

Information Safety, Corporate Image, and Intention to Use Online Services: Evidence from Travel Industry in Vietnam

Full Paper

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Abstract

The decline in the physical office space for travel agencies in developed countries has been accompanied with increases in e-travel services offered online. A similar revolution can be expected in developing countries, such as Vietnam. But what will drive consumer action in these countries? While linkages between corporate image and information safety have been proposed to online buying intentions, the area has research gaps, which are investigated in this paper. We used a Technology Adoption based model with corporate image and information safety, and investigated e-travel services adoption among Vietnamese students. Our sample consists of 548 responses obtained from a survey conducted at a university in Vietnam. The results show that information safety, but interestingly not corporate image, links to e-travel services adoption. We discuss the reasons and propose future research opportunities in this area.

Keywords

Intention to use service, corporate image, information safety, Vietnam.

Introduction

Tourism has developed significantly in Vietnam during recent years, and is an important part to the economy of Vietnam since the "Open Door" economic policy was introduced in the 1980's. Showing this in figures, the number of international tourists has increased from 250.000 to 10 million people during the period 1990 - 2016 (VNAT, 2016). Indeed, the growth in tourist arrivals during the past 20 years has been over 10% per year, higher than the average annual GDP growth rate (which was 6%). In 2015, tourism contributed directly 12.7 billion dollars to the economy, accounting for 6.5% of GDP and generating 2.8 million jobs (World Travel & Tourism Council, 2016). However, it is thought that the contribution of tourism to the economy can still increase significantly. In 2015, Vietnam was ranked 32 out of 184 countries on the contribution of tourism to GDP, behind other neighbouring Asian countries such as Thailand, Indonesia, and Malaysia. Compared to Thailand which has similar conditions, tourism revenues in Vietnam accounts only a third of Thailand's, and contribute also a smaller percentage to GDP (9% for

Thailand versus 6.5% for Vietnam) (World Travel & Tourism Council, 2016). Information technology (IT) can be part of the solution for Vietnam's further development of the tourism industry.

IT has significantly changed the tourism industry and created new possibilities for tourism services provision (Sheldon, 1997; Werthner & Klein, 1990; Cao & Yang, 2015, Xiang et al, 2008). Hence, in order to exploit tourism potentials and develop services relating to tourism, travel agencies should focus to develop e-travel services, such as offering travel packages on their website (Lee et al, 2006) and understanding customer preferences online (Stepchenkova et al, 2010). Such e-travel services are becoming a necessity as Internet shopping is gaining in popularity in Vietnam. According to the Ministry of Trade and Industry, 62% of citizens purchase items online and 75% of those who buy only do so after searching for information first (The Ministry of Trade and Industry, 2016). It is also important to recognize the role of smartphones and applications in searching for tourism information (Sigala et al, 2012; Xiang & Gretzel, 2010), which increases the appeal of these mobile devices for tourism-related purchases. Travel agencies can benefit greatly by having their offerings on the Internet, and be able to take market share from more established competitors by having well-developed online stores.

Many studies have been conducted on the purchasing of online travel services in Asian countries such as Taiwan, China, and Korea (Chuang, 2016; Cao & Yang, 2016; Maswera et al, 2009; Kim et al, 2011). These studies were based mainly on the Theory of Planned Behavior and the Technology Acceptance Model. However, these studies focus on technology-related service properties. Purchasing travel services via the Internet is not only affected by technology convenience but also personal experience about the travel agency. Corporate image is one factor influencing customers' purchasing intentions (Choi et al., 2016), and it has also been investigated in relation to online buying (Park & Lennon, 2009), and traditional, offline travel services (Richard & Zhang, 2012), but only to a limited extent in e-travel services. The experiences from the e-commerce revolution show that new market entrants have an edge in competing against their more established rivals if these new entrants are able to provide service online. The transition to e-travel is particularly rapid in developing countries such as Vietnam, raising the question of to what extent customer buying behaviour is affected by corporate image in e-travel services in such countries.

