Will Insurance Brokers Use Mobile Insurance Service Platform: An Integration of UTAUT and TTF

Research-in-Progress

Yi-Ming Tai
National Pingtung Institute of Commerce
ymta@npic.edu.tw

Yi-Cheng Ku
Providence University
ycku@pu.edu.tw

Abstract

Mobile insurance service platform enables insurance firms to improve the quality of insurance services by providing faster means of communication and timeliness of operation. The platform allows insurance brokers to serve their customers immediately anytime and anywhere. To reach the benefits, however, insurance brokers must have intention to use the implemented mobile platform. Thus, insurance firms have to understand insurance brokers’ intention towards mobile insurance service platform. Consequently, identifying determinants of insurance brokers’ intention to use mobile insurance service platform is a valuable focus of research. Therefore, this study will propose a theoretical model by combining the perspectives of UTAUT and TTF theory. The theoretical model will be proposed and verified, in order to understand insurance brokers’ intention in mobile insurance service platform. The results of this study will help establish practical IT strategies for implementing mobile insurance service by providing information about perceptions of insurance brokers to insurance firms.

Keywords

Mobile insurance service platform, insurance broker, UTAUT, TTF.

Introduction

Noticing the potential competitive advantage and benefit enabled by mobile IT, mobile insurance service platform, an innovative customer interaction platform, has been implemented by several insurance firms to increase insurance brokers' customer service productivity (Shih and Huang, 2009; Pesout and Matustik, 2012). Because of lightweight and portable mobile devices, mobile service platform is especially applicable for insurance industry consisting of highly mobile employee (i.e., insurance broker). Mobile insurance service platform allows insurance brokers to serve their customers via mobile devices immediately anytime and anywhere. Recently, the development of mobile devices like Apple's iOS-based products, Google's Android-based products or Microsoft’s Windows mobile-based products brings new opportunity for insurance firms how to be in contact with their customers and how to sell customers additional services.

With the advent of more and more powerful mobile devices, mobile insurance service platform offers the more potential to improve the quality of insurance services by providing faster means of communication and timeliness of operation. To reach that potential, however, insurance brokers must intend to use the implemented mobile insurance service platform. Previous studies suggested that individuals are motivated to use an IT artifact when they perceive the IT artifact can satisfy their needs (Wang et al., 2009; Yang, 2010) or to be a better fit than alternative methods (Junglas et al., 2009; McGill and Klobas, 2009; Yen et al., 2010). With the emergence of many innovative applications of mobile IT, individuals are again confronted with IT adoption issues (Zhou et al., 2010; Lee et al., 2012). Compared to prior ITs, mobile devices are portable and thus particularly helpful in situations where immediate access to information is vital (Gebauer et al., 2010; Yuan et al., 2010). In insurance settings, these situations are the norm (Lee et al., 2007; Pesout and Matustik, 2012). Mobile insurance service platform is intended to be used by insurance brokers, the first-line employees with direct contact with customers, for information
processing and communicative needs. The usage of mobile insurance service platform generally means that the interaction between insurance brokers and their customers will be more personal, more tailored to the specific actual customers’ needs, and faster and more flexible.

Despite the tremendous growth and future potential of mobile devices and the mobile Internet, mobile insurance service platform is still in its infancy, leaving a great deal of room for development (Wang et al., 2009; Hameed et al., 2010; Lin et al., 2011). How insurance brokers feel about using mobile insurance service platform in their works is particularly important as we look towards future innovations in mobile insurance service platform. For insurance firms, mobile insurance service platform enables insurance brokers to serve their customers immediately anytime and anywhere. The benefits of mobile IT-driven innovations in customer services will only be fully realized if the design and implementation of mobile insurance service platform adequately reflects the factors that contribute to insurance brokers’ intention to use.

Insurance brokers’ evaluations of mobile insurance service platform have become an extremely salient issue for both insurance managers and mobile insurance service platform practitioners, enabling them to better understand how insurance brokers’ personal evaluations of mobile insurance service platform affect their usage intention (Apampa, 2010; Pesout and Matustik, 2012). A better understanding of insurance brokers’ usage intention would have great practical value, not only for insurance managers who would like to manage the implementation of mobile insurance service platform effectively and make the mobile insurance service platform an integral component of their business strategy, but also for mobile insurance service platform practitioners who wish to assess insurance brokers’ demands for their mobile insurance service platform and improve their offerings. Clearly, there is a strong need to understand what factors determining insurance brokers’ intention to use mobile insurance service platform by developing and empirically examining a comprehensive determining model. With that motivation, the main research question that this project seeks to address is the following:

What factors affect insurance brokers’ intention to use mobile insurance service platform?

