The relationship between culture and e-business website acceptance (a comparative study of Arab and UK cultures)

Khushman, Sa'ad Ali

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THE RELATIONSHIP BETWEEN CULTURE AND E-BUSINESS WEBSITE ACCEPTANCE
(A COMPARATIVE STUDY OF ARAB AND UK CULTURES)

by

Sa'ad Ali Khushman

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This work is dedicated,
with deepest grateful and everlasting respect,
to Dr. Alison Todman
without her support and encouragement
I could not have reached this stage.
Saad Khushman

DEDICATED TO THE MEMORY OF

MY FATHER (ALI KHUSHMAN)
&
MY BROTHER (AMER KHUSHMAN)

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ABSTRACT

Previous research into website and e-business acceptance and usage has not been completely successful in establishing how this links with factors related to culture. Furthermore, most new technologies have originated within a developed cultural context—namely the United States and Western Europe. Consequently, when new technology transfers to different cultural settings we can predict some sort of cultural gap because of their technology acceptance modes. Most studies have focused on technology transfer into the developed countries with an *a priori* assumption about the fit of that technology without taking into consideration cultural values that would make impact its ultimate uptake and acceptance. Few of these studies have tried to investigate how Arab cultural values could influence general acceptance and use of e-business websites.

The aim of this study is to explain the influence of culture on a user's acceptance behaviour and to develop a new website acceptance model that includes cultural variables. The researcher reviewed the existing literature related to culture, technology acceptance theories, Human Computer Interaction (HCI) and e-business. A Culturally-Sensitive Technology Acceptance Model (CTAM) was devised and a pilot study conducted to test the cultural variables considered relevant. Along with *Perceived Usefulness, Perceived Ease of Use*, *Cultural Variables* and *Website Quality*, these variables affect user *Intention to Use* e-business websites.

The research combines both qualitative and quantitative methods to reflect the nature of the research problem and to determine whether any relationships between variables can be identified to determine behavioural patterns. A random sample consisting of 623 respondents was drawn from Arab and UK tourists visiting Jordanian tourist sites. A survey questionnaire and semi-structured interview were employed to obtain data from the selected sample. Questions contained in the questionnaire were derived from existing literature and were piloted to enhance its reliability and validity.

Statistical methods were used to analyse the data in three main phases. The first phase aimed to establish that there were differences between the Arab and UK samples in terms

of e-business website acceptance. This was found to be the case. The second phase aimed to establish that these differences were directly related to culture. Again, the results confirmed that there was a significant relationship between cultural variables and e-business website acceptance. In the third phase, a multiple regression analysis was applied to find the relationship between the independent variables (*Website Quality, Cultural Variables, Perceived Usefulness* and *Perceived Ease of Use*) and the dependent variable (*Intension to Use*). The results show that some of the cultural variables are not significant for either sample. Within the Arab sample, *Trust, Tangibility, Power Distance, Uncertainty Avoidance* and *Individualism* were found to be significant but *Subjective Norms* and *Masculinity* were not. For the UK sample *Trust, Power Distance* and *Individualism* were significant but *Tangibility, Subjective Norms, Masculinity* and *Uncertainty Avoidance* were not.

Hence, the results show that cultural variables have a significant impact on user acceptance of e-business websites and Davies' 1989 original and general Technology Acceptance Model (TAM) was found to be moderately applicable in an Arab milieu.

However, not only do the Arab and UK groups have different preferences in website quality (such as website design, content, etc), but there are also differences in the acceptance process. For the UK, acceptance is routed through design preferences, usefulness and attitude of satisfaction. However, for the Arabs, it seems to be determined by ease of use. The results also indicate that factors such as tangibility and trust are playing an important role in determining website acceptance in Arab countries.

The results are expected to provide useful insights that can help global businesses to enhance and improve technology acceptance across countries within different cultures such as the Arab and UK. This study provides a better understanding of the relationship between cultural values and website acceptance, and should help firms and companies understand the influence of core cultural values on e-business website acceptance and thus to better exploit social and cultural practices in organisational technology dispersal.

This study aims to contribute to the building of a model of cultural sensitivity website acceptance within an e-business context. The study reports on the development of a culturally sensitive website acceptance model and offers recommendations for expanding the adoption of e-business websites. The systematic research model produced by this study can be a useful point of departure for further related work in this area.

LIST OF PUBLICATIONS

1- Conferences

Khushman S. and Todman. A. (2008) The impact of the national culture on website acceptance and usage. *The 8th International Scientific Conference - Change Management and Knowledge Society*. Amman – Jordan. April, 2008.

Khushman .S. Todman. A and Amin.S. (2009) The Relationship between Culture and E-business Acceptance in Arab Countries. *Accepted to appear in the International Conference on "Developments in eSystems Engineering" (DeSE '09)*. IEEE proceeding. 14th - 16th December 2009, Abu Dhabi, UAE.

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2- Journal papers

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Khushman .S. Todman. A and Amin.S. (2009)The relationship between culture and e-business acceptance (A comparative study of Arab and Western cultures). The *International Journal of Business Science and Applied Management*, In submission**.**

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

List of Abbreviations

ANOVA	The Analysis Of Variance
B2B	Business –to-Business
BI	Behaviour Intention
COL L	Collectivism
CRM	Customer Relationship Management
CTAM	Culturally – Sensitive Technology Acceptance Model
CV	Cultural Variables
EFA	Exploratory Factor Analysis
GDP	Gross Domestic Product
HCI	Human-Computer Interaction
ICT	Information and Communication Technology
IN	Intention to Use
IND	Individualism
INFQ	Information Quality
IS	Information Systems
IT	Information Technology
KMO	Kaiser-Meyer-Oklin Value
M	The Mean
MAS	Masculinity
MIS	Management Information Systems
PCA	Principal Component Analysis
PD	Power Distance
PEOU	Perceived Ease Of Use
PU	Perceived Usefulness

SD	Standard Deviation
SEM	Structural Equation Modelling
SN	Subjective Norms
SRQ2	Service Quality and Attractiveness
SYQ	System Quality
TA	Tangibility
TAM	Technology Acceptance Model
TAM2	Extension of Technology Acceptance Model
TPB	Theory of Planned Behaviour
TRA	Theory of Reasoned Action
UA	Uncertainty Avoidance
WOM	Word-of-Mouth
WQ	Website Quality
WWW	World Wide Web

CHAPTER 1

INTRODUCTION

Foreword

From the point of view of my future career and out of personal interest, I am interested in the way the internet is being and not being used in my home region, the Middle East. I am interested in why things as they are and as I feel this come from human and not technical dimensions. I am examining the issue from the perspective of culture. Amongst other things, if we understand culture we should be able to recommend effective business strategies to local businesses, both large and small**.**

1.1 Background

Theoretically, e-customers gain more benefits than traditional customers as they can access products and services 24-hours a day from anywhere in the world. However, so far, in an effective commercial sense, e-business has not been accepted by consumers in the Middle East. I believe and in this study I hope to show that cultures including, national cultures play an important role in user acceptance and usage of e-business websites.

Although, considerable research has been done on Internet acceptance, few studies emphasise factors related to national identity or culture. There are questions regarding the gap between the low penetration rates in many developing countries—especially in the Arab world and the popularity and, by objective standards the usefulness of e-business websites. Thus, there is a need for further research to investigate this phenomenon and to identify the key factors that determine users' acceptance and usage of websites. Specifically the study focuses on; e- business and e-business websites.

The current study aims to devise a new website acceptance model that includes cultural variables and the way in which they relate to all the other variables in the model, with a focus on a user's acceptance behaviour.

The internet model is going to be examined by comparing UK and Arab tourists.
Tourists have been, selected for the following reasons:

- Because the role of "tourist" is likely to be familiar to the reader.
- Because e-commerce offers major benefits to tourists in many different respects and at all stages in the tourist experience
- Because there is a lot of academic material analysing tourists and tourism.
- Because tourism itself has a strong cultural dimension.
- Because, in principle, one would expect the role of tourist, when compared with other roles, to be sufficiently stable across cultures common to all for differences between UK and Arab tourists to be genuine and reliable.

1.2 Overall Aim and Study Objectives

The acceptance of websites is one of the main streams in the field of Information Technology (IT) (Zakour, 2004; Srite, 2006; Merchant, 2007; Jones, and Alony, 2007; Selim, 2007).

Over the years, even though several theories have been developed to address the phenomenon of culture and its effects on technology uptake, no general consensus about its determinants has emerged among researchers in the IS field. Specifically, the Technology Acceptance Model (TAM) (Davis, 1989) is considered to be the most frugal model in explaining IT use at the individual level.

However, since individuals are relatively conditioned by interaction with their culture, it is proposed to extend the TAM model in such a way that we can make useful predictions of culturally-mediated behaviour by both individuals and groups. By examining these

cultural factors, we should be able to explain and predict behaviour and opinions about IT and its relative uptake in various cultures. The researcher has integrated cultural value dimensions within the research model that is well-established in the literature. These cultural value dimensions are: "Individualism/Collectivism", "Power Distance", "Masculinity/Femininity", and "Uncertainty Avoidance" (Hofstede, 1980, 1997). They show a high variability between countries and have been applied to both the practice and the study of comparative and cross-cultural management.

Building a usable and useful website in general terms of style and content will not guarantee user acceptance and usage. Therefore, understanding individual acceptance of Information Technology (IT) and especially usage is an important issue (Davis, 1989; Igbaria, 1990; Zakour, 2004).

As was the case in the early days of the World-Wide Web of the visual internet in developed countries, the phenomenon of low website adoption now frustrates companies in developing countries as it once did in the west. These developing countries are on the receiving end of a new global IT transfer. In addition they and, certainly in terms of the mass of the population, have a relatively short history in the development of what we see as modern technology, such as the telephone technology. Technology and website acceptance is an important issue in Arab countries[1] which are significant importers of western-created information technologies (Al Alak, 2003) and where the role of new technology and IT is regarded as one of the key drivers for sustainable economic growth.

Different factors influence user acceptance and usage. Some of these factors are likely to be culture specific (Brown, *et al* 2005; Merchant, 2007, Jones and Alony, 2007). Understanding how cultural factors influence website acceptance and usage will contribute significantly to the development of more effective e-business websites in the

[1] Arab countries include: Gulf Region, Yemen, Iraq, Syria, Lebanon, Jordan, Egypt, Sudan, Libya, Algeria, Tunisia, Morocco, and Mauritania.

future (Vatanasakdakul and D'Ambra, 2006; Merchant, 2007; Khushman and Todman, 2008).

The main aim of this study is:

To devise a new website acceptance model that includes cultural variables which explain the influence of culture on a user's acceptance behaviour.

The main objectives of the study are to:

1. Establish cultural variables that underlie cross-cultural differences (or similarities) between Arab and UK in the acceptance and usage of e-business websites.
2. Develop and validate a new acceptance model that incorporates cultural variables that will enable to build and validate e-business websites for a global market.

The objectives will be achieved through:

- A study and review of the literature related to culture, and human computer interaction, in the context of e-business, with particular reference to e-business especially website acceptance. In this study, e-business is seen as business to consumer (B2C).
- Assessing the significance of the influence of cultural factors within the hypothesised model.
- Examining the extent to which the Technology Acceptance Model (TAM) developed in the West is applicable in the context of the Arab culture.
- Statistical analysis including descriptive analysis, factor analysis, and multiple regressions.

