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Examining the Factors that Determine the Behavioural Intention of E-Travel Sites in Egypt

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Abstract

The main purpose of this study is to explore external variables that influence perceived usefulness and perceived ease of use and in turn influence the behaviour intentions of e-travel sites in Egypt. The study is based on the original TAM constructs and postulated relationships. The study hypothesized that four external variables-relevant information content, information quality, functionality and perceived risk of e-travel sites influence perceptions of usefulness and ease of use, which in turn affect behavioural intention to use the site. The findings of this study contribute to enriching our understanding of how tourists evaluate e-travel sites and the factors affecting their decisions to use it in Egypt. Eventually, developing high-quality e-travel sites will not only improve the tourist's knowledge and experience of the destination, but also enhance its innovative and creative image among potential and actual tourists.

Keywords: Egypt, e-travel site, technology acceptance model, external factors.

Introduction:

The current era is witnessing the development of the internet and e-commerce and its adoption in the travel and tourism industry. Due to these dramatic developments and the plenty of services opportunities, there are rapid changes in the way travel and tourism products were distributed (O'Connor and Frew, 2000). In response, Travel and tourism companies have started to use their websites to offer their different services such as booking flights and hotels directly as well as providing access to country specific information through e-business website to the customers. On other hand, customers are more conscious of the opportunities offered by these websites from search for information, arrange, compare, and book services online (Buhalis and Law, 2008). According to The World Tourism Organization the key to internet success lies in the swift identification of customer needs and direct contact with consumers, offering them comprehensive, personalised and up-to-date information (Castaneda, Frias and Rodriguez, 2009). Moreover, in Egypt Internet adoption would enhance the competitiveness of tourism, and improve the efficiency of the travel agents (Mavromatis and Buhalis, 2003 cited in Abou-Shouk, 2012)

As said by Mavromatis and Buhalis (2003), Egyptian travel agents perceive the internet as a global interface to the world, providing information and a tool for increasing sales and improving business efficiency. They use the Internet and create their own websites to advertise their services and receive customer enquiries and feedback (Abou-Shouk, 2012). Despite these trends and the surge in the number of internet users, but there is still some people reluctant to use and accept websites especial in the Arab countries (Al Sukkar and Hasan, 2005; Akour, et al, 2006). Over the past decade, the Technology Acceptance Model (TAM) has been applied by many researchers to examine the usage of computer / information

technology. The TAM hypothesizes that users' perceptions of both usefulness and ease of use are key determinants of individuals' adoption of technology (Davis, 1989). They are considered determinants of user acceptance and have a direct effect on people's attitudes towards the use of computer technologies. (Davis, Bagozzi and Warshaw, 1989). Regarding external variables, Davis et al. (1989) explored that they lie on the bridge between internal beliefs, attitudes, intentions and individual differences, and situational restrictions and managerially controllable interventions that affect behaviour. Thus, This study has tried to shed light on the TAM model in order to explain the acceptance of using the e-travel sites in Egypt.

Literature Review

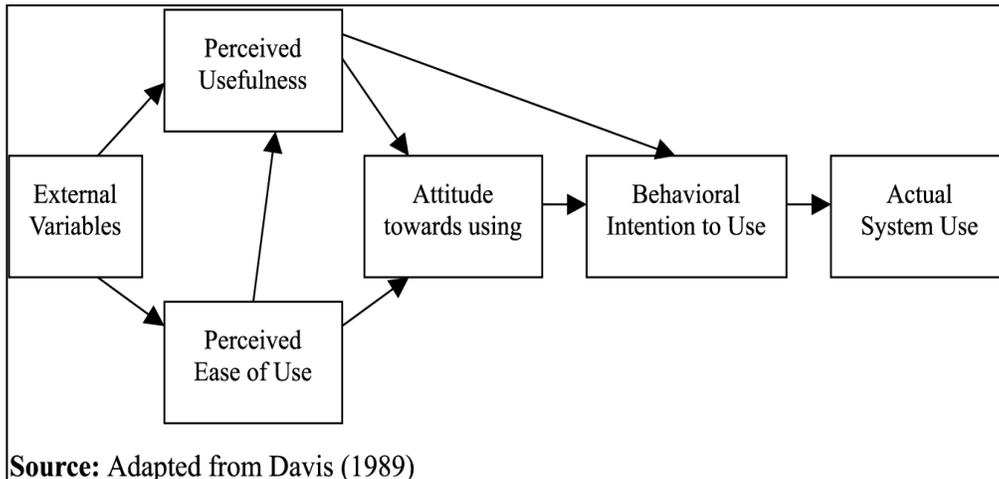
In 1986, Fred Davis developed the Technology Acceptance Model (TAM) from the Theory of The Reasoned Action Model (TRA) (Ajzen and Fishbein, 1977; Ajzen and Fishbein, 1980) that was originated from learning theory and introduced in the field of social psychology. The primary goals of the theory of reasoned action are to understand, and therefore predict certain social human behaviour (Godin, 1994). The TRA has been posited that beliefs influence attitudes, which lead to intentions and then consequently generate behaviours (Martins, Oliveira, and Popovic, 2013; Leung and Matanda, 2013). TRA has received considerable attention and widely used among researchers to explain the individual's behaviours in different context (Mak and Nickerson, 2009; Seneler, Basoglu and Daim, 2010).

