Factors influencing the adoption of e-Services in Indonesian Airlines: A Field Study Approach

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Abstract

Today, Internet is almost all about the evolution from e-Commerce and e-Business into e-Services. Airline industry has a significant contribution in the development of information technology as well as the economy. There is some success and failure in airline e-Services projects. In Indonesia for instance, some airline companies have adopted e-Services, yet have faced various problems in encouraging their customers to utilize e-Services. This study explores the factors and variables that influence Indonesian customers in using e-Services of Indonesian Airlines. This paper reports a field study on 15 selected Indonesian customers who have used Indonesian airline e-Services. A snowball sampling technique is employed to select these customers. Content analysis is performed to analyse the data from the interview, to extract potential factors and variables, and to develop the final research model. The result of the interview indentifies five major variables potentially affecting e-Services, which are effort expectancy, facilitation conditions, trustworthiness, outcome expectancy, and motivation. The overall result therefore highlights the importance as well as the relevance of these variables in a developing country context to be further empirically tested.

Keywords: e-Services, adoption, field study, content analysis

1. Introduction

Electronic-Services (e-Services) are increasingly becoming important in business to customer (B2C) e-commerce and portal sites. E-Services are the services that are produced, provided or consumed over electronic network for instance the Internet, ATM, wireless, and mobile devices (Chevrin et al. 2004; Scupola 2008). The use of e-Services has been continuously being expanded in general commercial uses such as travel agency, banking, health services, education, including airline industries. By adopting e-Services, every airlines company can improve their services. Some airline companies have gone on the way. Their services can do almost anything that customers needs. Their services can be executed faster without any physical contacts with customers. These airline companies can reduce costs that become benefits for their customers. Therefore, e-Services can create faster services and cheaper fare; which is the future. In Indonesia, although most airline companies have developed e-Services, they have not done their full service innovation via their portal site. Many customers of these airlines are, therefore, more comfortable buying airline ticket via travel agents. They are still unwilling to use airlines' portal sites for buying tickets. Therefore, that is why we need to do some study in the context of Indonesia airlines, so that they know how can improve their services via e-Services. This study will give contribution in airline industry, especially in Indonesia. This study will let them know how customers have a feeling about Indonesian airline e-Services and what should be done, so that Indonesian airlines can improve their services via e-Services.

In the literature, although it has been some models of e-Service adoption, an integration of model to develop appropriate model in the particular context, which is in Indonesia, has not been done. Prior researchers has used a number of prominent theories such as Theory of reason action (TRA) (Ajzen & Fishbein 1975), Theory acceptance model (TAM) (Davis 1989), Theory of planned behaviour (TPB) (Azjen 1991), Unified theory of acceptance and use of technology (UTAUT) (Venkatesh et al.

2003) to do in a particular context. For instance, Featherman et al. (2010) studied e-Services by using TAM as basis theory, examining the impact of ease of use, perceived usefulness, security and reliability concerns, and privacy risk on intention to use banking e-Services. Gefen and Straub (2003) also used TAM as main theory in their study, investigating factors (e.g. social presence, trust, ease of use and perceived usefulness) which influence intention to purchase airline tickets. Hung et al. (2007) reused UTAUT for investigating the use of e-Government services. Ruyter et al. (2001) investigated the impact organization reputation, relative advantage, and perceived risk on perceived service quality, trust, and behavioural intentions of customer towards adopting e-Services. To significantly contribute to the literature, this paper integrates all of those possible models in a uniquely requisite model which are considered relevant to be tested in an Indonesian context. This paper thus attempts to answer the following research question: What are important factors to the e-Services adoption in respect to encourage Indonesian customers for getting benefit from e-Services usage continuously?

To meet the above objectives, this study is formed as a part of a wider research process that was divided into a number of stages. The basic premise of the study is extensive literature on IT adoption based on research context development. This stage of the study involved a qualitative field study. The semi-structured interview techniques are used to collect relevant data. The primary objectives of this paper are two-fold, namely: (a) to identify various factors and variables of e-Services usage; (b) to explore and develop a model of e-Services usage in the individual level from external perspective.

The paper is organized as follows. Section 1 provides the general overview of the study. Section 2 reviews past literature on e-Services adoption underpinning this study. The research method, which describes the process of data collection including the explanation on the interview process and the content analysis, is presented in Section 3. Section 4 reports the results. This is followed by Section 5, which discusses the implications of the results. Te overall conclusion and future directions are finally presented in Section 6.