Research Questions

To achieve the research aim and objectives above, the following questions need to be answered:

1. Are there significant differences between Arab and UK people in terms of acceptance and usage of e-business websites?
2. Are there differences between Arab and UK people in acceptance and usage of e-business website that can usefully be ascribed to "cultural" factors?
3. Are there any significant relationships between cultural factors and e-business website acceptance of Arab people?
4. Are there any significant relationships between cultural factors and e-business website acceptance of UK people?
5. Are there any significant relationships between website quality, cultural factors, PU and PEOU and e-business website acceptance of Arab people?
6. Are there any significant relationships between website quality, cultural factors, PU and PEOU and e-business website acceptance of UK people?

1. 3 Research Problem

Some studies emphasise the role of culture in the process of technology acceptance and the usage of websites (Luna *et al*., 2002; Tsikriktsis, 2002; Singh, *et al*, 2005). These studies confirm that website users from different countries have different cultures, different ways of life, different ways of thinking, and have their own thoughts regarding the way they perceive things. It follows that different users will prefer various website characteristics in terms of navigation, information, security, product information, customer service, shopping tools and other features. But these interactions have never been systematically explored in the context of specific cultures.

Although the usage and acceptance of websites has been a key component of information, and technology studies and culture has been extensively studied in the social disciplines, little has been done to integrate these two areas of study. Additionally, culture's influence on the acceptance and use of technology, in the context of the Arab countries, has not been comprehensively examined.

Studies such as Hall (1976) and Hofstede (1980, 1991) and Trompenaars (1993) revealed that Arab countries differ significantly in cultural values from UK countries[2].

It is essential to consider the differences and uniqueness of a country's specific cultural values in the context of the usage and acceptance of websites. It could be argued that the success of websites in the Arab world depends on their fit with the Arab cultural and religious values that differ from their counterparts in developed countries.

It is a commonplace to say that technology has played a significant role in changing patterns of people's behaviour in many areas of life (Al Alak, 2003; Usluel, *et al*, 2008). For example, the rapid development of IT in respect of tourism has improved e-business services by the use of websites to provide different services such as booking flights and hotels directly as well as providing access to country specific information through e-business website.

Despite these trends and the increase in the number of Internet users, some countries are still reluctant to use and accept websites. Recent studies (Al Sukkar and Hasan, 2005; Alkadi, 2005; Akour, *et al*, 2006) have indicated that Arab people are still reluctant to use and accept websites and they propose a number of economic and cultural reasons.

The effective deployment of websites on global basis requires more understanding of cultural constraints in website acceptance and usage behavior where e-business is involved (Al Sukkar and Hasan, 2005).

Akour *et al* (2006) stated that technology acceptance studies are scant in Arab countries. This creates a need for more studies to investigate the impact on technology acceptance and usage in these regions, including studies in terms of culture and use perceptions.

[2] USA and European countries

Only a few studies have so far considered this problem (Hill, *et al*, 1998; Rose and Straub 1998; Straub, *et al* 2001; Loch, *et al* 2003). Rose and Straub (1998) examined technology transfer in five Arab cultures, (Jordan, Saudi Arabia, Lebanon, Egypt and Sudan). They examined the transfer of new technology to Arab countries using Technology Acceptance Model (TAM) constructs (Davis, 1989, 1992). Perceptions of ease of use and usefulness were posited to influence actual usage. However, in these studies, the focus was on technology transfer and none of the dimensions that I am identifying as "cultural" were included.

Furthermore, most user acceptance studies are substantially based on the USA and other developed countries where the technology has been generated. This study aims to investigate whether models such as TAM can be applied to other countries or cultures or whether there is a need to develop a more sophisticated model that takes into account cultural values. As websites have a global presence and are dispersed beyond country boundaries, user acceptance models face the challenge of maintaining their validity and reliability globally. It is sensible to presume a need for some adaptation of the model to enable this. In addition, it would clearly be desirable if the adapted model had relevance across a broad field of information technology applications.

1. 4 Case study – Description and Rationale

The focus of this research will be on using e-business websites using tourists from Arab countries and UK visiting Jordan as a case study. The rationale behind this interest is as follows:

- There is an increasing global trend toward the use of such websites. Studies show that the tourism sector is one of the major fields of website usage where users frequently look for information and services online. This includes transportation, accommodation, restaurants, and tickets (Arlt, 2006). The number of people using websites for vacation and travel planning increased more than 300% during the period from 2000 - 2005 (Cardoso, 2005).

- Tourism is important to the Jordanian economy, contributing (13.0%, of GDP in 2008). This sector has potential for more development; therefore, any meaningful research in this area will help the industry to enhance its position.
- Despite the increasing number of Arab internet users, studies show that users commonly use the internet for email and chatting, rather than e-business. They rarely use other kinds of websites such as e-business websites (Al Alak, 2003; Wheeler, 2004).

1. 5 Significance of the Research

The results from this study will be beneficial at individual, organisational and the national levels.

1.5.1 Individual Level

E-business websites offer a dynamic experience to customers. They gain more benefits than traditional customers as they can access products and services 24-hours a day from anywhere in the world. Users can therefore carry out their purpose efficiently and effectively, saving time and efforts. In the context of tourism, this makes travel more convenient for tourist customers. In addition, a direct relationship is created between travellers and tourist organisations which, amongst other things, help the users to buy the services and products at any time and location

The findings of this study will help developers create culturally-sensitive websites that enhance a user's individual experience of e-business.

1.5.2 Organisational Level

Websites provide new creative opportunities for all organisations. Companies can use the website as an effective marketing tool that helps to increase their sales and profits and enables them to achieve a range of competitive advantages.
According to Law (2000), e-business websites create new benefits for providers (suppliers), through lower distribution costs, better revenues, and a larger market share

The findings from this research should help companies to plan their strategies to support and motivate customers to use the website more extensively. The Culturally – sensitive Technology Acceptance Model (CTAM) produced by this study aims to be a useful tool for companies to understand the determinants and factors (particularly cultural factors) that influence user behaviour. This will enable them to develop user-centered websites that will attract more customers.

In addition, understanding of cultural influences, such as subjective norms and tangibility on website acceptance, could enable better utilisation of social systems to facilitate website acceptance. E-business website quality can then be modified to improve compatibility with the cultural tendency of the organisations or individuals involved.

1.5.3 National Level

In addition to the individual and organisational benefits of websites in general, this study should have a national impact, as CTAM, by providing culturally-adjusted information explaining website usage, will make it easier to market and promote Jordan and Arab countries as a tourist destination. In addition, there will be diffusion of ICT skills across the board enabling the development of e-business across the whole economy

1.6 Contributions of the Research

This research sets out to make contributions to knowledge as follows:

1. It provides a big picture of neglected aspects of e-business website use in selected Arab countries and the UK.
2. It enhances significantly the global understanding of e-business acceptance through the development of the research model in Arab and UK cultural contexts.
3. To the researcher, it brings valuable knowledge: this study is the first study conducting in e-business environment using real users from the UK and Arab countries.
4. This is the first study performed that deals with the differences between Arab and UK culture in this context as well as website acceptance. This study expands the

understanding of culture to include dimensions such as trust, subjective norms and tangibility.

5. This study provides validation of TAM within Arab countries and across different cultures (UK) and in a different context. There were no previous studies of TAM as they apply to tourists, especially in Arab countries, where tourists play a key role in the economy, making it especially important to explore this population and to understand their intentions with regards to using e-business websites. The results of this study show that Arabs and UK people do not differ overly in their behavioural intentions with regards to e-business website acceptance.
6. This study adds to TAM cultural variables (Hofstede dimensions, trust, subjective norms and tangibility) as well as website quality .This enhances its function in settings including cultures other than that of North America and the West.

1.7 Structure of the Thesis

The thesis is structured around eleven chapters; it starts with introduction gives an overview of the research aim and objectives, research problem, significance of the research, the study contribution and organisation of the thesis.

Chapter 2, 3 and 4 provide a multidisciplinary analytical review of theories and approaches in the research areas where this research is based: technology acceptance theories, culture, HCI. These chapters present a detailed description and critical overview of the theoretical background of this study. They made evident for the shortage of studies on user attitudes towards, and behaviour with, websites in different alternative cultural settings. It was also shown that the research is mainly UK -culture driven and that issues related to users from different cultures that are recently introduced to the websites and internet, such as the Arab culture, are generally neglected.

Chapter 5, *Research Methodology* discusses and justifies the research philosophy and data gathering techniques chosen at various research stages. Important points in the research such as the sampling design and technique, unit of analysis, location, data collection method also discussed in this chapter.

Chapter 6, *Research Model and Hypotheses* includes the proposed theoretical framework. In the light of this framework and literature review, specific hypotheses were posited to investigate the relationship between users' acceptance and use of e-business websites. Chapter 7, presents the *results of interviews*, this chapter starts with discussion of the objective of the interview and its producers then presents the results of semi-structured interviews with tourists (Arab and UK) and interview with academics.

Chapter 8 discusses the *descriptive analysis and factor analysis* include the demographics and descriptive statistics the correlation analysis and factor analysis

Chapter 9 presents *the differences and similarities between Arab and UK tourists in terms of culture and e-business acceptance*, and the levels of cultural variables compared. Means and independent-sample t-tests are used to find the significant differences between Arab and UK tourists.

Chapter 10 provides a discussion of *the relationships between the cultural variables and e-business variables.* To perform the analysis for each group, the total sample was split into two groups (Arabs and UK) and analysed separately for correlation and regression.

Chapter 11 combines *the key findings from the data analysis* and addresses the contribution that this study potentially offers to research and practice in the future. In addition, presents the limitations of the study and suggest future research directions.

CHAPTER 2

Technology Acceptance Theories

2.1 Introduction

This chapter aims to position the study in relation to existing work, and to provide the base for the models and theories that will be used to carry out the study presented in the later chapters of this thesis. This chapter presents an analytical overview of the existing literature in technology acceptance theories.

Several studies have been designed to explain end-user acceptance behaviour (Ma and Lui, 2004; Kimery and Amirkhalkhali, 2008; Lingyun and Dong, 2008; Yuanquan, *et al* 2008). There are three broad approaches to the study of user acceptance of IT:

- User satisfaction,
- Innovation adoption, and
- Social psychology attitude/behaviour perspectives (Gallion, 2000).

More recent studies (Park and Jun. 2003; Rotchan-akitumnuai, 2005; Cho and Agrusa 2006; Rigopoulos and Askounis, 2007; Dehua, *et al* 2008) attempt to integrate these areas. There are three main models, which when combined, are labeled Technology Acceptance Theories (TAT) (Yuen and Ma, 2002; Yousafzai. *et al* 2005). TAT are most widely applied within technology acceptance approaches. In historic order, these theories are as follows:

1. Theory of Reasoned Action (TRA) Fishbein and Ajzen (1975, 1980).
2. Theory of Planned Behaviour (TPB) Ajzen, (1985, 1988).
3. Technology Acceptance Model (TAM) Davis (1989, 1991) (Davis *et al*., 1989).

