

# Factors Affecting the Use of Online Flight Booking in Ethiopian Airlines

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## ABSTRACT

*The rapidly growing Information and Communication technology (ICT) is knocking the front door of every organization in the world. Online shopping has changed the way business is done & it has made international shopping very easy. As one of the e-commerce categories, e-ticketing system nowadays is being actively and widely practiced. Due to the slow grabbing of E-Commerce and E-payment in Ethiopia, the utilization of e-ticketing in Ethiopian Airlines is an important issue that should be addressed to improve the deficiency of the system. This research aims to identify the factors that affect the use of E-Ticketing in EAL based on extended Technology Acceptance Model (TAM) (Davis, 1989). The study was made by collecting data from 399 respondents on Ethiopian Airlines flights. The results obtained from analysis confirmed that Relative Advantage, Perceived Ease of Use, Perceived Trust and awareness and usage of E-ticketing are found to be having a positive significant relationship with adoption of E-Ticketing while perceived risk has shown a negative significant relationship. The research, therefore, suggests to EAL to promote the E-Ticketing services aggressively through appropriate media to increase users awareness and usage on the advantage of E-ticketing services.*

**Key words:** E-Ticketing, information technology, Ethiopian airlines, Technology Acceptance Model

## INTRODUCTION

The role of internet & websites has almost changed everything in the business world throughout the past couple of decades. There is a rapid expansion of Electronic Booking & payment systems throughout the developed and the developing world. E-ticketing system and in general E – commerce provides tremendous amount of advantages, such as continuous availability, time saving, global reach, price transparency, time competitive responsiveness and faster supply chain processes (Morganosky and Cude, 2000). E-Ticketing is an alternative marketing strategy implemented by airline to serve their customers via the Internet. It is basically an online flight ticket purchasing system which is an essential application of online shopping (E-commerce). The E-commerce revolution has created a competitive environment that change the way how business is being delivered and designed (Turban & King, 2003).

Ethiopian Airlines (EAL) is one of the leading airlines in Africa and most profitable companies in Ethiopia. Ethiopian Airlines currently operates flights to over 116 destinations and 5 continents in the world namely Africa, Asia, Europe, Middle East & North America. Tewolde Hailemariam EAL CEO (Selamta Magazine, 2018) said Ethiopian airlines has marked its 10 million passengers in the year 2018; it has opened eight new

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international destinations; received the four SKYTRAX customer service certification & introduced 14 brand new aircraft and surpassed its 100<sup>th</sup> aircraft in service.

EAL is popular for adapting new technologies, training its employees & allowing its customers take advantage of the new technology adapted to benefit the airline in reducing overheads and gaining a much closer access to target consumers.

Ethiopian Airlines dissolved its agreement with SITA at the end of 2006 (ibid) and entered into an agreement with Sabre soft airlines solution and started online flight booking (E-ticketing) system in 2006. As a result, EAL has made available user-friendly Android & IOS E-ticketing mobile application software in addition to their website which is used for online booking, purchase and also check-in process for ease of use by travelers and competitiveness of the Airline itself. This has been developed for the purpose of online booking where passengers can book & purchase their tickets from the comfort of their seat in partnership with different bank online payment methods (E-payment) moreover check in and get their boarding passes without having to queue at the terminal.

Although the benefits of using online flight booking system are obvious, it is a surprise that there are customers who prefer to stick to the traditional method of business transactions (IntanSalwani, 2010). In fact, E-shopping such as online E-ticketing and purchase is on an infant stage for Ethiopian Airlines customers who book their flights in Ethiopia. As per the data found from the marketing department of EAL, only 41% of travelers purchase their tickets using EAL website or Application. Due to this low number, it is a need for EAL to find effective ways of persuading customers to use the E-Ticketing system. Thus, an investigation on factors that influence user's acceptance on online flight booking system could provide useful findings to the EAL.

Various researches have been done in the world and show that E-ticketing adoptions vary based on different factors. Although, airline passengers' buying behavior has been looked at by different authors such as- Diggins (2010), Gupta et al. (2004) and Yu (2008) nonetheless all these stated works primarily focused on Anglo-American and Asian countries with no emphasis on sub-Saharan African consumers.