2. Background

E-Services are part of enabling process of Internet evolution to open up new channels for companies that can reach global customers, going beyond the traditional barriers of location, time, and distance (Surjadjaya et al. 2003). There has been sustained growth in the wide range of e-Services. According to National Technology Readiness Survey (NTRS), in the United States, online travel accounts for the highest growth of e-Services, increasing from 19% in 2001 to 30% in 2002 (Colby & Parasuraman 2003). In Indonesia, airline websites have been growing steadily to provide virtual services, such as schedule info, booking and purchasing airline ticket. The 2007 Nielsen Global Online Survey (NGOS) survey revealed that most users of e-Services in Indonesia use the internet for buying flight tickets instead of for buying other things such as books and electronic equipments (Agustina 2008). In this section, we first briefly look at the growth and use of e-Services. We, then, briefly review the background of adoption technology in order to prepare a preliminary workable model of e-Services adoption for further exploration in customers' perspective.

2.1 e-Services

E-Services can involve a number of different relations, such as B2C, business to business (B2B), electronic-Government (e-Government). In this paper, we focus on B2C e-commerce. Since e-commerce is a new way of doing business for both customers and online trade, scholarly literature on e-Services that support B2C e-commerce is limited. These few studies available focused in five specifics aspects of e-Services: e-Services functions for support online shoppers (Kalakota & Whinston 1997; Turban et al. 2002), customer satisfaction with e-Services (Lankton & Wilson 2007), quality of e-Services (Douglas et al. 2003; Singh 2002; Surjadjaya et al. 2003), e-Services systems design and implementations (Chevrin et al. 2004; Sahai & Machiraju 2001), factors affecting organizational decision and customers to use e-Services (Scupola 2008; Singh 2002). Although previous researchers have studied customers' adoption of e-Services (Dinev & Hart 2006; Featherman et al. 2010; Gefen & Straub 2003; Ruyter et al. 2001), their the application of adoption intention as the dependent variable, yet still very little (if any), this has so far been given the

emphasis on understanding the actual behaviour to adopt e-Services as a dependent variable. Riel et al. (2001) also argued that e-Services research was in its early stages and there were no generally accepted e-Services model. Consequently, we have gone with the relevant sources of literature to find out the factors that will possibly influence customers on e-Services usage.

2.2 e-Services usage

The utilization of e-Services is necessary for deriving its benefits. e-Services usage by customers has a notable practical value for managers interested in evaluating the impact of e-Services. It is, therefore, requisite to understand the use of e-Services that have been introduced by an airline company. As such, we have consulted relevant sources of text to find out factors that will possibly influence customers on using e-Services. An analysis of the social psychology, innovation and IT implementation streams of literature identifies a total of five core theoretical frameworks: TRA (Ajzen & Fishbein 1975), TAM (Davis 1989), TPB (Ajzen 1991), UTAUT (Venkatesh et al. 2003) and expectancy theory (Vroom 1964). These frameworks include a variety of key factors that can potentially influence users to use IT applications. Detailed of the frameworks can be found in the literature, and hence are not presented here.

The review of the frameworks leads to the following observations. Firstly, assumption has been made in most frameworks about a causal relationship between behavioural intention and actual behaviour. In the frameworks implicitly indicate that the key factors which affect the individual's intention to engage in a particular behaviour is also applicable to that individual's decision to execute that given behaviour. In the context of e-Services usage, we argue that although an individual may have strong intention to use e-Services, there are factors that would control him/her to terminate actual e-Services usage. For instance, a person may have a strong intention to use e-Services; however, due to unavailability of the e-Services at a certain time, the intention may not realize actual usage. Secondly, some of the key factors contain have almost the same meaning across the frameworks. For instance, factors like ease of use and effort expectancy have similar explanations. Another example, factors such as perceived usefulness, relative advantage, performance expectancy, and outcome expectancy have also comparable rationalization. In this context, we exclude performance expectancy and introduce outcome expectancy. Performance expectancy usually corresponds to job-related, while outcome expectancy relates to more personal attitude (Compeau & Higgins 1995). Therefore, outcome expectancy is more relevant to examine the customers' behaviour.

2.3 The initial research model and propositions development

A requisite approach was adopted to develop initial research model (see Figure 1) by including a subset of factors identified from the existing theoretical frameworks and the empirical literature. This study did not include all the key factors identified in the existing theoretical frameworks. Table 1 shows the key factors which are drawn from the core theoretical frameworks. The model would be applicable in a certain context but would need some adjustments if it was like to be used for another context. Too many factors were also unfeasible to implement in actual field setting due to sheer size of the instrument.

This study includes effort expectancy because it is the most widely cited and empirically supported factor regardless of the underlying technologies used in building IT applications. Social influence has been further selected to be a relevant factor because a customer may use the e-Services to follow his/her colleagues who have used it to enhance his/her status in a social system. One of the objectives of this paper is also to find out the influence of facilitating conditions that have been constructed by the airlines in order to attract their customer in using e-Services through various customers' supports online that are responsive to solve customer's problems when doing transactions.

