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# Research on Characteristics of Platforms for Purchasing Airline Tickets – Focusing on Air Ticket Distribution in Korea

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## Abstract

**Purpose**: This study intended to examine the effects of the characteristics of platforms for purchasing airline tickets on perceived ease of use, usefulness, and e-loyalty, applying the technology acceptance model. **Research design, data and methodology**: A research model was established based on previous studies, and data were collected from consumers with experience in the airline ticket purchasing platform. 175 valid samples were used and analyzed using SEM. **Results**: Characteristics of the ticket purchase platform were classified into sub-factors of accessibility, functionality and information reliability through theoretical consideration. The established hypotheses for the research were partially accepted. **Conclusions:** First, functionality and information reliability were found to have significant positive effects on perceived ease of use, while accessibility did not have such effect. Second, accessibility did not affect the perceived usefulness, and both functionality and information reliability had a significant positive effect on perceived usefulness. Third, it was found that the perceived ease of use had a positive effect on perceived usefulness. Finally, it was found that perceived ease of use did not affect e-loyalty of the ticket purchasing platform, only perceived usefulness affected e-loyalty. This study had important academic and practical implications in the context of air ticket distribution.

**Keywords:** Characteristics of Platforms, Technology Acceptance Model (TAM), e- Loyalty, Air Ticket Distribution, Distribution Strategy, Online Ticket Distribution

**JEL Classification Code:** L10, L81, L83, M31.

## 1. Introduction

With the development of ICT industries, the number of individual tourism and commercial demands has increased to a large extent, and the strategies of airlines have also changed to new environments. With the rapid development of the Internet, airlines have moved away from traditional ticket sales methods such as direct sales through travel agencies or selling airlines' home pages (Alamdari, 2002), and began to sell tickets to customers by meeting them at online platforms. The media which allow people to experience various kinds of information online through mobile devices is a platform. The most important purpose of platforms is to enable all participants to connect with each other and create value by exchanging products, services, and opinions with each other. (Joo, 2017).

Korea has the best Internet environment in the world. And the Internet has enabled an environment where potential customers can use airline ticket inquiries and purchases, and services provided by airlines ticket distribution regardless of time and place. Accordingly, it has become common to buy airline tickets online, and the range of tourist products and services available online is expanding rapidly.

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Passengers using the same flight pay different prices, because, in many cases, airfares are determined by differentiated prices imposed by airlines (Dana, 1998). Additional benefits or restrictions are given based on the time when the ticket is procured, the travel time, and class of airline tickets, and price sections of airlines are determined based on them (Chakrabarty & Kutlu, 2014; Siegert & Ulbricht, 2020). At the platform for purchasing airline tickets, consumers can compare airfares of different airlines, and get information on flight schedules, buy tickets, and exchange information with other customers. The adoption of this set of mobile-based airline services not only reduces operating costs, but also helps achieve the strategic benefits of improving the performance of customer relationship management (Pagiavlas et al., 2005).

Online distribution of airline tickets through home pages of airlines and ticket-purchase platforms allows airlines to reduce their fixed expenses, and becomes a rapid and convenient means to customers. Unlike general products, air tickets cannot be directly viewed and experienced because the point of purchase and actual consumption are different after purchase. Therefore, the consumer wants to make a reservation and payment directly online by searching for information on the price and time of the ticket through the ticket purchase platform, and then selecting the ticket with the conditions and price that the consumer wants. Consumers access the platform to order products, and the times are gradually changing in the form of online communication between airlines, which are producers, and customers, who are consumers, in real time.

By adopting Internet business tools including GDS (Global Distribution System), airlines now have effective means of business. Platforms affect airlines in a variety of ways, from production phases such as schedules, prices, and conditions, to distribution systems, relationships with consumers, and other related businesses, requiring airlines and platforms to establish new relationships (Menascé et al., 2000).

The home page of an airline is very effective in raising recognition among people about its brand, and airline tickets, and sending the image it pursues. But, purchasing of airline tickets through the home page of the airline is limited to the flights of the airline (Joo, 2018). So, it is not satisfactory for customers to acquire various kinds of information. In contrast, the platform for purchase of airline tickets allows customers to be able to check and compare flight schedules of tens of airlines as well as reserve the ticket real time and the seat. In addition, easy accessibility using mobile allows airlines to achieve more profits by allowing ticket purchases anytime, anywhere. (Pasupa & Cheramakara, 2019). Because of such merits, the airlines linked to the platform can secure the market of a larger scale, and secure advantage in the tough competitive market. In addition, the number of customers who get information from airline home pages and purchase airline tickets is decreasing, and the platform which has an advantage of allowing customers to purchase cheap tickets by comparing prices of a number of airlines is expected to grow. The use of online technology has become an important strategic tool for increasing airline revenue (Pagiavlas et al., 2005).

