"Determining customer continuous online usage intention in the airline industry. Research and investment management implications"

| AUTHORS | Aliyu Olayemi Abdullateef
Chux Gervase Iwu ⓘ https://orcid.org/0000-0002-6290-9864
Olanrewaju Kareem
Ndanusa Mohammed Manzuma-Ndaaba |

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Aliyu Olayemi Abdullateef (Malaysia), Chux Gervase Iwu (South Africa),
Olanrewaju Kareem (Malaysia), Ndanusa Mohammed Manzuma-Ndaaba (Malaysia)

Determining customer continuous online usage intention in the airline industry. Research and investment management implications

Abstract

The primary objective of this paper is to determine the factors that influence airline customers' continuous online usage intention in Malaysia. To achieve this, data were collected from 251 students and staff of University Utara Malaysia. Reviews of existing literature on internet usage by customers reveal that online usage is influenced by several factors. While the findings in this study are somewhat consistent with literature, this study also found that customers' continuous online usage intention is greatly determined by factors such as service quality, subjective norm, pre-existing offline trust, and pre-existing offline image. This study further found that subjective norm has higher impact on customers' continuous online usage intention and that pre-existing offline trust positively mediates the relationships between service quality, pre-existing offline image and customers' continuous online usage intention of airline online booking services in Malaysia. The major implication of this study for airline firms in Malaysia is that it will assist them in the evaluation and improvement of their online booking services. For academics and researchers, this is the first study that has empirically validated the mediating effect of pre-existing offline trust in the relationships between service quality, pre-existing offline image and customer's continuous online usage intention.

Keywords: e-commerce, continuous online usage intention, service quality, offline trust, offline image, subjective norms, airline, Malaysia.
JEL Classification: M150; M310.

Introduction

More than ever before, business managers have recognized the importance of providing online services and products to their customers by adopting e-commerce technology. This is due to the increasing usage of the internet globally (Lin, 2007; Heung, 2003; Khatibi et al., 2003). Park and Beak (2007) established that because of the accelerating growth of internet technology, coupled with the increasing number of web suers, e-commerce has become a major medium for conducting business (Heung, 2003; Olson & Boyer, 2005). This growth which has been more visible in the Asia Pacific region with web users exceeding over 240 million since 2005 can be attributed to the large amount of consumers who have been purchasing merchandise online, thus making the internet an extremely desirable tool and part of peoples' lives (Lin, 2007). In Malaysia, internet users have tremendously increased reaching 25.3 million in 2012, whilst 10 million are subscribers of 3G, 5 million and 2.5 million are broadband and wireless broadband users respectively (Salman et al., 2013).

The past decade has even seen a much improved internet usage prompting airline firms in Malaysia to offer services to their customers through the web in order to enjoy the advantages of the e-commerce technology as well as to facilitate the ease of transaction to the benefit of its customers (Sam, Fazli & Tahir, 2009). The provision of online booking services to extend customer base, marketing strength and achieving greater profitability are major focus

areas for these firms (So, Wong & Sculli, 2005). Despite these, many challenges are still being faced with regard to customers' continuous intention to use the internet to transact business with Malaysian airline companies.

Continuous usage of the internet by customers for goods and services is a function of loyalty of such customers resulting from their evaluation of services and quality perceptions, as well as trust (Ribbink et al., 2004). The satisfaction of these customers is considered a vital antecedent to customer loyalty because it enhances long-term positive customer relationship and profitability for the firms (Van Riel et al., 2004). Consequently, consumers are likely to return or revisit the companies that give them personal attention or good customer service. Therefore, the need to improve customer satisfaction must be emphasized in both brick and mortar as well as online businesses. Considering the importance of online services in today's business environment, this study examines the determinants of customers' continuous online usage intention.