Besides the three factors that have been selected from the existing core theoretical frameworks, this study also includes two essential factors (trustworthiness and privacy concerns) from the wider empirical literature on the Internet applications. These two factors are among the most important factors that lead customers to drop out the online business (Lohse et al. 2000). Although both of these

factors are consistently found to have an effect on the usage of Internet applications, but the result has varied degrees depending on the context. In addition, outcome expectancy is investigated as determinant factor of the internet application usage (as mentioned in previous section). Finally, this study tries to discover the impact of motivation and intention onto the usage of Internet applications. We acknowledge that the selection of these factors is somewhat influenced by how we view acceptance and usage of technology phenomenon in relation to e-Services and other researchers could differ from our viewpoint.

Based on the initial research model, the links among the factors in Figure 1 illustrates the propositions. The propositions are presented formally below which have been developed based on extensive literature review. However, due to page limitation discussions on proposition development are not presented here.

Proposition 1 (P1)   :   *Behavioral intention will have a significant positive influence on consumers' use behavior.*

Proposition 2 (P2)   :   *Motivation will positively influence the intensity of consumers' behavioral intention to use e-Services.*

Proposition 3 (P3)   :   *Effort expectancy will positively influence the intensity of consumers' behavioral intention to use e-Services.*

Proposition 4 (P4)   :   *Social influence will positively affect the intensity of consumers' behavioral intention to use e-Services.*

Proposition 5 (P5)   :   *Social influence will positively influence consumers' motivation.*

Proposition 6 (P6)   :   *Facilitation condition will positively influence the use of e-Services.*

Proposition 7 (P7)   :   *Privacy concerns will negatively influence the intensity of consumers' behavioral intention to use e-Services.*

Proposition 8 (P8)   :   *Privacy concerns will negatively influence consumers' motivation.*

Proposition 9 (P9)   :   *Trustworthiness will positively influence the intensity of consumers' behavioral intention of using e-Services.*

Proposition 10 (P10) :   *Trustworthiness will positively influence consumers' motivation*

Proposition 11 (P11) :   *Trustworthiness will positively influence effort expectancy.*

Proposition 12 (P12) :   *Trustworthiness will positively influence outcome expectancy.*

Proposition 13 (P13) :   *Outcome expectancy will positively influence the intensity of consumers' behavioral intention to use e-Services.*

Proposition 14 (P14) :   *Outcome expectancy will positively influence consumers' motivation*

3. Research Method

The paradigm of the research in this study is qualitative, in which the field study has been used as the research method (Zikmund & Babin 2007). Since we are interested in exploring the real customer adoption in a specific context, the field study is an appropriate method. Like any other users, field study involves the choosing of a sample of Indonesian customers using either random or non-random methods, which have used Indonesian airline e-Services (Zikmund & Babin 2007). Data in a field study can be collected in various ways. As we will explain later, we have chosen the interview method to collect the required data (Maykut & Moorehouse 1994). The details of our field study research process are presented below.

3.1 Sample

The snowball sampling technique was used to select participants (Zikmund and Babin 2007). In Indonesia, it is arguable that there are a limited number of customers who use Indonesian airline e-Servies. Most Indonesian airlines themselves just started adopting airline e-Services in 2007. Furthermore, as noted by CIA (2008), the national level of Internet use in Indonesia on 2007 was only 5.54%, highlighting that the level of Internet usage in this developing nation is very low. It is therefore considered that the users of Indonesian airline e-Services are exclusive. To be able to obtain a sufficient number of respondents, this study decides to adopt a snowball sampling technique.

In applying such a snowball sampling technique, the researchers asked potential respondent to give recommendations to others potential respondents who used Indonesian airline e-Services. A similar method has been used in information systems (IS) field, such as a study by Stephen et al. (2008). Alternatively, this study conducted a preliminary investigation to ensure whether a perspective respondent has already adopted Indonesian airline e-Services. All participants voluntarily took part in this study. The resulting participants, 15 persons, were quite demographically varied and had different backgrounds, like experience, gender and age group. Table 2 shows the demographic information on the customers who has already used e-Services and involved in the field study.

3.2 Data Collection

According to Dymon and Holloway (2001), the interview method is useful to explore the perspectives and perceptions of various respondents in the specific context. This study uses a series of semi-structured interviews for collecting the data. Prior to conducting the field study, an interview protocol was developed from the initial research model (see Figure 1). The semi-structured interview questions focused on exploring area of information to identify the factors and variables influencing the adoption of e-Services by Indonesian customers in Indonesian Airlines. The interview protocol provided the structure for the data collection and focused on exploring the following key areas identified: (a) general perception of e-Services in Indonesian Airlines, (b) the adoption process of e-Services, (c) the reason to shift buying ticket from travel agent to online, (d) the main factors that influence the e-Services adoption and the link between those factors, and (e) the role of motivation and intention on e-Services adoptions. Prior to the interviews, potential interviewees were contacted via e-mail and phone earlier, in order to explain the background and objective of the research.