This study aims at exploring and determining the main factors that affect for the slow adoption of the E-ticketing system in Ethiopian Airlines. The objective of the study is to identify the factors that affect the use of E-ticketing in EAL and recommend the interventions, to enhance the usage of E-Ticketing in EAL.

The study is based on testing hypothesis which were developed based on the literature:

- H1: There is a positive relationship between Relative Advantage and usage of E-ticketing.
- H2: There is a positive relationship between perceived usefulness and usage of E-ticketing
- H3: There is a positive relationship between Perceived Ease of Use and usage of E-ticketing.
- H4: There is a positive relationship between perceived behavioral control and usage of E-ticketing.
- H5: There is positive relationship between Perceived Trust and usage of E-ticketing.
- H6: There is a positive relationship between awareness and usage of E-ticketing.
- H7: There is a negative relationship between Perceived Risk and usage of E-ticketing

## LITERATURE REVIEW

Electronic commerce or E-commerce has been defined in several ways. Kalakota and Whinston (1997) broadly define ecommerce as "A modern business methodology that addresses the needs of organizations, merchants and consumers to cut costs while improving the quality of goods and services and increasing the speed of service delivery." They view E-commerce as a production process that converts digital inputs into value-added outputs through a set of intermediaries.

Despite the very high rate of growth in internet usage in Ethiopia, the use and adoption of E-commerce services remain low. The E-commerce development in Ethiopia is at its starting stage.

Currently E-commerce in Ethiopia can be considered as accessing the internet to choose products over the web. Hence, only a customer can see the items and pay in person to actually buy the product. With the advent of new E-payment methods which serve as a catalyst, E-commerce is on the edge to draw thousands of new users with in Ethiopia. Review of the existing literature showed that e-commerce has been widely researched in the developed and emerging

economies; however, there is not much of research for the developing Ethiopian economy. This study is therefore assumed to fill this gap.

E-ticketing can be defined as a new way of purchasing tickets and issuing tickets without papers to clients and the transactions are purely done through electronic devices such as telephone and Internet. E-ticketing was started by United Airlines back in 1994. A decade later, the industry was not able to gain profit from saving costs \$3 billion a year as only 20% of all airlines issued e-tickets. In June 2004, IATA set an industry target of 100% e-ticketing in four years. This announcement had been criticized that it was an unrealistic goal and the return on investment was uncertain. However, on 1 June 2008, the industry has successfully transformed into 100% e-ticketing (IATA, 2010).

As one of the e-commerce categories, e-ticketing system nowadays is being actively and widely practiced by not only airline companies but also other companies in different fields, for example cinemas for entertainment industry; buses, and trains for transportation industry; banking industry; and sports industry (Haneberg, 2008).

The use of the Internet makes buying a ticket more convenient since the service is available at any geographical location, including your home (or even remotely via a laptop and cellular phone) and at any time of the day, any day of the year. Online ticket services have a further advantage by providing relevant information alongside the service. This can aid purchasing decisions and may encourage future usage (Buford, 1998). Therefore, ticket buyers have quite an easy commute to the ticket offices, these days-they only have to get to their home personal computer and onto the internet. It beats standing in lines and transportation to ticket offices.

There are also benefits for those providing the service. New markets are being created and ticket sales are increased. Apart from maintenance and data updates, no manpower is required to provide the service once it has been established. The process of recording the transactions is more automated and overhead is reduced. An important point is that ticket providers are also providing a convenient service to customers and are thereby improving public image and encouraging return customers. (Buford,1998).

Strong argument in favor of a ticketless system is the decrease in time “wasted” by the passenger

at the airport. The real benefit is for business travelers, as found by Reuben Gronau in his study of the monetary value of time for passengers, where he concludes: the price of time will determine the mode of transportation to use and business travelers price their time according to their hourly earnings, along with other factors such as the length of the trip, the time of the day, etc. Given the proven time reduction with a ticketless system, all of these factors contribute to time-value savings for the traveler. (Reuben Gronau, 1970)

Consistently posting record profits for the past seven years, Ethiopian Airlines has been using Sabre’s technology for its core reservations, network planning and e-commerce since 2005. Despite the daunting challenges in African aviation, Ethiopian Airlines has continued with thriving successes and has become the leading aviation group in Africa, nine years ahead of its 15-year strategic growth roadmap, Vision 2025. Addis Ababa Ethiopia and South Lake, Texas (Aug 31,2017).