1. Literature review

This review is underpinned by a theoretical framework. Theoretical frameworks serve the purpose of providing guidance to complex studies (Evans et al., 2011). Theoretical frameworks provide a model for understanding the significance of previous theoretical work and empirical research and thus provide direction for future studies (Weitz, 1981). Direction for future studies usually emerges from a rigorous interaction with research hypotheses (Ferrell & Gresham, 1985). Essentially there is a link

between a research hypothesis and a theoretical framework. Discussions of the constructs (factors) of the framework culminated in the hypotheses that define the scope of the study. The constructs of the framework include service quality, pre-existing offline image, and subjective norm. The other constructs are pre-existing offline trust and continual usage. These constructs are discussed in the following sections. Figure 1 below presents the study's theoretical framework.
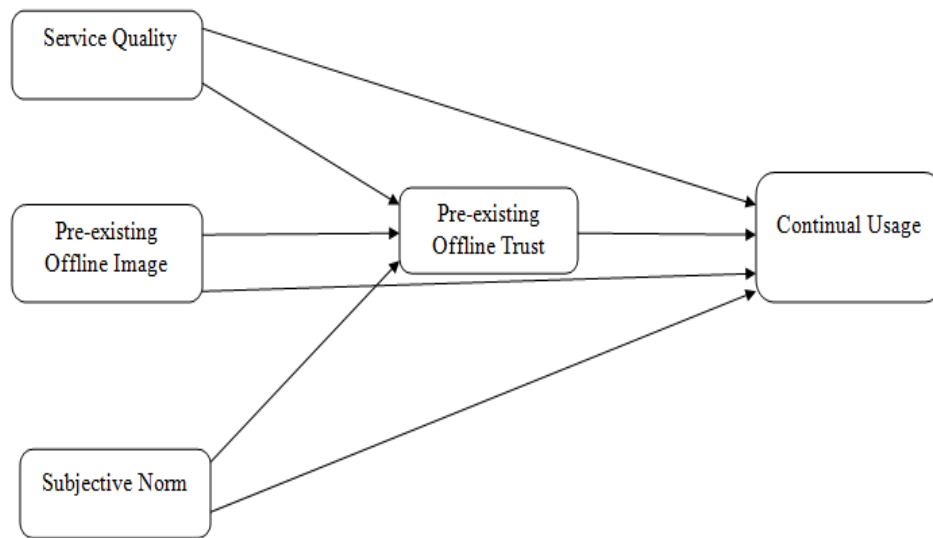

Fig. 1. Theoretical framework for the study

2. Service quality

The importance of service quality as the key determinant of trust and continuous usage in an online transaction environment has been vehemently emphasized in ample literature (e.g. Chiu et al., 2009; Cai & Jun, 2003). Boston Consulting Group (2002) reported that due to failures experienced in online purchasing, forty-one percent of patrons are discouraged from purchasing online. This is an indication that satisfied customers spend more money buying online than the dissatisfied ones. Hence, service quality is in enhancing and boosting a firm's market share as well as in attracting prospective customers (Al-Hawari, 2011; Cai & Jun, 2003).

Parasuraman et al. (1985, 1988) describe service quality as the expectation and judgment of customers on a firm's services as served by employees. To this effect, the expectations of customers in terms of service must be consistent with their perceived service to avoid dissatisfaction. Therefore, firms should ensure the provision of high quality services so as to enjoy the benefits of future repurchase behavior of the consumers.

Considering the linkages between service quality and continuous online usage intentions several researchers believe that usage intentions are indirectly influenced by service quality (Cronin & Taylor, 1992; Caruana, 2002), while some proclaim a direct effect (Ranaweera & Neely, 2003). Verhagen and Dolen (2009) are in agreement with Ranaweera and Neely. They found that the impact that service quality has on customers' online usage intention is strong and direct. Yang and Jun (2002)

also argued that service quality of retailers significantly influenced customers' intention to use online services and products.

There is no doubt therefore that high quality service has the capability to build strong customer trust (Al-hawari & Mouakket, 2012), but this cannot be achieved without consistent interaction between a firm and its customers (Wong & Sohal, 2006). The above are consistent with the notions of Sharma and Patterson (1999); Coulter and Coulter (2002); Pappu and Quester (2006); and Wong and Sohal (2006) regarding service quality and trust. Their notion is that there is a significant and direct correlation between service quality and trust. Following the above discussions, this study hypothesizes that:

♦ **H1:** Service quality is positively related to pre-existing offline trust of airline customers in Malaysia.
♦ **H2:** Service quality is directly related to continual online usage intention of airline customers in Malaysia.

Pre-existing offline image

Image is an important factor that can enhance the achievement of an organization's competitive edge (Kaubaa, 2008) because image consists of benefits and attributes that distinguish an organization from others in customers' minds (Keller, 2008). Image is a reflection of previous actions, exploits and/or achievements of a firm, a mirror of history concerning company's interactions with its prospective clients (Wang et al., 2003). However, the manner and level of treatment and interaction

that a customer receives from an organization reveal its image which eventually determines to a greater extent customers confidence in such an organization and subsequently the influence on continuous usage intentions (Al-hawari & Mouakket, 2012).