Before pre-test interview, the semi-structured questions were translated into Indonesian language because the interview was conducted in Indonesian language. To do this a fluent bilingual speaker, of Indonesian and English, translated the English version of the semi-structured questions into Indonesian.

A pre-test of the semi-structured questions was conducted to interview with the first participant, a customer who had a doctoral degree and familiar with Airline e-Services. The minor correction has been done based on the constructive feedbacks from the pre-test interview. The interview guide proved to be running well for accomplishing the research aims of this research. Fifteen people were involved in these interviews. Each interview lasted for from 30 to 45 minutes, depending on the knowledge of the interviewees.

The interviews were electronically recorded while the interviewer took notes. The recorded interviews were then transcribed. The transcription process is presented in the following section.

3.3 Transcription process

As most of the interviews were conducted in Indonesian language. The following steps were undertaken to transcribe the field interviews so that we could get optimum output. In this process, researchers involved three research associates (RAs) who have bilingual language competence (Indonesian-English).

Firstly, researcher made a sample of interview transcripts from a respondent. Then, chief of RAs were asked to translate in English. Thus, the pattern of transcription and translation has been obtained. Next, following steps were followed by the research associates (RAs):
1. RAs were instructed to listen to the audio recording for each interview at least three times and to find out similarities and dissimilarities with their written notes.
2. They were also instructed to produce Indonesian transcripts individually, followed by translated into English.
3. Chief of RAs was asked to deal with comparing their individual transcripts and translations for finding out the consistencies and inconsistencies between them. They were, then, required to revise if needed.

4. Finally they were asked to submit all transcripts and translations to the researcher including raw written questionnaires.

Lastly, following steps were followed by the researcher:

1. All transcripts and translations were checked manually to find out any inconsistency.
2. Listened to all audio recordings which were transcribed in Indonesian to find out whether RAs entertained all information on interview scripts that the respondents mentioned.
3. Necessary information was included that the RAs discarded.
4. Checked and rechecked whether new factors and variables extracted from the subsequent interviews and relevant transcripts and translations. It was found that one new factors from an interview. But since only one among 15 respondents mentioned, it can be eliminated.
5. Finally researchers revised transcripts and translations if required for further use, mainly for data analysis.

3.4 Data Analysis

The interview transcripts were analysed using content analysis approach (Holsti 1969), because the prime objectives of this study was more exploratory than confirmatory in nature (John, et al. 2004). The data collected from fifteen interviews were transformed into text units and denoted by meaningful sentences. Those sentences were considered the important factors and variables that have significant influence on the customer adoption in e-Services.

There were 107 pages of interviews scripts to analyse. Data analysis collected was done manually in two stage processes that combined inductive and deductive approaches to categorise the factors and variables, as revealed by Quaddus and Xu (2005). The first stage is to conduct content analysis of single interview, which procedures were as follows:

1. Read the interview transcripts and find the key themes/patterns.
2. Determine grounded categories for these key themes/phrases.
3. Revise the grounded categories to be systematic categories based on the literature and decide the selection of systematic categories.
4. Integrate the interview transcripts into the systematic categories in accordance with the systematic selection criteria and find their relationships.
5. Develop raw tables of factors, variables and their links for each interview.

The second stage of the content analysis is mainly dealt with across interview to integrate the factors and variable from each interview and their links. This stage produced a combined model of factors and variables. The processes were carried out as follows:

1. Reread the interview transcripts and the table of systematic categories, especially the factors and variables and their links from the first stage.
2. Recognize the similarity and differences of the variables in each factor.
3. Combine the similar variables and generate a common name.
4. Relate the individual models of fifteen customers based the integrated factors and variables.
5. Develop integrated relationship of factors, variables, and their links for all customers and put it on elements for previous studies, as identified in the literature.
6. Develop a combined model factors and variables that will clarify airline customer's intention to adopt e-Services.

4. Findings of the research

The data, from the field interviews, were coded and entered for necessary analysis. The result is presented below.

4.1 Demography

Table 2 presents the summary of demographic characteristics of respondents. They are 8 male and 7 female. In term of age, 47% of the respondents are between 31 and 40; while 40% of the respondents are between 21 and 30. Of the participants, 40% have at least master degree and undergraduate, while 20% have diploma. The interviewees' occupations are various, like lecturer, student, general staff,

manager, owner and programmer. Furthermore, all of the respondents have been using computer in medium and high level, 40% and 60% respectively. In other words, it can be said that most respondents are quite familiar with computer and Internet. They are, therefore, not surprised when they earlier adopt e-Services compared to other customers. In terms of domicile, they live in some cities in Indonesia, such as Jakarta, Bandung, Surabaya, Solo, and Yogyakarta which can represent wide-ranging facility of Internet infrastructure in Indonesia.