Despite strategic advantages of platforms for online ticket distribution, there are not sufficient researches on use of airline service based on platforms. While there have been efforts to search for the web site characteristics related to airline service (Wei & Ozok, 2005), and individual characteristics of web users (Lubbe & Louw, 2010), there have been few efforts to deal with psychological mechanisms of consumers procuring airline tickets at mobile platforms. Thus, this study, using the technology acceptance model (TAM) about acceptance and expansion of innovative technology, wanted to examine awareness and e-loyalty about platforms for purchase of airline tickets. The TAM suggests that acceptance of innovative technology is dependent on the degree of efforts needed to adopt it (perceived ease of use) and expectation of improvement of performance of the technology (perceived usefulness) (Davis, 1989). For example, various characteristics of platforms for purchasing airline tickets can vary depending on the degree of efforts needed to use those platforms and expectation of performance of the decision-making of purchase of airline tickets.

Based on such theoretical backgrounds, this study intends to examine characteristics of platforms for purchasing airline tickets as major variables affecting loyalty to such platforms. In particular, this study wants to investigate how perceived ease of use (PEOU) and perceived usefulness (PUN) affect characteristics of such platforms and e-loyalty by applying TAM. Through this, we intend to provide theoretical and practical implications for enhancing e-loyalty to online air ticket distribution, which are expected to continue to grow.

## 2. Literature Reviews

### 2.1. Characteristics of Platforms for Purchasing Airline Tickets

Because research on the ticket purchasing platform has not been actively conducted, an exact definition has not been established. In a study by Seon et al. (2018), the characteristics of the tourism information service platform were defined as "characteristics that appear when potential tourists acquire tourism information by using the service platform on a mobile device" and classified the characteristics of tourism information service platforms into

three kinds: convenient accessibility, mutual interactivity, and situation consciousness. Joo (2017) defined the airline ticket purchase platform as "platform where consumers can compare and purchase various airlines using computers or online smart device" and classified platforms for purchasing airline tickets into large-scale platforms and tourism-specific platforms, and suggested system functionality, security, reliability, and innovativeness as system quality sub-dimensions of characteristics of platforms.

With the popularization of mobile devices across the world, people can get access to the Internet anytime anyplace, breaking the border between online and offline. Tourism types have also changed from the group tour where people have to move on the schedule fixed by travel agency to free independent traveler (FIT). So, the proportion of travelers who purchase tourism products online is increasing (Seon et al., 2018). At such a platform, consumers can do various things at a time from checking schedules and detailed requirements in traveling to making reservations and paying for the trip by using the contents linked to the platform. Such convenience and easiness to access has made companies providing platform services grow rapidly.

Only recently, theoretical spotlights began to be focused on airline ticket purchase based on mobile platforms. Initially, researches paid attention to web-based attributes to attract willingness to purchase airline tickets online (Wei & Ozok, 2005), and core factors to succeed in mobile businesses (Pagiavlas et al., 2005). Then, researches have moved to attributes of consumers directly affecting purchasing of airline tickets (Lubbe & Louw, 2010), mobile airline service (Samy, 2012), and purchase behavior of consumers at such platforms (Pasupa & Cheramakara, 2019).

Samy (2012) emphasized that in the future mobile platforms would become key players in airline ticket purchase. As important factors of mobile airline service, Samy (2012) suggested three factors: process-oriented factor, information-oriented factor and auxiliary factor. He identified that consumers consider information-orientation factor more importantly than process-orientation factor, and evidenced consumer attitudes on mobile platform use in airline travel experiences.

Pasupa and Cheramakara (2019) tried to examine differences of platforms for purchasing airline tickets. They included airline web sites, mobile sites, and mobile apps. Through in-depth interviews to passengers using low-cost airlines of Thailand, they tried to reveal thinking processes in procuring airline tickets. Also, they identified five factors including "physical, trust, willingness to learn, use and adaptation". Among those factors, they found out that physical elements and trust of platforms are the most important elements in procuring tickets. They focused on user experiences and web-usability, and tried to search for ways to maximize optimization of platform and customer experiences. Related studies are summarized in Table 1.