An integrated model will be developed from the perspectives of the unified theory of acceptance and use of technology (UTAUT) theory (Venkatesh et al., 2003) and task-technology fit (TTF) theory (Goodhue and Thompson, 1995). UTAUT has been widely adopted to explain an individual’s acceptance and use of an IT (e.g., Wang et al., 2009; Yang, 2010; Yu, 2012; Zhou, 2012; Chen and Chang, 2013; Tai and Ku, 2013). Hence, the research model will be proposed based on the main constructs of UTAUT. However, solely focusing on user perceptions of mobile IT may be not enough. TTF theory argues that individuals determine whether or not to use an IT based on the fit between the IT characteristics and the individuals’ task requirements (Goodhue and Thompson, 1995; Dishaw and Strong, 1999). It is possible that, although users perceive an IT as being advanced, they do not intend to use the IT if they think the IT is unfit for their task requirements (Junglas et al., 2009; Lee et al., 2012). In other words, users’ intention to use an IT will be influenced not only by their perceptions toward the IT but also by the fitness between the IT and their task requirements (Schrier et al., 2010; Lee et al., 2012). In order to consider simultaneously insurance brokers’ perceptions toward mobile insurance service platform and the fitness between mobile insurance service platform and insurance brokers’ task requirements, this study extends the UTAUT model’s applicability to the context of using mobile insurance service platform in insurance service-related activities by incorporating the perspectives of TTF theory into the model.

**Theoretical Background and Hypotheses**

**Hypotheses based on UTAUT theory**

Insurance brokers’ behavioral intention to use mobile insurance service platform represents a fundamental managerial challenge (Lee et al., 2007). Insurance firms need to take a holistic approach to assess potential uptake of mobile insurance service platform and understand the drivers of the mobile insurance service platform acceptance. This information would allow insurance firms to proactively develop solutions targeted at populations of insurance brokers that may otherwise be less inclined to adopt mobile insurance service platform. Since using mobile insurance service platform in insurance service-related activities is a kind of innovative IT applications which is fulfilled by information systems with mobile technologies, UTAUT could be employed to explain insurance brokers’ behavioral intention.
Venkatesh et al. (2003) synthesized eight prominent models in the field of IT acceptance research into UTAUT to assess the likelihood of successful uptake of new technologies. In UTAUT, four core determinants of intention and usage - performance expectancy, effort expectancy, facilitating conditions and social influence - are developed from eight adoption theories. Moreover, the theory suggests that four variables - gender, age, experience and voluntariness of use - play moderating roles on the model's relationships (Venkatesh and Morris, 2000; Venkatesh et al., 2003). We argued that UTAUT could be adopted circumstantially to explain the research question in this study, because UTAUT has gradually drawn increased attention and has recently been used to investigate user acceptance of mobile-based IT artifacts. Since UTAUT is a comprehensive model which has been adopted to successfully predict behavioral intention toward mobile IT by several previous studies (e.g., Wang et al., 2009; Yang, 2010; Yu, 2012; Zhou, 2012; Chen and Chang, 2013; Tai and Ku, 2013), UTAUT could be a robust basis for identifying the determinants of insurance brokers' behavioral intention to use mobile insurance service platform. Thus, this study proposes the following hypotheses:

H1: Insurance brokers with high performance expectancy for mobile insurance service platform will have greater behavioral intention to use mobile insurance service platform.

H2: Insurance brokers with high effort expectancy for mobile insurance service platform will have greater behavioral intention to use mobile insurance service platform.

H3: Insurance brokers who perceive a high degree of positive social influence (i.e., supportive of mobile insurance service platform) from their peers will have a greater behavioral intention to use mobile insurance service platform.

Moreover, based on the findings of previous studies (Venkatesh et al. 2003; Tai and Ku, 2013), gender and age are theorized as playing moderating roles on the impact of users' perceptions of a particular IT. Thus, this study proposes the following hypotheses:

H4a: Gender will moderate the relationship between performance expectancy and behavioral intention to use mobile insurance service platform.

H4b: Gender will moderate the relationship between effort expectancy and behavioral intention to use mobile insurance service platform.

H4c: Gender will moderate the relationship between social influence and behavioral intention to use mobile insurance service platform.

H5a: Age will moderate the relationship between performance expectancy and behavioral intention to use mobile insurance service platform.

H5b: Age will moderate the relationship between effort expectancy and behavioral intention to use mobile insurance service platform.

H5c: Age will moderate the relationship between social influence and behavioral intention to use mobile insurance service platform.