Recently, TAM has gained the attention of IT and e-commerce researchers as a result of its simplicity and robustness (Venkatesh and Davis 2000; Heijden, *et al*, 2003; Abdelnour-Nocera and Dunckley, 2005; Dubelaar, *et al* 2005; Akour, *et al* 2006; Kimery and Amirkhalkhali, 2008; Lingyun and Dong, 2008; Yuanquan, *et al* 2008). Additionally, these studies have produced useful insights that enable us to better understand users'

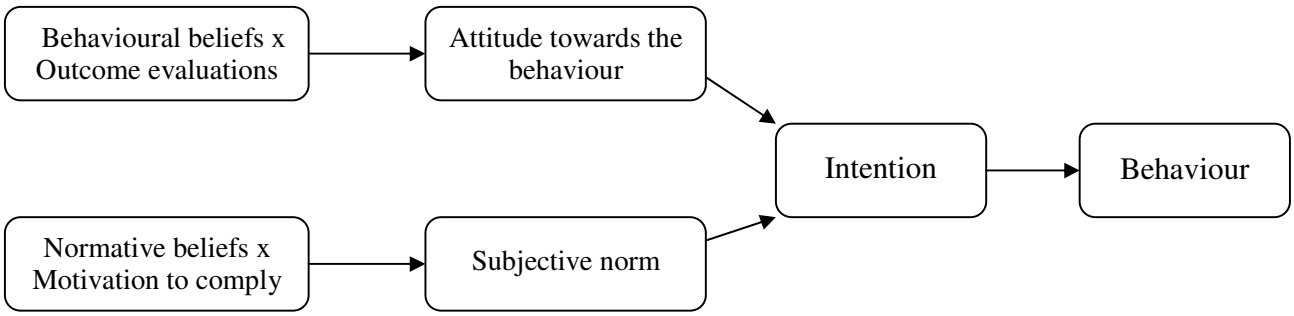
attitudes and intentions towards using websites and the factors that contribute and enhance revisits to a website.

2. 2 Theory of Reasoned Action

The Theory of Reasoned Action (TRA) is based on the assumption that individuals make rational decisions based on the availability of information.

TRA suggests that people are generally rational and will consider the implications of their behaviour and actions "before they decide to engage or not engage in a given behaviour" (Ajzen and Fishbein, 1980. p.5).

Figure 2.1 The Theory of Reasoned Action



As shown in Figure 2.1, behavioural intention is the direct antecedent of an individual's behaviour. TRA postulates that "most behaviours of social relevance are under volitional control and are thus predictable from intention" (Ajzen, and Fishbein, 1980; p.41). The theory also suggests that because many irrelevant factors influence stability of intention, the relationship between individual intention and behaviour is based on two factors namely: 1) the measure of intention has to match to the behavioural standard in action, target, context, and time; 2) intention does not change before the behaviour is observed (Ajzen, and Fishbein, 1980; Yousafzai.*et al*, 2005).

TRA suggests that individuals' performance of a given behaviour is primarily determined by their intention to perform that behaviour (Ajzen, and Fishbein, 1980). According to TRA, individual Behavioural Intention (BI) (e.g., toward an information system) is

predicted by the person's attitude and subjective norm concerning the behaviour (Ajzen, and Fishbein, 1980).

TRA is criticised as a general model because it does not identify the beliefs that are operative for a particular behaviour (Davis, *et al* 1989) which is related to the usage of information technology (Succi and Walter, 1999). Thus, researchers applying TRA should first specify the important beliefs for subjects regarding individual behaviour under investigation.

Moreover, TRA focuses on the prediction more than result of behaviours (Yousafzai.*et al*, 2005). In TRA, behaviour is influenced by behavioural intentions, therefore limiting the predictability of the theory to situations where intention and behaviour are highly correlated. When intention and behaviour is measured simultaneously then it is not a good test of the model's power to predict the future, but rather a test of the model's power to predict current behaviour (Yousafzai. *et al,* 2005). Davies *et al*.(1989) recommend that in order to test TRA, actual behaviour should be measured objectively, and unobtrusively, without indicating in any way its connection to the past intention measurement phase. An additional requirement of the TRA is that behaviour should be under willing control. Consequently, the TRA cannot predict situations in which people have low levels of volitional control (Ajzen, 1991).

2.3 Theory of Planned Behaviour

The Theory of Planned Behaviour (TPB), produced by Ajzen (Ajzen, 1985, 1991), is an extension of the TRA. The core construct of the TPB model consists of *'attitude* toward behaviour' and *'perceived behavioural control'* (Taylor and Todd 1995, and Harrison *et al.* 1997) – see Figure 2.2 below. According to TPB, three considerations guide peoples' action, namely:

1. Behavioural Beliefs (beliefs about the likely consequences of the behaviour and the evaluations of these results).
2. Normative Beliefs (beliefs about the normative expectations of others about the normative expectations of others and motivation to follow these expectations).

3. Control Beliefs (beliefs about the presence of factors that may facilitate or impede performance of the behaviour).

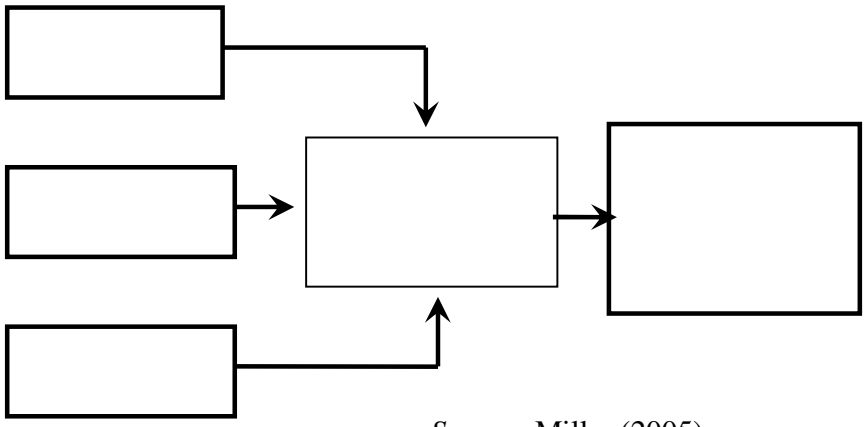
In the original TPB, behavioural beliefs produce a positive or negative attitude toward the behaviour, normative beliefs result in perceived social pressure or a subjective norm, and control beliefs give rise to perceived behavioural control. In combination, attitude toward the behaviour, subjective norm, and perception of behavioural control lead to the formation of a behavioural intention.

TPB was criticised by other studies for its inaccuracy in predicting behavioural intentions. Similar to TRA, TPB assumes proximity between intention and behaviour; hence, the accurate situational correspondence is still important for accurate prediction (Foxall, 2005). Furthermore, the implementation of the theory faces the problem of measuring perceived behavioural control (PBC) directly as opposed to recording control beliefs (Manstead and Parker, 1995).

Also, TPB suggests only one new factor while there is continuing evidence that other variables add predictive power over and above the measures formally included in the TPB (Davis, 1989). For instance, Manstead and Parker (1995) suggest that personal norms and effective evaluation of behaviour can account for difference in behavioural intentions beyond that accounted for by the TPB.

Ajzen (1988) depicts the model as open to more expansion, stating that: "…the theory of planned behaviour is, in principal, open to the inclusion of additional predictors if it can be shown that they capture a significant proportion of the variance in intention or behaviour after the theories' current variables have been taken into account" (p.199).

Figure 2.2 Theory of Planned Behavior



Source: Miller (2005)

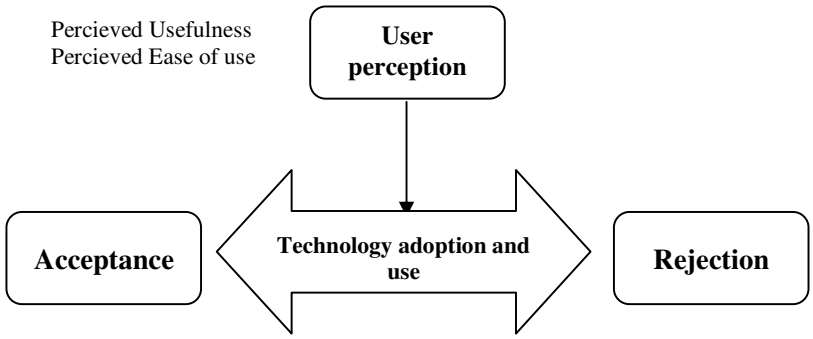
2.4 Technology Acceptance Model (TAM)

TRA faced criticisms from other researchers for not explaining the beliefs that are operative for a particular behaviour which is related to adoption and usage of new technology (Succi and Walter, 1999). Consequently, Davis *et al* (1989) proposed a new instrument to measure the acceptance of new technology and the intention to use it (Moon and Kim, 2001; Hallegatte and Nante 2006), the Technology Acceptance Model (TAM). TAM is now one of the most frequently used models to explain and predict the individual's acceptance of an information system (IS). Despite its age, it is still considered one of the most powerful theories in information systems/information technology (IS/IT) research relating to acceptance and usage (Park and Jun. 2003; Dubelaar, *et al* 2005; Kimery and Amirkhalkhali, 2007; Lingyun and Dong, 2008).

TAM is designed to analyse an individual's willingness to accept information technology by determining two beliefs that influence individual behavioural intention to use the technology namely: *Perceived Usefulness* (PU) and *Perceived Ease Of Use* (PEOU) (Moon and Kim, 2001).

These two factors combined will generate an acceptance or rejection disposition for the user towards using a particular technology as shown in Figure 2.3 below:

Figure 2.3 Individual perception of acceptance



It becomes clear that users will find the technology interesting and will be encouraged to use it if they find it useful and easy to operate (Davis, 1993). It is useful to note that PU is more related to the expected overall impact of system use on process and outcome, whereas PEOU is merely related to those performance impacts that are closely related to the process of using the system per se. Such interrelations are shown in Figure 2.4 below.

Figure 2.4 Technology Acceptance Model (TAM) Source: Davis (1989)

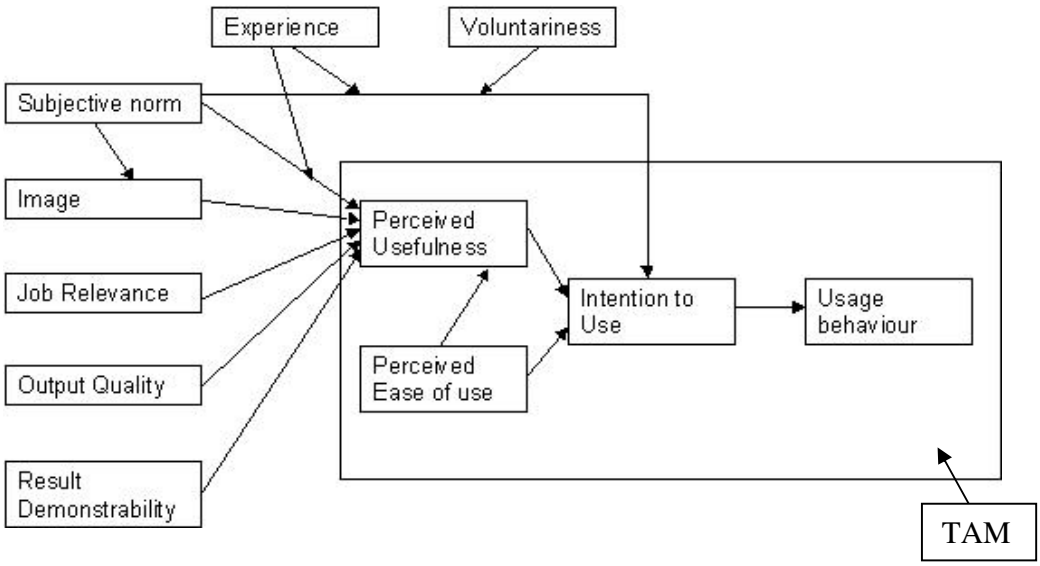
Since its original development, TAM has been the centre of significant academic interest (e.g., Gefen and Straub, 2000; Venkatesh *et al*. 2003; Money and Turner, 2004; Zakour, 2004; Hallegatte and Nantel, 2006). TAM has been revised, adapted and extended by many researchers (e.g., Davis, 1993; Gefen and Straub, 2000, Venkatesh *et al*. 2003; Park and Jun. 2003; Dubelaar, *et al* 2005; Kimery and Amirkhalkhali, 2007; Lingyun and Dong, 2008).