A further study of the effect of pre-existing offline image on online usage intentions was explained with the Festinger's (1957) cognitive dissonance theory (Kwon & Lennon, 2009). According to the theory, discord is created when the perception of an individual is inconsistent with his expectations, causing psychological distress and as well initiating the dissonance eradication process. The existence of stronger pre-existing image counteracts the new inconsistent ones from affecting others, thus an individual dissociates himself from new dissonant information and adhering to the current perception. Therefore, the stronger a firm's image is in the minds of customers, the more they are likely to revisit the company's site to repurchase, thus the effect of customer's online continuous usage intention would be positive and more significant when pre-existing image is high (Kwon & Lennon, 2009). In this case, this study hypothesized that:

♦ **H3:** Pre-existing offline image is positively related to pre-existing offline trust of airline customers in Malaysia.
♦ **H4:** Pre-existing offline image is directly related to continuous online usage intention of airline customers in Malaysia.

3. Subjective norm

Subjective norm is regarded by many researchers as "the perceived pressures or perceived social pressure that can influence and motivate an individual to engage in a particular behavior emanating from observing the actions or reactions of others and as such, the encouragement to conform with the pressures" (Ajzen & Fishbein, 1975; Ajzen, 2006; Kim et al., 2009). According to Finlay, Trafimov and Moroi (1990), subjective norm is defined as an individual's perception of whether the people who are considered important to him or her think a certain behavior should be performed. Therefore, subjective norm is a factor that instigates the initiation of intentions toward carrying out behavior and represents an individual's drive to act in accordance with the views of people they consider very important to them (Shim et al., 2001).

The link between subjective norm and continuous usage intentions has yet to be proved without doubts. Davis et al. (1989); Shin and Fang (2004); Shim et al. (2001), found no relevance of subjective norm to continuous usage intentions, while Hartwick and Barki (1994); Kim et al. (2009); and Taylor and Todd (1995) recorded significant

relationship between them. Murray (2009) and Rogers (2003) also found a significant linkage between subjective norm and continuous online usage intention. On the basis of the above, we hypothesize that:

♦ **H5:** Subjective norm is positively related to pre-existing offline trust of airline customers in Malaysia.
♦ **H6:** Subjective norm is directly related to continuous online usage intentions of airline customers in Malaysia.

Pre-existing offline trust

Organizations can establish, maintain and sustain positive long-term relationship with customers through trust (Al-hawari & Mouakket, 2012). Trust can be established through persistent high quality services, creating confidence in customers mind and removing the perception of risks and uncertainties (Coulter & Coulter, 2002; Zhou, 2011). Trust is seen from the perspective of business relationship as the extent of reliance on the sincerity of promises that are extended by partners to each other (Kolsaker & Payne, 2002).

Ample literature has identified trust as indispensable in consumer behavior studies in association with business environment as it was seen as an antecedent to customers' continuous usage intentions (Ba & Pavlou, 2002; Hahn & Kim, 2009). According to Quin et al. (2008), trust is very strong and influential to the extent that customers can transfer their confidence and trust for a particular product to another which they have no prior knowledge or experience. Hence, it is argued that high level of customer trust in a company would trigger the exhibition of confidence to purchase online from the same firm (Hahn & Kim, 2009).

Winch and Joyce (2006), as well as Li and Zang (2002) contend that there are high risks involved in purchasing online for both experienced and inexperienced customers, albeit customers trust on a firm for high quality services will result in the customers' intentions to engage in online transaction with the firm (Piercy, 2012; Lee et al., 2011, 2007). Other studies that support the link between trust and direct influence on customer's online purchase include Jones and Kim (2010), Kuan and Bock (2007), Quin et al. (2008) and Corbitta et al. (2003). Following the above, this study hypothesizes as follows:

♦ **H7:** Pre-existing offline trust is positively related to continuous online usage intention of airline customers in Malaysia.
♦ **H8:** Pre-existing offline trust mediates the effect of service quality on continuous online usage intention of airline customers in Malaysia.
♦ **H9:** Pre-existing offline trust mediates the effect of pre-existing offline image on continuous

online usage intention of airline customers in Malaysia.

♦ **H10:** Pre-existing offline trust mediates the effect of subjective norms on continuous online usage intention of airline customers in Malaysia.