4.2 Factors and variables to e-Services

The complete list of factors and variables to e-Services adoption in Indonesia as generated from different customers using content analysis; totally 10 factors and 48 different variables were identified, is illustrated in table 3 (see Appendix). The table shows the list of variables identified in each factor. The process of analysis presented to maintain a consistency between the interview data and the initial research model. However, in the field study, some of the variables identified different from the literature, as they were intended to represent the responses of the respondents in the context of e-Services adoption in Indonesian Airlines.

Not all customers are familiar with 10 factors, only 7 factors are primary. These are effort expectancy, facilitation conditions, trustworthiness, outcome expectancy, motivation, intention to use, and e-Services usage. There is a new factor, "ethics", mentioned by one of respondents. However, due to only 1 of 15 respondents mentioned it, we eliminated this factor. Out of forty-eight variables, the six variables confirmed by all customers were: *ease of use, technical and non-technical support, persuades somebody to use, shifted from travel agent to online buying ticket, how many times and how often to use*. Meanwhile, ten variables were mentioned by more than ten customers. Most customers tend to use e-Services would influence their perception regarding e-Services adoption. Providing e-Services of airline with clear and understandable, creating trust of e-Services, offering more suitable flight schedule and price, and providing specific person or groups available for assistance will persuade somebody to use e-Services of airline in Indonesia. Although the variables of "guarantee of data validity" and "get priority offers via e-mail" were simple mentioned by two customers, they could be fussy for the e-Services in Indonesian Airlines.

Table 3 presents initial factors and variables extracted from literature as well as field interviews (*typed in italics*). In regards to the number of variables provided by the customers, customer E have mentioned 26 variables, followed customer B with 24 variables and customer G, H, K with 23 variables. This is not surprising that they have mentioned more variables rather than other customers, because they are at high level on computer usage. For example, customer B always access e-Services in her daily activity not only via local network but also via her mobile access, in accordance with the result of the interview said that:

I have used e-Services so many times, because I am an active user. In addition, I travel once in a week, so I often use the e-Services. I also have been using the e-Services since the first time e-Services have emerged.

If there is no hot spot to access Internet, I use mobile services. I am an active user of internet. Therefore, I access information and news for a few hours every day.

It must be noted that, customers H, as general staff and at medium level on computer usage, has mentioned more variables than customers F and L who have mentioned the lowest variables; whilst they had educational background of Information Technology (IT). Thus, they are very familiar with IT application, such as e-Services. The rational could be that people, who are familiar with IT, will have a different perspective when using an application, such as e-Services, compared with the common users. For example, customers, who have a good IT backgrounds, do not concern social influence factor. They have used airline e-Services, because they got information from advertisings, such as newspaper, magazine or website. They, then, tried themselves the airline e-Services. Thus, variables, such as colleagues' persuasion, supervisor support, friends' influence, and more prestigious would no longer be a concern for those customers.

4.3 Causal links among factors

Table 4 presents linkage among the factors of e-Services adoption. The information related to the perceived links was sought during the interview process and was extracted from the interview scripts through content analysis approaches as previously described. For example, the linkage between Effort Expectancy and Intention was identified in all customers' statement such as customer D said that "I think e-Services is very easy to use", which was made by its representing participant in the field study. Column 1 of table 4 illustrates the pairs of factors and corresponding linkages. For instance, it is showed in row 1 of table 4 that Effort Expectancy has impacts on Intention, and this linkage has been identified in all customers.

It was identified that not all customers, from their representing participants, recognized the following links: Social Influence to Motivation and Intention, Privacy Concerns to Motivation and Intention, as well as Trustworthiness to Effort and Outcome Expectancy. Different with initial research model, customers C, F, G, L, M, N and O proposed that Social Influence would not have direct impact on intention and motivation to use e-Services. The interviews from customer E indicated that Privacy Concerns would not influence the Motivation and Intention to use e-Services.

4.4 The combined research model

The focus on the field study was exploring factors and variables that direct customers to use e-Services. Figure 2 presents the combined research model which has developed to select the variables and links mentioned by at least 6 customers. The combined research model was developed based on the factors and variables of comprehensive literature review and merging similar variables identified and provided by interviewees.

Three new causal linkages among factors was found in the combined research model (see figure 2) compared to the initial research model (see figure 1), namely (i) facilitation condition and effort expectancy, (ii) facilitation condition and outcome expectancy, and (iii) effort expectancy and motivation. While indicators of measurement items are the same for both model.

5. Implications of the research

5.1 Theoretical Implications

Figure 1 presents the comprehensive model of e-Services usage. This model is distinctive in a sense that it has been developed based on the data obtained from 15 interviews. Although no formal hypotheses are proposed in this paper, the model can still be taken as a research model that can be further explored by using quantitative techniques, such as Structural Equation Model (SEM). The links between factors can be taken as the hypotheses to be tested (see figure 2). It must be highlighted that the factors and variables are different and very specific to e-Services for the specific context. Since there are no specific theoretical model in the literature that relates to this study, figure 2 would serve as the basic research model. This comprehensive model can be used to undertake further research and thus add value to the literature on customer behaviour, especially in IS field. In the following section we elaborate on how the combined research model can be used to undertake further research and how it can also be used for practical applications for the particular context.

