

# TAM Approach On E-Commerce of Aircraft Ticket Sales On Consumer Purchase Intention

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**Abstract-** E-commerce has served on the aviation industry and the travel agent, the airline industry adoption of e-commerce by selling air tickets through the internet media online. While the travel agents in applying e-commerce by selling air tickets of various airlines that have cooperated. The purpose of this study was to determine the background of the consumer in deciding to make transactions on e-commerce airline website or e-commerce on the travel agent. This study is a quantitative research that will use the variables that exist in the Technology Acceptance Model (TAM); Perceived Ease of Use, Perceived Usefulness of, Brand Orientation and Perceived Product Quality. This study uses a variable Purchase Intention to determine the relationship between the variables of TAM with variable Purchase Intention. So the result of this research is a framework of concepts and hypotheses which shows the relationship between these variables.

**Keywords-** E-commerce, Technology Acceptance Model (TAM), Perceived Ease of Use, Perceived of Usefulness, Brand Orientation, Perceived Product Quality, Purchase Intention.

Technology of Indonesia the last three months of 2016 e-commerce transactions in the field of tour and travel are in the order of four as much as 23%. In the first order of e-commerce transactions for clothing products, the second order of e-commerce transactions for cosmetic products, while in the third order is electronic commerce e-commerce transactions.



Figure 1. Percentage of Activity conducted in accessing the Internet in 2014

## I. INTRODUCTION

E-commerce has created new business opportunities in the travel and tourism industry. Business fields connected with resources to exploit the market potential set by e-commerce [1]. Information technology also enables consumers to access information and conduct transactions across national boundaries, cultures and languages [2].

Internet-based travel booking became popular in 1998, more than two percent of the tourist market was transacted over the Internet. Analysts expect 7.5% increase every year [3]. From previous research 95% of internet users use the internet to search and collect information related to tour and travel [4]. The current business environment has changed and information technology has challenged tourism businesses in the distribution and sale of tourism products. [5]. Implementation of e-commerce in the field of tour and travel is on flight booking, hotel booking and car rental [6].

According to data from the Ministry of Communications and Information Technology of Indonesia in 2014 the online sale and selling activities of goods and services in Indonesia are in second place after the activity of social network usage. Based on data from the Ministry of Communications and Information



Figure 2. Classification of device used in e-commerce transaction.



Figure 3. Classification of services used in e-commerce transactions.

E-commerce has transformed consumers into planning, ordering and paying. E-commerce helps consumers to find information about airline tickets, hotels, car rental, destination and map directions. In Indonesia, the development of e-commerce in the field of tourism causes various airlines to apply the system of booking and selling airline tickets by using e-commerce.

Many factors influence consumers to purchase or make transactions on e-commerce airline or travel agent e-commerce. In e-commerce purchase decision or transaction may be viewed from two areas, namely, marketing and acceptance of information technology. From the field of marketing decision to buy will be in touch with the intention to purchase commonly referred to as purchase intention. There are several factors that influence the potential customer to make a purchase online, in particular; the seller's reputation, structural assurance, attractive image and confidence. Fulfillment encourage consumers to make transactions as well as transactions repeatedly, besides that trust is the dominant factor in the transactions on online sales or e-commerce [7].

From the aspect of e-commerce website, convenience of use also affects the consumer decision to conduct a transaction. TAM can be used to measure the comfort of use of the website. This model shows that the usefulness and ease of use is a major factor that affects the use of the website. A website is considered a useful means the extent to which a person believes that using a particular website will improve its performance. Perceived ease of use means the extent to which a person believes that using a particular system would be free not require excessive effort. Usability and ease of use directly affect user attitudes, attitudes affect the intention of user behavior, and behavioral intentions influence the desire to actually use [8]. Consumers who feel adept at using online sales or e-commerce systems will have a desire or intention to purchase [9]

This study aims to look at the relationship between marketing theory in particular Purchase Intention by linking theory Technology Acceptance Model (TAM). As well as see the correlation between the variables Technology Acceptance Model (TAM), in particular; Perceived Ease of Use, Perceived Usefulness of, Brand Orientation, Perceived Product Quality, Purchase Intention with variable purchase intention.