TAM is considered an extension to TRA, which was intended for demonstrating acceptance of information systems by potential users. According to the TRA, an individual's performance of a specific behaviour is determined by his/her behavioural intentions, which are a function of individual attitudes (the person's feelings that performing

the behaviour is good or bad) and subjective norms (the person's beliefs that certain individuals or groups approve or disapprove of performing the behaviour) ($BI = A + SN$) (Fishbein and Ajzen, 1977, Seneler, Basoglu and Daim, 2010; King and He, 2006; Burton and Hubona, 2006)

The main goals of the TAM are to explain, predict and understand the acceptance of users to information systems or technology in various fields. In other words, TAM mostly emphasizes on the clarification of the individual's attitudes and intentions to use a certain technology service as the purpose of a four-stage process, (Lu, Chou and Ling, 2009) as depicted in fig (1):

Figure1



Source: Adapted from Davis (1989)

- External variables influence users' beliefs in using the system (service)
- Users' beliefs influence their attitudes in using a system (service)
- Users' attitudes influence their intentions to use a system (service)
- Users' intentions determine the level of usage of the system (service)

TAM postulated that two particular beliefs, perceived usefulness and perceived ease of use, are of primary significance for the information systems or technology acceptance behaviours. Perceived

usefulness (PU) is referred, as “the degree to which person believes that using a particular system would enhance his or her job performance” (Davis, 1989). Perceived ease of use (PEOU) is defined as “the degree to which a person believes that using a particular system would be free from efforts” (Davis, 1989). The TAM propositioned that PU and PEOU beliefs affect users’ attitude towards using information systems. Their attitude directly relates to behavioural intention (BI) to use, which, in turn, will determine usage of the system. TAM theorized that the effects of external variables on intention to use are mediated by perceived usefulness and perceived ease of use. In general, the model assumes that both PU and PEOU are the most significant influences affecting the behaviour of using technology.

However, the original of Technology Acceptance Model (TAM) was revised by Davie et al. (1989), in a longitudinal study and reported that the data partially support the model. Additionally, the attitudinal construct was omitted from the model since the mediating role was doubtful, and the perceived technology characteristics directly influenced the individual’s intention to use the new technology. TAM has received much academic attention and has confirmed to be appropriate across a wide variety of information technologies such as word processor technology (Davis et al., 1989) e-mail, voice –mail, graphics, word processing software (Adams, Nelson, and Todd, 1992) DBMS (Hendrickson, Massey, and Cronan, 1993) e-travel sites (Lin, 2010) internet banking (Al Sukkar and Hasan, 2005) online services (Sender et al, 2010) mobile technology (Lee and Park, 2008) and others services related to the computer and information technology.

Nonetheless, the prosperous of studies using TAM, various external variables that apply to different fields have been found. Based on the original TAM model, the external variables as a construct include various number of variables, which are personal features (computer self-efficacy, innovativeness, and past adoption behaviour),

system features (design and functionality), and organizational features (top management support and training) can affect attitude and behaviour (Davis, 1989). For example, Igarria et al. (1995) studied the influence of external factors including user training, computing support and managerial support on PU and PEOU beliefs. Their findings boosted that these external factors significantly affected both the PU and the PEOU of microcomputer usage. Nevertheless, many studies have been extended TAM by adding external variables to the model and focusing on the central constructs of TAM (PU and PEOU) (Kim and Qu, 2014). Based on Kim and He (2006), the external variables are consisting of individual differences, situational factors, and variables suggested by other theories. In 2003, Venkatesh and his colleagues reviewed the extant user acceptance models, and combined the eight models from the previous literature to create a unified theory of acceptance and use of technology (UTAUT). UTAUT suggests four essential constructs to explain and predict user acceptance of a new technology including performance expectancy, effort expectancy, social influence and facilitating conditions. In fact, two constructs in UTAUT including performance expectancy and effort expectancy are equivalent to perceived usefulness and perceived ease of use in the TAM model respectively.

Despite the lack of researches on technology adoption in the tourism and hospitality literatures, a few recent researches have been increasing which focus on the examinations of the external factors in an effort to assess possible connections to behavioural intention (Kim and Qu, 2014). These include external demonstration, airline incentives, perceived risk, and perceived quality (Lu et al., 2009) information quality, system quality, and perceived quality (Kim et al, 2008) relevant information content, information quality and functionality needs service (Lin, 2010)

Research model and hypotheses:

The main objective of this study is to explore external variables that

effect perceived usefulness and perceived ease of use and in turn influence the behaviour intentions of e-travel sites in Egypt. In this study the travel and tourism industry provides e-travel sites (such as Blue Sky Travel, Skyegtours, makemytrip, Thomas Cook Egypt, Travcotravel, etc. in Egypt) that offer customers virtually any type of online travel function, such as vacation package, airlines, hotel reservations, cruise bookings and other travel services. Figure (2) shows the model, which is based on the original TAM constructs and postulated relationships. The model hypothesized that four external variables- relevant information content, information quality, functionality and perceived risk of e-travel sites influence perceptions of usefulness and ease of use, which in turn affect behavioural intention to use the site. Besides, the proposed model in this research does not include the path from behavioural intentions or other constructs to actual use, which is initially introduced in the TAM model.

Relevant information content

Buhalis& Law (2008), explained that the internet user visits e-travel sites for either searching for information on a particular product or purchasing something in particular. Earlier study of Saracevic (1970) defined relevant information content as an estimate of appropriateness existing between provision and information use as judged by an individual (cited in Lin, 2010). Thus, it can be considered that this appropriateness is a multi-dimensional cognitive concept depending on user perceptions of both information obtained and that required at a specific time (Lin, 2010). As the result, relevant content consists of three factors including the type of information the web site offers, the quality of the offered information and the accessibility of that information.