**Hypotheses based on TTF theory**

Research on IT usage has long pointed out the importance of matching IT with the users’ tasks to be supported, as a precursor to IT use (Junglas et al., 2009; Yen et al., 2010; Xu et al., 2010). Hence, to gain further understanding of the factors that influence insurance brokers’ intention to use mobile insurance service platform, the perspective of TTF theory will be used to extend the UTAUT by considering how the fit between task and technology influences IT usage. TTF theory postulates that the adoption of a technology depends on how well the technology fits the requirements of a particular task (Goodhue and Thompson, 1995; Dishaw and Strong, 1999). This implies that for the adoption of a technology, the technology must be willingly used by users, and there needs to have been a good fit between the technology and the tasks of the users. Previous studies on IT usage have found that when users feel that an IT is capable of supporting the task at hand, the users will intend to use the IT (Zhou et al., 2010; Lee et al., 2012). The ability of the IT to support the task means that the functionalities of the IT enable users easily to accomplish the task. The degree of the task and technology fit is affected by the interactions among the characteristics of the task, the functionalities of the IT and the characteristics of users (Lee et
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Recently, a growing number of studies have applied TTF model to explain user adoption of emerging mobile ITs (e.g., Yen et al., 2010; Xu et al., 2010; Zhou et al., 2010; Lee et al., 2012). For example, Yen et al. (2010) proposed a revised TTF model (incorporating TAM and tool experience construct) to study the determinants of users’ intention to use wireless technology in organizations. They found that users’ intention to adopt wireless technology in organizations was determined directly by fit between characteristics of task and technology as well as users’ perceived ease of use and usefulness. Moreover, Xu et al. (2010) extended the concepts of TTF to explain determinants of user evaluation and acceptance of mobile video entertainment services. They found that the fit between the duration of the video content and the mobile handset and context determined users’ intentional involvement in the video content that in turn influenced users’ emotional enjoyment and satisfaction with the mobile video entertainment services. Zhou et al. (2010) proposed a revised TTF model to investigate factors affecting user to adopt mobile banking. They found that users’ adoption of mobile banking is affected not only by their perception toward mobile banking technology but also by the fit between their tasks and mobile banking technology. Lee et al. (2011) proposed a revised TTF model (incorporating individual characteristics and integrating TAM) to study the key drivers of mobile financial services usage intention. They found that perceived usefulness and perceived ease of use both serve as mediators between the constructs of TTF and usage intention.

Since TTF is a comprehensive model which has been adopted to successfully predict behavioral intention toward mobile IT by several previous studies, TTF could be a robust basis for identifying the determinants of insurance brokers’ behavioral intention to use mobile insurance service platform. Thus, this study proposes the following hypotheses:

H6: The characteristics of the task the insurance brokers performed will have impact in determining the fit between task and technology.

H7: The characteristics of the technology the insurance brokers used to perform their task will have impact in determining the fit between task and technology.

H8: The individual characteristics of the insurance brokers will have impact in determining the fit between task and technology.

H9: Insurance brokers who perceive a high degree of task-technology fit will have greater behavioral intention to use mobile insurance service platform.

Combining the Perspectives of UTAUT and TTF Theory

Research on IT usage has suggested that attitude/behavior models can be extended with the perspective TTF theory to provide a more comprehensive explanation of IT utilization (McGill and Klobas, 2009; Yen et al., 2010; Lee et al., 2012). For example, McGill and Klobas (2009) used a technology-to-performance chain model based on TTF and attitude/behavior theory to investigate performance impacts of learning management systems (LMS). The results shown that the fit between task characteristics and technology characteristics have significant impact on expected consequences of LMS use and affect toward LMS use. Moreover, Yen et al. (2010) developed a model that integrates both TAM and TTF model to understand the determinants of users’ intention to use wireless technology. The results demonstrated that integrating the perspective of TAM theory and the perspective of TTF theory will increase the explanation of the utilization of wireless technology. Zhou et al. (2010) proposed a mobile banking user adoption model by integrating TTF and UTAUT and found that performance expectancy, task technology fit, social influence, and facilitating conditions have significant effects on user adoption. Schrier et al. (2010) utilized a hybrid model combining TTF and TAM to investigate the factors affecting the usage of guest empowerment technology (GET). The results revealed that the use of a hybrid TTF/TAM could be a good predictor of GET utilization. Yu and Yu (2010) proposed a model combining TTF with TPB to investigate the usage of online learning and found that the integrated model can provide better explanation of users’ utilization of online learning systems. Lee et al. (2011) developed an integrated model combining the key ideas of both TTF and TAM and found that the integrated model can provide good explanation of users’ intention toward using mobile financial services. Shih and Chen (2011) developed an integrated model of TAM and
TTF to investigate behavioral intention for mobile commerce and found that the combination of TAM and TTF explains more variance than either model alone.