## II. LITERATURE REVIEW

### A. E-Commerce

E-Commerce is a way for a consumer to buy the desired goods online through the Internet, E-Commerce can also be interpreted as a business process by using electronic technology that links between businesses, consumers and the public in the form of electronic transactions and exchange/sale of goods, services, and information electronically.

Defines of e-commerce from some perspectives [10]:

- communications perspective: e-commerce is the delivery of information, products / services, or payments over telephone lines, computer network or other electronics.
- Business Process Perspective: e-commerce is the application of automation technology to the transaction and the company's work flow.
- Service Perspective: e-commerce is one tool that meets the needs of companies, consumers and management to cut service costs while improving the quality of goods and speed of service.
- Online perspective: e-commerce related to the capacity of buying and selling of products and information on the Internet and other online services.

E-commerce consists of several types [11]:

- Business to business (B2B), is a model of e-commerce business where the offender is a corporation, so the transaction process and the interaction is between one company with another company.
- Business to Consumer (B2C), is a model of e-commerce business where the actors involved directly between the seller service provider (e-commerce) with individual buyers or buyers.
- Consumer to Consumer (C2C), is the e-commerce model in which individuals or individual as sellers interact and transact directly with other individuals as buyers. The concept of e-commerce this type are widely used in online auction sites or online auctions.
- Consumer to Business (C2B), is the e-commerce model in which individuals or individual businesses conduct transactions or interactions with one or several companies. Type the e-commerce like this is very rarely done in Indonesia

E-ticketing or electronic ticketing is a form of technological innovation in the field of e-commerce where sales process from customer travel activity can be processed without the need to issue a paper ticket. All information regarding electronic ticketing is stored digitally in a computer system. E-ticketing can reduce the cost of the ticket, complete the form to eliminate paper and increase the flexibility of passenger [12].

Benefits of e-ticketing; reduce costs to printing and send the ticket to the buyer, reducing labor, secure from the possibility of duplicate ticket, ticket can deliver after the purchasing process is completed, allows users in the transaction process to be conducted [12].

*B. Purchase Intention*

There are several factors influencing potential customers to make online purchases. Some of factors are; the seller reputation, structural assurance, positive e-image, and the online trust. The seller fulfillment criteria is a trigger customer willingness to spend money and buy goods sold. The buying repetition mechanism starts from an initial purchased by the potential buyer. The first trust represents the transactional trust and it is continuously developed to the relational trust [13]. The creation of relational trust represents a stronger personal relationship, and then, emerges repetitive customer purchases. The repurchase buying behavior indicates the customer satisfaction [14]. Where, satisfaction is an emotional or cognitive response based on the accumulation of purchasing experiences. At this higher level of trust, the potential customer can be said as the loyal customers. However, trust is not a perpetual property [15], and everything can change dynamically. Trust, it is a demand for the sellers to maintain and develop their trustworthiness to conserve sustainable customer and potential customer purchase intention. Trust is a perception of consumer confidence in the mechanisms that exist in online or e-commerce sellers [16]. Trust in online or e-commerce sales arises or occurs from the interaction of consumers with sellers of products or services, some research emphasizes the importance of consumer confidence and online or e-commerce sellers [17]. Trusts are antisendent that will significantly increase usage in online or e-commerce transactions [18]. In other studies the trust is essential in controlling perceived usefulness[19] and affecting purchase intention [20].

*C. Technology Acceptance Model (TAM)*

One model to analyze and understand the factors that influence the acceptance of the use of computer technology is the Technology Acceptance Model (TAM). TAM was developed from a psychological theory that describes the behavior of computer users, which is based on belief, attitude, intention, and the relationship of user behavior. The purpose of this model is to explain the factors of user behavior on the acceptance of the use of technology [21].

Perceived usefulness is a level of trust someone to the use of a particular subject to provide benefits for people who use it [22]. Perceived ease of use defines a person's level of confidence that the computer can be easily understood [23].

Intensity of use and interaction between user and the system can also show the ease of use. The system is often used to denote that the system easier to understand, easier to operate and easier to use [22].

