the model constructed, in order to increase its explanatory ability. This integrative approach contributes to the body of knowledge in terms of offering a more comprehensive empirical insight into those factors that significantly influence individual intention to use flight ticket booking apps on mobile devices, and identifies those that have the strongest effects.

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The results are vital for the successful employment of online marketing strategies via mobile devices (Lee et al., 2007), and for the transformation of prospective customers into actual ones, who can be encouraged to make repeat purchases (Limayem et al., 2000).

The rest of this paper is organised into five sections. Reviews of the relevant literature are provided in Section 2, and Section 3 introduces the research methodology applied in the study. The analysis of the data using the SEM approach is described in Section 4. The paper then proceeds to discuss the resultant data in Section 5, before a final section deals with the conclusions and implications of the study as well as future research directions.

2. Literature review

2.1. Technology acceptance model

The Technology Acceptance Model (TAM) indicates a causal effect between perceived usefulness, perceived ease of use, attitude toward use, behavioural intention, and actual computer use (Davis, 1989). Specifically, both perceived usefulness and perceived ease of use are seen to be significant predictors of attitudes toward use, and both perceived usefulness and attitude toward use are identified as determinants of behavioural intention to use a system/technology. Furthermore, behavioural intention to use a system/technology is significant predictor of actual computer use, and perceived ease of use significantly impacts on perceived usefulness (see Fig. 1).

The TAM has been widely used for exploring the potential of IT acceptance or intention to use in a range of diverse situations, such as the adoption of Internet health information resources by resident doctors (Ajuwon and Popoola, 2015), intentions to purchase travel online (Amaro and Duarte, 2015), the use of smartphones for mobile shopping (Agrebi and Jallais, 2015), and the use of the interactive whiteboard (Tosuntas et al., 2015). In the present context, the TAM is applied to determine individual intention to use a flight ticket booking app on mobile devices, through the dimensions of unified aspects like perceived value, perceived trust, subjective norm, and airline image.

2.2. Perceived usefulness and perceived ease of use

Perceived usefulness is the "degree to which a person believes that using a particular system would enhance his or her performance" (Davis, 1989, p. 320). In the TAM, perceived usefulness is an important predictor that affects behavioural intention to use (Davis, 1989). Perceived ease of use refers to "the degree to which a person believes that using a particular system would be free of effort" (Davis, 1989, p. 320). The TAM stresses that perceived ease of use is a determinant of perceived usefulness, whereby users tend to consider that a system is more useful and can improve their performance when it is easy to use and requires minimal effort and time to learn (Davis, 1989; Venkatesh and Davis, 2000). Preceding studies have found that the impact of perceived usefulness on

behavioural intention to use e-booking is significant (Kim et al., 2009). Furthermore, it has been specified by Kim et al. (2009) that individuals' behavioural intention to use e-booking is also affected by their perceived ease of use of the system. Similar findings were obtained by Norazah and Norbayah (2011) in their exploration of the relationship between perceived usefulness, perceived ease of use, perceived enjoyment, attitude and subscribers' intention towards using 3G mobile services. Furthermore, a study by Bhatiasevi and Yoopetch (2015) on the determinants of intention to use electronic booking among young users in Thailand, found that perceived ease of use plays a significant role in affecting their perceived usefulness of the system. In relation to the current study, it is conjectured that when users discover e-booking to be both useful and easy to use, their ability to use a flight ticket booking app on a mobile device without experiencing any difficulty, will be heightened. Accordingly, they will tend to develop positive intentions to use it. Based on the literature, the following hypotheses are formulated:

H1. Perceived usefulness has a positive impact on individual intention to use flight ticket booking apps on mobile devices.

H2. Perceived ease of use has a positive impact on the perceived usefulness of flight ticket booking apps on mobile devices.

H3. Perceived ease of use has a positive impact on individual intention to use flight ticket booking apps on mobile devices.

2.3. Subjective norms

Subjective norms refer to the likelihood that people will approve or disapprove of certain behaviour. This likelihood is associated with the belief that influential referents expect people to behave in a particular way, and that they are thus motivated to comply with those anticipations (Ajzen, 1991). Friends, family members, work colleagues, and other people important to them are noted as these referents. It has been suggested that subjective norms have a significant and positive impact on users' behavioural intentions (Liao et al., 2007). Consistent with previous findings, Mouakket and Al-Hawari (2012) attempted to determine the precursors of e-loyalty intention towards online reservations in the United Arab Emirates. Their results confirmed that subjective norms positively affect e-loyalty intention towards online reservations. Correspondingly, an empirical study by Kim et al. (2009) noted that the links between subjective norms and customer intention to reuse the e-commerce website of airline B2C were significant among South Koreans. Indeed, the positive recommendations of family or friends regarding the efficiency of an airline's services positively affected low-cost carrier passengers' perceived usefulness of the e-booking system and their buying intentions (Buaphiban and Truong, 2017). Thus, the current study hypothesises the following:

H4. Subjective norms have a positive impact on individual intention to use flight ticket booking apps on mobile devices.
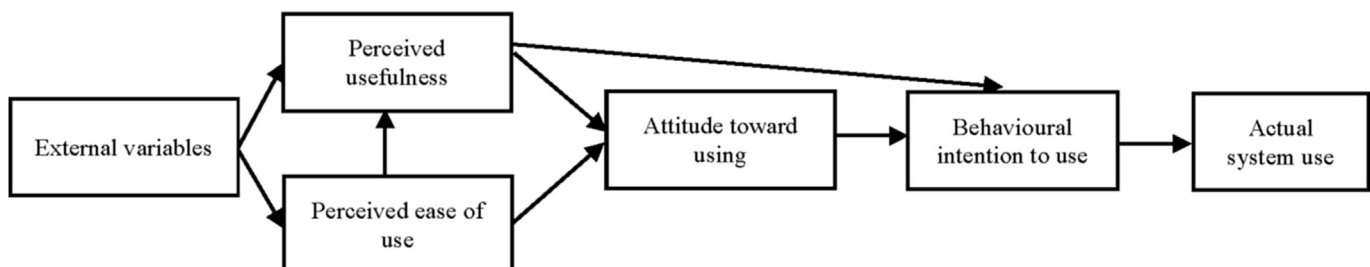

Fig. 1. Technology acceptance model (Davis, 1989).