When buying online, one particularly important facet is that buyers feel that transactions are secure, and that their personal information is not leaked out. If corporate image is weak, for example, it is a small and relatively unknown company, it is likely that would-be customers will pay particular attention to their information security; they will e.g. check whether the company has a physical address, whether the website uses secure protocols to process personal information, and so on. The Previous studies have investigated information safety in online buying (Pavlou & Fygenson, 2006; Venkatesh, 2000; Fortes & Rita, 2016), and in e-travel services (Eastlick et al., 2006) but there have been thus far few studies examining information safety in the context of developing countries. In addition, the application of corporate image and information safety together in research designs has been rare. Therefore, in this study we include information safety to our model to investigate the role of corporate image for the adoption of e-travel services.

This paper is organized as follows. First, we present the theoretical constructs and variables, as well as the hypotheses that link them. Next, we operationalize the constructs and explain our research method and sample. Then, the results of the analysis are presented. Finally, we discuss the results, describe what can be learned in a theoretical and practical sense from this research, and outline some directions for future research

Theoretical basis and research hypotheses

Intention to Use Services

Intention to use services is the decision to services or systems (Davis et al, 1989, 1993; Venkatesh, 2000). Intention to use services is formed by motivational factors affecting customer behavior and an estimate on the level of effort that a person is eager to execute a given behavior (Fortes & Rita, 2016).

Information Safety

Everyone is interested on the safety of their personal information, and perceived safety of their information affects their motivation in providing information before making online transactions (Smiths et al, 1996; Malhotra et al, 2004; Fortes & Rita, 2016). Information safety affects perceived usefulness (Venkateshet et al, 2003; Fortes & Rita, 2016), perceived ease of use (Venkatesh et al, 2003), perceived risk (McKnight et al, 1998; Van Slyke et al, 2006; Fortes & Rita, 2016) and trust in services (McKnight et al, 2002; Eastlick et al, 2006). Hence, this research proposes the following hypotheses:

H1a: Information safety affects positively to perceived ease of use

H1b: Information safety affects positively to perceived usefulness

H1c: Information safety affects positively to perceived risk

H1d: Information safety affects positively to trust

Perceived Ease of Use

Perceived ease of use is "the degree to which a person believes that using a particular system would be free from effort" (Davis 1989; 1993). Easy to use services encourage users to use them (Davis, 1993; Venkatesh, 2000; Ha & Stoel, 2009), and make would-be users have more positive attitudes towards the services (Davis 1989; Pavlou & Fygenson, 2006; Fortes & Rita, 2016). Hence, this research proposes the following hypotheses:

H2a: Perceived ease of use affects positively perceived usefulness

H2b: Perceived ease of use affects positively attitude towards services

Perceived Usefulness

Perceived usefulness is "the degree to which a person believes that using a particular system would enhance his or her job performance" (Davis 1989). The usefulness of services is demonstrated by time and cost savings, for example (Davis 1993; Venkatesh, 2000; Pavlou, 2003; Erkan & Evans, 2016). Perceived usefulness is positively linked to attitude towards the service (Pavlou & Fygenson, 2006; Fortes & Rita, 2016) and intention to use services (Fortes & Rita, 2016). Hence, this research proposes the following hypotheses:

H3a: Perceived usefulness effects positively to attitude towards services

H3b: Perceived usefulness effects positively to intention to use services

Trust

Trust is the firm belief of the potential online buyer after consideration of the features and the online transaction environment (Pavlou, 2003). Moorman et al (2002) argued that trust decreases uncertainty about transactions. This means that trust reduces perceived risk to transactions (Pavlou, 2003), and has an impact on customers' attitude towards services. (Ha & Stoel, 2009; Fortes & Rita, 2016). Hence, this research proposes the following hypotheses:

H4a: Trust affects positively to perceived risk

H4b: Trust affects positively to attitude towards services

Perceived Risk

Perceived risk is the feeling of potential harm to personal benefits, the abuse of one's personal information such as violations of personal privacy, or the wasting of time (Glover & Benbasat, 2011). Perceived risk is among factors having a negative impact of online transactions on attitude (Teo & Liu, 2007; Crespo et al, 2009; Glover & Benbasat, 2011; Fortes & Rita, 2016). Reducing perceived risk can be assumed to increase one's positive attitude towards services. Hence, this research proposes the following hypothesis:

H5: Reduce perceived risk affects positively attitude towards services

Convenience

Convenience is the property of being able to access services easily and use services effectively, particularly services such as service searching or payment services (Richard, 2002; Liang & Lai, 2005; Chen, 2010). Convenience affects customer intention to use online services. Hence, this research proposes the following hypothesis:

H6: Convenience affects positively intention to use services

Corporate image

Corporate image is the customers' feeling that a company has a good reputation in offering services to customers through business and social activities. Corporate image transmits the service signal to customers and solve information asymmetry when customers and their providers have different information about services (Zmud et al, 2010; Connelly et al, 2011; Mavlanova et al, 2012). Corporate image also affects customer satisfaction (Gronroos, 1984; Kang & James, 2004). Thus, corporate image is likely to affect customer attitude towards services as well as their intention to use services (Choi et al, 2016). This research proposes the following hypotheses:

H7a: Corporate image affects positively attitude towards services

H7b: Corporate image affects positively attitude towards intention to use services.

Attitude Towards Services

Attitude towards services is the belief of a customer toward target implementation (Ajzen & Fisbein, 1975; Davis, 1989). Customer positive attitudes towards a service will stimulate their intention to use the service (Davis 1989, Lwin & Williams, 2003; Pavlou & Fygenson, 2006; Smith et al, 2008; Fortes & Rita, 2016). Hence, this research proposes the following hypothesis:

H8: Positive attitude towards service affects positively intention to use services

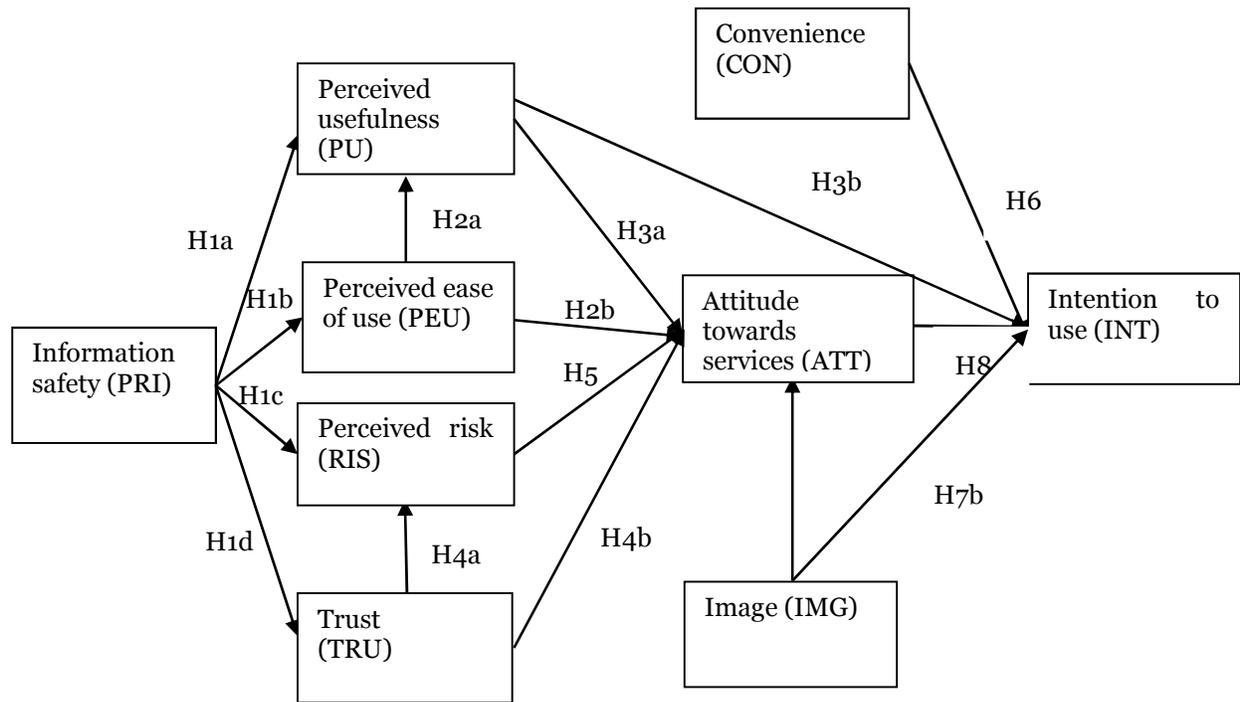


Figure 1. Research model

Method

Research Instruments

Observed variables were operationalized as follows:

- "information safety" is referenced from Dinev & Hart (2006) and Fortes & Rita (2016)
- "perceived ease of use" is referenced from Davis (1993) and Koufaris (2002)
- "perceived usefulness" is referenced from Davis (1993), Park et al (2004), and Fortes & Rita (2016)
- "trust" is referenced from Pavlou (2003) and Fortes & Rita (2016)
- "perceived risk" is referenced from Schlosser et al (2006) and Fortes & Rita (2016)
- "convenience" is referenced from Chang (2012)
- "corporate image" is referenced from Kang & James (2004)
- "attitude towards services" is referenced from Davis (1989); Lim & Dubinsky (2005), and Fortes & Rita (2016)
- "intention to use service" is referenced from Davis (1993); Venkatesh (2000), Schlosser et al (2005), and Erkan & Evans (2016).

The questionnaire was translated from English into Vietnamese and was evaluated through a group discussion with five experts on the travel industry in Vietnam. Then, the questionnaire was pre-tested with 136 different customers in order to eliminate unsuitable scales using content analysis and tested by Cronbach Alpha and item-total. The measurement scale used was 5-point Likert-type scale from 1 (disagree) to 5 (totally agree).

Samples and Data Collection

According to a report by the Ministry of Information and Communications, a high percentage of young (under 35-year-old) people are using the Internet. Therefore, students were seen as an ideal sampling category. Data collection was focused on 1,000 undergraduates and postgraduates at the Foreign Trade University (Ha Noi Campus) by directly handing paper-based questionnaire forms. The reason to choose this method instead of collecting data online is to have better control in data quality. After sorting to eliminate unfit samples, the number of responses was 548, which exceeds 500, the minimum number typically required. Most respondents (80.1%) were of age 30 or under, and were using the Internet heavily; as many as 44.9% were using the Internet more than 5 hours in a day. Only 5.8% of respondents used the Internet less than 2 hours a day.

Data Analysis

Confirmatory Factor Analysis (CFA) was used to evaluate the constructs. The model is considered to fit the data when Chi-square is less than 3; CFI, TLI, IFI >0.9; RMSEA <0.08 (Hair et al, 2006; Kline, 2011, Hooper et al, 2008). The loading of each factor should be above 0.5 to have convergence validity (Hair et al, 2006), Composite Reliability (CR) and Cronbach's Alpha should be above 0.5, and the Average Variance Extracted (AVE) should be above 50% in order to show reliability (Hair et al, 2006). In order to assess discriminant validity among constructs, we used the square root of AVE, which should be greater than the correlations involving the constructs. To test the hypotheses, we applied structural equation modeling (SEM) with the level of 5%. We also used direct correlation, indirect correlation and generalized correlation to evaluate the general impact of factors on the intention to use services.

The results

Evaluating Reliability and Validity

We used Confirmatory Factor Analysis (CFA) to evaluate the reliability and validity of constructs in the model. The results shows that the model fits the data (Chi - square = 2.329 < 3, CFI = 0.928; TLI = 0.918, IFI = 0.928, above 0.9, RMSEA = 0.049 < 0.08). However, observed variables PU1, TRU4, IMG3

& RIS6 which had factor loading less than 0.5 were eliminated. The other variables were above 0.5, showing that the constructs assessed composite reliability. Cronbach's Alpha was above 0.7 and average variance extracted was above 50%, showing that the constructs assessed reliability (see Table 1). Testing discriminant validity representing the level of square root of AVE of factors was greater than correlation showing the constructs assess discriminant validity (see Table 2).