Based on previous studies, this study defines the characteristics of a ticket purchase platform as "the attitude that consumers perceive when they want to purchase a ticket using the ticket purchase platform". In addition, this study wants to include airline web sites, mobile sites, and mobile applications into platforms for purchasing airline tickets.

**Table 1**: Related Research Trends: Researcher Summary

| Authors | Platforms | Research contents | Sub Factors |
|---|---|---|---|
| Seon, et. al. (2018) | tourism information service platform | Characteristics of Mobile Tourism Platform | convenient accessibility<br>mutual interactivity<br>situation consciousness |
| Joo (2017) | airline ticket purchase platform | System Quality of Airline ticket Platforms | system functionality<br>system security<br>system reliability<br>system innovativeness |
| Samy (2012) | mobile platform | Mobile Phone Technology in Airlines | process oriented factor<br>information oriented factor<br>auxiliary factor |
| Pasupa and Cheramakara (2019) | airline web sites, mobile sites, mobile apps | Purchasing Behavior of Thai LCCs passengers through Various Online Platforms | physical factor<br>trust factor<br>willingness to learn factor<br>use factor<br>adjustment factor |
| Wei and Ozok (2005) | mobile platform | Web-Based Mobile Ticketing Model in Airlines | none |
| Pagiavlas et al. (2005) | mobile platform | Mobile Business-Comprehensive Marketing Strategies in the US Airlines | none |
| Lubbe and Louw (2010) | mobile platform | Perceived Value on Mobile Devices to Airline Passengers | none |

### 2.2. Technology Acceptance Model

TAM is proposed by Davis (1989) to examine factors affecting the decision of consumers to adopt computer. Davis (1989) focused on developing a general theoretical frame which is not constrained by object of acceptance, computing technology or the subject of acceptance, the kinds of users group. Borrowing the theory of reasoned action (TRA), he suggested that willingness to use a product or a technology is determined by the trust on the results of using the product or the technology. He also argued that, only when there was optimistic trust that acceptance decision would bring about positive results, an innovative technology would be accepted by the market (Featherman & Pavlou, 2003).

TAM embraces theory of reasoned action, and explains willingness to use a technology using two major concepts: perceived ease of use (PEOU) and perceived usefulness (PUN) (Davis, 1989). Davis (1989) defined PEOU as "degree to which a person believes that using a particular system would be free of effort," and PUN as "degree to which a person believes that using a particular system would enhance his or her job performance". Later on, the TAM has been expanded and modified by various scholars in various fields. Also, a number of previous researches have shown that PEOU can affect PUN, proving that the easier consumers feel a specific technology is, the more convenient or useful they fell the technology is (Chou et al., 2022, Naeem et al., 2022). That is, when consumers fell that a specific technology is more convenient than other technologies, they use it more frequently.

Numerous research models have been proposed in sociology to explain the use of technology acceptance (Hanafiah et al., 2022; Rahman et al., 2021). According to Davis (1989), TAM is about individual attitudes by which one decides on something considering one's important goals and values. According to TAM of Brandon-Jones & Kauppi (2018), technology use of consumers is affected by acceptance of a specific technology, and two kinds of perception ─ PUN and PEOU─ determine the acceptance of it (Mohamad et al., 2021). Hanafiah et al. (2022) defined PEOU as "the degree to which one can easily access a system or application related with social media without special efforts or capacities" and PUN as "the degree to which a person believes that using a particular system would enhance their performance in completing a task". They determined to use TAM in the social media context.

Meanwhile, Nguyen et al. (2020) argued that if a system is designed to satisfy user's needs with usefulness and ease of use, the system is of high quality. The concept includes ease of acquiring the technology, system usefulness, and ease of performing the work, and that users perceive that it is easier to work using the system than to do it with their own hands.

### 2.3. E-Loyalty

Duffy (1998) defined loyalty as "possibility of continuous procurement of products or services." According to Oliver (1999), loyalty is defined as "devotion of consumers to procurement of a specific brand or product with high satisfaction without changing into other products or services." That is, loyalty is affection of consumers to the provider.