In fact, the tourism and travel industry is heavily reliant on information and providing optimal information to consumers is crucial for its success (Cai, Feng,&Breiter, 2003). On the other hand, some researchers evaluate tourism industry web sites by analysing and using relevance of information

content (Cai et al., 2003; Baloglu and Pekcan, 2006; Lin, 2010). They found that relevant information content is an important factor to motivate users and visitors to use e-travel sites. Based on the previous literature review, this research proposes the following hypothesis:

- H1. Relevant information content will have a positive effect on perceived ease of use of an e-travel site.
- H2. Relevant information content will have a positive effect on perceived usefulness of an e-travel site

Information quality

Kuan, Bock and Vathanophasx (2008) defined information quality as the degree to which the user believes that the information in the website possesses the attributes of content, accuracy, format and timeliness. Furthermore, many researchers such as Wixom and Todd (2005); and DeLone and McLean (2003), defined information quality as the reliability, currency, relevancy, completeness and accuracy of information on a system / web site facilitating customers' decision-making. They claimed that quality measures are important constructs related to the success of an information system. Moreover, Palmer (2002) found that website with high information quality is more likely to become successful website. With the same line, many researchers have been studied the influence of information quality on the customer' behavioural intentions in the hospitality and tourism context, they found the information quality is a critical and important indicator for predicting such intentions (Shchiglik and Barnes, 2004; Ho and Lee, 2007; Lin, 2010; Kuan et al, 2008). Wixom et al, (2005) further posited that information quality has been and will remain a significant factor affecting users' information satisfaction and users' beliefs towards the systems, which in turn affect behavioural intention to use a certain systems. Based on the literature review, this research proposes the following hypotheses:

- H3. Information quality will have a positive effect on perceived ease

of use of an e-travel site.

H4. Information quality will have a positive effect on perceived usefulness of an e-travel site.

Functionality needs service

Based on Lin (2010), functionality needs service can be defined as the e-travel site's ability to provide specific activities when users go online. The service can be a transaction in which users buy and sell products or services such as a sufficient product and purchasing online. With the flourishing of the Internet many tourism organizations including airlines, hotels, and travel agencies have created websites incorporating internet technologies to market and sell their products on-line (Buhalis and Law, 2008). Thus, such this service can support information gathering and seeking for facilitating and making a correct choice as well as providing personalized communication and services such as a search engine or a mechanism for interaction (Lin, 2010). Moreover, the results of Ho and Lee (2007), found that web site functionality has strong predictive capability for online customer satisfaction and loyalty intention toward the e-travel site. Similarly, Lin (2010) point out that there is a positive relationship between functionality needs service and both of perceived usefulness and perceived ease of use of an e-travel site. Therefore, according to the literature review, this research proposes the following hypotheses:

H5. Functional needs service will have a positive effect on the perceived ease of use of an e-travel site.

H6. Functional needs service will have a positive effect on the perceived usefulness of an e-travel site.

Perceived ease of use and perceived usefulness

With regard to the TAM model, Davis (1989) stated that there are numerous variables, which effect users to either accept or reject a new technology. However, among those variables, there is a

consensus between the researchers that there are two factors, which are important and critical for determining the behaviour intention. First, perceived usefulness (PU) which defined, as “the degree to which a person believes that using a particular system would enhance his/her job performance”. Second, 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). Based on the TAM proposition indicates that behaviour is established by the intention to perform the behaviour. Intention itself is determined by the attitude towards the behaviour which determined by two antecedent beliefs (PU) and (PEOU). Davis, Bogazzi and Warshaw (1992), considered perceived usefulness as a motivation to engage with use of information system, whereas perceived ease of use was regarded as an antecedent of perceived usefulness. They viewed the perceived usefulness as an extrinsic motivation of use system, which concerned with performance as a result of using.

Generally, several researchers have verified the causal relationships among perceived usefulness, perceived ease of use, attitude, and behavioural intention in different fields (Wixom and Todd, 2005; Adams et al., 1992; Lu et al., 2009; Al Sukkar et al., 2005; Hendrickson et al., 1993; Seneler et al., 2010; Venkatesh et al., 2003; Kim and Qu, 2014; Kim et al., 2008). The results of these researches all reinforced the assumptions proposed by TAM: that is, behavioural intentions would be determined by perceived usefulness and, while attitude would be determined by both perceived ease of use and perceived usefulness, and perceived usefulness would be determined by perceived ease of use. Similarly, in the e-travel sites contexts, if users consider that the web site is useful then they are more likely to accept it. Additionally, if the web site is easy to use; it is more likely to be accepted by the potential users. Therefore, in accordance with the TAM, the researchers will test the relationships among these variables:

- H7. Perceived ease of use will have a positive effect on perceived usefulness.
- H8. Perceived usefulness is positively related to attitude toward using e-travel sites.
- H9. Perceived ease of use is positively related to attitude toward using e-travel sites.
- H10. Perceived usefulness will have a positive effect on the behavioural intention to Use e-travel sites.

Attitude and behaviour intention

Ajzen (1991) defined an attitude toward behaviour as a positive or negative evaluation of performing that behaviour. Attitudes are predisposition to respond favourably or unfavourably to an object, person, event, institution, or another discriminable aspect of the individual's world (Ajzen, 1991). In fact, previous studies in the online consumer behaviour have been included attitude towards a website as a significant determinant to the behavioural intentions to use the web sites (Bruner and Kumar, 2000, 2002; Castaneda, Frias and Rodriguez, 2009). Consequently, Bruner and Kumar (2002) defined attitude in the website context as "a person's predisposition to respond in a consistent manner to a given website". In addition, many scholars have introduced evidence of the significant and positive effect of attitude towards the internet on the tourist's intention of future internet use (Castaneda, Frias and Rodriguez, 2009). Hence, this research will test the relationship between a user's attitude and his/her intention toward the e-travel sites.