“Leveraging the latest information technology and travel system solution is one of the pillars of our long-term growth plan, Vision 2025, and consequently we have made significant investments in technology to create a seamless passenger experience,” said Tewelde Gebre Mariam, CEO, Ethiopian Group. “Sabre’s technology partnership and expertise has been invaluable over the years, and that’s a key decision driver in our expanded relationship which includes new cutting-edge technology that will help us create better customer experiences and remain the airline of choice among travelers around the world.”

Several theories are offered in order to identify factors that cause people accept new technologies and information systems and use them (Rao and Troshani 2007).

TAM was first introduced by Fred Davis in 1989 to predict user acceptance of new technologies. According to (Davis 1989), TAM suggests that perceived usefulness (PU) and perceived ease of use (PEOU) are the two most important factors in explaining individual users’ adoption intentions and actual usage. Davis (1989) defines perceived usefulness as the degree to which a person believes that using a particular system will enhance his or her job performance. Perceived Ease of Use refers to the degree to which the person believes that using the system will be free of effort.

A research model by (JiinFui, et al. 2014) on adoption of E-ticketing combines Acceptance Model (TAM) (Davis, 1989), and online trust and purchase intention model for airline E- ticketing in Malaysia (Chen & Barnes, 2007 as cited from Goh, 2008). In the modified model, Internet trust (including perceived security and perceived privacy), personal trust disposition, perceived ease of use and perceived behavioral control are the independent variables whereas purchasing airline e-tickets is identified as the dependent variable. According to the study there are many factors that influence the intention, behavior, and attitudes to shop online or airline e-ticketing adoption. The factors include perceived risk, perceived usefulness, perceived ease of use, perceived enjoyment, perceived privacy, perceived security, subjective norm, trust, personal trust disposition, internet usage, experience, perceived behavioral control, and demographic variables.

### **PERCEIVED USEFULNESS**

Perceived usefulness refers to the degree to which a person believes that using a particular system would enhance his or her job performance (Davis 1989). In the context of online consumer behavior, Chen et al., (2002), Childers et al., (2001), and Heijden et al.,(2001) found that perceived usefulness affects attitude toward online shopping. Similarly, Chen et al., (2002), Gefen and Straub (2000), Heijden et al., (2001), and Pavlou (2001) found perceived usefulness to be a significant factor affecting intention to shop online.

### **PERCEIVED EASE OF USE**

In contrast to PU refers to “the degree to which a person believes that using a particular system would be free of effort” (Davis 1998) Perceived ease of use (PEOU) refers to the degree to which a person believes that using a particular system would be free of effort (Davis, 1989). PEOU has received enormous attention in the IT adoption studies. Chen et al., (2002), Childers et al., (2001) and Heijden et al., (2001) found that PEOU influences attitudes toward online shopping.

### **PERCEIVED BEHAVIORAL CONTROL**

The construct of control reflects beliefs regarding the availability of resources and opportunities for performing the behavior as well as the existence of internal/external factors that may impede the

behavior(Ajzen, 1991). Perceived behavioral control is important in explaining human behavior since an individual who has the intentions of accomplishing a certain action may be unable to do so because his or her environment prevents the act from being performed. In the context of online ticketing in Ethiopia, computer access, Internet access and availability of assistance for passengers who intend to purchase tickets online in Ethiopia are all behavioral control factors that are important in facilitating the E-ticketing behavior.

### **AWARENESS**

According to (Sathye 1999), customers go through “a process of knowledge, persuasion, decision and confirmation” before they are ready to adopt a product or service. The adoption or rejection of an innovation begins when “the customers becomes aware of the product”.

Customers must become aware of the new brand or technology. An important characteristic for any adoption of innovation service or product is creating awareness among the customers about the service or product (Sathye 1999).