Reichheld and Schefter (2000) mentioned that loyalty in the offline market and online e-loyalty are different, and they defined e-loyalty as " the degree of affection consumer has to supplier through Internet". In a study to enhance loyalty on online, e-loyalty is defined as "the willingness to repeatedly purchase the same product, service or brand online or to recommend it to others through the web, mobile phone or social network" (Carneiro et al., 2019). Buhalis et al. (2020) defined e-loyalty as "consumer's intention to repurchase from the same site or recommend to other consumers", arguing that it is particularly important for younger age groups because of their high purchasing power and influence. Therefore, e-loyalty is extension of traditional concept of loyalty to consumer behavior online. Concept definitions of e-loyalty are summarized in Table 2.

**Table 2:** Definition of E-loyalty: Researcher Summary

| Author | Definition |
|---|---|
| Duffy (1998) | possibility of continuous procurement of products or services |
| Reichheld and Schefter (2000) | the degree of affection consumer has to supplier through Internet |
| Carneiro et al. (2019) | the willingness to repeatedly purchase the same service, product or brand online or to recommend it to others through online |
| Buhalis et al. (2020) | intention to reuse from the same site or recommend to others |

## 3. Research Design

### 3.1. Research Model

Reflecting previous researches, and responding to the need of do research on platforms for purchasing airline tickets, this study wanted to examine the factors affecting e-loyalty to such platforms. The platform for purchasing airline tickets is the site which provides customers with service by allowing them to compare prices and other conditions of various airlines, and such a platform includes home pages of airlines, mobile sites, and mobile applications. This study classified the characteristics of platforms for purchasing airline tickets into accessibility, functionality, and information reliability, and wanted to examine the effect of the characteristics of platforms for purchasing airline tickets on PEOU, PUN, and e-loyalty. Based on previous researches, this study identified relations among variables,

and, based on such relations, set the research model is shown in Figure 1.

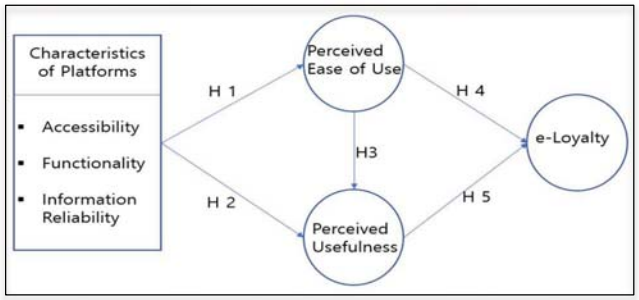


**Figure 1:** Research Model

### 3.2. Hypothesis Development

With the rapid development of mobile devices around the 2000s, there have been many studies on the characteristics of mobile tourism platforms. Those researches are based on researches of the characteristics of mobile information service. Siau et al. (2001) prescribed the characteristics of mobile communication as the first stage characteristics (ubiquity, accessibility, security, and convenience) and the second stage characteristics (locality, instant accessibility and individualization). Later, different researchers have given different names and concepts. That is, depending on scholars and research purposes on tourism platforms, sub-dimensions of platform characteristics vary.

In their study on behavioral intension for web site use, Lin and Lu (2000) found out that system quality factor has a significant effect on PUN and PEOU. According to Li (2015), among the characteristics of web site, mutual interaction is important, and perception of mutual interaction affects values of consumers, making them use it again. In their research on the role of quality of web site platforms in e-commerce, Liao et al. (2006) found that web site qualities consist of appearance, contents quality, detailed contents, and technological compatibility, and they affect intention to use continuously by the mediation of trust and usefulness.

Joo (2017) classified the characteristics of platforms for purchasing airline tickets into system functions, security, reliability, and innovation. In addition, it was demonstrated that innovation factor has a significant positive effect on PUN. It was also argued that the higher the perceived ease of the ticket purchase platform, the higher the PUN. Based on such previous researches, we can predict that characteristics of platforms for purchasing airline tickets have positive effects on PEOU and PUN.

**H1:** Characteristics of platforms for purchasing airline tickets will have a positive effect on PEOU.

**H2:** Characteristics of platforms for purchasing airline tickets will have a positive effect on PUN.

On the other hand, as the PEOU is improved, the effort required to accept the technology is reduced, and more cognitive and physical resources that can be invested in the original work can be stored. Therefore, it is known that the user's expectations for improved work performance are higher (Davis, 1989; Pinho & Soares, 2011). For example, Davis (1989) who first proposed the TAM showed that the higher PEOU gets, the stronger the trust to PUN. Featherman and Pavlou (2003) and Kamarulzaman (2007) proved that the positive effect of PEOU on PUN is reproduced in the online e-commerce context as well. Ayeh et al. (2016) argued that PUN and PEOU affect the intention of tourists to use user-generated content.