5.2 Practical Implications

Figure 2 also presents a practical model of e-Services adoption. All factors and variables have been obtained from practical opinions in order to make the research model more applicable to explicate the e-Services adoption by customers. A close examination of the model enlightens that all the factors and variables eventually lead to sustained use of e-Services. These findings will be helpful to stakeholders, customers, and policy-makers to understand what are the e-Services' factors and variables that take key roles for making customer to decide to use e-Services. This result is also likely to help marketeers and IT developers to collect information and making plan for appropriate

competitive strategies for improving and sustaining e-Services usage among customers. It must be considered that not all criteria mentioned in Figure 2 will be applicable for all e-Services application and customers. A careful analysis is first needed to select the appropriate criteria for the particular e-Services and customers. A multiple criteria modelling approach can then be undertaken to assess the suitability of e-Services usage for customers. The research and modelling approach described in this paper can also be undertaken elsewhere to find the type of e-Services usage suitable for any specific context in any country (Quaddus & Achjari 2001).

6. Conclusion and Future research

This paper presents a comprehensive study to determine the factors and variables of e-Services usage. The study employed qualitative field study approach that interviewed 15 respondents. The customers interviewed had some level of education, various jobs and degrees of computer usage. The interviews were transcribed by the researchers and the contents were analysed thoroughly using a structured process. The analysis resulted in 9 factors and 48 unique variables. Customers' adoption models were individually first developed which were, then, combined to develop a comprehensive e-Services adoption model. Even though the findings of this study are somewhat exploratory in nature, it is expected that the information produced and the implications of the study will be helpful to customers, policy-makers, marketers and IT developers to build more competitive e-Services in any specific context.

There are some limitations of the study that encourages more sound research to be undertaken in the near future. The interviews were conducted in five different cities and customers' Indonesia airline which would not represent all customers' airlines. This is a geographic and time limitation of the interviews. Also, this study did not include non-adopters of e-Services in the sample. They may have different view about the e-Services adoption. In addition, this study is somewhat limited in its selection of factors and variables. A numbers of other variables and factors were mentioned by the respondents but they could not be taken into considerations to limit the size of the factors and variables. Furthermore, as e-Services are a relatively new concept, some interviewees might have slightly different interpretations of e-Services. The researchers and interviewees were kept to a minimum to ensure that the interpretation of terms and concepts was consistent among all of the interviewees. The data analysis may have been influenced by the subjectivity of the researcher. Consequently, these limitations should be considered as essential and critical of any future research. Our immediate future research plan is to study the combined model using a structural equation modelling approach. This research plan will use a quantitative approach, testing a number of hypotheses and the model itself. The test will therefore examine all causal links among factors illustrated in Figure 2, including those which have not been empirically tested by business scholars. It is expected that the findings of that future study further contribute to the existing literature.

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Appendix

Table 1 Factors for e-Services usage

Factors for e-Services usage	References
Effort expectancy	Davis (1989), Davis et al. (1989), Moore and Benbasat (1991), Venkatesh et al. (2003)
Social influence	David et al. (1989), Ajzen (1991), Mathieson (1991), Thompson et al. (1991), Moore and Benbasat (1991), Taylor and Todd (1995), Venkatesh et al. (2003)
Facilitation conditions	Ajzen (1991), Thompson et al. (1991), Taylor and Todd (1995), Venkatesh et al. (2003), Venkatesh et al. (2008)
Privacy concerns	Dinev and Hurt (2004, 2006).
Trustworthiness	Jarvenpaa et al. (2000), Belanger et al. (2002), Pavlou (2003), Gefen and Straub (2003)
Outcome expectancy	Vroom (1964), Miller and Grush (1988), Compeau et al. (1999)
Motivation	Suri et al. (2003), (Smith, Johnston, Shanks, & Rahim, 2007)
Intention	Ajzen and Fishbein (1975), Davis (1989), Ajzen (1991), Venkatesh et al. (2003), Shih and Fang (2004), Pavlou and Fygenson (2006), Venkatesh et al. (2008)
e-Services usage	Davis (1989), Ajzen (1991), Venkatesh et al. (2003), Venkatesh et al. (2008)