3. Continual usage

Continuous usage has been widely studied by many researchers and described differently in literature as not only a continuing activity, but also as conformation, incorporation and routinization (Al-hawari & Mouakket, 2012; Lee & Kwon, 2011), hence the adoption of the concept – continuous usage in this study is to describe Malaysia airline customers' possibility of consistently using the online booking services provided by the various airline firms to make e-ticket purchases (Park et al., 2010; Roger, 1995).

However, many of the studies on the factors influencing usage intention within the context of online services delved more into cognitive and affective factors (Al-Maghrabi & Dennis, 2011; Sam & Tahir, 2009; Nusair & Kandampully, 2008; Su et al., 2008; Hassanein & Head, 2007; Moharrier et al., 2006; and Lee & Lin, 2005). Meanwhile, limited empirical research on offline factors as a significant determinant of continuous usage is available (Al-hawari & Mouakket, 2012). Therefore, coming up with a new perspective on continuous usage intentions of customers requires other cognitive and affective factors that will be in the context of offline services and also embracing the factors (constructs) illustrated in the theoretical model (see Figure 1 above) for this study.

4. Methodology

In order to facilitate the easy collection of data for the purpose of this research, 251 questionnaires were administered online at the Universiti Utara Malaysia (UUM). The population consisted of staff and students of UUM who often travel using air transportation due to the remote location of the university and its nearness to Alor Star airport in Kedah, Malaysia. This was emphasized as part of the instruction for completing the questionnaire. From the 251 questionnaires, only 179 (representing 71.6% of sample) were properly filled out, while 72 were discarded due to large numbers of missing values. Watt et al. (2002) considers 71.6% response rate as sufficient for online surveys.

The questionnaire employed for this study comprised six different sections. The first contained the demographic questions such as gender, nationality, religion, marital status, age, educational level and occupation, while the last five sections included associated items covering elements of the theoretical framework namely pre-existing offline image, service quality, pre-existing offline trust, subjective norm and continuous usage intention which were all measured by a five-point Likert scale where 1 was equivalent to "strongly disagree" and 5 was equal to "strongly agree". However, all items used in measuring the variables were adopted from existing literature, thus authenticating the reliability and validity of the data. Table 1 below captures the hypothesized constructs and their sources of measurement instruments.

Table 1. Conceptual measurement items and constructs

Constructs	Items	Source
Employee-based service quality	The office where I purchase my air ticket has attractive decorations.	Cronin and Taylor (1992).
	The employees of the company where I book my air ticket perform their job accurately.	
	The employees of airline firm where I make reservations respond to my queries effectively.	
	The airline company I transact business with has knowledgeable and friendly employees.	
	The employees of airline firm give me personal attention whenever I am making reservation with their company.	
Pre-existing offline image	The airline firm where I make my air ticket reservations is very good at caring for its customers.	Aaker (1996); Davis et al. (2009); Xu and Chan (2010); Wang et al. (2008); Kwon and Lennon (2009).
	The airline firm where I make my air ticket reservations exhibit unique services and features than other airlines.	
	I can accurately predict the performance of the airline firm where I make reservations for air ticket.	
	The firm where I make ticket reservations is highly respected compared to others.	
Pre-existing offline trust	The firm where I make ticket reservations can always be trusted.	Hahn and Kim (2009); Kuan and Bock (2007).
	The firm where I make ticket reservations can be dependable in doing what is right.	
	The integrity of the firm where I make ticket reservations is high.	
	The firm where I make ticket reservations is reliable when it comes to keeping promises.	
Subjective norm	People who are important to me think that I should continue to use online reservation.	Kim et al. (2009).
	People who influence my behavior think that I should continue to use online reservation.	
	People whose opinions I value would prefer me to continue to use online reservation.	
Continual usage	I intend to continue using online reservations.	Lee and Kwon (2011).
	I expect to continue making online reservations in the future.	
	I expect to increase my usage of online reservations in the future.	
	I intend to revisit online reservation portal to make a reservation whenever the need arises.	

5. Validity and reliability of the inclusion of the constructs in the data collection instrument

Using the Cronbach Alpha coefficient, the reliability of the data collection instrument was tested against the constructs of the theoretical framework. Each of the constructs was separately tested. None of the elements achieved a score less than 7. Given this result, the instrument was deemed sufficient for the study. Previous study by Chen et al. (2006) stated that a reliability coefficient exceeding 0.7 for any test or scale was the minimum acceptable reliability coefficient. See Table 2.