**H3:** PEOU for purchasing airline ticket platform will have a positive effect on PUN.

Through various researches including TAM and the extended version of it, PEOU and PUN of information prove to continuous use of the related service by consumers (Hanafiah et al., 2022). Unlike offline trade where people can meet together, as the trade in Internet and mobile platform is high in uncertainty, trust plays an important role in willingness to use information and loyalty using information service. According to Gefen et al. (2003), loyalty to online is the product of evaluation of information technology, especially, PUN and PEOU, and trust. That is, like offline loyalty, consumer who is high in e-loyalty to a site has high possibility to procure products satisfactory to him or her from the site, and is not likely to move to another site, even if the site approaches the consumer with marketing activities. In that case, e-loyalty of the consumer to the site is high (Lim & Yu, 2008).

According to Joo (2017), PEOU of a platform provides consumers with satisfaction with the site, leading to their continuous use of the platform. Also, Joo (2018) discovered that the higher P one has, the more likely one is to actively use it, and recommend it to one's neighbors. Therefore, based on above findings of previous researches, this study set the following hypotheses.

**H4:** PEOU to a platform for purchasing airline tickets will have a positive effect on e-loyalty

**H5:** PUN to a platform for purchasing airline tickets will have a positive effect on e-loyalty

### 3.3. Data Collection and Research Method

This study conducted a survey. The survey was done from January 1 to 15, 2022. Respondents of the survey were limited to those who had ever used platforms for purchasing airline tickets to travel by airplane. They were selected by convenience sampling, and the survey was done online and

offline. Some of the respondents filled out the questionnaire by themselves offline, and others did online. 200 copies in total of the questionnaire were distributed, and 189 copies (94%) were collected. Among the data, this study used 175 copies (87% of 200 copies) for analysis, excluding some copies which were severe in central tendency, or not sincerely filled out. The data were analyzed using SPSS 22.0 and AMOS 22.0.

## 4. Results

### 4.1. Demographic Characteristics

To examine the demographic characteristics of respondents, in this study, frequency analysis was performed as shown in Table 3.

**Table 3:** Demographic Characteristics

| Distinction | | n | % |
|---|---|---|---|
| Gender | Female | 58 | 33.1 |
| | Male | 117 | 66.9 |
| Age | 20~29 | 69 | 39.4 |
| | 30 ~39 | 46 | 26.3 |
| | 40~49 | 37 | 21.1 |
| | Over 50 | 23 | 13.2 |
| Marital Status | Single | 137 | 78.3 |
| | Married | 38 | 21.7 |
| Education | College graduates | 48 | 27.4 |
| | University graduates | 104 | 59.4 |
| | Graduate school | 23 | 13.2 |
| Purchasing Platform | Mobile application | 93 | 53.1 |
| | Airline web sites(pc) | 40 | 22.9 |
| | Mobile sites | 42 | 24.0 |
| Total | | 175 | 100 |

### 4.2. Reliability and Validity

To test internal consistency and discriminative validity, this study conducted confirmatory factor analysis. The statistical programs used for analysis were PASW(SPSS) 22.0 and AMOS 22.0. To test internal consistency, this study examined factor loading, average variance extracted (AVE), and composite reliability (CR). Data analysis found that factor loading > .60, AVE > .50, and CR > .75, securing convergent validity of constructs of measurement items (Bagozzi & Yi, 1988).

To measure structural relations among variables, in this study, confirmatory factor analysis was performed. The fit of the model was presented after deleting items that impede validity. It was found that $\chi^2$=512.069(p=0.00), $\chi^2$/df=2.695, GFI=.892, AGFI=.877, RMR=.031, NFI=.902, CFI=.933, IFI=.925, and RMSEA=.054. While some goodness-of-fit indices did not satisfy requirements of absolute goodness-of-fit indices of structural equation, this study considered the recommendation that, as AGFI and GFI had inconsistency due to the characteristics of the sample, it is desirable to choose CFI which is relatively free from characteristics of the sample, and, based on goodness-of-fit indices of previous researches, this study analyzed the data (Anderson & Gerbing, 1988). Reliability of construct was over 0.7, and as AVE value was over 0.5, this study judged that it secured concept validity. Table 4 shows the results of the confirmatory factor analysis.