- H11. Attitude toward using e-travel sites is positively related to behavioural intentions toward using e-travel sites.

Perceived Risk

Cunningham (1967) defined perceived risk as a consumer's perceptions of the uncertainty and adverse consequences associated with buying a product / service. He stated that perceived risk increases with uncertainty and/or the magnitude of the associated negative consequence

(cited in Cunningham, Gerlach and Harper, 2005). In others words, due to the consumers' uncertainty and potentially unfavourable consequences because of their purchases/ usage, they perceive risk. Therefore, when consumers' perception of risk for buying a product is high, their likelihood of purchasing that product will be low (Lim, 2003).

With the booming of using IT/IS, it has been clear that TAM has to extend by adding the perceived risk (PR) construct to avoid its lack of not considering the task environment. Therefore, perceived risk (PR) could be defined as the perceived possibility of exposure to adverse consequences in the persuasion of desired outcomes which, in turn, result in psychological, social, time, privacy, financial and performance losses (Cunningham et al., 2005, cited in Celik, 2008). Currently, a number of Studies advocated that perceived risk is a vital factor for consumers' acceptance of a technology. Studies have focused on the relationship between perceived risk and electronic commerce (Pavlou, 2003; Lim, 2003), online applications (Lu, Hsu and Hsu, 2005) internet banking (Kim &Prabhakar, 2000; Celik, 2008), online shopping (Bhatnagar, Misra&Rao, 2000; Mohammed, 2014).

Some studies studied perceived risk (PR) as a multi-dimensional constructs which consists of abundant types of risk, including financial risk, physical risk, functional risk, social risk and time-loss risk (Lu, et al., 2005), while many studies treated with the perceived risk (PR) as a unidimensional construct in general (Pavlou, 2003; Lim, 2003; Mohammed, 2014; Kim and Prabhakar, 2000; Celik, 2008; Lee, 2013). Moreover, main stream studies presents a valuable evidences that PR negatively affects the users' attitude and behaviour intentions towards using an information technology systems or the internet (Mohammed, 2013; Lim, 2003; Lu, et al., 2005; Pavlou, 2003; Lee, 2013). Furthermore, others studies shown that perceived risk has a negative affect on TAM's criterion variables (Lu et al., 2005; Celik,

2008; Yiu, Grant and Edgar, 2007)

H12. Perceived risk will have a negative effect on perceived usefulness of e-travel sites

H13. Perceived risk will have a negative effect on perceived ease of use of e-travel sites.

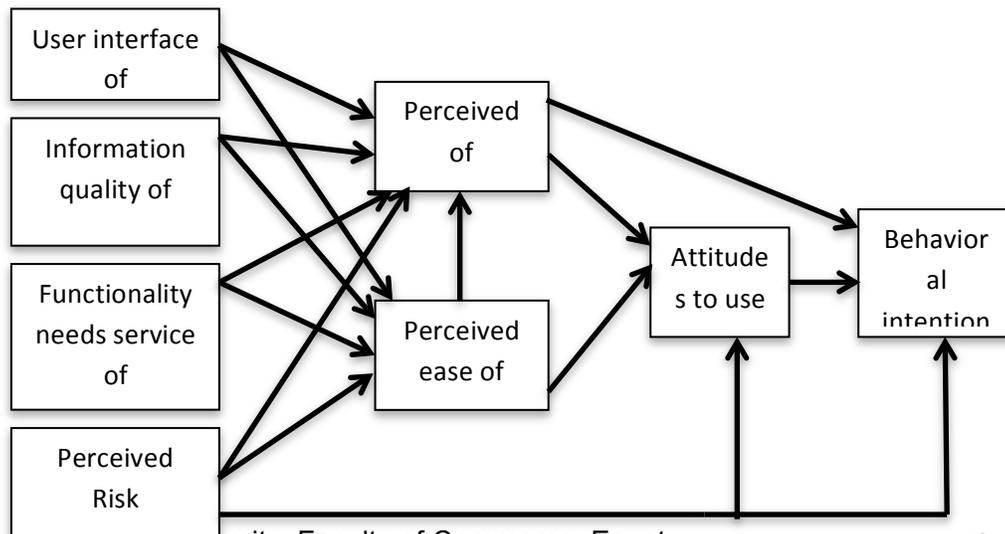
H14. Perceived risk is negatively related to attitude toward using e-travel sites.

H15. Perceived risk will have a negative effect on the behavioural intention to use e-travel sites.

Thus, the study proposes the following model for analysis that is depicted in figure (2). The model presents the original TAM constructs and postulated relationships, which hypothesized that four external variables- relevant information content, information quality, functionality and perceived risk of e-travel sites influence perceptions of usefulness and ease of use, that in turn affect behavioural intention to use the site. Hence, the study suggests the following hypothesis:

H16. Relevant information, information quality, functional needs service, perceived ease of use, perceived usefulness; attitude and perceived risk are predictors for the behavioural intention

Figure (2)



Research Methodology

Data Collection Method

The primary objective of this study was to examine the factors that determine the behavioural intention of E-travel sites in Egypt. The antecedents derived from the technology acceptance model (TAM) constructs PU, PEOU and BI of travel web sites. Thus, the questionnaire design can be grouped into two major categories: external variables, which affect user acceptance and behavioural intention to use a travel web site, and variables of the TAM constructs. Accordingly the questionnaire design can be grouped into different categories: perceived usefulness, perceived ease of use, perceived risk, relevance of information content, information quality, functionality needs service which affect user's attitude and behavioural intention to use a travel web site.