TAM was criticised as not including any social factors that might affect technology acceptance and usage. A further model (TAM2) was later introduced by Venkatesh and Davis (2000) which includes the role of social influence in the process of technology user acceptance.

2.4.1 Technology Acceptance Model 2 (TAM2)

TAM2 shows the influence of three interrelated social forces that influence users to accept or reject technology, namely, subjective norms, voluntariness, and image (See Figure 2.5)

Figure 2.5 Extended TAM Model (TAM2)



The Subjective norm (SN) derived from TRA theory, where it is defined as a "person's perception that most people who are important to him think he should or should not perform the behaviour in question" (Fishbein and Ajzen 1975). The SN is included as a direct determinant of behavioural intention in the theory of reasoned action (Fishbein and Ajzen 1975) and the subsequent theory of planned behaviour (Ajzen 1991).

Furthermore, voluntariness and compliance with the social norms is important. These refer to "...the extent to which potential adopters perceive the adoption decision to be

non-mandatory" (Venkatesh and Davis 2000). They found there is a significant effect of SN on PU and intention to use. This is derived from two processes; internalisation and identification.. The rationale of the internalisation effect is that "...if a superior or co-worker suggests that a particular system might be useful, a person may come to believe that it actually is useful, and in turn form an intention to use it" (Venkatesh and Davis, 2000).

Identification or (image) refers to the extent to which using the new technology will enhance and improve user status. So, if an individual believes that using new technology will raise his or her status within the work group, its use will be more likely (Moore 2000). From this TAM2 model, we can infer that social factors such as word of mouth and other people's opinion will affect attitudes toward using websites. Arab culture has been described as an oral-dominant society (Zaharna, 1995), i.e. where people prefer speech rather than other communication methods (Akour, *et al*, 2006). Word of mouth is considered one of the most effective marketing tools within Arab culture. It is therefore proposed that the *subjective* norm will be one of the most important factors affecting a user's intention within Arab culture to use websites.

As mentioned in section 2.4**,** TAM is criticised by some researchers for ignoring the social influence on technology acceptance (Chen *et al*., 2002). Although, TAM variables such as "*ease of use*", "*usefulness*", and "*external variables*" are suggested to be the primary determinants of user acceptance and use of various existing information technologies (Davis, 1989, 1993), these variables, may not explain users' behaviour toward new emerging technology. There are other factors contributing to the acceptance of a new technology which vary with the nature of the technology, target users, and context (Moon and Kim, 2001).

These indicate that culture also has a role to play. A study conducted by Ho, *et al*, (1989) found that applying TAM in Asia did not explain and predict user acceptance of information technology. Another study conducted by Straub, *et al* (1997) suggested that TAM is not applicable in Japan while it is applicable in the U.S. and Switzerland. TAM

focuses entirely on theories derived from social psychology without linking cultural factors that also influence user acceptance of technology. This inhabits the use of the model across cultures (Gefen and Straub 1997; Straub, *et al*, 1997; Zakour, 2004; MaCoy, *et al*, 2005).

Initially, user acceptance and usage behaviour issues from a social psychology perspective have been studied by most of the technology acceptance models whereas cultural influence on technology use has been neglected.

Furthermore, user acceptance research and studies such as TAM is substantially based on the USA and other developed countries where the technology has been generated. Whether these models can be applied to other countries or cultures is an issue calling for further inquiry. It may also be necessary to question its adequacy for research into the acceptance and usage of new technology, such as e-business websites, in the circumstances that exist in less-developed countries, such as those in the Arab world. As information technologies are dispersed beyond country boundaries, user acceptance models face the challenge to maintain their validity and reliability globally. However, it is sensible to presume that the need for some amendments may be the case. A generally applicable model must have relevance across the broad field of information technology applications as well as high probability of success in transfers of various technologies among cultural boundaries.

Also, Akour *et al* (2006) state that technology acceptance studies are scant in Arab countries, which creates the necessity for more studies to investigate the impact of cultural as well as perceptions on technology acceptance and usage in developing countries.

In conclusion, although many attempts have been made to explain end user acceptance behaviour, the models that have been developed still lack cultural sensitivity. In the Arab world in particular, there seems lower acceptance of e-business which may be due to cultural differences and the gap between cultural values and the use of websites. The

current study attempts to address this problem through the introduction of cultural variables.

The review of relevant literature in this chapter has highlighted some of the gaps in the fields of technology acceptance and culture; thus providing a worthwhile agenda for a new study, especially one which examines an Arab culture.

CHAPTER 3

CULTURAL THEORIES

Culture plays an important role in the process of technology acceptance and use of websites (Luna *et al*., 2002; Tsikriktsis, 2002; Singh, *et al*, 2005). These studies confirm that website users from different countries behave differently because of matters attributed to their culture. They have different ways of life, different ways of thinking, and are taught a different perspective on how to see things through their culture.

Studies confirm that there are cultural differences between countries and nations e.g. Hall (1976) Trompenaars (1993); and Hofstede (1980, 1991). These studies suggest that Arab countries have distinct cultural values and show that differences between Arab cultural dimensions and other cultures have significant practical and commercial implications.

This research explores e-business website acceptance and use and its relationship with national culture. Specifically, it is argued that knowledge of the cultural orientation of website users will greatly facilitate e-business website adoption. In turn, this will contribute to the enhancement and increase in the usage and acceptance of websites leading to a successful business approach.

3.1 Introduction

One of the major hypotheses of this research is that national culture plays an important role in the process of technology acceptance. It is therefore important to start by defining this difficult and complex term. This definition will not be unique but it will be used to understand and analyse the concept of culture for the purpose of this study.

In early studies, Hall (1976) proposed a broad definition of culture stating that it a "…stands for the way of life of a people, for the sum of their learned behaviour patterns,

attitudes and material things". This definition suggests that people who are from the same culture can understand each other easily based on the way they raised and grown. This includes the restrictions that were set by parents, families and their environment, the lessons learned at school and social relations with other people around them.

Hofstede (1991) describes culture is as the "*software of the mind"* which distinguishes the member of one group or category of people from another. He points out that culture is learned, not inherited, and that people acquire different patterns of thinking, feeling and potential action that remain with them all their lives. He also argues that culture is affected by the social environment in which people interact.

A definition of culture similar to Hofstede is also proposed by Del Galdo (1996) who states that culture is the learned behaviour of a group of people influenced by their immediate environment including their history, customs and traditions and social rules. She adds that culture refers to group of people who share the same values, history symbols and/or language. In the same vein, Hofstede (1991) argues that within the same culture, individuals carry several "layers of mental programming", relating to gender, age, education, career, language, and religion; Del Galdo (1996) contended that these demographic groups exist within larger groups and represent sub-cultures , for example "African American Politicians" or "Female Teenagers".

Bourges-Waldegg (2000), defines culture as a system of social factors such as values, traditions, religion, language, conventions, and social behaviour. He adds that it is not easy to specify the boundaries of a specific culture in these terms because many of these cultural dimensions are not unique.

As noticed above, the term of culture is related to the rules that shape peoples' behaviour, and this can be represented in large societies and small communities within the same country. Hofstede's (1991) definition is used for the purpose of this study which states that people who have the same cultural values think the same way because they share the same process of learning. This implies that cultural variables have a direct influence on

individuals' behaviour. This also implies that culture has a direct impact on peoples' acceptance and attitude toward websites. "…Culture affects everything we do, say, read, hear and think and even websites cannot escape the influence of culture"? (Kwintessential).[3]

It is argued below in 3.5.1 that culture plays an important role in the process of technology acceptance, and usage of e-business websites. Some fundamental theories of culture form the basis of work in this area (Hall, 1976), (Hofstede, 1980, 1991) and (Trompenaars, 1993). More recent cultural studies include (Straub, *et al* 2001; Loch, *et al* 2003; El Said and Hone, 2005; Nantel and Glaser, 2006).

Hofstede (1980, 1991) is considered one of the most influential culture theories in information system research and his work and concepts are used in many studies (Pavlou and Chai, 2002; MeCoy, *et al* 2005; Al Sukkar and Hasan, 2005; Akour *et al*, 2006; Merchant. 2007).

Many of these studies have strongly supported Hofstede's cultural theory and largely confirm his results (Sondergaard, 1994; Lackman *et al*. 1997;; Kimery and Amirkhalkhali, 2007).

In this chapter, cultural differences are described and evaluated using the three main cultural models, namely; Hall (1976), Hofstede (1980, 1991) and Trompenaars (1993). These models provide a detailed view of culture, by identifying a number of dimensions that are used to organise cultural data.

The studies have all confirmed that Arab countries have different cultural values compared to other cultures and that there exist significant differences in the cultural dimensions of Arab and Western users.

[3] http://www.kwintessential.co.uk/translation/articles/culture-website-localization.html

3.2 Hall's Model of Culture

Hall classifies culture in term of the following dimension

- Context
- Time
- Space

Hall's model focuses on what he calls "high-context" and "low-context" cultures, viewing meaning and context as "…inextricably bound up with each other" (Hall, 1982, p. 18). The difference between these two types of culture depends on how much meaning is found in the context in opposition to is found in what is identified as "the code". Low-context cultures tend to place more meaning in the language code and very little meaning in the context. Therefore, communication between people tends to be specific, clear, and analytical (Zaharna, 2000).

In high-context cultures, Hall mentioned that, "…most of the information is either in the physical context or internalised in the person, while very little is in the coded, explicit, transmitted part of the message" (Hall, 1982, p. 18). Thus the individual needs to understand the contextual cues in order to understand the full meaning of the message.

Table 3.1 illustrates in more detail the differences between high-context and low-context cultures.

Table 3.1 The Differences Typical of High-Context and Low-Context Cultures

Source: Salleh, (2006)

Space and spatial aspects of culture:

Hall also discussed the space and the relationships within it, as people are concerned ~~about space in many situations. This m~~ay be from individual space, to space in the office, and space at home. The need for space varies between people. Some people require bigger homes, bigger cars, and so on. This is one of several 'cultural factors', for example

we have reached a situation where American people seem to require more use of space, whilst Japanese people seem to need less space (Hall, 1976).

Hall identifies four different senses of space, or invisible boundaries, namely territoriality, personal space, multisensory space and unconscious reactions to spatial differences. Section 3.5 below provides more details and looks at Arab and Western cultures in term of this model.

3.3 Trompenaars' Model of Culture

Solving problems between people was the main interest of Trompenaars' (1993) cultural model. He identifies seven dimensions of culture that characterise the way cultures solve problems. These are described below: (Gould *et al*., 2000)

- Universalism vs particularism: Universalists refer to the application of the rules of morality, ethics and the right or logical solution with regards to the relationship between people, while particularists focus on the nature of the specific problem and are prepared to break the rules if necessary.
- Neutral or emotional: This refers to the emotional relationships between people and the conduct of these relationships especially when dealing in a business environment. A neutral person keeps their emotions in check with more control and focuses on the argument. In contrast, an emotional person shows their reactions and expects emotional reactions in return.
- Individualism vs collectivism: Individualism refers to the people of cultures who isolate themselves and focus on their own interests, not those of others. Collectivism refers to a cultural solidarity and harmony where others are cared for as a priority and the individual is marginalised.
- Specific vs diffuse: This refers to relationships between people and measures the range of involvement that people have with others in their lives. Specifically-oriented cultures are split between business, and friend or family relationships. In

diffuse cultures, business relationships and communication is based on strong personal relationships such as liking and trust.