Table 2. Cronbach's alpha for theoretical framework constructs and their items

Variables	Number of items	Cronbach's Alpha
Employee-based service quality	5	0.823
Pre-existing offline image	4	0.792
Pre-existing offline trust	4	0.815
Subjective norm	3	0.835
Continual usage	4	0.875

Table 3 below presents the summarized calculations of the variance extracted (VE) through the square multiple correlation (SMC) and standard error (SE).

Table 3. Variance extracted

Variable	Code	Square multiple correlation (SMC)	SMC2	Standardized error (SE)	Variance extracted (VE)
Employee based service quality (EBSQ)	EBSQ1	0.458	0.209764	0.059	
	EBSQ2	0.550	0.3025	0.050	
	EBSQ3	0.461	0.212521	0.050	
	EBSQ4	0.539	0.290521	0.053	
	EBSQ5	0.457	0.208849	0.058	
Pre-existing off-line image (PEOI)	PEOI1	0.567	0.321489	0.057	
	PEOI2	0.460	0.2116	0.061	
	PEOI3	0.469	0.219961	0.053	
	PEOI4	0.443	0.196249	0.060	
Subjective norm (SN)	SN1	0.619	0.383161	0.055	
	SN2	0.613	0.375769	0.052	
	SN3	0.649	0.421201	0.052	
			1.180131	0.159	0.881
Pre-existing off-line trust (PEOT)	PEOT1	0.585	0.342225	0.060	
	PEOT2	0.444	0.197136	0.056	
	PEOT3	0.539	0.290521	0.054	
	PEOT4	0.532	0.283024	0.052	
			1.112906	0.222	0.834
Continuous usage (CU)	CU1	0.621	0.385641	0.053	
	CU2	0.654	0.427716	0.056	
	CU3	0.625	0.390625	0.060	
	CU4	0.661	0.436921	0.057	
			1.640903	0.226	0.879

As indicated in Table 3 above, the values of the variance extracted are shown in the last column of the table i.e. the amount of variances that each construct can explain in the research framework. For this current study, these values range from 0.804 to 0.881 as calculated through the squared multiple correlations (SMC) and the standard error (SE) of variance. The results in Table 3 show that the variance extracted for all the five constructs were greater than 0.5 as suggested by Hair et al. (2010).

Table 4. Composite reliability

Variable	Code	Factor loading	Factor loading²	Standardized error (SE)	Composite reliability
Employee based service quality (EBSQ)	EBSQ1	0.627	0.393129	0.041	
	EBSQ2	0.704	0.495616	0.025	
	EBSQ3	0.639	0.408321	0.029	
	EBSQ4	0.726	0.527076	0.029	
	EBSQ5	0.501	0.251001	0.039	
			2.075143	0.163	0.927
Pre-existing off-line image (PEOI)	PEOI1	0.466	0.217156	0.033	
	PEOI2	0.793	0.628849	0.044	
	PEOI3	0.631	0.398161	0.033	
	PEOI4	0.612	0.374544	0.044	
			1.61871	0.154	0.913

Table 4 (cont.). Composite reliability

Variable	Code	Factor loading	Factor loading²	Standardized error (SE)	Composite reliability
Subjective norm (SN)	SN1	.625	0.390625	0.028	
	SN2	0.664	0.440896	0.025	
	SN3	0.663	0.439569	0.023	
			1.27109	0.076	0.944
Pre-existing off-line trust (PEOT)	PEOT1	0.665	0.442225	0.037	
	PEOT2	0.823	0.677329	0.038	
	PEOT3	0.690	0.4761	0.031	
	PEOT4	0.472	0.222784	0.029	
			1.818438	0.135	0.931
Continuous usage (CU)	CU1	0.721	0.519841	0.025	
	CU2	0.812	0.659344	0.026	
	CU3	0.804	0.646416	0.032	
	CU4	0.752	0.565504	0.027	
			2.391105	0.11	0.956

To calculate composite reliability for the study, we employed the formula below as suggested by previous researchers (Fornell & Larcker, 1981; Hair et al., 2006).

$$\text{Composite reliability } (CR) = \frac{\sum (\text{factor loading}^2)}{\sum (\text{factor loading}^2) + \sum \varepsilon j},$$

where CR = composite reliability; Σ = summation; εj = standardized error.

