

Rapid Communication

Understanding Individual Adoption of Mobile Booking Service: An Empirical Investigation

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Abstract

Based on information systems acceptance literature, this study develops an integrated model to predict and explain behavioral intention to use mobile booking (m-booking). Data collected from 201 users in Taiwan are tested against the research model, using the structural equation modeling approach. The proposed model is mostly supported by the empirical data. The findings of this study provide several crucial implications for m-booking service practitioners and researchers.

Introduction

THE DEVELOPMENT OF MOBILE COMPUTING TECHNOLOGY provides tourism organizations with new opportunities to interact with their customers through mobile devices and wireless Internet. Mobile booking (m-booking) service will, without doubt, become one of the trailblazers in the global mobile commerce area. M-booking services include booking hotel rooms, airline tickets, restaurant seats, and other traveling products, using a mobile device (e.g., mobile phone and PDA) while on the move. Research on m-commerce suggests that potential consumers may not adopt m-services in spite of their availability.¹ Therefore, the main purpose of this research is to investigate user acceptance of m-booking service and identify the factors that can predict behavioral intention to use m-booking service.

Research Model and Hypotheses

Since the Technology Acceptance Model (TAM), Theory of Planned Behavior (TPB), and Innovation Diffusion Theory (IDT) have been among the most widely applied theories/models for explaining IT adoption behavior, this study uses them as the theory base for deriving the research model and hypotheses. TAM posits that users' intention to use a new IT is determined by perceived usefulness and perceived ease of use.² According to TPB, an individual's behavioral intention is jointly influenced by attitude, subjective norms, and perceived behavioral control.^{3,4} IDT posits a set of innovation attributes to explain the rates of IT adoption by users: relative advantage, compatibility, and complexity.^{5,6} However, relative advantage and complexity are conceptually overlapped with TAM's perceived usefulness and perceived ease of use, respectively.⁷ Attitude construct has usually been

taken out to simplify the model in many TAM-related studies. According to Venkatesh et al.,⁸ social influence instead of subjective norms is used as a hypothesized determinant of behavioral intention. Also, this study replaces TPB's perceived behavioral control with Wang et al.'s⁹ perceived financial resources construct to reflect specific resources required to use m-booking services. The research model is shown in Figure 1 and the hypotheses are indicated below, which are all supported by the information systems literature:

H1: Higher perceived usefulness will lead to higher behavioral intention to use m-booking service.

H2: Higher perceived financial resources will lead to higher perceived usefulness of m-booking service.

H3: Higher perceived financial resources will lead to higher behavioral intention to use m-booking service.

H4: Higher perceived compatibility will lead to higher perceived usefulness of m-booking service.

H5: Higher perceived compatibility will lead to higher behavioral intention to use m-booking service.

H6: Higher perceived ease of use will lead to higher perceived usefulness of m-booking service.

H7: Higher perceived ease of use will lead to higher perceived compatibility of m-booking service.

H8: Higher perceived ease of use will lead to higher behavioral intention to use m-booking service.

H9: Higher social influence will lead to higher behavioral intention to use m-booking service.

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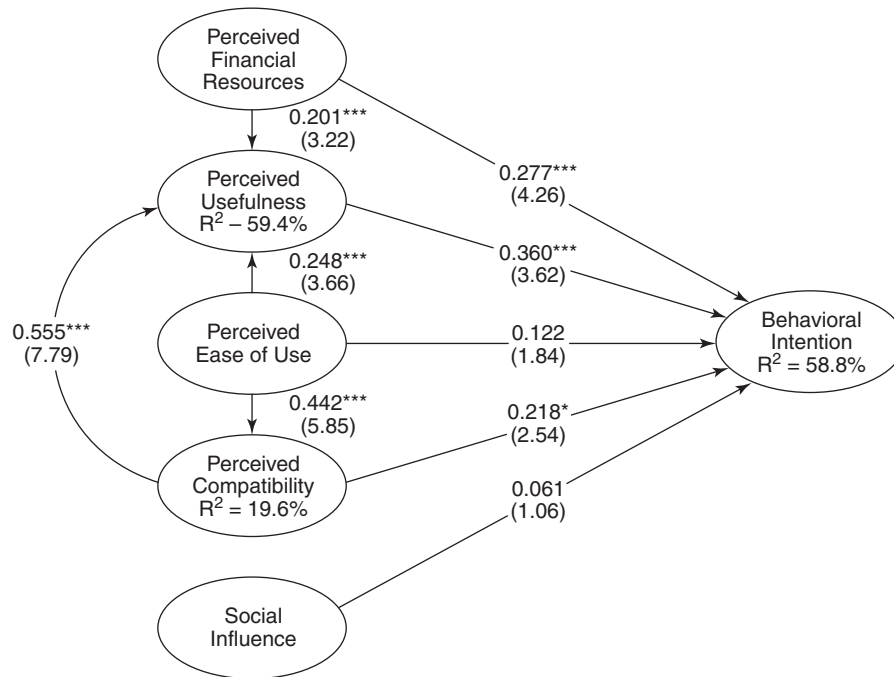