- Achievement vs Ascription as the basis of status: Achievement is where individuals are judged on what they have achieved and on their record. Ascription is where status is attributed by social factors such as gender, age, interpersonal connection, or profession, not on one's performance.
- Time: This includes Hall's definition of polychronic and monochronic time, as well as a culture's attitude towards the past, the present and the future and the relationship between them.
- Environment: this refers to specific cultural attitudes toward the environment and an ability to control nature and develop the environment.

As noted above, Trompenaars' model includes only subjective culture as all of the above variables relate to individual beliefs, and values rather than artefacts and institutions.

3.4 Hofstede's Cultural Dimensions

Four cultural dimensions were developed by Hofstede (1980) within a five year research model using 166,000 IBM employees (from the sales and service departments in 50 countries and three regions). The study enabled Hofstede to make a reasonable comparison between cultures in different countries. These dimensions are largely independent of each other; he rated each country based on these dimensions, for values from 0 – 100. A brief description of each dimension is listed below:

3.4.1 Power Distance (PD) – Measuring the Degree of Inequality in Society.

According to Hofstede (1980) the PD dimension explains how different societies treat inequalities in social structure. Hofstede claims that high PD countries are typified by centralised political and leadership powers with large hierarchies in organisations and sizeable differences in salary and work position or status. This is clear also in

management styles. The leader or manager has strong influence over subordinates and they work to the manager's parameters. Parents teach obedience, and expect respect. Thus, inequalities are expected, and may even be desired. In low PD cultures, subordinates and supervisors work closer together and more interchangeably, with flatter hierarchies in organisations and a smaller difference in salaries and status. Subordinates tend to be more organised, have an informal relationship with their managers, and this is also reflected in the relationship between parents and children, who in the case of the latter, may view themselves more as equals (but not necessarily as identical).

This model can be applied to the relationship between suppliers and users where services provided by suppliers have power over their customers (Donthu and Yoo, 1998). They have also shown empirically that customers with high levels of power-distance have lower expectations about responsiveness than customers with lower levels of power-distance. In the case of website quality, according to Furrer, *et al* (2000), power distance is negatively correlated with reliability, responsiveness, (download time and interaction with the website). Emotional appeal is positively correlated with privacy, security, website design and visual appeal. High PD is associated with lower expectations in terms of the website's responsiveness and flow, emotional appeal and higher expectations about privacy and security, interactivity, design, and visual appeal.

Additionally, Marcus and Gould, (2000) confirm that cultural power-distance significantly affects access to information on a website. For those in a low PD culture, content and information should be equally available and easy to find; people demand greater freedom to explore the website, while those in a high PD culture will accept restrictions on exploring the website, even when access to the information is reserved for those with greater social power. Therefore, access to the information is dependent on user position, as websites often include official stamps, logos, certifications, and security measures (Jack and Mike, 2005).

3.4.2 Individualism (IND) vs. Collectivism (COLL)

Individualism and Collectivism refer to the extent to which individuals look to themselves or are loyal to a group and society. Hofstede found that individualistic cultures value personal time, freedom, challenge, and such extrinsic motivators as material rewards at work. Individualism is concerned with the relationship between individuals and other individuals or society, thus, everyone is expected to look after one's self or immediate family but no one else.

In individualist societies, the focus is on the individual and there are weak ties between individuals. Personal freedom is respected and valued and personal decision-making is encouraged. On the other hand, in collectivist cultures there is more focus on religion, custom and tradition, and consensus is very important. There is a stronger relationship between individuals and between individuals and groups, so there are more social relationships and the following of societal norms is valued. Group decision-making is also encouraged (Stengers *et al*, 2005; and Kang and Araujo, 2006).

Tsikriktsis (2002) states that individualistic customers are expect good service, while collectivist customers tolerate poor service because they do not want to break a perceived harmony and want to keep a good relationship with other customers and the service provider.

In respect of a website, high IND cultures emphasise youth, motivation, action and change, while collectivistic culture emphasise history, tradition and age. Websites targeted at low IND cultures usually have pictures of products or landmarks more than people (Marcus and Gould, 2000). Table 3.4 below shows the differences between individualism and collectivism from Hofstede's study in (1980, 1991).

Table 3.2 Differences between Individualism and Collectivism from Hofstede's Study in (1980 and 1991)

Source: Kang and Araujo (2006).

3.4.3 Masculinity vs. Femininity (MAS)

MAS refer to the degree to which gender roles are defined. The masculinity-femininity dimension proposed by Hofstede (1980) shows and explains the role of the masculinity and femininity in different cultures and societies not their physical characteristics.

'Masculine' cultures value assertiveness, ambition, success, and performance. In such cultures, big and fast is beautiful, and clear gender roles are the norm. On the other hand feminine cultures value, beauty, nature and nurturance, and blurred gender roles (Kang and Araujo, 2006).

A high MAS culture shows more appeal for competition, ambition, action as a motivation providing quick rewards and navigation based on exploration and control (Marcus and Gould, 2000). Alternatively, in low MAS cultures, more emphasis is placed on mutual relationships and cooperation rather competitiveness (Stengers *et al*, 2005).

3.4.4 Uncertainty Avoidance – The degree to which a member of a culture feels worried about unpredictable situations.

Hofstede shows that cultures vary in their avoidance of uncertainty with different values regarding formality, punctuality, legal-religious-social requirements, and tolerance for ambiguity.

According to Nakata and Sivakumar (1996), customers of a high UA cultures hesitate to choose uncertain situations, while customers of low UA are more accepting of uncertainty and risk. Donthu and Yoo (1998) found that high UA customers expect high service quality compared with customers with low UA. In addition, Furrer, *et al* (2000) found that uncertainty avoidance is positively correlated with reliability, responsiveness, assurance, and empathy and negatively correlated with website design and visual appeal.

In term of website design, high-UA cultures emphasise simple navigation systems so users do not get lost. Content is simple with restricted amounts of data. Redundant cues (colour, typography, sound, etc.) are minimised to reduce ambiguity. On the other hand, low UA cultures look for more helpful navigation system, more options and content focused more on understanding the concepts rather than on narrow tasks (Marcus and Gould, 2000).

3.4.5 Hofstede's Model Evaluation – Limitations and Justifications

Hofstede's model faces a number of criticisms, especially when applied in the Information Systems (IS) domain. According to Walsham (2002) Hofstede's model sees culture as a static phenomenon, while the nature of culture is reflexive and changeable. Walsham also claimed that Hofstede's cultural variables are not easily transformed into effect on work patterns. Kirkman and Shapiro (1997) in their study of self-managing work teams pointed out that using Hofstede's dimensions can only be used to analyse a national cultural level, and as such is not suitable for analysis at the individual level.

However, there are studies that have found evidence supporting the use of Hofstede in the workplace. Robertson and Hoffman (2000) (in their investigation of Confucian values in American managers adapted Hofstede's dimensions to reflect the attitudes of individuals in the workplace environment). They found the reliability of the instrument above 0.70 for individualism and more 0.85 for masculinity, power distance, and uncertainty avoidance. Also, Simon (2001) in his study of the cultural and gender impact on websites found the reliability more than 0.80 for individualism, masculinity, and uncertainty avoidance and 0.75 for power distance.

Another criticism comes up from Hoft's (1996) study about the questionnaire design in Hofstede's model. He claimed that the questions reflected Western perspectives, thus some responses to the survey did not fit into the original international variables. Hofstede admitted that his survey was developed from a Western perspective and justified that by stating it was done "...to try to find out if they were like us".

Spector and Cooper (2002) criticised the statistical level of Hofstede's scales for their poor internal consistency reliability. Hofstede (2002) admits that the individual level produces low reliability scores and supported that the reliability of an instrument designed for comparing country means can only be tested across countries; "one should not expect that applying a reliability formula like Cronbach Alpha across individuals provides information about reliability across countries" (Hofstede, 2002).

However, and in spite of the criticisms above, Hofstede's cultural variables enshrined in his model are considered as the most influential aspects of cultural theory in information systems research (Pavlou and Chai, 2002). In addition, they are the most widely cited and used in all the cultural literature (Myers and Tan, 2002). In particular, Jones and Alony (2007) argue that while Hofstede's work is not without its critics, "…it remains one of the most widely used pieces of research among scholars and practitioners" and that their overview "…illustrates the importance of culture, and the impact each of Hofstede's dimensions has on IS design, development and management" (Jones and Alony, 2007, p. 416).

Also, many studies have strongly supported Hofstede's cultural theory by replicating studies of his work. Time has largely confirmed his results (Jones and Alony, 2007). Furthermore, Meyers and Tan, (2003) reviewed cross-cultural information systems research. The results show that some or all of Hofstede's cultural dimensions have been used in 24 of 36 studies of literature reviewed used.
In summary, Hofstede theory remains relevant because:

1. Hofstede's dimensions been extensively validated and intensively used by numerous researchers who further validated them as an important part of cultural theory.
2. Hofstede's typology is free from overlap with different cultural typologies (Clark, 1990). In addition, Hofstede's typology provides a high and beneficial level of analytical flexibility making it easy and effective when applied to website communication (Singh and Baack, 2004).
3. Hofstede's values have been proved to be applicable to the study of consumption-related values and motives (Mooij, 2000).
4. Hofstede's dimensions have been successfully used to show cross-cultural differences in Internet diffusion and adoption (Pavlou and Chai, 2002).
5. Hofstede's framework is found to be not only a valid basis for analysis of regional differences, but can be adapted to websites in local culture (Simon, 2001).

This study, therefore, is based on Hofstede cultural dimensions (1980, 1991) for a number of reasons, namely:

1. It is comprehensive, and can be used in different cultures and situations.
2. It is shown to be stable and useful in different researches across many disciplines
3. It is the only model that explicitly links national cultural values to communication practices.
4. Hofstede's model and arguments are compelling for research in the areas selected for this study because, even before empirical testing, links can be seen

between his cultural dimensions and many aspects of Arab countries' cultural behaviour.

3.5 Cultural Variables and the Arab Culture

Few researchers have considered Arab culture while building their cultural frameworks. The following part describes Arab culture using cultural variables used by various researchers:

Hall (1976) noted that Middle Eastern culture is *polychronic*. This means that people prefer to do several tasks at the same time and interruptions are accepted. This is illustrated, for example, within the business environment where managers answer phone calls during business meetings or sign papers and discuss tasks with employees. In the context of website usage this might mean browsing several windows that are open simultaneously, each connected to different sites (El Said and Hone, 2005). Hall (1976) identified the Arab culture as a high context culture. In such a culture, context provides a significant part of meaning and information which is implicitly stated. In addition, individuals are tightly connected to each other and have strong relationship looking to enhance their solidarity.

In contrast, users in low-context cultures, such as Western culture, are more comfortable with *monochronic* time, where one particular activity is conducted at a time and interruptions are not acceptable. Furthermore, according to Hall's cultural model high-context cultures highly value relationships and are less bound by schedules. In this type of culture, the information flow tends to be very fast while in low-context cultures, where procedures and routines are followed for doing everything, the information flow tends to be slow and there is relatively low value in relationships. Table 3.3 shows the main differences between Arab and American culture according to Hall (1976).