Meanwhile, to check whether there was discriminant validity among constructs, this study compared the AVE values of constructs and the squares of correlation coefficients between constructs, and, it was found that all the AVE values of constructs in the model exceed squares of correlation coefficients between constructs, securing discriminant validity between concepts (Fornell & Larcker, 1981). Table 5 summarizes results of discriminant analyses.

### 4.3. Hypothesis Test

Applying TAM, this study wanted to examine the characteristics of platforms for purchasing airline tickets affecting e-loyalties of consumers. Based on theoretical discussion, this study set the research model, and used structural equations for empirical analyses. The test of the overall structural model of the research model resulted in the model of $\chi^2$=451.126, GFI=0.900, AGFI=0.897, CFI=.923, NFI= 0.921, and RMR=0.023. It was also found that $\chi^2$/df=2.306, a proper value (Anderson & Gerbing, 1988). Compared with common evaluation indices, this model seems proper. The results of path analyses of the structural model are shown in Table 6.

#### 4.3.1. The Characteristics of Platforms for Purchasing Airline Tickets and PEOU

Hypothesis 1 was that the characteristics of platforms for purchasing airline tickets would have significant positive (+) effect on PEOU. The characteristics of platforms were classified into accessibility, functionality, and information reliability. The path coefficient from accessibility of platforms to PEOU was 0.053 (t=0.231). As t value did not reach significant value (t value≧±1.96), this hypothesis (H 1-1) was rejected. The path coefficient from functionality of platforms to PEOU was 0.313 (t=2.711). As the t value was significant, this hypothesis (H 1-2) was accepted. The path coefficient from information reliability of platforms to PEOU was 0.477 (t=3.214). As the t value was significant, this hypothesis (H 1-3) was accepted.

**Table 4:** Confirmatory Factor Analysis for the Measurement Model

| Factor | Measurement Category | Std. factor loading | t Value | SMC | AVE |
|---|---|---|---|---|---|
| Accessibility | AB 1 | .807 | 12.554** | .669 | .657 |
| | AB 2 | .617 | 17.128** | .680 | |
| | AB 3 | .776 | 15.457** | .784 | |
| | AB 4 | .821 | --- | .863 | |
| Functionality | FN1 | .703 | --- | .701 | .557 |
| | FN 2 | .800 | 17.708** | .781 | |
| | FN 4 | .712 | 17.721** | .652 | |
| | FN 5 | .777 | 14.963** | .579 | |
| Information Reliability | IRY 1 | .719 | --- | .668 | .770 |
| | IRY 2 | .644 | 13.114** | .650 | |
| | IRY 3 | .660 | 15.700** | .758 | |
| | IRY 4 | .768 | 14.223** | .544 | |
| Perceived Ease of Use | PEOU 1 | .809 | 15.307** | .577 | .640 |
| | PEOU 2 | .881 | --- | .558 | |
| | PEOU 4 | .816 | 14.340** | .678 | |
| | PEOU 5 | .778 | 14.013** | .774 | |
| Perceived Usefulness | PUN 1 | .653 | --- | .877 | .528 |
| | PUN 2 | .672 | 13.334** | .846 | |
| | PUN 3 | .698 | 14.307** | .669 | |
| | PUN 5 | .889 | 13.015** | .709 | |
| e-Loyalty | EL 1 | .870 | 10.729** | .790 | .702 |
| | EL 2 | .807 | --- | .798 | |
| | EL 3 | .756 | 14.211** | .678 | |
| | EL4 | .839 | 17.001** | .702 | |
| $\chi^2$=512.069(p=0.00), $\chi^2$/df=2.695, GFI=.892, AGFI=.877, RMR=.031, NFI=.902, CFI=.933, IFI=.925, RMSEA=.054., **: P<.01 | | | | | |
| Composite reliability: Accessibility 0.871, Functionality 0.842, Information Reliability 0.891, Perceived Ease of Use 0.776, Perceived Usefulness 0.801, e-Loyalty 0.819 | | | | | |