Table 2 Background Information of participants

Customers	Occupation	Gender	Age group	Computer usage	Education	Domicile
A	Lecturer	Male	30+ to 40	High	Doctoral	Surabaya
B	Lecturer	Female	40+ to 50	High	Master	Solo
C	Manager	Male	30+ to 40	High	Master	Jakarta
D	Lecturer	Male	40+ to 50	High	Doctoral	Bandung
E	Owner	Male	30+ to 40	High	Bachelor	Yogyakarta
F	Owner	Male	30+ to 40	High	Bachelor	Jakarta
G	Programmer	Male	20+ to 30	High	Bachelor	Yogyakarta
H	Staff	Female	30+ to 40	Medium	Diploma	Solo
I	Staff	Female	20+ to 30	Medium	Bachelor	Yogyakarta
J	Staff	Female	20+ to 30	Medium	Diploma	Surabaya
K	Student	Male	20+ to 30	High	Master	Bandung
L	Lecturer	Male	30+ to 40	High	Doctoral	Jakarta
M	Student	Female	20+ to 30	High	Bachelor	Yogyakarta
N	Staff	Female	20+ to 30	Medium	Diploma	Jakarta
O	Manager	Female	30+ to 40	Medium	Bachelor	Yogyakarta

Table 3 Factors and Variables of e-Services Adoption

Factor	Customers														
Variable	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Effort Expectancy															
Ease of use	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Clear and understandable	√	√	√	√	√	√	√	√	√	√	-	√	√	√	√
Easy to learn among customers	-	√	√	√	√	√	√	√	√	-	√	√	√	√	√
Ease to access the information exactly	-	-	-	-	√	-	-	-	-	-	-	-	-	-	-
Very useful to customers	-	-	-	-	-	-	√	-	-	-	-	-	-	-	-
Simple language	-	√	-	-	-	-	-	-	-	-	-	-	-	-	-
Simple and clear stage	-	√	-	-	-	-	-	-	-	-	-	-	-	-	-
Social Influence															
Colleagues persuade	√	-	-	-	-	-	-	√	√	√	-	-	-	-	-
Supervisor/boss support	-	-	-	-	-	-	-	√	√	√	-	-	-	-	-
Friends encourage/influence	√	-	-	√	√	-	-	√	√	-	√	-	-	-	-
More prestigious	-	√	-	-	√	-	-	-	-	√	√	-	-	-	-
Somebody influence	-	√	-	-	-	-	-	-	-	-	-	-	-	-	-
More exclusive	-	-	-	√	-	-	-	-	-	-	-	-	-	-	-
Privacy Concerns															
Misused of personal information	√	√	-	-	-	√	√	√	-	-	-	-	√	√	-
A person can find personal information	-	√	-	-	-	-	-	√	√	√	√	-	-	-	-
A person can track and monitor	-	-	-	-	√	-	-	√	-	√	-	-	-	-	-
Private information	√	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Trustworthiness															
Trust of e-Services	√	√	√	√	√	-	√	√	√	√	√	√	√	√	√
Trust to company	√	√	√	√	√	-	-	√	√	√	√	√	√	√	√
Trustworthy	-	√	√	-	√	√	√	-	-	√	√	√	√	√	√
Guarantee secure of data	√	-	-	√	-	-	√	-	-	-	-	-	-	-	-
Guarantee of data validity	-	-	√	-	-	√	-	-	-	-	-	-	-	-	-
No terrible issues about the company	√	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Facility Condition															
Technical infrastructure provided	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Resource available for support	√	√	√	-	√	-	√	√	√	√	√	√	√	√	√
A person or group available for assistance	√	√	√	√	√	√	√	√	√	-	√	√	√	-	√
Clear interface and user friendly	-	-	-	-	-	-	√	-	-	-	-	-	-	-	-
Available clear steps	-	-	-	-	-	-	-	√	-	-	-	-	-	-	-
Clear instructions	-	-	-	-	-	-	-	-	√	-	-	-	-	-	-
Display on the screen should be made more Systematic	-	-	-	-	-	-	-	-	-	-	-	√	-	-	-
Outcome Expectancy															
More suitable flight schedule and price	√	√	√	√	√	√	√	√	√	√	√	√	√	-	√
More efficient at buying ticket	√	√		√	√	√	-	-	√	-	√	-	√	-	√
Increase of status among your colleagues	-	√	√	-	-	-	-	-	-	-	√	-	-	-	-
Increase chance for getting efficiency and Effectiveness	-	-	-	-	√	-	-	-	√	√	√	-	-	-	-
Customer's loyalty	√	-	-	-	-	-	-	-	-	-	√	-	-	-	-
Ease of payment	-	√	-	-	-	-	-	√	-	-	-	-	-	-	-
More comfortable	-	-	√	√	√	-	√	-	√	-	-	-	√	√	√
Get priority offers via e-mail	-	-	√	-	-	-	-	-	-	-	√	-	-	-	-
Information should be valid	-	-	-	-	√	-	-	-	-	-	-	-	-	-	-
More flexible for payment	-	-	-	-	√	-	-	-	-	-	-	-	-	-	-
More flexible time	-	-	-	-	-	-	-	-	-	-	-	-	-	-	√
Get ticket easier and cheaper	-	-	-	-	-	-	-	√	√	-	-	-	-	-	√
Guarantee secure of data	-	-	-	-	-	-	-	√	-	-	-	-	-	-	-
Get seat availability quickly	-	-	-	-	-	-	-	-	√	-	-	√	-	-	-
Booking without down payment	-	√	-	-	-	-	-	-	-	-	-	-	-	√	-
More transparent	-	-	-	-	-	-	-	-	-	-	-	-	-	√	-
Affiliation with hotel and cars rental	-	-	-	-	-	-	-	-	-	-	-	√	-	-	-
Getting information sooner	-	-	-	-	-	-	-	-	√	-	-	-	-	-	-
Motivation															
Motivated to use	√	√	√	√	√	√	√	-	-	√	√	√	√	√	√
Interested to continue using	√	√	√	√	√	√	√	√	√	√	√	-	√	√	√
Persuade somebody to use	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Commit to use	-	√	-	-	√	-	√	-	-	-	-	-	-	√	√
Ethics	-	-	-	-	-	-	-	-	-	-	-	-	-	-	√
Intention to Use E-Services															
Shifted from travel agent to online	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
E-Services Adoption															
How many times	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
How often to use	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√