The self-administered questionnaire was developed and pre-tested and validated with the co-operation of several academicians familiar with research methods, as well as four practitioners. The practitioners represented travel agency managers or senior staff with first-hand knowledge of the travel web site operation of their companies. Based on the literature review, six different statements were developed to measure PEOU, four to measure PU, seven to measure BI, six to measure the RIC, two to measure the IQ, five to measure the FNS, seven to measure the PR and five to measure the attitude. A pilot study of 20 travel web site users comprised the survey items listed in Table 1 to verify the wording, ease in responding and applicability of statements. This study made some modifications to the

wording of statements as a result of the pre-test.

Table 1: Survey items used in the study

Construct	Item	Measure
Behavioural intention to use BI)	BI 01	I like to use e-travel sites
	BI 02	I like to visit or purchase at e-travel sites
	BI 03	I intend to use e –travel sites more frequently in the near future
	BI 04	I like to collect information at e-travel sites
	BI 05	I will suggest e-travel sites to friends
	BI 06	Assuming I have access to the system, I intend to use it
	BI 07	Given that I have access to the system, I predict that I would use it
Perceived usefulness (PU)	PU 08	E-travel sites are useful
	PU 09	E- travel sites enhance efficiency of tour searching
	PU 10	E- travel sites enhance performance of travel purchases
	PU11	E- travel sites make better travel decisions
Perceived ease of use (PEOU)	PEOU 12	Learning to use E-travel sites is easy
	PEOU 13	E- travel sites are clear and understandable
	PEOU 14	Tasks can be performed in a and straightforward manner
	PEOU 15	E- travel sites are flexible
	PEOU 16	When using e-travel sites it is easy to become skilful

	PEOU 17	It is easy to interact with e-travel sites
Relevance of information content(RIC)	RIC 18	E- travel sites are good visual information such as photographs, maps, etc.
	RIC 19	E- travel sites include comprehensive coverage (sufficient amount of information provided)
	RIC 20	E- travel sites include Information about tours offered for sale
	RIC 21	E- travel sites include Customer/agent membership information
	RIC 22	E- travel sites are ease in collecting specific information
	RIC 23	E- travel sites include information about different tourist destinations
Information quality(IQ)	IQ 24	E- travel sites include new/current information
	IQ 25	E- travel sites include correct/reliable information
Functionality needs service(FNS)	FNS 26	E- travel sites include good mechanism for interaction (e.g. contact information)
	FNS 27	E- travel sites include hyperlinks to relevant web sites
	FNS 28	E- travel sites include surveys to collect information on different issues
	FNS 29	E- travel sites include travel schedule/plans
	FNS 30	E- travel sites include easy online select/purchase
Attitude (A)	A 31	I think e-travel sites in Egypt is good

	A 32	I think e-travel sites in Egypt is favourable for me
	A 33	I think e-travel sites is something positive to be used
	A 34	I think e-travel sites are beneficial
	A 35	I think e-travel sites is something wise to be used
Perceived Risk (PR)	PR 36	Using e-travel sites infringes on my privacy via e-travel sites
	PR 37	I am unsure if e-travel sites performs satisfactorily
	PR 38	I would feel secure providing personal information
	PR 39	I am not worried that information I provide over e-travel sites could be used by other people
	PR 40	Using e-travel sites to collect information about different destinations and offers make me personally uncomfortable.
	PR 41	I do not know how to use the e-travel sites
	PR 42	My friends would not strongly support using the e-travel sites

Then according to the feedback, a revised version of the research instrument was designed and distributed to the customers through the internet using the convenience sample method. Preliminary power analyses indicated that the minimum number of responses needed to ensure significant effect sizes was 300. Hence, our sample size determined by Statistical Power Test was deemed sufficient. The G-power Statistical Package was used with the following specification

[($\alpha=0.05$, $\beta=0.05$. POWER (1-B) =0.95, effect size=moderate (0.30)]. Therefore, based on the analysis, 330 were considered to be suitable sample size.

Analysis and findings

The data collected in the survey were analysed and compared using SPSS. Descriptive statistics was used to analyse the sample's basic information. Then the reliability of the multi-dimensional constructs used was verified. Finally, the Simple Regression and Multiple Regression analysis were adopted to test the hypotheses.

The results of the study are presented in three parts as follows: firstly, sample characteristics are highlighted, secondly, reliability analysis is determined, and finally hypotheses testing are emphasized.

Sample characteristics

The total number of respondents was 330 and the demographics are shown in Table (2). A 53.9 % of the respondents were males and 45.26 % of the respondents were females. Around 24.8% were in the age group 35-39, 21.2% in the age group 30-34, about 22.4 % in the age group 25-29 and 15.8% in the age group 20-24. Approximately 57 % of the sample was postgraduate and, another 40.9 % was graduate, a further 0.9% undergraduate and 1.2% high school. Around 37% was single, 32.4% was married and 30.3 % was married with kids. Also almost 32.7% of the sample has monthly income over 5000 L.E.