According to TAM, Perceived Usefulness and Perceived Ease of Use affect the user's to purchase intention. In TAM Perceived Usefulness defined as degree to which a person believes that using a particular system would enhance his/her job performance and Perceived Ease of Use is degree to which a person believes that using a particular system would be free of physical and mental effort [24]. Perceived ease of use is the confidence of consumers that

vendors online sales or e-commerce has the system easy to use, where to use it is not required of effort [25]

III. PROPOSED RESEARCH METHOD AND HYPOTHESIS

This study uses a quantitative approach to observe the relationship between variables [26]. The purpose of quantitative research is to find facts or causes of social phenomena objectively, so that reliability or consistency is the key of quantitative research [27]. In quantitative approach, the researcher emphasizes on the theory test through measurement of research variable by using statistical method. The quantitative paradigm uses a deductive approach to test the hypotheses that have been deduced from a number of theories and the development of a framework of thought consisting of variables that lead to operational concepts. This research use survey method to get data, fact or information, where each research variable is described and known its influence between one variable with another variable.

Surveys are used to examine selected samples from a population to determine the incidence, distribution and relative interrelations of variables, in addition surveys can be used to study attitudes, values, beliefs, behaviors, demographics, habits, opions, ideas, desires and other types of information

In accordance with the research objectives to be achieved, then in this study will be used descriptive research. Descriptive study aimed to obtain or characteristics of how the Adoption Application of E-commerce Industry Tour & Travel In Consumer Decision To Purchase Tickets Aircraft In this study used quantitative research methods is an approach empirical study to gather, analyze, and display data in numeric form.

The method of analysis used in this research is by multivariant analysis (Structural Equation Modeling). To fulfill the design of this research, the research is done descriptively and explanatory. Descriptive research to describe or describe the condition of each research variable, while explorative research to explain the kusal relationship between research variables.

The study was conducted on people using e-commerce applications that sell airline tickets in Indonesia. The data used in this study is expected to be able to represent the overall behavior of e-commerce application users who sell airline tickets in Indonesia.

Operationalization of variables needs to be done to define a construct to be measured by reducing the level of abstraction by drawing dimensions and elements. Variables are a concept, characteristic, perception, or image that can be observed and provide different values or vary [28]. The use of scale for this study is the ordinal scale because of the data obtained from the questionnaires [29]. Characteristics of variables in this study are latent variables, therefore measurement requires a special indicator [30].

Table 1. Operational Variables

<i>Variable</i>	<i>Scala</i>
Perceived Ease of Use,	Ordinal

Perceived Usefulness	Ordinal
Brand Orientation,	Ordinal
Perceived Product Quality	Ordinal
Purchase Intention	Ordinal

Sources of data or information in this study were collected through two sources, namely primary data and secondary data. Primary data derived from empirical research conducted from collected questionnaires directly from the results that have filled and passed from the respondents, while secondary data collected from various sources, such as data taken online from the results of a survey conducted by the survey institutions.

Data collection will be done by distributing questionnaires. Surveys are done by sending questionnaires online or directly to consumers. In this study the indicator in the questionnaire used is based on previous research that has been scopus indexed, and using a four-point likert scale. Four preferred scales used as a likert scale questionnaire in this study aims to make respondents have to choose one of the poles, because in the four Likert scale, the "neutral" option is not provided [31].

In this study, researchers collected primary data. The technique used to collect primary data in this research is to send a questionnaire. Sending questionnaires is a way to collect data by distributing questionnaires to respondents, and respondents will respond to a list of questions that have been sent. This questionnaire covers all the variables in this study. The type of data collected is quantitative, the data obtained is the primary data, by way of sending the questionnaire in the form of online via email and google docs.

The data collection technique used in this research is probability sampling, so all samples are given equal opportunity in giving the answer. Respondents in this study were consumers who purchased airline tickets online through airline e-commerce websites or through online travel agency websites. The type of data collected is quantitative and the data obtained is primary data, ie data obtained directly from the respondents who have been determined at the beginning.