Table 3.3 Arab and American Cultures According to Hall's Cultural Model

Arab	American
High context	Low context
Implicit information	Explicit information
Meaning in context	Meaning in the language code
Audience is more responsible for understanding message	Speaker is more responsible for message comprehension

According to Trompenaars (1993), Arab culture is highly *ascriptive*, where a person's background, connections, relationship and education, rather than actual achievements and actions increase and enhance respect and status. In the context of attitudes to websites, this might affect users judgments for a website "...if any of the pages were recognised, had a reputation or were associated with prestigious institutions" (El Saiid and Hone, 2005). Furthermore, Zaharna (1995) stated that Arab culture is oral dominant and relies more on emotion and symbolism than on "…factual accuracy and the analytical content of a message".

Hofstede's studies (1980 and 1991) also show other significant differences between Arab culture and other cultures in term of *power distance*, *uncertainty avoidance*, *individualism*, and *masculinity*. Arab Culture is characterised as having high power distance, high uncertainty avoidance, low individualism, and low masculinity. Table 3.7 below illustrates Hofstede's finding of the differences between Arab cultures and the USA and UK. According to Hofstede (1991) Arab culture tends to be large Power Distance (PDI) (80) relating to how people respond to and perceive power. It emerges as autocratic relationship. This dimension might have a bearing on constructs relating to perceptions of the authority of a web page (El Said and Hone 2005). For Hofstede dimensions scores, see appendix (1)

Table 3.4 Hofstede Cultural Dimensions of Arab Countries, UK, and USA.

Country	PD*	IND*	MAS*	UA*
Arab World	80	38	52	68
United Kingdom	35	89	66	35
United States	40	91	62	46

*PD: Power Distance; IND: Individualism; MAS: Masculinity; UN: Uncertainty Avoidance.

3.5.1 Arab Culture and Website Acceptance According to Hofstede

Studies confirmed that Arab countries – to which group Jordan belongs - have different cultural values from other cultures. Hofstede's studies in (1980, 1991) show there is a significant difference between Arab cultural dimensions and other cultures. Arab Culture is characterised as having high power distance, high uncertainty avoidance, low individualism, and low masculinity. Studies state that such cultural characteristics may not be ideal for promotion of technology acceptance and website usage.

3.5.1.1 Power Distance

As mentioned above, Arab culture has been described as high power distance culture that confirms the concentration of authority and large difference between individuals according to age, gender, rank, and social status. Straub *et a1*, (1997) in their study confirmed that Arab cultural values are resistant to computer technology and the use of websites. While, Akour *et al*, (2006) pointed out that Arab countries including Jordan accept the anticipated technology gap between themselves and other countries, Arab people, however, are less likely to adopt new technology and existing knowledge systems that could affect their lives and social norms (Akour *et al*, 2006).

De Atkine (2004) in his study argues that Arabs still lag behind in producing new technology and innovation, in contrast to the superiority of western technology. De Atkine (2004) adds that Arab people think the entrance of new technology will threaten their lifestyle and group or family relationship. However, they are willing to use the technology without any social negative effect in their life, "...We want your TV sets but not your programmess, your VCRs but not your movies". He adds that "...This will be the battleground of every Arab nation for the coming generation". De Atkine's results show that Arab people are willing to use the new technology that fits their cultural values.

Other research has been produced by Alkadi (2005) about the impact of the Internet on social life in Jordan. The results show dissatisfaction with Internet influence on social life, particularly marriage arrangements and gender relationships. Alkadi (2005) comments that Arab people do not want to change their lifestyle, traditions, and customs of interaction and solidarity between groups.

Akour *et al* (2006) conducted a study to investigate the impact of national culture on Jordanian managers' intentions to use the Internet in their work. They found that Jordanian managers are willing to use the new technology to match the global trend and enhance their competitiveness in international markets; on the other hand, managers were unhappy with the influence of the Internet on social life and agreed with the public attitude towards using it. They called for more studies in website and Internet acceptance, taking into account national culture. Jordanian managers may perceive the information they acquire as a source of power as long as they are the only ones to possess that knowledge or control access to it. Managers tend to minimise the role of technology and use it selectively in order to keep their power and control (Akour, *et al*, 2006). Jordanian mangers look to the Internet as a threat to the harmony of their existing social structures and hierarchies (Dewachi, 2000).

3.5.1.2 Uncertainty Avoidance

According to Hofstede (1980) Arab culture is characterised with high uncertainty avoidance, which leads to predictability, risk avoidance, resistance to change, sticking

with existing patterns, and hesitate to choose uncertain situations. Thus, Arab people tend to consider websites and the Internet generally, as ambiguous, threatening, or risky; they see it as a threat for the future, especially for families and children, and so therefore they tend to resist using many websites (Taylor, 2004).

As noticed by some researchers, (Fagan et a1, 2004; Akour *et al*, 2006) Arab managers prefer to keep the existing patterns of their work such as using face to face interview and paper work rather than using the Internet . These managers tend to avoid uncertainty (Akour *et al* 2006). In summary, people are trying to avoid the risk and ambiguity of results (if any) of using the website and also its impact on their life style.

3.5.1.3 Individualism and Collectivism

Individualism refers to the individual relationship with the other and community, according to Hofstede (1980) Jordanian culture can be described as collectivist as individuals consider themselves part of a group and dedicate their lives towards a group—especially family.

Arab culture is described as a corporate community where people keep strong relationships using the ties of religion, custom and tradition. These features are consistent with the idea, widespread in Arab communities, that using websites and the Internet threaten these relationships.

According to At-Twaijri and Al-Muhaiza (1996), there are two main factors leading to a collectivist culture: first, the Islamic religion, the main religion in Arab countries, emphasises to a great extent the idea of unity. Caring is a religious duty and so co-religionists help each other. The second factor refers to fact that Arabs are organised into tribes, families or areas. They strongly associate themselves to these unity symbols.

Hasan and Ditsa (1999) argue that people may see website and new technologies from a cultural perspective as dehumanising, or representing a more individualistic attitude very

different from their collectivist background; significant given that collectivism is considered a core cultural value in Arab countries (Elashmawi, 1993) where people are joined together in different aspects of their lives and are keen to keep strong relationships due to kinship, age, and area. In relation to using websites and the Internet, authority figures in such cultures are keen to keep the individual away from new technology that will threat the community custom and tradition (Akour, *et al* 2006).

3.5.1.4 Masculinity/Femininity

Masculinity/femininity refers to the degree to which a society emphasises the distinction between traditional gender roles. Higher scores mean greater distinction, lower scores signify blurring of traditional roles. In other words, it refers to differences in the social roles of women versus men (Hofstede, 1997). As mentioned earlier, Arab people accept using the Internet and new technology but also wield a great attention of influence because of masculinity/femininity, which may reflect substantial variations in the extent of computer-technology acceptance, including the website and Internet (Akour, *et al*, 2006).

According to Hofstede (1997) higher masculinity cultures give more attention to competitiveness, achievement, recognition, and challenge; while, lower masculinity cultures give emphasis to relationships, interdependence, and group orientation. High masculinity culture is seen as more sympathetic to new technology including computer technology. So there is expected to be a significant relationship between high masculinity culture and computer technology.

Arab culture is slightly higher than the 50.2 average for all countries, however, Hofstede (1997) comments that "…This would indicate that while women in the Arab World are limited in their rights, it may be due more to the Muslim religion rather than a cultural paradigm". However, Arab as a lower masculinity characteristic cu1ture tends to be a culture where group interests take priority over personal needs and goals, people tend to value intangible results more (Akour, *et al* 2006).

3.6 Tangibility

One important issue related to Arab culture is the tangibility or otherwise of e-business product and services. Usually, services such as e-business are described as intangible as it cannot be touched, seen, defined and difficult to think about and grasp mentally (McDougall, *et al* 1990; Laroche, *et al*, 2001)

Four unique characteristics are proposed to distinguish services from products - intangibility, inseparability, heterogeneity, and perishability (Parasuraman, *et al*, 1985; Zeithaml, *et al*, 1985). These attributes contribute to make pre-purchase evaluation more difficult for services than for products, which increase risk concerns, and in turn inhibit website adoption (Featherman, and Wells 2004).

Tangibles are discernible by touch (palpable), material (and therefore possible to touch), perceptible and possible to be treated as fact (real or concrete) (Featherman and Wells 2004). This attributes make customers' judgements and evaluations easier and more convincing about the product or services produced.

Intangibility issues arise where consumers look for tangible cues to decrease uncertainty. They are one of two key factors of a service that is generally difficult for forthcoming customers to evaluate a service in advance. This means that service is a deed, performance or effort, not a tool, object or thing. A customer may find difficulty in evaluating a service before purchase. For some services, their intangible nature leads to difficulty in evaluation after consumption. For instance, it is difficult to judge how pleasurable a holiday will be before taking it because the holiday cannot be shown to a customer before consumption (Berry, 1980).

Cowell (1984) suggests that the customer may have tangible evidence of the services purchased. This purchase is, of course, something intangible. For example, the experience of a member of a company or a sports club who uses the facilities but does not own it; they have a membership card as tangible evidence of the service. The challenge for the

service provider is to use tangible clues to service quality. For example, a travel agency may show pictures of the holiday destination, exhibit testimonials from satisfied tourists and provide details of the type of entertainment available in a brochure.

Physical evidence is considered a key factor of the environment in which the service is delivered and where goods facilitate the communication and performance of the service. When inspecting the tangible evidence, customers look for clues to the success suitability of the service. For instance, prospective customers may stare through a restaurant window to check the décor, furnishings and the appearance of the waiters (Lemmink and Mattsson, 1998; Hendrie, 2004).

Scharl, *et al*, (2004) point out that many users still prefer to buy through traditional communication tools, for instance, visiting stores, and using fax and telephone; meanwhile, other users buy through websites relying on information provided by offline marketing tools such as TV and newspapers,. This shows that not all online purchasing comes through the website; there are additional marketing tools that can help increase online sales.

According to Choi and Morrison (2005) using data from PhoCusWright Research (2004) more than 20 million people worldwide spent US$20 billion on online travel in 2004, with an increase 17% over last two years. Although e-business websites offer different services for users, they use different channels for purchasing their travel product. According to Fittkau and Maass, (2005) 60% of online travellers are searching websites for information and buying offline, while PhoCusWright, (2005) declared that 68% of online travel buyers are not only purchasing via the Internet , but also they use different channels for purchasing their travel products.

Arab people think that the tangible visiting of a shop or office will enhance their feeling for the products and services offered there (Alalak, 2005; Yasin and Yavas 2007). Personal contact and relationships with the seller of a product or service will enable them

to negotiate better offers and develop trust. It clear that Arab culture is resistant to the use of websites it when comes to transactions. The culture is dominated by face-to-face encounters and word of mouth communications; oral communication is preferred to written communication in most cases. Therefore, face-to-face communication, or even a telephone call is valued more than e-mail or fax-based communication (Yasin and Yavas, 2007). Unfortunately, the majority of IT or IT enabled companies in the Arab world are not customer–oriented, but rather IT–oriented (Al Alak, 2005). Marketing input is low, and as such rigidity prevails, customers are reluctant to transact with such companies. Fear of technology is magnified, and mistrust intensified.

Finally, it is important to consider the differences and uniqueness of a country's specific cultural values in usage and acceptance of e-business websites. It could be argued that the success of e-business websites depends on its fit with the Arab culture and Islamic religion, maters which greatly differ from their counterparts in developed countries.