| Constructs (No# of Items) | Factor loadings Range | AVE (%) | Composite Reliability | Cronbach's Alpha |
|---------------------------|-----------------------|---------|-----------------------|------------------|
| PRI(3) | 0.790 - 0.889 | 69.126 | 0.870 | 0.867 |
| PEU(4) | 0.792 - 0.830 | 62.916 | 0.871 | 0.868 |
| PU(4) | 0.733 - 0.759 | 55.366 | 0.788 | 0.783 |
| TRU(4) | 0.746 - 0.840 | 62.874 | 0.874 | 0.821 |
| RIS(6) | 0.644 - 0.759 | 51.409 | 0.841 | 0.85 |
| ATT(4) | 0.735 - 0.801 | 58.784 | 0.851 | 0.85 |
| CON(4) | 0.707 - 0.800 | 58.46 | 0.849 | 0.848 |
| IMG(6) | 0.683 - 0.758 | 53.634 | 0.852 | 0.847 |
| INT(4) | 0.710 - 0.765 | 55.661 | 0.843 | 0.832 |

Table 1. Reliability and Cronbach’s Alpha tests

Note: PRI: information safety; PEU: perceived ease of use; PU: perceived usefulness; TRU: trust; RIS: perceived risk; ATT: attitude to service; CON: service convenience; IMG: corporate image; INT: intention to use service

| | Mean(SD) | PRI | PEU | PU | TRU | RIS | ATT | CON | IMG | INT |
|-----|---------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PRI | 3.955 (0.937) | 0.831 | | | | | | | | |
| PEU | 3.526(0.797) | 0.175 | 0.793 | | | | | | | |
| PU | 3.745(0.755) | 0.331 | 0.637 | 0.744 | | | | | | |
| TRU | 3.158(0.771) | 0.096 | 0.244 | 0.294 | 0.793 | | | | | |
| RIS | 3.695(0.708) | 0.521 | 0.207 | 0.251 | 0.174 | 0.717 | | | | |
| ATT | 3.427(0.661) | 0.158 | 0.507 | 0.584 | 0.373 | 0.233 | 0.767 | | | |
| CON | 3.864(0.718) | 0.288 | 0.462 | 0.625 | 0.263 | 0.369 | 0.533 | 0.765 | | |
| IMG | 3.764(0.712) | 0.370 | 0.338 | 0.384 | 0.305 | 0.390 | 0.408 | 0.616 | 0.732 | |
| INT | 3.542(0.724) | 0.295 | 0.486 | 0.611 | 0.312 | 0.214 | 0.677 | 0.584 | 0.449 | 0.746 |

Table 2. Discriminant validity

Structural equation modeling

The analysis of structural equation modeling showed that the model fits the data (Chi – square/df = 2.522 < 3; CFI = 0.915, TLI = 0.906, IFI = 0.915, RMSEA = 0.053). The estimated results of relationships among factors are shown in Figure 2. We found the evidence to support 13 out of 15 hypotheses, including hypotheses H1a, H1b, H1c, H1d, H2a, H2b, H3a, H3b, H4a, H4b, H6, H7a and H8, but rejected hypotheses H5 and H7b (Figure 2).