Data analysis technique used in this research consist of descriptive statistic analysis and infernsial statistic method with explanation as follows:

- a. Descriptive statistical analysis  
 Descriptive statistical analysis in general is a statistical study of the procedure of compilation of data collected in a research. In this descriptive statistic, statistical measurements such as the average frequency distribution are used to measure the central tendency of the random distribution.
- b. Inferential statistical analysis  
 According to inferential statistics aim to draw conclusions of population parameters based on statistical samples as well as analyze the relationship between one variable with other variables. Inferential analysis in this study is used to test the hypothesis. The inferential analysis used is Structure Equation Modeling (SEM) or a structural equation model operated with AMOS. SEM is widely used in research

in education, marketing, psychology, sociology, management and measurement.

This research will use two kinds of analytical techniques:

- a. Confirmatory factor analysis (SEM) is used to confirm the most dominant factors in a variable group.
- b. Regression Weight is used to test H1 to H4.

The framework of this research is built from the variables that exist in the Technology Acceptance Model (TAM), namely; Perceived Ease of Use, Perceived Usefulness of, Brand Orientation, Perceived Product Quality. This study will look at whether the TAM variables influence the consumer's decision to transact in this case is known as a variable Purchase Intention. The framework is illustrated in the figure below:

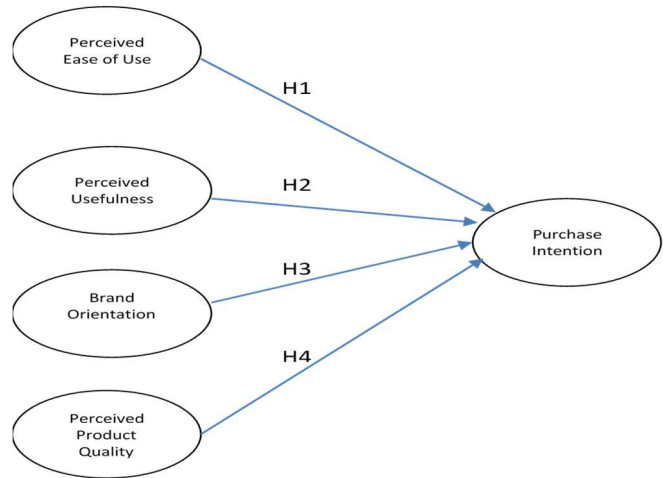


Figure 3. Proposed Research Model

The formulation of hypotheses; Perceived Ease of Use affecting Purchase Intention, Perceived Usefulness affecting Purchase Intention, Brand Orientation affecting Purchase Intention and Perceived Product Quality affecting Purchase Intention. Results of this study was to see how much influence Perceived Ease of Use, Perceived of Usefulness, Brand Orientation, Perceived Product Quality to the consumer's decision to pass up a deal or buying decisions. The hypothesis tested in this study ia as follow:

- a. H1: Applied Perceived Ease of Use is able contribute its use value thus directly affecting Purchase Intention.
- b. H2: Applied Perceived Usefulness is able contribute its use value thus directly affecting Purchase Intention.
- c. H3: Applied Brand Orientation is able contribute its use value thus directly affecting Purchase Intention.
- d. H4: Applied Percieved Product Quality is able contribute its use value thus directly affecting Purchase Intention.

To test the reliability of the research instrument (question) and sampling research, can use the method "Cronbach's alpha" if all values of the study variables above 0.70, it is an indication of reliability is acceptable as for its validity can be measured from the value of the loading factor of which more than 0.7 for

confirmatory research and more than 0.6 for research eksploratori [32].

#### IV. CONCLUSION AND PERSPECTIVES

It is expected that the results of this study can contribute to the development of knowledge science in the field of marketing and information technology, especially e-commerce

This study will provide scientific contributions to the field of marketing, especially purchase intention, namely the influence of these variables on the Technology Acceptance Model (TAM) to the consumer decision making purchases.

This study also will look at the influence of the Information Technology field to field marketing, because variable used is variable Technology Acceptance Model (TAM), namely; Perceived Ease of Use, Perceived Usefulness of, Brand Orientation, Perceived Product Quality

From this research will be able to see how big the influence of these variables on the Technology Acceptance Model (TAM) on purchase intention, thus will give feedback on the business model of e-commerce both the airline and the travel agent.

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