UTAUT and TTF are two important theories to explain and predict users’ behavioral intention toward a specific IT. We suggest that combining the perspectives of UTAUT and TTF theory can provide better explanation of insurance brokers’ intention towards mobile insurance service platform, since the two models capture different aspects of users’ choices to utilize IT. The concept of beliefs in UTAUT theory and the concept of fit in TTF theory offer explanations for why users choose one IT over the other in carrying out their tasks. UTAUT theory assumes users’ perceptions of a particular IT play important roles in determining whether the users exhibit the behavior of utilizing the IT (Morris and Venkatesh, 2000; Venkatesh et al., 2003). TTF theory takes a rational determining approach by assuming that users choose to use a particular IT depends on how well the IT fits their task requirements, regardless of their beliefs toward the IT (Goodhue and Thompson, 1995; Dishaw and Strong, 1999). Combining the perspectives of UTAUT theory and TTF theory is likely to provide a better explanation of IT utilization than either UTAUT or TTF theory could provide separately.

In integrating UTAUT and TTF, this study suggests that task-technology fit will affect insurance brokers’ performance expectancy and effort expectancy. Because when insurance brokers’ tasks require fast, convenient, and ubiquitous to provide contextual and personalized services to customers, they will feel that mobile insurance service platform is useful and will feel the platform is easy to learn and use. Thus, this study proposes the following hypotheses:

H10: Insurance brokers who perceive a high degree of task-technology fit will have greater performance expectancy for mobile insurance service platform.

H11: Insurance brokers who perceive a high degree of task-technology fit will have greater effort expectancy for mobile insurance service platform.

Based on the proposed hypotheses, the research model is established, as explained in Figure 1. In the research model, the construct of task characteristics will be operationalized as a formative second-order latent construct with three reflective first-order latent sub-constructs, namely, mobility, frequency and time criticality. The construct of technology characteristics will be operationalized as a formative second-order latent construct with three reflective first-order latent sub-constructs, namely, functionality, user interface and portability. The construct of individual characteristics will be operationalized as a formative second-order latent construct with two reflective first-order latent sub-constructs, namely, IT self-efficiency and IT absorptive capacity.
Research Methodology

The survey methodology will be chosen given the context of this study. Empirical data for testing the research model will be collected via a field survey. Items designed to measure the constructs will be generated through a comprehensive literature review. The development of a construct will be based on the adoption of relevant research streams. For example, items designed to measure performance expectancy, effort expectancy and social influence will be developed from review of UTAUT-based studies and mobile IT adoption studies, and items designed to measure task characteristics, technology characteristics, individual characteristics and task-technology fit will be developed from review of TTF-based studies, mobile IT studies and tasks of insurance brokers studies. In the pre-pilot study, these items will be reviewed by the panel assembled by academicians and re-evaluated through structured interviews with practitioners who will be asked to comment on the appropriateness of the research constructs. Based on the feedback from the academicians and practitioners, redundant and ambiguous items will be either modified or eliminated. New items will be added wherever deemed necessary.

Empirical data for testing the research model will be collected from insurance brokers. For ensuring respondents have a certain degree of IT literacy and mobile devices to access, insurance brokers who have ever used IT-based communication tools (e.g., electronic mail, online discussion, instant messaging software, and etc.) to interact with their customer will be chosen as the target respondents. In order to make contact with appropriate study subjects, branch office managers of insurance firms in Taiwan will be used to distribute questionnaires to their employees (i.e., insurance brokers).

Anticipated Contributions

This study focuses on investigating what factors determining insurance brokers' intention to use mobile insurance service platform. In order to simultaneously capturing the encouraging and obstructive factors that affect insurance brokers' intention to use mobile insurance service platform, the theoretical constructs derived from UTAUT theory and TTF theory are integrated to formulate research model of this study. Based on the literature analysis and the empirical investigation on the determinants of insurance brokers' behavioral intention, this study will provide several contributions.

First, this study will analyze the causal paths of the formation of insurance brokers' behavioral intention towards mobile insurance service platform, thus help to answer the question of what factors determining insurance brokers' intention to use mobile insurance service platform. Second, a theoretical model will be proposed based on the perspectives of UTAUT theory and TTF theory for analyzing factors affecting insurance brokers' behavioral intention to use mobile insurance service platform, the results can be formed as the foundation of future researches in studying why salespeople adopt or resist mobile IT. Finally, this study will investigate the factors determining insurance brokers' behavioral intention with considering the moderating effects of gender and age, the results can help establish practical IT strategies for implementing mobile insurance service platform by providing information about perceptions of insurance brokers to insurance firms.

REFERENCES