Table 4 Causal Links among the Factors

Links Between Factors	Customers														
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Effort Expectancy and Intention	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Effort Expectancy and Outcome Expectancy		√						√							
Effort Expectancy and Motivation		√													
Social Influence and Use via Intention	√	√		√	√			√	√	√	√				
Privacy Concerns and Use via Intention	√	√		√		√	√	√	√	√	√	√		√	√
Trustworthiness and Use via Intention	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Outcomes Expectancy and Use via Intention	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Motivation and Use via Intention	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√

|															
Social Influence and Motivation	√	√		√	√			√	√	√	√				
Privacy Concerns and Motivation	√	√	√	√				√	√	√	√	√	√		
Trustworthiness and Motivation	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Outcomes Expectancy and Motivation	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Facilitation Condition and Use	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Facilitation Condition and Effort Expectancy	√	√			√			√	√				√	√	√
Facilitation Condition and Outcome Expectancy	√	√					√	√		√		√			
Facilitation Condition and Motivation	√	√										√		√	
Trustworthiness and Effort Expectancy	√	√	√	√	√	√	√	√		√	√	√	√	√	√
Trustworthiness and Outcome Expectancy	√	√	√	√	√	√	√	√		√	√	√	√	√	√
Ethics and Trustworthiness															√
Ethics and Privacy concerns															√
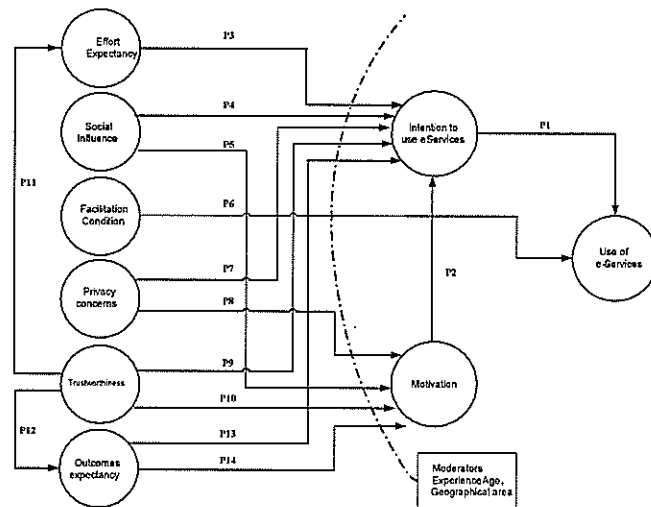
Figure 1 Initial Research Model
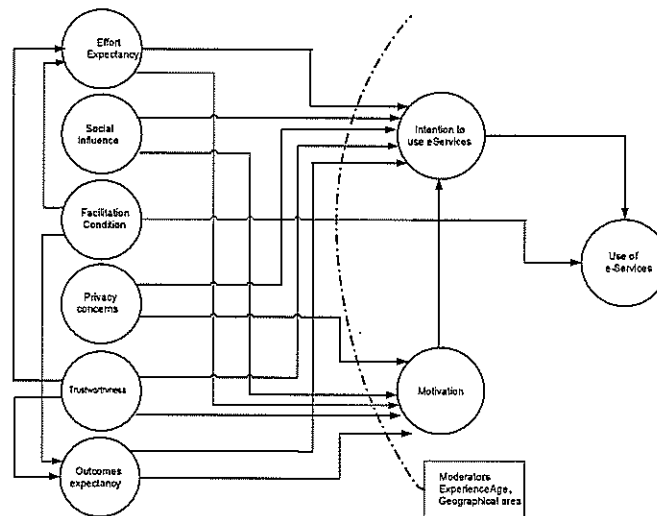
Figure 2. Combined Research Model