Table (2) Respondents' Profile

	Frequency n 330	Valid Percent %
Gender		
Male	178	53.9
Female	149	45.2
Age		
20-24	52	15.8
25-29	74	22.4
30-34	70	21.2
35-39	82	24.8
40-45	39	11.8
50-59	12	3.6
Over 60	1	0.3
Education		
High School	4	1.2
Under-graduate	3	0.9
Graduate	135	40.9
Post-Graduate	188	57
Monthly income		
Less than 200	11	3.3
From 1201 to 1800	47	14.2
From 1801 to 2400	42	12.7
From 2401 to 3000	57	17.3
From 3001 to 4000	45	13.6
From 4001 to 5000	20	6.1
Over 5000	108	32.7
Status		
Single	122	37.0

Married	107	32.4
Married with kids	99	30.3

Reliability analysis

To ensure internal consistency, researchers computed Cronbach's Alpha. Cronbach's Alpha is used to measure how well a set of variables used in an instrument can measure a one-dimensional construct through coefficient reliability. This test is commonly used to measure the degree of consistency of various facets in the same dimension. The questionnaire includes a variety of dimensions, and a higher reliability coefficient represents a higher correlation of respective dimensions, which illustrates higher internal consistency. The multi-dimensional construct namely behavioural intention scored (0.915), perceived usefulness scored (0.809), perceived ease of use (0.641), relevant information (0.570), information quality (0.709), the functional needs service (0.926), the attitude (0.879), and perceived risk (0.969). Thus, the test items are reliable in terms of internal consistency.

Regression Analysis

Simple regression and multiple regression analysis have been used to examine the research hypotheses.

Table (3) highlights the results of the regression analysis of the relationship between relevant information; information quality and functional needs service as independent variables with perceived ease of use as the dependant variable. The three independent variables have significant relationship with perceived ease of use.

The results are significant at $p \leq 0.05$ or lower. Also, the resulting measurement is considered a good fit according to its R^2 value; where the independent variables relevant information, information quality and functional needs service that entered the model explain almost 36%, 24% and 28% respectively of the dependent variable. Consequently, consistent with the research

hypothesis in H1, H3 and H5 the results (Table 3) show that RI, IQ, FNS were significantly associated with PU.

Table (3) Regression Analysis of Relevant Information, Information Quality, Functional Needs Service and Perceived Ease of Use for E- Travel Sites

Dependent variable (y)	Independent variable/s (x)	R	R ²	β	t- value	F
Perceived ease of use	Relevant information	.605***	.366	.635	13.775***	189.755***
	Information quality	.496***	.246	1.038	10.333***	106.761***
	Functional needs service	.534***	.283	.454	11.437***	130.802***

Notes: ** significant at 5% level of significance; ***significant at 1% level of significance

Table (4) emphasizes the results of the regression analysis of the relationship between relevant information, information quality and functional needs service with perceived usefulness. The three independent variables have significant relationship with perceived usefulness.

Generally speaking, the model is significant at $p \leq 0.05$ or lower. Also, the resulting measurement is considered a good fit according to its R² value; where the independent variables relevant information, information quality and functional needs service that entered the model explain almost 19%, 29% and 32% respectively of the dependent variable.

Further examination of t-values reveals that the three variables entered are linearly associated and moderately correlated with perceived usefulness. Thus, H2, H4 and H6 are supported.

Table (4) Regression Analysis of Relevant Information, Information Quality, Functional Needs Service and Perceived Usefulness for E- Travel Sites

Dependent variable (y)	Independent variable/s (x)	R	R ²	β	t- value	F
Perceived usefulness	Relevant information	.442***	.196	.443	8.932***	.79.773***
	Information quality	.544***	.296	1.088	11.749***	.138.038***
	Functional needs service	.570***	.325	.463	12.578***	.158.210***
Notes: ** significant at 5% level of significance; ***significant at 1% level of significance						

Another aim of the current study is to investigate the relationship between the perceived ease of use and perceived usefulness (H7). Table (5) displays the result of the above-mentioned relationship. The model is significant at $p \leq 0.05$ or lower. Perceived ease of use R² value is 31. 8%emphasize linear association and correlation between perceived ease of use and perceived usefulness. Consistent with the research hypothesis in H7, the results (Table 5) revealed that. Perceived ease of use is significantly correlated to perceived usefulness.

Table (5) Regression Analysis of Perceived Ease of Use and Perceived Usefulness

Dependent variable (y)	Independent variable/s (x)	R	R ²	β	t- value	F
Perceived ease of use	Perceived usefulness	.564***	.318	.538	12.357***	152.694***
Notes: ** significant at 5% level of significance; ***significant at 1% level of significance						

Another objective of this research is to investigate the relationship between perceived usefulness and behavioural intention to use e- travel. The results indicate that 58.8% % of the variance in the dependent variable namely behavioural intention is explained by the perceived usefulness as shown in (Table 6). Though, the variable is positively and significantly associated with the dependent variable indicating that H10 is supported.

Table (6) Regression Analysis of the Relationship of Perceived Usefulness and Behavioural Intention

Dependent variable (y)	Independent variable/s (x)	R	R ²	β	t- value	F
Behavioural intention	Perceived usefulness	.767***	.588	1.464	21.655***	468.958***

Notes: * * significant at 5% level of significance; * * *significant at 1% level of Significance

The study explored the relationship between perceived usefulness, perceived ease of use and attitude. The results are significant at $p \leq 0.05$ or lower. Also, the resulting measurement is considered a good fit according to its R² value; where the independent variables perceived ease of use and perceived usefulness that entered explain almost 30.2%, 26% respectively of the dependent variable named attitude. Consequently, consistent with the research hypothesis in H8, H9 the results (Table 7) show that PEU and PU were significantly associated with attitude.

Table (7) Regression Analysis of the Relationship of Perceived Usefulness, Perceived Ease of Use and Attitude

Dependent variable (y)	Independent variable/s (x)	R	R ²	β	t- value	F
Attitude	Perceived ease of use	.550***	.302	.639	11.894***	141.470***
	Perceived usefulness	.600***	.360	.731	13.560***	183.867***

Notes: * * significant at 5% level of significance; * * *significant at 1% level of significance

The study also examined the relationship between attitude toward using e-travel sites and behavioural intention. The result is significant at $p \leq 0.05$ or lower. Also, the resulting measurement is considered a good fit according to its R² value; where the independent variable attitude explains 36.1% of the dependent variable named the behavioural intention. Consequently, consistent with the research hypothesis in H11, the results (Table 8) show that attitude and

behavioural intention were significantly associated.