### **PERCEIVED TRUST**

Refers to the confidence a person has in his or her favorable expectations of what other people will do, based, in many cases, on previous interactions (Gefen, 2000). A significant number of studies (George 2002, Heijden et al., 2001, Jarvenpaa et al., 2000, Pavlou and Chai 2002) found that trust is a salient determinant of online shopping attitude. Moreover, Lynch et al., (2001) found that trust significantly affects a potential consumers’ intention to shop online. Therefore, adding the concept of trust to our model will improve the predictive ability of the model to investigate the driving factors of E-ticketing adoption in our country.

### **RELATIVE ADVANTAGE**

The notion of relative advantage is concerned with the extent to which an innovation is perceived by potential adopters as being superior from the idea, product or service it supersedes (Rogers, 1983). The construct of relative advantage is highly domain specific, although dimensions that are found to have some generality include reduced costs and greater convenience. A key issue is that it is not the better performance of an innovation

in an objective sense that matters, but rather the superiority of performance as subjectively perceived by the customer (Szymigin and Bourne, 1999).

**PERCEIVED RISK**

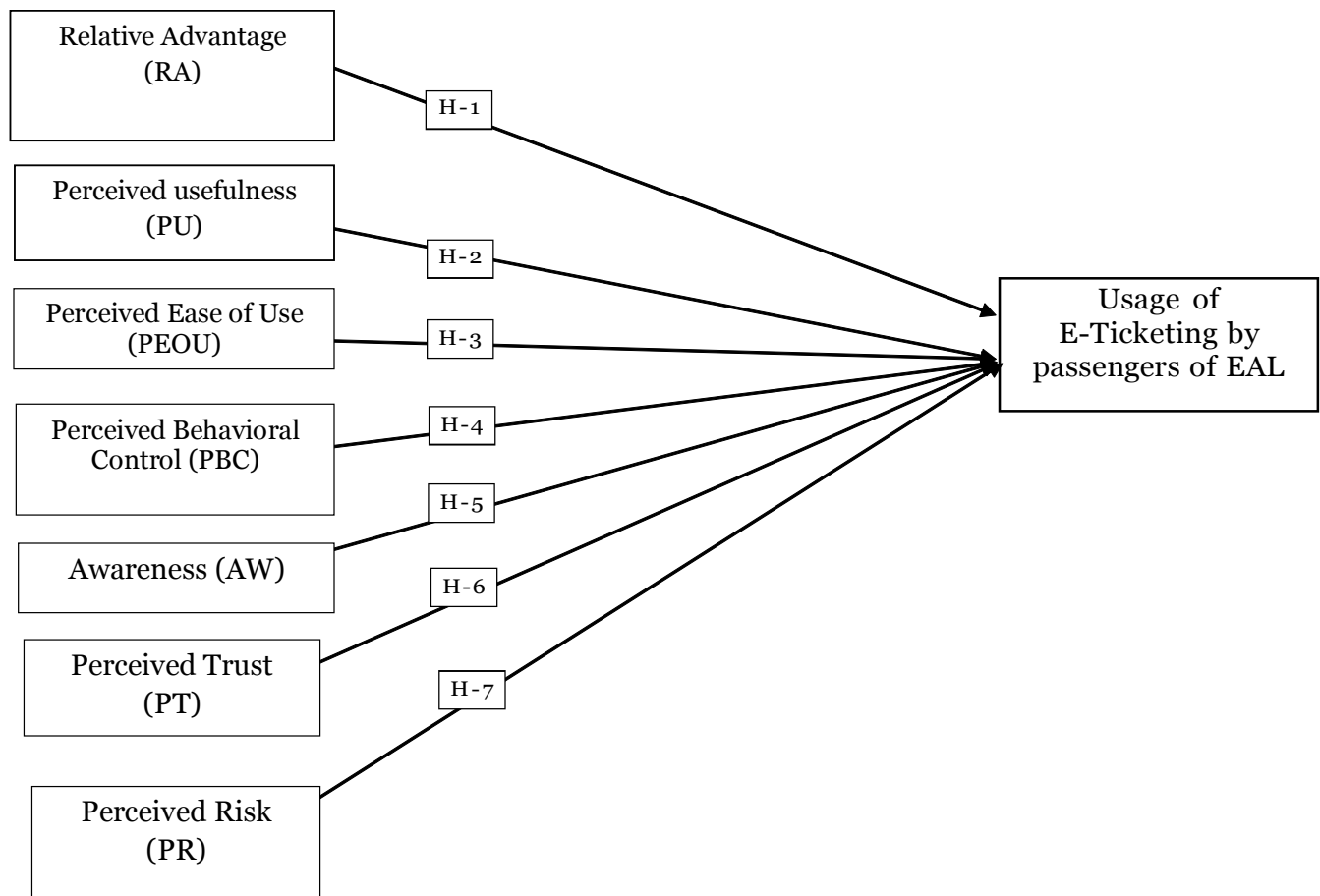
Perceived risk refers to a consumer’s perceptions of uncertainty and adverse consequences of buying from the web (Grazioli and Jarvenpaa 2000). Prior studies (Heijden et al., 2001; Jarvenpaa and Todd 1996) found that perceived risk had a strong impact on attitude. Moreover, Heijden et al., (2001), Pavlou (2001) and Tan and Teo (2000) found that perceived risk affects intention to shop online significantly. Similarly, Miyazaki and Fernandez (2001) found perceived risk had a significant impact on online purchasing behavior. Uncertainty plays a role in adoption