**Table 5:** Correlation Matrix

| | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| Accessibility: A | **.810** | | | | | |
| Functionality: B | .442 | **.746** | | | | |
| Information Reliability: C | .525 | .421 | **.877** | | | |
| Perceived Ease of Use: D | .417 | .402 | .441 | **.800** | | |
| Perceived Usefulness: E | .509 | .276 | .487 | 437 | **.726** | |
| e-Loyalty: F | .425 | .441 | .424 | .521 | .523 | **.837** |

Note: p<0.01(diagonal; square root AVE , correlation coefficient; below the diagonal)

**Table 6:** Results of Hypothesis Testing

| H | Path | Estimate | S.E | C.R | P- value | Decision |
|---|---|---|---|---|---|---|
| 1-1 | Accessibility -> Perceived Ease of Use | .053 | .042 | 1.262 | .092 | Rejected |
| 1-2 | Functionality -> Perceived Ease of Use | .313 | .078 | 4.012** | .000 | Accepted |
| 1-3 | Information Reliability -> Perceived Ease of Use | .381 | .071 | 5.364** | .000 | Accepted |
| 2-1 | Accessibility -> Perceived Usefulness | .033 | .047 | 0.731 | .120 | Rejected |
| 2-2 | Functionality -> Perceived Usefulness | .351 | .083 | 4.228** | .000 | Accepted |

| | | | | | | |
|---|---|---|---|---|---|---|
| 2-3 | Information Reliability -> Perceived Usefulness | .464 | .061 | 7.601** | .000 | Accepted |
| 3 | Perceived Ease of Use -> Perceived Usefulness | .276 | .067 | 4.119** | .000 | Accepted |
| 4 | PEOU -> e-Loyalty | .131 | .083 | 1.590 | .062 | Rejected |
| 5 | Perceived Usefulness -> e-Loyalty | .284 | .081 | 3.506** | .000 | Accepted |

Note: **p<0.05

#### 4.3.2. The Characteristics of Platforms for Purchasing Airline Tickets and PUN

Hypothesis 2 was that the characteristics of platforms for purchasing airline tickets would have significant positive (+) effect on PUN. The characteristics of platforms were classified into accessibility, functionality, and information reliability as mentioned in the previous hypothesis. The path coefficient from accessibility of platforms to PUN was 0.033 (t=1.262). As t value did not reach significant value (t value≧±1.96), this hypothesis (H 2-1) was rejected. The path coefficient from functionality of platforms to PUN was 0.351 (t=4.228). As the t value was valid, this hypothesis (H 2-2) was accepted. The path coefficient from information reliability of platforms to PUN was 0.464 (t=7.601). As the t value was significant, this hypothesis (H 2-3) was accepted.

#### 4.3.3. PEOU, PUN, and E-loyalty

Hypothesis 3 was that PEOU to a platform for purchasing airline tickets would have significant positive (+) effect on PUN. Hypothesis 4 was that PEOU to a platform for purchasing airline tickets would have significant positive (+) effect on e-loyalty to the platform. Hypothesis 5 was that PUN to a platform for purchasing airline tickets would have significant positive (+) effect on e-loyalty to the platform. Analyses found that the path coefficient from PEOU to PUN was 0.276 (t=4.119). As t value satisfied the requirement of t value (t value≧±1.96), this hypothesis (H 3) was accepted. The path coefficient from PEOU to e-loyalty was 0.131 (t=1.590). As the t value was not valid, this hypothesis (H 4) was rejected. In contrast, the path coefficient from PUN to e-loyalty was 0.284 (t=3.506). As the t value was significant, this hypothesis (H 5) was accepted. Therefore, among the hypotheses established in this study, Hypothesis 1-1, Hypothesis 2-1, and Hypothesis 4 were rejected, and the other hypotheses were accepted at a significance level of 0.05.

## 5. Conclusion

This study intended to examine the effects of the characteristics of platforms for purchasing airline tickets on PEOU, PUN, and e-loyalty, applying the TAM. Based on previous researches, this study set the hypotheses, and did a survey to those who had ever used online ticket distribution platforms. The results of the empirical analyses are as follows.