Table (8) Regression Analysis of the Relationship of Behavioural Intention and Attitude

Dependent variable (y)	Independent variable/s (x)	R	R ²	β	t- value	F
Behavioural intention	Attitude	.601***	.361	.941	13.589***	184.667***

Notes: * * significant at 5% level of significance; * * *significant at 1% level of significance

Finally, the study investigated the relation between perceived risk and perceived ease of use, perceived usefulness, behavioural intention and attitude. The results are significant at $p \leq 0.05$ or lower. Also, the resulting measurement is considered a good fit according to its R² value; where the independent variable perceived risk explains 31.7% of perceived usefulness, 28.3% of the perceived ease of use, 42.3% of the behavioural intention and 65% of the attitude toward using e-travel sites. Consequently, consistent with the research hypothesis in H12, H13, H14, and H15, the results in (Table 9) show that the variables were significantly associated.

Table (9) Regression Analysis of the Relationship of Perceived risk, Perceived usefulness, Perceived Ease of Use, Behavioural Intention and Attitude

Dependent variable (y)	Independent variable/s (x)	R	R ²	β	t- value	F
Perceived usefulness	Perceived Risk	.563***	.317	.295	12.342***	152.316***
Perceived ease of use		.532***	.283	.291	11.368***	129.227***
Behavioural intention		.650***	.423	.649	15.503***	240.347***
Attitude		.806***	.650	.514	24.623***	606.305***

Notes: * * significant at 5% level of significance; * * *significant at 1% level of significance

A multiple regression analysis was used to identify which variables made significant contributions to predicting the behavioural intention to use e-travel sites.

Table 10 presents the results of the multiple regression analysis that examines the relationship between the independent variables namely; relevant information, information quality, functional needs service, perceived ease of use, perceived usefulness, attitude, perceived risk and the behavioural intention.

Table (10) Multiple Regression Analysis of the External Variables and Variables of the (TAM) on Behavioural Intention to Use E-Travel Sites

Dependent variable (y)	Independent variable/s (x)	R	R ²	β	t- value	F
Behavioural intention	Perceived usefulness	.769***	.592	.574	474.420***	152.316***
	Perceived risk	.812***	.660	.256	316.369***	129.227***
	Relevant information	.817***	.668	.115	218.198***	240.347***
Notes: ** significant at 5% level of significance; *** significant at 1% level of significance						

The Multiple regression analysis has revealed that among all constructs, perceived usefulness has the strongest influence on behavioural intention followed by the perceived risk and relevant information respectively. The value of Beta, which is the standardized regression coefficient, of the three above mentioned significantly affecting factors is (.574) for the perceived usefulness and (.256), (.115) for perceived risk and relevant information respectively. This indicates that perceived usefulness was a much stronger predictor compared to perceived risk and relevant information. This is consistent with others research's results such as David, (1989). Thus far, the influencing factors on the behavioural intention of e-travel sites have been identified and explored. Consequently, the results in (Table 10) show that H16 was supported.

Research Conclusions

Searching and using information is a central activity performed

by tourists, which can greatly affect the way they experience the destination. Similar to other areas of the tourism and travel industries, technological developments are redesigning the way destinations interact with tourists. (Peres et al., 2011)

The findings of this study are essential from the point that it is examining the influence of external factors and the constructs of (TAM) on the behavioural intention of e-travel sites in Egypt. Thus the study explored external variables that influence perceived usefulness and perceived ease of using e-travel sites in Egypt. Studying the influence of external variables on the constructs not only contributes to theoretical development but also helps in designing appropriate features, such as site functionality and information content and quality that might lead to improved acceptance by users. This is particularly true in a site-implementation environment.

The findings of the study, is consistent with (Lin, 2010) indicating that perceived ease of use was positively affected by relevant information content, information quality and functionality needs service. Moreover perceived usefulness was positively affected by relevant information content, and information quality and functionality needs service. However the relationship between perceived usefulness and functionality needs services was not supported in the study of (Lin, 2010). Furthermore the study indicated that relevant information is one of the predictors of behavioural intention to use e-travel sites. These findings imply that travel web sites offering a wide variety of relevant information content may be at an advantage in relation to the user expectations. Therefore travel web sites should contain diverse and complete relevant information.

These findings also entail that travel web sites offering a wide variety of current and reliable information may be at an advantage. Thus to meet users' expectations regarding quality and travel, organizations should offer and select the newest and most consistent information for their web sites. Also implies that a travel site possessing an appropriate functionality service is associated with

greater perceived ease of use. The functionality needs service allows visitors to do something, such as searching for information on the World Wide Web using quick and easy hyperlinks to relevant web sites. Thus the web site design of product and tourism search engines should allow visitors to further explore topics of interest. (Lin, 2010)

Moreover the results of the relation between perceived usefulness and functionality needs service indicates that functionality needs service providing useful value lead to another advantage in travel web site use.

Davis's study shows that users are driven to adopt a technology primarily because of the functions it provides them, and secondarily because of the easiness of benefiting from those functions. Customers are often willing to overlook some difficulties of usage if the service provides critically needed functions: no amount of ease of use can compensate for a system that does not perform a useful function (Davis, 1989). This is consistent with the results of the study that perceived usefulness have a positive effect on the behavioural intention to use e-travel sites. Also consistent with the results of (Peres et al., 2011), (Castaneda et al., 2009) and (Fusilier et al., 2005) that perceived usefulness was related to intention. In other words, users intend to use the system more frequently as the system becomes easy to use and useful.