decision in the form of perceived risk (Shimp and Bearden, 1982) and this construct is expected to be of considerable significance in relation to service adoption.

**RESEARCH METHODOLOGY**

The below research model is the modification and combination of extended Technology Acceptance Model (TAM) (Davis, 1989)

In the modified model, Relative Advantage, perceived Usefulness, Perceived ease of use, perceived Behavioral control, Awareness and Perceived Risk are the independent variables whereas Use of e-tickets in EAL is identified as the dependent variable. The independent variables of security and privacy in the model of Chen and Barnes are merged under Perceived Risk and a schematic of the model is shown in figure 1.



**Figure 1: A Modified Conceptual Framework for the Study (Davis, 1989)**

In this study, the primary data had been collected through 399 valid questionnaire surveys from target respondents of passengers who travelled using Ethiopian Airlines above the age of 18 years old on international flights. The instrument was structured based on the study variables and survey was carried out from 25<sup>th</sup> of Oct - 10<sup>th</sup> Nov 2018. A total of 420 questionnaires were distributed and 21 were found to be invalid and were excluded in the analysis. Statistical Package for social Science (SPSS v20) was used to generate the actual results on frequency tables while descriptive analysis was used to analyze and describe the findings. In addition, logistic regression was used to determine the extent to which identified factors affect usage of online flight booking in Ethiopian Airlines.

A quantitative research approach is appealing for this study because the research problem tends to be explanatory which seeks to explain the relationship between E-Ticketing adoption and its affecting factors, to achieve the objectives of the study and to test the hypothesis.

Jonker and Pennink (2010) contended that the essence of quantitative research is to use a 'theory' to frame and thus understand the problem at hand.

Based on the data obtained from Ethiopian Airlines *Salamta* magazine (Nov/December 2018) EAL has reached its 10,000,000 passengers for the year 2018. Therefore, the target population will be the total number of passengers travelling annually using EAL. As the entire population size is very large, the researcher has used a sampling frame of the total number of passengers who used EAL within two weeks of Oct 25<sup>th</sup>–Nov 10<sup>th</sup> 2018. As per the data from Ethiopian Airlines marketing department the number of passengers that travelled with in the 2 weeks is equal to 318,456. Then, a simplified formula by Yamane (1967), was used to calculate sample sizes with a 95% confidence level and precision  $P = 0.05$ .

$n = N/1 + Ne^2$  Where  $n$  = sample size

$N$  = population size

$e$  = Error of 10 %

Sample size  $n = 302,040 / 1 + (302,040 * (0.05)^2)$

Sample size  $n = 399.52$  passengers.

In this research study, probability and non-probability sampling technique of random and convenience sampling was used in which all the targeted respondents have been reached most

conveniently and the survey questionnaire was distributed on willingness basis.