As indicated in Table 4 above, all the constructs generally exhibited acceptable levels of composite reliability with values that are greater than the suggested 0.70. These results further confirm the fitness of the data for the intended measurements in this study.

6. Results, analysis and discussion

Participants' data were analyzed descriptively. In the case of measuring the correlation between variables, Pearson crrelation, also known as the Pearson Product Moment Correlation or PPMC was deployed, while Chi Square was used to test the goodness of fit and whether there are significant differences between the variables.

Participants' descriptive statistics. Table 5 presents a detailed analysis of participants' descriptive statistics.

Table 5. Descriptive statistics of frequency and percentage

	Frequency	Percentage
Gender		
Male	85	47.5
Female	94	52.5
Total	179	100
Residence		
Citizen	177	98.9
Non-citizen	2	1.1
Total	179	100
Religion		
Muslim	46	25.6
Buddhist	98	54.8
Hindu	24	13.5
Christian	9	5
Others	2	1.1
Total	179	100
Marital status		
Single	179	100
Married	0	0
Others	0	0
Total	179	0
Age		
Under 20	0	0
20-30	179	100
31-40	0	0
41-50	0	0
Above 50	0	0
Total	179	100
Level of study		
Undergraduate	164	91.6
Postgraduate	13	7.3
Diploma	2	1.1
Others	0	0
Total	179	100
Occupation		
Student	178	99.4
Lecturer	1	0.6
Staff	0	0
Others	0	0
Total	179	100

Based on the data collected, 177 respondents were Malaysian indicating 98.9% of the total population. All the respondents were between the ages of 20 and 30 years. From this result, it can be observed that the respondents captured for the data were young adults further confirming the report of Statistica (2014) that young people use the internet more than adults. Furthermore, out of 179 respondents, 178 were students in the university, while only one staff response was received.

Estimating the relationships between constructs

The extent to which variables are related is a measurement of correlation between them. Pearson correlation is the most frequently used in measuring the correlation between variables in statistics. According to Statistics Tutor (2012), Pearson correlation can be used to display the linear relationship between one variable and the other or

more variables. The outcomes of Pearson correlation range between -1 and 1. When the value of Pearson correlation of two or more variables gets to 1, the variables are more correlated with each other.

Table 6. Pearson correlation

		E.B.S.Q	P.E.O.I	P.E.O.T	S.N	C.U
E.B.S.Q	Pearson correlation	1	.707**	.678**	.559**	.558**
	Sig. (2-tailed)		.000	.000	.000	.000
	Sum of squares and cross-products	54.162	42.075	39.620	33.627	35.434
	Covariance	.304	.236	.223	.189	.199
	N	179	179	179	179	179
P.E.O.I	Pearson correlation	.707**	1	.675**	.559**	.544**
	Sig. (2-tailed)	.000		.000	.000	.000
	Sum of squares and cross-products	42.075	65.449	43.358	37.001	37.963
	Covariance	.236	.368	.244	.208	.213
	N	179	179	179	179	179
P.E.O.T	Pearson correlation	.678**	.675**	1	.591**	.548**
	Sig. (2-tailed)	.000	.000		.000	.000
	Sum of squares and cross-products	39.620	43.358	63.042	38.335	37.521
	Covariance	.223	.244	.354	.215	.211
	N	179	179	179	179	179
S.N	Pearson correlation	.559**	.559**	.591**	1	.750**
	Sig. (2-tailed)	.000	.000	.000		.000
	Sum of squares and cross-products	33.627	37.001	38.335	66.852	52.879
	Covariance	.189	.208	.215	.376	.297
	N	179	179	179	179	179
C.U	Pearson correlation	.558**	.544**	.548**	.750**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	Sum of squares and cross-products	35.434	37.963	37.521	52.879	74.350
	Covariance	.199	.213	.211	.297	.418
	N	179	179	179	179	179

Notes: *Correlation is significant at the 0.05 level (2-tailed). **Correlation is significant at the 0.01 level (2-tailed).

Abbreviations: EBSQ = employee based service quality; PEOI = pre-existing off-line image; SN = subjective norm; PEOT = pre-existing off-line trust; CU = continuous usage. From the Table above we realize that the subjective norm, one of the independent variables is highly correlated to continual usage, which is the dependent variable of the research. This trend of Pearson correlation indicates that consumers are highly dependent on their own subjective norm to decide on the usage of an online service. Therefore, consumers' subjective norm is a critical factor to determine whether consumers will continue with the services of a company in the future.