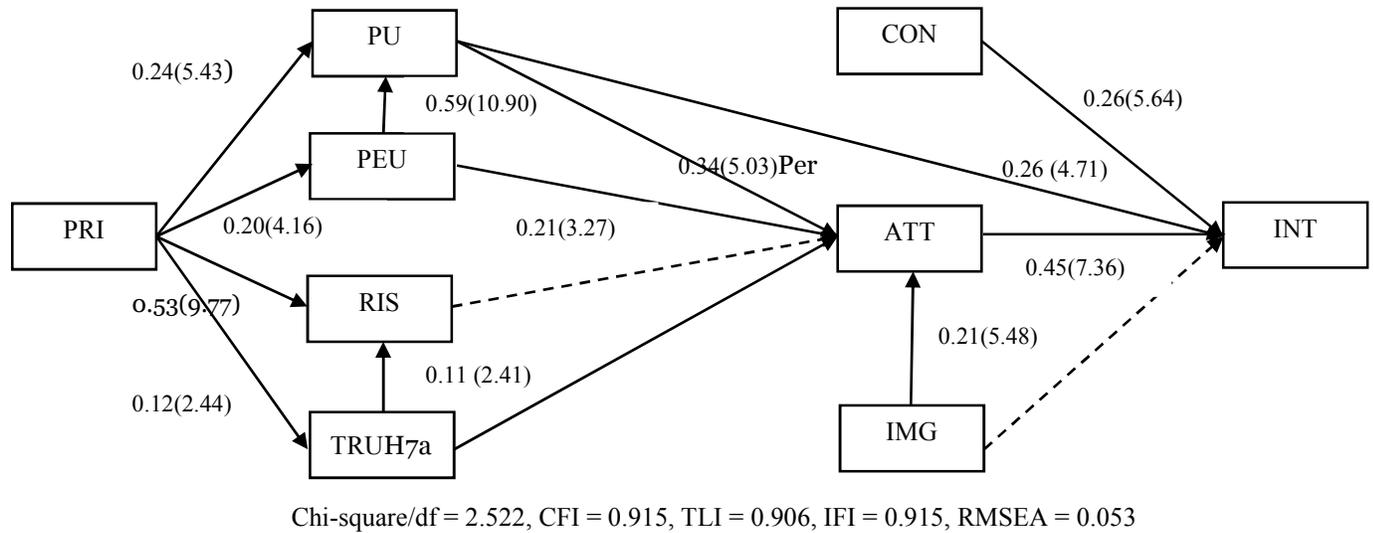


Figure 2: Structural Equation Model

The analysis based on direct correlation, indirect correlation and generalized correlation showed that all variables except perceived risk affected intention to use service. Attitude to service accounted for the highest impact level ($\lambda = 0.455$), followed by perceived usefulness ($\lambda = 0.414$), perceived ease of use ($\lambda = 0.336$), convenience ($\lambda = 0.255$), information safety ($\lambda = 0.179$), corporate image ($\lambda = 0.094$) and trust ($\lambda = 0.091$).

Theoretical contributions

The results show the positive effect on information safety on perceived usefulness, perceived ease of use, trust, and perceived risk in relation to e-travel services. In this respect, we add to the results of Eastlick et al. (2006) from the perspective of a developing country. Our results are in accordance with the conclusion of Eastlick et al. regarding the importance of information safety. We count this as our first contribution. Our second contribution is the surprising result of not finding a link between corporate image and the intention to use e-travel services, which is discussed below among other results.

Discussion and practical contributions

Although corporate image has a positive effect indirectly on the intention to use e-travel services through attitude to services, we could not find a direct effect on the intention to use e-travel services. This might be explained by intense competition among travel agencies at the time of the research. When information about services is provided comprehensively by all competing rivals, its effect on the intention and decision to use services might decrease (Spence, 2002). In addition, this study did not find evidence on the direct effect of perceived risk on the attitude to use and indirect effect on the intention to use. This is surprising and counter to what was found by e.g. Amaro and Durate (2015). One explanation might be the particularly young sample. Young people are less deterred by risk and more eager to try out new ways of purchasing travel services than older persons.

We also show the direct effect of perceived usefulness, perceived ease of use, attitude to services and convenience to the intention to use e-travel services. This result is consistent with previous studies on online buying behaviors (Liang & Lai, 2005; Pavlou & Fygenon, 2006; Ha & Stoel, 2009; Chen, 2010; Fortes & Rita, 2016). However, our study confirmed the applicability of the Technology Acceptance Model in a developing country context.

Regarding practical contributions, our findings can suggest ho travel agencies can increase customers’ trust in e-travel services. In addition to increasing ease of use, perceived usefulness, and convenience in using e-travel services, travel agencies should focus on: (1) setting up a customer data protection policy;

and (2) setting up transaction systems that guarantee customer data safety. Our results also suggest that corporate image is not necessarily crucial for e-travel services to the degree assumed. Therefore, new startup companies may have potential is capturing market share if they act quickly.

Limitations and further research

There were some limitations in conducting this study. Samples were not fully random because all responses were collected from among the students of a single university Although online data collection was not used in this research, we were able to better control that respondents are who they say they are. Future research should focus on confirming our result on corporate image and e-travel services adoption in different market conditions.

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