## DESCRIPTIVE ANALYSIS

Descriptive analysis is used to describe and explain the information of sample collected and summarizes a given data set, which can either be a representation of the entire population or a sample. The measures used to describe the data set are measures of central tendency and measures of variability or dispersion.

## FREQUENCY DISTRIBUTION

Frequency distribution is used for obtaining a count of the number of responses associated with different values of one variable and to express these count into percentage terms. Frequency distribution is used to analyze respondents demographical profile in part A such as gender, age, Travel experience, occupation, residence and education level as well as general information in part B. In addition, the mean and standard deviation are measures of central tendency which are used to analyze data collected in the Section II of the questionnaire.

## SCALE MEASUREMENT

Scale measurement is used mainly to verify quality of the data collected and this can be determined by the reliability level of the data.

## LOGISTIC REGRESSION

Logistic Regression attempts to investigate the relationship between two or more independent variables and a dependent variable that is dichotomous while keeping all the other variables constant. For this type of dependent variable there are only two categories to predict. In this study the dependent variable (Usage of E-ticketing) takes one of the two values of usage or non usage. Logistic regression also accommodates independent variables that scaled end of a ratio scale ordinal or nominal.

In this study, whether an individual chooses to adopt E-Ticketing or not adopt E-Ticketing falls into the realm of two choices. Probabilities have to be between zero and one.

In logistic regression, we can write the equation in terms of log odds (logit) which is a linear function of the predictors. The coefficient  $\beta_1$  is the amount of the logit (log odds) change with a

one unit change in ‘X’. The logistic formulas are stated in terms of the probability that Y=1 which is referred as  $\hat{p}$ . The probability that Y is 0 is  $1-\hat{p}$

$$\ln (\hat{p} / (1-\hat{p})) = \beta_0 + \beta_1 X$$

The ‘ln’ is a symbol to a natural logarithm and  $\beta_0 + \beta_1 X$  is our familiar equation for the regression line. ‘P’ can be computed from the regression equation also. Therefore the regression equation is known then theoretically it’s possible to calculate the expected probability that Y=1 for a given value ‘X’

$$P = \frac{\exp (\beta_0 + \beta_1 X)}{1 + \exp (\beta_0 + \beta_1 X)} = \frac{e^{\beta_0 + \beta_1 X}}{1 + e^{\beta_0 + \beta_1 X}}$$

**Pearson’s Correlation Analysis**

Pearson’s correlation analysis is used to indicate the strength and direction of relationship between two variables. In this study, this analysis is chosen to measure the co-variation between the seven independent variables and travelers’ usage of e-ticketing for EAL. The correlation coefficient determines how the value of one variable changes when the value of another variable changes.

**Multicollinearity Test**

Multicollinearity occurs when independent variables are correlated. If two independent variables are correlated then its difficult to keep the other independent variable constant. When

multicollinearity arises, the ability to define any variable’s effect is diminished (Hair et al., 2010). Independent variables should be *independent*. The acceptable level of correlation between each pair of the independent variables should be at 0.80 or less (Bryman & Cramer, 1999).

During multicollinearity test PBC was found to have value above 80 and it was omitted for the rest of the analysis and hypothesis

**Cox & Snell R Square & Nagelkerke Analysis**

The R Square refers to the percentage of the response variable variation. These variations take a value between 0 & 100%. The higher the R square the better the model fits the data entered.

**RESULTS AND DISCUSSIONS**

**Descriptive Analysis**

**Usage of EAL E-Ticketing services**

Based on results of respondents replies 46.6% of the respondents are using E-Ticketing system and 47.4% started using it regularly after they had the awareness. Only 26.3% of the respondents have the mobile app on their smart devices and 93% of the respondents claimed that they didn’t encounter risk related issue after they started using it. 73.7% believed that attitude has an effect on usage of E-ticketing system. 59.6% of travelers felt that the promotion is appealing enough which leaves the rest of the 40.4% thinking the