Figure 2 above shows the outcomes of the test conducted on this study's theoretical framework using the five constructs namely employee-based service quality, pre-existing off-line image, subjective norm, pre-existing off-line trust and continual usage intention. Overall, 20 measurement items were employed for the measurement of the latent variables – employee-based service quality had 5 items, pre-existing off-line image, pre-existing off-line trust and continual usage all having 4 items, while subjective norm was measured with 3 items. Sequel to this, SEM analysis was conducted to determine the relationships that occur between the constructs in pairs based on the hypothesis suggested by this study. Shown in Figure 2 and Table 7 below are detailed analysis of SEM results and the fit indices as obtained for each latent variable in the theoretical model.

Table 7. Goodness of fit index for the model

Final models	Standard criteria	Final model results	Results
CMIN/Df	< 5	1.307 (32.663/25)	Passed
p-value	>0.05	0.140	Passed
GFI	>0.9	0.963	Passed
CFI	>0.95	0.989	Passed

Table 7 (cont.). Goodness of fit index for the model

Final models	Standard criteria	Final model results	Results
AGFI	>0.9	0.920	Passed
NFI	> 0.9	0.957	Passed
RMSEA	< 0.05	0.041	Passed

Quite observable from the SEM results in Table 8 below are R-square statistics. R^2 as often depicted is a statistical measure that represents the extent to which independent variables can explain the variations or movement up/down in the dependent variables. It is mainly employed to forecast the future results or the testing of *hypotheses*, based on other related information. From the table below, R^2 for continuous usage and pre-existing offline trusts are 0.846 and 0.656 respectively. This is an indication that 85% of the fluctuations in customer's continual usage of online services of airline firms in Malaysia can be explicated by the independent variables in this research model i.e. pre-existing offline image, service quality, and subjective norm.

However, X^2 statistics is 32.663 with 25 degrees of freedom and an insignificant *p*-value of 0.140, a value that exceeds the suggested *p*-value of 0.05 making the model statistically acceptable (Byrne, 2010). More so, the ratio of X^2 to the degree of freedom is 1.307 which is consistent with the recommended value of < 5 prescribed to attain goodness of fit indices (Hair et al., 2010). But, in a case where the *p*-value that is greater than 0.05 and a ratio of X^2 to degree of freedom that is less than 5 is not achieved, then the model will be technically rejected as specified in the goodness of fit indices of any SEM analysis (Byrne, 2010; Hair et al., 2006). Other indicators that are of importance to the achievement of goodness of fit in this study model are GFI: 0.963, CFI: 0.989, AGFI: 0.920, NFI: 0.957, RMSE: 0.041. Hence, statistically, the results shown in Table 7 confirm that the model for this study is acceptable.

Table 8. Direct effects of revised model

	Endogenous	Exogenous	Estimate	SE	CR	P	Label R²
Hypothesis1	PEOT	<-- EBSQ	.560	.395	1.416	.157	Not sig.
Hypothesis3	PEOT	<-- PEOI	.280	.410	.683	.495	Not sig.
Hypothesis5	PEOT	<-- SN	.197	.134	1.468	.142	Not sig.
Hypothesis4	CU	<-- PEOI	-.017	.280	-.059	.953	Not sig.
Hypothesis6	CU	<-- SN	.720	.122	5.895	***	Sig.
Hypothesis7	CU	<-- PEOT	.175	.137	1.279	.201	Not sig.
Hypothesis2		<-- EBSQ	.090	.291	.309	.757	Not sig.
PEOT							0.656
CU							0.846

Notes: $^*p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Abbreviations: EBSQ = employee based service quality; PEOI = pre-existing off-line image; SN = subjective norm; PEOT = pre-existing off-line trust; CU = continuous usage Not sig. = not significant; Sig. = significant.

Table 9. Indirect effects interpretations

Exogenous	Mediated	Endogenous	Direct effects estimates	Indirect effects estimates	Mediating hypothesis
EBSQ	PEOT	CU	0.09	0.098	Mediating
PEOI	PEOT	CU	-0.02	0.051	Mediating
SN	PEOT	CU	0.74	0.035	Not mediating

Abbreviations: EBSQ = employee based service quality; PEOI = pre-existing off-line image; SN = subjective norm; PEOT = pre-existing off-line trust; CU = continuous usage.