The following section will discuss the main barriers to using and accepting websites in Arab countries.

3.7 The Barriers to Using and Accepting Websites in Arab Countries

The Arab world consists of many individual nations which are categorised as 'developing countries'. Studies confirmed that websites users in such countries are viewed as late adopters of new technology (Awamleh *et al*., 2003; Al-Sukkar and Hasan, 2004a). This can be attributed to a number of economic, technological, cultural and political factors.

Researchers addressed some barriers such as the lack of top management support, poor quality IS design, as well as the shortage in user experience and motivation (Kwon and Zmud, 1987; Nidumolu and Goodman, 1993; Mahmood, *et al*., 1995, Aladwani, 2003). In addition, these barriers in the Arab world are attributed to a lack of national infrastructure (Odedra, *et al*., 1993), capital resources (Goodman and Press, 1995), and government policies that could hinder website usage and acceptance. In general,

researchers (e.g. Goodman and Press, 1995; Mahmood, *et al*., 1995; Aladwani, 2003; Awamleh et al., 2003; Al-Sukkar and Hasan 2004a; Kimery and Amirkhalkhali, 2007) addressed different barriers of adopting and using of websites, which could be summarised as follows:

1- Although many users perceive usefulness and ease of use as benefits of the e-business websites, they have not transferred this attitude toward visiting e-business websites. Some customers do not like "the technology" at all, and others do not trust e-business websites.
2- Lack of e-business services through the websites as most of the e-business websites exist solely for information and marketing.
3- Data and network security worries, in addition to privacy problems, which inhibit the confidence of customers.
4- Government policies and legislation as there is no legal protection for users and their information.
5- Lack of telecommunication infrastructure as well as slow and broken Internet connections.
6- Connection costs for customers and high costs of building and managing sites for the banks.
7- Cultural and religious issues that determine consumer behaviour in the region.
8- Cultural differences between countries where the new technology originated in developed countries and problems of transfer the technology to developing countries.
9- Lack of trust on e-business websites.
10- Lack of computer literacy in Arab countries.
11- Language (Arabic and English).
12- Lack of offline advertising and promotion to encourage customers to use e-business websites.
13- Users prefer to use offline methods rather than using websites.

3.8 Arab Culture and Technology Acceptance (e-business websites)

In general, few studies have been conducted regarding the usage and acceptance of websites in Arab countries (Straub, *et al* (1997; Rose and Straub, 1998; Akour *et al*, 2006).

In the majority of developed countries, new technology and the Internet has become the main medium of effective and efficient social interaction (Straub et a1, 1997). However, this case is different in developing countries – to which Arab countries belong - as most of them are still in the infancy stage of using the technology (Davison *et al*, 2000). The reason for this, according to Amant (2001), is that technology has been mainly designed with the cultural assumptions of the West in mind.

According to Fandy (2000) many studies have focused on technology transfer into the developing countries, but few studies have tried to investigate how cultural variables in Arab countries could influence users' acceptance and adoption of information technology. This motivated researchers to pay more attention to the importance of cultural values in technology acceptance and adoption because ignoring cultural deviations can hinder acceptance of new technology and increase the risk of failure (Simpson 1996; Akour, *et al* 2006).

Some studies recognised the link between culture and technology acceptance and adoption (Hofstede 1980, 1997; Straub et a1. 1997; Dutta et a1.2003). Studies suggest that cultural values shape cognitive processes that influence people beliefs and behaviours (Anderson 1988). Also, studies have linked national culture with organisational and individual beliefs and behaviours regarding website usage and acceptance, this includes users' attitude toward the websites, self-efficacy toward the websites, perceived usefulness, perceived ease of use, website literacy, and website usage (Watson et a1. 1994).

As mentioned above, technology acceptance and usage among Arab countries has received scant attention by researchers. In addition, no studies have been conducted regarding e-business websites' acceptance in Arab countries in general and Jordan in particular.

El Nawawy (2000) studied the main determinants of using the Internet in Egypt; he found that national culture is one of the main barriers for implementing and using the Internet and e-commerce in Egypt. He claims that the management and decision makers are used to performing their business work in a certain way and do not want to change the way they work, and they are more likely to resist computer-technology integration into business practices. Moreover, these findings are in line with the Hofstede (1991) cultural dimensions where Arab countries are seen to be high uncertainty avoidance cultures. Taylor (2004) contended that in a high uncertainty avoidance culture, people will tend to consider computer technology ambiguous, threatening, or risky, and that they will try to resist the changes in their life and work style by sticking to existing patterns of educational process.

Hill, *et al*, (1998) state that Arab people prefer face-to-face communication and are concerned about unknown effects of using the website and the Internet will threaten the stability of their life style; therefore, they try to resist new technology. They conclude that Arab culture and society have an influence on how IT is viewed and the extent to which it is used. In other words, Arab cultural and societal values have an impact on website use and acceptance. Alkadi (2005) in his study found that Jordanian users have a negative attitude towards the Internet which has an affect on their lifestyle, especially towards marriage arrangements and gender relationships. Alkadi (2005) argues that the reason for that is that people do not want to replace their traditions, values, and way of life of interactions and caring.

By using TAM, Rose and Straub (1998) studied the main factors of technology adoption in five Arab countries (Jordan, Egypt, Saudi Arabia, Lebanon, and The United Arab

Emirates). They indicated that perceived ease of use and perceived usefulness, might give support to the adoption of IT in the Arab world.

Loch *et al*, (2003) examine the main incentives and barriers to using the Internet in Arab countries. They end the study by concluding that national culture and social norms could be an obstacle to using the Internet in Arab countries, because Arab culture is collectivist and family oriented in nature. The respondents feel the usage of websites and the Internet will threaten family and social life. They linked this collectivist nature of the Arab countries (Hofstede, 1991) to the limited use of the Internet.

Hasan and Ditsa (1999) used Hofstede's (1991) uncertainty avoidance dimension to conduct a qualitative study in Arab and Middle East countries. They interviewed the IT community from (Egypt, Jordan and Turkey), and the results were compared with Australia. The high uncertainty avoidance of Arab culture seems to be the main reason for using websites. The study suggested that the high uncertainty avoidance of Middle Easterners is blamed for the resistance to IT. Moreover, they add that the IT is generated in western culture and designed for low-context cultures, while Arab countries are high context culture. Shoib and Jones (2003) reviewed the previous studies relating to IS in Egypt. The finding shows the scarcity of the literature in Information System and cultural acceptance. They call for more research in this area.

Although these studies provide some evidence of the issues related to IS design, implementation and use in Arab countries, there is a necessity for more studies to build a reliable picture of website use in the Arab countries.

However, nowadays, the number of Internet users has grown steadily, and the numbers of websites has grown in Arab countries. According to Internet World Stats report (2007), the number of the Internet users in 2006 in Arab countries was 19,424,700 with growing a rate of 490.1 % between (2000-2006) and in Jordan 629,500 users in (2006) with growing a rate of 394.5 % between (2000-2006). Studies confirm that the majority of users (around 90%) tend to use the Internet for chatting and personal emails (Shoib and

Jones 2003; Alkadi 2005; Al-Sukkar and Hasan, 2005; Akour *et al*, 2006; Yasin and Yavas 2007).

As noticed above, previous studies that explored the effect of culture on IT adoption and use in Arab countries associated with Hofstede's (1991) cultural dimensions which describe the characteristics of Arabic culture. The role of the cultural dimension has been highlighted in most of these studies, as it ostensibly shapes Arab perceptions and attitudes toward using websites and the Internet (Shoib and Jones, 2003).

While there is some evidence of cultural differences in e-commerce and technology adoption in the Arab countries, it is unclear whether these can be related to established cultural dimensions or to what degree they will influence website users in the longer term. Also, e-business websites' acceptance and adoption is ignored in these studies as well as the impact of national culture on users' attitudes toward e-business websites.

On the basis of the discussion above, the need for research on Arab perceptions of e-business websites is crucial and timely. It is therefore reasonable to study the factors that affect technology acceptance and usage within Arab countries.

This section discussed the culture and technology acceptance among Arab countries as well as the main barriers of websites and technology diffusion in Arab countries. The following section, will discuss Human Computer Interaction (HCI) and cultures including culture's effect on interface design.

It noticed that the literature related to the effects of cultural dimensions on the technology acceptance model is focusing on a particular region and examines only one or a few dimensions of culture at a time. While this is useful and provides useful insights in this area, it is believed that a more comprehensive, theoretical treatment of one of more cultures and their relationships with the acceptance of e-business websites is warranted.

As mentioned above, most new technologies have been originated with western or developed cultural context. Consequently, a cultural gap often exists when new technology transfers to different cultural settings because these cultures differ greatly in their technology acceptance modes. Moreover, some researchers noticed that few of the studies which have focused on technology transfer into the developing countries, including Arab countries, have tried to investigate how (Arab) cultural values could influence general acceptance and use of e-business websites.

Furthermore, there is a scarcity in the literature that investigates the effect of culture on e-business websites. This study aims to investigate this area by looking into the factors that influence users' acceptance and usage of e-business websites.

CHAPTER 4

HUMAN COMPUTER INTERACTION AND CULTURE

4.1 Introduction

For many years now researchers have developed methods to understand how people use computers to do certain tasks, and how they interact with new technology. The aim of Human Computer Interaction (HCI) is generally to make performing tasks easier, effective, and satisfying (Norman, 1998). However, users from different cultures may face different problems when using computers. Therefore, designers need to take into account the target users to ensure that the interfaces designed are suitable for their use. This has generated interest in cultural issues in interface design during recent years.

Early studies focused on visible manifestations of culture such as symbols and website layout (Barber, 1995; Del Galdo, 1996). Others concentrated on problems such as date, time, currency and language formats (Nielsen and Tahir 2001) colour, icons and metaphor (Duncker, 2000; Nielsen, 2000). In addition, during this period of time, a few guidelines were produced for date format, time, numbers, currency, units of measure, and layout (Dunckley, *et al*, 1999; Nielsen and Tahir 2001).

More recent studies have investigated culture-sensitive issues such as icons, metaphors, functionality and perceived usefulness (Duncker, 2000; Evers, 2000; Abdelnour-Nocera and Dunckley, 2005). These studies show differences between users from different cultures and their perceptions and preferences, and as a result show variations in user behaviour and attitudes towards interface design (Kralisch and Bettina, 2004; Yeo and Loo, 2004). Taking this further, some studies have used cultural models, mainly Hofstede's (1991), in design decisions and in the interpretation of results from user evaluation (Marcus, *et al*, 2003; Jagne, *et al*, 2006).

Hoft (1996) suggests that cultural models can be used to show the importance of localisation of websites. Marcus and Gould (2000) studied the link between culture and features of a website design. The results reflect Hofstede's country ranking scores for uncertainty avoidance.

Schegg, *et al*, (2002) in their study included language use as part of a "value-added service" within their five dimensions, the other four being service processes, customer relationships, creating trust, and cyber-marketing. In addition, Marcus and Gould (2000) suggested the building of localised interfaces for national cultures by using Hofstede's study. They believe that "...companies that want to do international business on the web should consider the impact of culture on the understanding and use of Web-based communication, content and tools". Tsikriktsis**,** (2002) also investigated the link between culture and website quality expectations based on Hofstede's dimensions and WEBQUAL model; he found a relationship between culture and website quality expectations.