First, the characteristics of platforms for purchasing airline tickets were divided into sub-factors like accessibility, functionality, and information reliability. As functionality and information reliability were found to have significant positive effects on PEOU, hypotheses 1-2, and 1-3 were accepted. While accessibility did not have such effect, so, hypothesis 1-1 was rejected. That is, the more users feel that it is convenient to search for information at a certain platform for purchasing airline tickets, the more they feel that the platform is easy to use. In addition, the more they feel that the ticket distribution platform provides special, abundant, and reliable of information, the more they feel that the platform is easy to use. In contrast, the perception of users that they can access the platform safely and quickly does not affect their feeling of ease of use. Additionally, the effect of information reliability on PEOU is higher than that of functionality on it shows that the role of information reliability is important in improving the level of PEOU.

Second, as for the influence relationship between the characteristics of airline ticket purchasing platforms and PUN, it was found that accessibility did not affect the PUN, and both functionality and information reliability had a significant positive effect on PUN. Hypothesis 2-2, 2-3 were all accepted. It means that the more customers feel that contents posted in the platform for purchasing airline tickets is easy to understand, and convenient to search for, the more they feel that purchase of airline ticket through such a platform is useful. In addition, the more customers feel that the platform provides accurate information and protects personal information of user thoroughly, the more they feel that purchase of airline ticket through such online distribution platform is useful.

The fact that the effect of information reliability on PUN is stronger than that of functionality on it shows that, in raising PEOU and PUN of users, information reliability is the most important element. Meanwhile, among the characteristics of platforms for purchasing airline tickets, accessibility was found not to have a significant positive effect on PEOU and PUN. Such a result should be understood that it is not because accessibility is not important for PEOU and PUN, but because users consider accessibility as naturally given in Korea where the environment of mobile accessibility is excellent.

Third, this study set hypothesis 3 that PEOU would have a significant positive effect on PUN, and the hypothesis was accepted. That is, the more consumers feel that it is easy to purchase airline tickets through platforms, the more they feel that such a way of purchasing tickets is useful.

Finally, hypothesis 4 was that PEOU would have a significant positive effect on e-loyalty, and hypothesis 5 was that PUN would have a significant positive effect on e-loyalty. It was found that, while PEOU did not have a significant effect on e-loyalty, PUN did. That is, the more useful it is to purchase tickets through these platforms, the more likely they will be reused and recommended to others. In addition, while PEOU does not have significant effect on e-loyalty, it indirectly affects it through PUN.

In the context of accepting platforms for purchasing airline tickets, this study examined the way to improve loyalty to such platforms among consumers by applying the TAM, and examined how the model is applied in the context of platforms for purchasing airline tickets. While people tended to purchase airline tickets through travel agencies in the past, increasing number of them are now purchasing tickets using airline web sites or mobile applications. Thus, such platforms for purchasing airline tickets will be an important target of research. The implications of this study are as follows.

First, while there have been some researches on platforms for tourism information, there have been not enough researches on platforms for purchasing airline tickets. Thus, in the sense that this study applied the TAM, and suggested ways of improving e-loyalty to such platforms, the findings of this study will contribute to future researches.

Second, even if scholastic interests in platforms for purchasing airline tickets have continuously grown, there are not consensus on variables related with the characteristics of such platforms. In this situation, the fact that this study extracted sub-factors of the characteristics ─ accessibility, functionality, and information reliability ─ and applied them to the TAM, this study can be meaningful.

Third, to improve e-loyalty to such platforms, it is necessary to provide users with information they want to have swiftly and accurately, and simplify information registration and posting to make users share information with other users, which will upgrade ease of use and usefulness of such platforms. Airline marketers should devise a ticket purchase and distribution strategy with these implications in mind.

Fourth, among the sub-factors of the characteristics of platforms for purchasing airline tickets ─ accessibility, functionality, and information reliability ─ information reliability was found to be the most important variable. Consequently, to increase e-loyalty of airline ticket distribution, it is necessary to make users rely on information in platforms. Ticket distribution platforms need to improve their reliabilities not only by providing accurate information to users, but by protecting personal information of users with the equipment to prevent leakage of personal information.

This study has important theoretical and practical implications as suggested above in the context of air ticket distribution. However, there are some limitations of this study. One of them is the fact that this study examined only three sub-dimensions of the characteristics of platforms for purchasing airline tickets. In future researches, it seems necessary to extract more dimensions related with the characteristics which affect e-loyalty to such platforms. In addition, to upgrade e-loyalty to such platforms, the safety to the payment system within the platform should be secured. Therefore, it is necessary for future studies to check how the anxiety about the payment system within the platform affects loyalty to the platform.

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