FIG. 1. Research model and hypotheses testing results. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

Measures and Data Collection

Items for the constructs of interest were taken from the previously validated inventory^{2,8-10} and modified to fit the m-booking service studied. Likert scales (1-7), with anchors ranging from "strongly disagree" to "strongly agree" were used for all items. Data used to test the research model were gathered from an online sample of 201 willing respondents in Taiwan; 65.2% of the respondents were male.

Results

The measurement model exhibits a fairly good fit with the data collected ($\chi^2/df = 2.19$, GFI = 0.89, AGFI = 0.84, NFI = 0.93, CFI = 0.96, RMSEA = 0.08, and IFI = 0.96) and has proper psychometric properties in terms of reliability, convergent validity, and discriminate validity. The structural model also provides evidence of a good model-data fit ($\chi^2/df = 2.89$, GFI = 0.86, AGFI = 0.80, NFI = 0.90, CFI = 0.93, RMSEA = 0.09, and IFI = 0.93). Properties of the causal paths, including standardized path coefficients and significance levels, are shown in Figure 1. As expected, hypotheses H1, H2, H3, H4, H5, H6, and H7 were supported. However, H8 and H9 were not supported. Altogether, the proposed model accounted for 58.8% of the variance in behavioral intention.

Discussions and Conclusions

Among the determinants, perceived usefulness had the strongest direct impact on behavioral intention. This result is consistent with the finding of Wang et al.⁹ M-booking service providers could emphasize the value-adding characteristics of m-booking in promoting perceived usefulness. For

example, mobility can help users get traveling information (e.g., weather and maps) and book hotel rooms anytime, anywhere.

Consistent with the work of Wu and Wang,¹¹ perceived compatibility had the strongest total effect on behavioral intention among the determinants of m-booking acceptance. Making m-booking services more compatible with potential users' lifestyle and needs is critical for m-booking service providers in promoting users' adoption rate of the new IT. Based on viewpoints of Chen et al.,¹⁰ Internet lifestyle and time starvation are two factors that may influence perceived compatibility in the context of m-booking. Thus, m-booking service providers can use market segmentation strategies to attract those who are busy or currently have adopted Internet booking to use their m-booking systems.

Perceived financial resources were found to have a significant effect on usage intention. This finding supports prior research, which suggested that perceived cost or perceived financial resources is an important determinant of m-service use.^{9,11} Given that using wireless m-booking is much more expensive than using wire-based Internet booking, m-booking service providers need to ease users' perception of high financial costs associated with using m-booking through promotions and pricing strategies.

Perceived ease of use was observed to have no direct influence on behavioral intention but have an indirect influence on behavioral intention through its effects on perceived usefulness and perceived compatibility. The finding is consistent with the results of Wu and Wang¹¹ who found that perceived ease of use affects m-commerce use intention only indirectly through perceived usefulness. This study also found that perceived ease of use had a direct positive impact on perceived compatibility in the context of mobile

booking. The finding is new since the effect of perceived ease of use on perceived compatibility has never been found by previous research that added perceived compatibility to TAM.^{10,11}

It is worth noting that social influence was not a critical determinant of behavioral intention to use m-booking. This finding was in accordance with the results of Venkatesh et al.⁸ who suggested that social influence is not significant in voluntary contexts. However, Lu et al.¹² found that social influence has an indirect influence on behavioral intention to use wireless Internet service. Thus, continued research is required to investigate the direct/indirect effect of social influence on intention more deeply.

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Disclosure Statement

The authors have no conflict of interest.

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