**Table 1: Response of Respondents on Dependent Variables of E-Ticketing Adoption**

		Response	Frequency	Percent
ETU1	Do you use the E-ticketing system?	YES	186	46.6%
		NO	213	53.4%
ETU2	Did you use the E-ticketing system once you were aware of its existence?	YES	189	47.4%
		NO	210	52.6%
ETU3	Do you have the E-ticketing mobile application on your smart device?	YES	105	26.3%
		NO	294	73.7%
ETU4	Did you encounter any risky or security related issue after using the system?	YES	28	7%
		NO	371	93.0%
ETU5	Does your attitude towards change affect your uptake or usage of E-Ticketing system?	YES	105	26.3%
		NO	294	73.7%
ETU6	Do you find the promotion system appealing enough for usage of E-Ticketing system?	YES	161	40.4%
		NO	238	59.6%
ETU7	Does your travel experience influence your usage of E-Ticketing system?	YES	238	59.6%
		NO	161	40.4%

Source: own Survey results (November 2018)

promotion was not good enough. Almost 60% of travelers approved that Travel experience has an effect on usage of the E-Ticketing system.

Understanding the frequency with which certain services provided under E-Ticketing are used by travelers is important and provides useful feedback for management of EAL. This is because it could give an indication whether the service is meeting travelers' needs or not, whether travelers know how to use the service and simply whether it adds value providing it or not.

**Factors Affecting E-Ticketing system usage in EAL**

It is important for Ethiopian Airlines to understand the factors which affect the usage of E-Ticketing in order to be able to provide services which meet the customers' expectations and needs. Passengers were also requested to rate how important the identified factors were in influencing their decision to purchase their tickets online, ranging from STRONGLY AGREE to STRONGLY DISAGREE on a numerical scale. The results of the responses were as shown in the table 2.

**Table 2: Factors Affecting Passengers' Decision to Purchase Tickets Online**

Independent variable	N	Mean	Standard deviation
RA	399	1.9474	0.82387
PU	399	2.6249	1.17099
PEOU	399	2.2573	0.85951
PBC	399	2.6249	1.17099
PT	399	2.7076	0.48856
AW	399	1.5848	0.2673
PR	399	3.3816	1.01011

Source: Survey results on SPSS (November, 2018)

Scale: 1 = Strongly Agree, 2= Agree, 3 = Neutral, 4 = Disagree, 5 = Strongly Disagree

From the above table based on the average mean score calculated from the passengers' responses, the respondents agreed that Awareness is the major factor that affects usage of E-Ticketing with a mean of 1.58 where most passengers Strongly Agreed. The second major factor is Relative

Advantage with 1.94. Perceived ease of use on the 3<sup>rd</sup> place, while Perceived Behavioral Control has the same value with Perceived Usefulness with 2.62 at 4<sup>th</sup> rank as per the travelers' responses. The 6<sup>th</sup> and the 7<sup>th</sup> factors which influences passenger's usage of E-Ticketing for EAL is perceived Trust and perceived risk. Therefore, in this study Perceived Risk is the least factor that affects E-Ticketing Usage.

**LOGISTIC REGRESSION ANALYSIS**

**Table 3: Model Summary**

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	444.410 <sup>a</sup>	.235	.314

a. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

R square refers to the percentage of variance in the dependent variables that the independent variables explain. The value of R square shows the percentage of the response variable between the value of 0 and 100%. According to Cohen (1992) R-square value .12 or below indicate low, between 0.13 to 0.25 values indicate medium 0.26 or above values indicate high effect sizes. Therefore, the explained variation in the dependent variable based on the model ranges from 23% to 31%. Since Nagelkerke R Square is a modification of Cox & Snell, it is preferable to

report Nagelkerke R value equals 31% which means that 31% of the changeability of in usage of E-Ticketing has been explained by the independent variables taken together.