However, it could be observed that virtually all, but except one of our hypotheses supported our hypothesized positive relationships between the constructs in our theoretical model as shown in Figure 2 and Table 8, i.e. Hypothesis 4, where pre-existing off-line image is negatively related to continuous usage. Consequently, the mediating impact of pre-existing off-line trust on continuous usage in Hypothesis 9 offsets this negative relationship in Hypothesis 4. In Table 9, it is empirically shown that the standardized indirect estimates (0.051 and 0.098) in Hypothesis 9 are positive and greater than standard direct estimates in Hypothesis 4 (-0.02) and Hypothesis 2 (0.09) respectively though the value in Hypothesis 2 has a positive value.

Although, many of our hypotheses are not significant as shown in Table 8 at significant level of 5%, most of the independent variables positively affect the mediating and dependent variable, that is, EBSQ positively affects PEOT and CU, having EBSQ to PEOT (Hypothesis 1) with standardized estimates of 0.47 and p-value of 0.157, EBSQ to CU (Hypothesis 2) with standardized estimates of 0.09 and p-value of 0.757. Relatedly, PEOI positively affects PEOT (Hypothesis 3) with the standardized estimate of 0.25, p-value of 0.495, Hypothesis 5 with SN to PEOT has standard estimate of 0.17, p-value of 0.142 and SN to CU (Hypothesis 6) the only positively as well as significantly related of our Hypothesis has a standardized estimate of 0.74 and p-value of less than 0.01. For Hypothesis 7, PEOT to CU, though positively related and not significant at standardized estimate of 0.21 and p-value of 0.201, it successfully mediates the relationships between EBSQ and CU, and PEOI and CU.

Subjective norm is the only factor in this study that has a direct relationship with continual usage. This is evident in its consistent use as a major predictor of behavioral intentions in most existing literature (Kim et al., 2009; Lee et al., 2007). Al-hawari and Mouakket (2012) found a direct relationship by emphasizing that social pressure received by an individual so as to indulge in a behavior plays a vital role in the individual's continual usage of the internet to purchase airline ticket. All other factors (employee based service quality and pre-existing offline image) that have no direct relationships with continual usage were successfully mediated by the pre-existing off line trust. This mediating effect prove the authenticity of the importance of pre-existing offline trust for continual usage of the internet by customers as expressed by Piercy (2012), Qing et al. (2008), Lee et al. (2007), and Hahn and Kim (2009). Similar to Al-hawari and Mouakket (2012), and Hahn and Kim's (2009) studies, this study also established an indirect connection between pre-existing offline trust and customers' intention to continue using the internet for airline booking. The inability of employee based service quality to directly influence the online continual usage in this study is in agreement with the existing literature; though some literature specify that employee based service quality might have a direct or indirect impact on the behavioral intention of the customers (Al-hawari & Mouakket, 2012). Employee

based service quality was unable to directly determine continual usage of online services in this research.

Conclusion, limitations and recommendations for future research

The limitations of this research are relevant to the sample of the population and research design. The sample of this study tended to have uniform composition in some important aspects which did not allow for proper segmentation. Also, the sample of the population was small; hence further study on a larger platform and more importantly an extension to other organizations are recommended in order to obtain better and reliable estimates.

However, the generalizability of the research outcome to larger population is restricted; using students and staff as the research sample depicts that the sample is technologically inclined and au fait with the internet (Parasuraman, 2000). Therefore, one can argue that the population comprised an educated sample in contrast to an uneducated population.

In conclusion, the purpose of the study was to determine the impact of service quality, pre-existing offline image, subjective norm and pre-existing offline trust on customers' continual online usage intentions based on the services of airline firms in Malaysia. The analysis indicates that the continual usage of airline services will mainly be influenced by the subjective norm of the customers. However, to enhance consumer's continual usage of online services of Malaysian airlines, the management team should provide an enabling environment that will facilitate the improvement of the employees' performance in service quality as well as enhance the subjective norm of consumers in association with their services. This essentially suggests that this study also has an interesting implication for strategic investment management. Beyond this though, there are other interesting implications. Firstly, this study serves a major theoretical contribution in that it is the first study that has empirically established the mediating impact of pre-existing off-line trust in the relationship between employee-based service quality, pre-existing off-line image, subjective norm and customer's continuous online usage intention in the airline industry. Also, this study provides credible avenue for airlines to evaluate and improve their online booking services. By so doing, they are likely to remain productive and profitable.

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