The findings of this study pointed that perceived usefulness has the strongest influence on the behavioural intention these findings are supported by Davis's (1989) (Lin, 2010) and (Lin and Chang, 2011) findings that perceived usefulness has a stronger influence on usage than does ease of use. Also it was consistent with (Celik, 2011) and (Seneler et al., 2010) that PU appeared to be the strongest determinant of Turkish customers' online purchase intentions relative to perceived ease of use. Thus a useful site allows visitors to form more positive behavioural intention to use the site.

Following the findings of (Davis, 1989), (Seneler et al. 2010), (Lin, 2010), (Castaneda et al., 2009) and (Calisir et al., 2009)

concerning the existence of the relationship between ease of use and usefulness, the study revealed the positive relation between perceived of ease and perceived usefulness.

The study also concluded that is a strong positive relationship between PU and attitude toward using e-travel sites consistent with the results of (Calisir et al. 2009), (Peres et al., 2011), (Castaneda et al., 2009) and (Seneler et al., 2010) suggesting that the greater the level of perceived usefulness, the more positive was the attitude towards using e-travel sites. The study results revealed a positive relation between PEOU and attitude matching the results of (Seneler et al., 2010) and (Castaneda et al., 2009) indicating that the antecedents of attitude are usefulness and ease of use. Also (Lin and Chang, 2011) and (Lu et al., 2005) showed that perceived usefulness and ease of use are both positively associated with attitude. This finding suggests that the more an individual perceives e-travel sites as useful and easy to use, the more favourable his/her attitude is toward using e-travel sites.

According to our findings, consistent with prior findings (Seneler et al., 2010) (Lu et al., 2005), (Castaneda et al., 2009) and (Lin and Chang, 2011) attitude towards using the system can strongly affect user intention as concluded in the study that there is a strong positive relationship between attitude toward using e-travel sites and behavioural intention. Notably, the findings of this study indicate that the perceived risk plays the key factor in influencing the determinants of adoption of e-travel sites; which is similar with the study of (Lu et al., 2005), the perceived risk affected negatively perceived usefulness, perceived ease of use, attitude and behavioural intention to use e-travel sites. Nevertheless, consumers seem cautious of using the internet for using online applications such as credit card and e-payment systems. The weak security of the internet is such that we suggest that future research should address risk factors associated with the use of e-travel sites.

Finally the study results indicated that behavioural intentions could be raised through attitude similar to the study of (Peres et al., 2011) that indicated the positive relation between attitude and behavioural intention

to use e-travel sites. We suggest that the TAM in the context of e-travel sites should be redefined, to take account of our findings, and to include perceived risk, relevant information, information quality, functionality needs service and attitude in order to put a greater emphasis on the external factors that affect technology acceptance.

The findings of this study contribute to enhancing our understanding of how tourists evaluate e-travel sites and the factors affecting their decisions to use it. Eventually, developing high-quality e-travel sites will not only improve the tourist's knowledge and experience of the destination, but also enhance its innovative and creative image among potential and actual tourists.

We consider the results of this study and their suggestions represent a positive contribution to the existing literature on the subject, mainly with regard to knowledge of the tourism and travel industry in Egypt and the factors motivating tourists to use e-travel sites.

Managerial implications

Rapid changes in technology and strong competition from within the tourism and travel industry are forcing travel agencies to increase their understanding of consumers' expectations, needs and wants, which in turn lead to developing a well-designed travel web site. Yet the attributes that affect customers' perception leading to acceptance of e-travel sites are still unclear. (Lin, 2010) Evidence that the internet can provide plenty of services opportunities has generated both a challenge and an opportunity for travel agencies. Such organizations have hurried to set up web sites to benefit from this communication channel and to explore customer potential in the marketplace.

The TAM has been widely used by researchers and practitioners for explaining and predicting usage intentions and acceptance behaviour toward information technologies. This study focused on the factors affecting the behavioural intention of e-travel sites in Egypt. The results of this study have a number of implications for organizations having e-travel sites. First, increased usefulness and

ease of use will have a positive influence on customers' attitudes, which in turn affect intentions to use e-travel sites. Consequently, organizations should pay attention to simple and practical functions while also increasing useful key features that are frequently required.

Second the importance of creating relevant and reliable information accompanied by other services that could be performed by the users.

Finally organizations have to ensure the safety and security to decrease the perceived risk of users.

Limitations and Future Research

Although the findings herein have meaningful implications for the adoption of e-travel sites, this study is limited in different ways.

First, the research did not analyse the role of consumers' technology readiness (TR) plays in technology adoption (Lin and Chang, 2011)

Second limitation is that we should survey the possible influence caused by demographic factors (such as education and age) and culture differences.

Another possible limitation is that the sample might have a self-selection bias caused by the common weakness of online surveys in the collection of representative samples as specific groups in the populations are under-represented because they have less access to Internet. As with many online studies, the use of a non-random convenience sample greatly increased the likelihood of the respondents with certain characteristics participating in the survey. Future research should explore such issues and generalize this model's applicability in different research fields and among other groups would further validate both the findings and research model. Lastly, future research should measure actual usage behaviour instead of intention.

Thus, from an academic viewpoint the results of this study are consistent with the general technology acceptance model and

contribute to the travel web site evaluation literature. From a practitioner's viewpoint, the proposed model can provide the tourism industry with a theoretical model and professionals with information for building well-constructed e-travel sites from the consumer's perspective. However, the results still provide insights into predicting behavioural intentions to use e-travel sites and provide venues to encourage tourism in Egypt.

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