Accordingly, Relative Advantage was found to have statistically significant and positive relation with E-Ticketing usage. Holding other explanatory variables constant, perceived usefulness in this study has emerged to have statistically insignificant influence on customers usage of E-ticketing as its value of significance is greater than 0.05. Perceived Ease of use & Awareness also are found



**Logistic Regression Results**

**Table 4: Variables in the Equation**

		B	S.E.	Wald	Df	Sig.	Exp(B)	95% C.I. for EXP(B)	
								Lower	Upper
Step 1 <sup>a</sup>	RA	.429	.198	4.718	1	.030	1.536	1.043	2.262
	PU	.128	.101	1.616	1	.204	1.137	.933	1.386
	PEOU	.559	.160	12.210	1	.000	1.748	1.278	2.391
	PT	.841	.244	11.924	1	.001	2.319	1.439	3.738
	AW	2.493	.493	25.566	1	.000	12.102	4.604	31.814
	PR	-.444	.154	8.362	1	.004	.641	.475	.867
	Constant	-6.944	1.275	29.644	1	.000	.001		

a. Variable(s) entered on step 1: RA, PU, PEOU, PT, AW, PR.

Scale: 1=Strongly Agree 2=Agree 3=Neutral 4=Disagree 5=Strongly Disagree

to have a high positive significant relationship while a negative significant relationship between perceived risk and E-Ticketing adoption was created

**Discussions of Regression Results**

The identified factors affecting E-Ticketing Adoption for EAL are Relative Advantage, Perceived usefulness, Perceived ease of use, Perceived Trust, Perceived risk and awareness. Therefore, based on the regression result table above.

H1: The significant value for RA is 0.03 (i.e.  $p < 0.05$ ). Therefore, reject  $H_0$  which indicates that there is a positive significant relationship between RA and E-Ticketing adoption in EAL.

H2: The significant value for PU is 0.204 (i.e.  $p > 0.05$ ). Therefore accept  $H_0$  which indicates a value greater than 0.05 and that there is a positive but statistically insignificant relationship between PU and E-Ticketing adoption in EAL.

H3: The significant value for PEOU is 0.000 (i.e.  $p < 0.05$ ). Therefore, reject  $H_0$  which indicates that there is a positive HIGH significant relationship between PEOU and E-Ticketing adoption in EAL.

H5: The significant value for PT is 0.001 (i.e.  $p < 0.05$ ). Therefore, reject  $H_0$  which indicates that there is a positive significant relationship between PT and E-Ticketing adoption in EAL.

H6: The significant value for Awareness is 0.000 (i.e.  $p < 0.05$ ). Therefore, reject  $H_0$  which indicates that there is a positive HIGH significant relationship between Awareness and E-Ticketing adoption in EAL

H7: The significant value for PR is 0.04 ( $p < 0.05$ ). Therefore, reject  $H_0$  which indicates that there is a negative significant relationship between Perceived Risk and passengers usage of E-Ticketing method in EAL.

**CONCLUSION**

This research aims to identify the factors that affect the use of E-Ticketing in EAL. In this research, the proposed conceptual model is supported by data collected from 399 respondents on Ethiopian Airlines flights. The results obtained from analysis conducted had put into a conclusion that hypotheses H1, H3, H5, and H6 have a positive significant relationship with adoption of E-Ticketing while H2 has a positive insignificant relationship and H7 has a negative significant relationship.

**RECOMMENDATIONS**

**Recommendation for Action**

EAL should continue to promote and advertise the E-Ticketing services in a better way, which allow users to have awareness of the advantage. EAL has to develop a system that will assure travelers the safety of buying flight tickets online and confirmation for transaction mistakes such as refund & compensation.

- The airline should emphasize in designing an application and website that will allow better features of purchase considering the exposures of the passengers from all over the world. Such as lifestyle, culture & language.

- The airline should focus on the non-users especially those who still show up at the travel agent should be given a new & clear view on the importance and advantages of using the E-Ticketing system.
- The airline should provide a means through which passengers can book their tickets online considering limited access to internet, smart device and payment systems they have in different countries.

### Recommendation for future Research

This study may not have exhausted all the factors that affect E-Ticketing adoption. It is therefore recommended that:

- Further research should be done to unveil the other factors.
- Further research could also be done to evaluate how E-Ticketing contributes to the newly paperless movement of EAL that has been commenced recently on 2017.
- Further research could be done to assess the impact of E-Ticketing for the competitiveness of Ethiopian Airlines in the big aviation market and also how it can be used for profitability purposes, considering the objective of taking ticket offices out of the market.

This will help the airline to determine whether it is on the right track of utilizing technological innovation to reach the level of other airlines that have a limited number of ticket offices.

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