Singh (2003) developed a conceptual framework to analyse the cultural content of various country websites. His study was based on Hofstede's (1980) cultural dominations. His study shows that there is a strong relationship between website content and culture.

In another study, Singh *et al.* (2005) analysed 93 websites from local companies in China, India, Japan and the USA to investigate the cultural values on international websites. The results showed clear correlations between the cultural style of the websites and the cultural dimensions established by Hofstede (1980), they indicated that marketers and global companies should localise their websites to enhance and increase website efficiency.

Although these studies and guidelines provide a useful insight into requirements of designing for intercultural use, some of these guidelines are based on researcher experience rather than empirical research. Given the variety of cultures worldwide, it is

impractical to depend on personal experience (Dunckley and Smith, 2000). It is clear that more empirical studies are required.

4.2 HCI Approaches Dealing with Cultural Diversity

The discussion in the prior section suggests that users from different cultures may experience different problems when interacting with a website. To help avoid such problems, different methods and approaches have been developed to help website designers and management to deal with targeted peoples and different cultures:

4.2.1. Globalisation and Localisation

Website globalisation is a process of designing a website that could be used internationally within different cultural contexts (Bourges-Waldegg, 2000; Hall and Webb, 2000), while a website localisation is the process of modifying an existing website to make it more accessible, usable and culturally suitable to target users (Singh, 2003).

Many studies have investigated the issue of globalisation and localisation of the website content. Luna *et al*., (2002) Tsikriktsis, (2002); Singh, *et al*, (2006) confirm that website users from different countries have different cultures. They have different ways of life, different thinking, and the way taught to see things in culture. Therefore, different users prefer various website characteristics that meet their different needs in terms of navigation, information, security, product information, customer service, shopping tools and other features.

Additionally, Russo and Boor (1993) and Zahedi, *et al* (2001), pointed out that users do not prefer, and show resistance to, western symbols in favour of products localised according to their cultural variables. This raises the issue that marketers and website designer should consider cultural differences. Thus, companies should localise their websites to tailor and meet the needs of the different markets (Lynch *et al*. 2001; Sun, 2001; Singh. *et al*, 2005).

On the other hand, other studies supported internalisation of websites as cultural factors do not influence users' perception of websites, such as Hermans and Shanahan (2002), and Yang and Kang (2002) studies by proposing a standardised approach to web communications. In the same vein, Singh and Boughton (2002), in their study show that marketers are uncertain whether they should localise or standardise their websites. They used Forbers.com, search engine and found only 150 websites had country-specific web pages (such as, web address ending in .co. for UK, .jp for Japan, .it for Italy) and were localised for specific countries

Some researchers have combined different cultural approaches and develop new theories and frameworks. Zahedi *et al* (2001) developed a conceptual framework for exploring the differences in how users from different cultures and with different individual characteristics might use website documents. Zahedi *et al* claim that the framework is for the website but they focused on text alone. This is only one aspect of several in website design, so it is difficult to generalise their framework.

Another study by Sun (2001) relies on Zahedi *et al*'s model (2001) with other studies. He considers usability from a humanist approach. Sun uses the ecology metaphor for technology, which includes local differences, while he stresses the technology invented and used. However, there are no empirical studies that support the validation of Sun's study.

The online population has increased to reach 1.1 billion by 2005 (Lo and Gong 2005). This number refers to people from different cultures, Singh et al, (2005) comment that "currently 60 percent of the online population resides outside US ".

Violino (2001) states that understanding different cultures is the main barrier to extending globally, thus companies should work "to overcome cultural barriers and language differences on the website". Many researchers on website development have stressed the importance of a localised global website as this will attract and retain more customers (Tsikriktsis, 2002; Luna *et al*, 2002; Stengers, *et al* 2004; Singh, *et al*, 2005) stated that

the localisation of a website includes translating information content and modifying graphical and visual elements, content and examples to a make them culturally acceptable.

Companies by building their websites are looking to satisfy customers' needs globally, and marketers are working to perform this strategy. De Mooiji (2000) claimed that advertising reflects a society's values and that effective advertising and marketing should reflect this culture. Many studies have discussed that effective advertising and marketing is more powerful and persuasive when reflects local cultural values (Zandpour *et al*., 1994).

According to Luna *et al*. (2002), culturally congruent website content help users to use the websites and "...decreases cognitive effort to process information on the site, and represents an environment where demands are clearer, leading to easier navigation and favourable attitude toward the web site". This is because the processing of information is linked with cognitive schemas (D'Andrade, 1987); these schemes help people to store information in specific categories (Nantel and Glaser, 2006).

Singh (2003) developed a conceptual framework to analyse the cultural content of various country websites. His study was based on Hofstede's (1980) cultural dominations: individualism-collectivism, uncertainty avoidance, power-distance, masculinity, and long-term versus short-term orientation. His study shows that there is a strong relationship between website content and culture.

In another study, Singh *et al*. (2005) analysed 93 websites from local companies in China, India, Japan and the USA to investigate the cultural values on international websites. The results showed clear correlations between the cultural content of the websites and the cultural dimensions established by Hofstede (1980), they indicated that marketers and global companies should localise their websites to enhance and increase website efficiency.

However, although the research provides evidence of cultural differences in website content, there were some limitations of this study as, for example, the sample was not representative.

In addition, Marcus and Gould (2001) tried to build localised interfaces for national cultures by using Hofstede's study. They believe that "...companies that want to do international business on the web should consider the impact of culture on the understanding and use of Web-based communication, content and tools". Tsikriktsis**,** (2002) also investigated the link between culture and website quality expectations based on Hofstede's dimensions and WEBQUAL model; he found a relationship between culture and website quality expectations.

According to Gommans *et al* (2001), "...A website has to be designed for a targeted customer segment…local adaptation should be based on a complete understanding of a customer group's culture". This is important for e-business website visitors; they are looking for new experiences and to be exposed to new cultures.

In term of website design, many different features should be considered, such as menu layout, access to product information, professional design, screen design and navigation. These features may differ between cultures, for example, navigation of Arabic websites should be right to left, while in English, it's the opposite.

Some work in the area of design and culture has used Hofstede's dimensions to compare user reactions from different countries in preferences for design characteristics such as colour or screen images (Del Galdo and Nielson, 1996; Marcus and Gould, 2001). Del Galdo and Neilson (1996) pointed out that colour and screen design directions have various psychological and social associations in different cultures, and that diverse users have different concepts of screen use.

Badre, (2000) stated that the use of "cultural markers" is important when adapting a website to a specific culture. He listed the following website design elements: colour,

spatial organisation, fonts, shapes, icons, metaphors, geography, language, flags, sounds, motion, preferences for text vs graphics, directionality of how language is written, help features, and navigation tools.

A new trend in e-business websites has been developed by adding multilingualism: some websites having two styles, local and English language, some using more than two languages. Foe example, Hong and Kim (2004) remark the nature of the tourism industry indicates that "multilingual services can improve a tourism website's usability and thus help people with language barriers". This using different versions or providing global translator will help users for more understanding of the written language.

4.3 Research in Culture in HCI

Recent research on cultural issues in HCI investigates two major areas, culture's influence on interface attitude and preferences, and culture's effect on interface design elements. To provide more details of these approaches, the following section will discuss these issues in more detail, because they are valuable for this research, and provide insight into approaches and techniques for studying the impact of culture in user interaction.

4.3.1 The Influence of Culture on User Attitudes

Research in cultural studies has been focused on user attitudes towards websites and computers. By using a questionnaire for evaluating conceptions of computers among university students in China and Sweden, Allwood and Wang (1990), found differences in conceptions between the Chinese and Swedish students, though there was some variation between the areas of study the students were engaged in. They also found the Chinese students were somewhat more optimistic about the influence of computers on society than were Swedish students. For the Chinese students, humans and computers appeared to be more similar than for the Swedish students. In this study, the sample was very limited and it only evaluated two different cultures.

In another study, Omar (1992) found differences between cultures in attitudes towards computers. He used a questionnaire distributed to a sample of 286 students from a private university in the USA and 130 students from the University of Kuwait. The results revealed that US students' attitudes were more positive toward computers. He found that Kuwaiti women had more negative attitudes toward computers than Kuwaiti men, while no gender differences were found for the US sample. He also found that users experience' had a positive effect on student attitude among the American students which was in contrast to the Kuwaiti students, where there was no correlation between computer experience and computer attitudes. Omar concludes that the social consequences of religion (women's exposure to technology) and economic factors (negative attitudes through limited experience) influenced the findings.

Igbaria and Zviran (1996) also used questionnaires to compare end-user computing characteristics in the U.S., Israel and Taiwan. The sample includes 240 Israelis, 86 Taiwanese and 230 Americans: although the users were professionals working in companies and they controlled for the demographic variables, they found there were still significant differences in the variables tested. They commented that these differences may be due to cultural and language differences.

Evers and Day (1997) conducted a study to investigate the interface acceptance difference for Chinese and Indonesian users, the result suggest the existence of cultural differences in terms of systems usage. Chinese satisfaction toward the system was based on usefulness, while Indonesians' participants' satisfaction was built on ease of use. This shows that the Chinese users will try to work with a useful interface, even when it is not easy to use, while Indonesians users willing to use easy to understand interface. The researchers conclude that the reason for such results of the fact that the Indonesian culture is described as higher in Uncertainty Avoidance than the Chinese. The researchers used the English language rather than a translated survey for the non-English participants.

De la Cruz *et al*, (2005) investigated cultural influences on website quality and evaluation factors. They used a questionnaire with over 350 Internet users from Peru and Germany.

The results indicate that the features of website quality differ between these two cultures; although the analysis failed to explain the results based on Hofstede's (1991) cultural dimensions. They went on to argue that there is no Internet international culture and that local cultures still influence user attitude and behaviour (De la Cruz, *et al*, 2005).

All the studies described above used quantitative survey methods and investigated users' attitudes towards using computers and websites. The studies show that culture had a high influence on user attitude toward using the websites.

4.3.2 The Effect of Culture on Interface Design Elements

Researchers have given little attention to the special requirement of websites across borders and users' cultural aspects, (Luna *et al*., 2002; Tsikriktsis, 2002; Singh, *et al*, 2006) on the importance of websites localisation. They confirm that website users from different countries having different cultures should be considered when building a website.

In addition, Schegg, *et al*, (2002) in their study included language use as part of a "value-added service" within their five dimensions, the other four being service processes, customer relationships, creating trust, and cyber-marketing. In addition, Marcus and Gould (2001) try to build localised interfaces for national cultures by using Hofstede's study. They believe that "...companies that want to do international business on the web should consider the impact of culture on the understanding and use of Web-based communication, content and tools". Tsikriktsis**,** (2002) also investigated the link between culture and website quality expectations based on Hofstede's dimensions and WEBQUAL model; he found a relationship between culture and website quality expectations. Sigala and Sakellaridis (2004) have used Hofstede's (2001) cultural dimensions and E-SQ model to developed global rules for culturally aware website design.

In Tsikriktsis**,** (2002) and Sigala and Sakellaridis (2004) studies, it was assumed that the WEBQUAL dimensions are the same across cultures, although others have questioned the validity of SERVQUAL across cultures (Furrer *et al*., 2000; Arlt, 2006). Also the sample of Sigala and Sakellaridis, (2004) was limited as it was based on research students, so the findings could not be validated and generalised.

Furthermore, Jang (2004) confirmed that "...the results of studies focusing on the cross-cultural differences in online search behaviour . . . should be incorporated into a website designing process to capture every cultural market segment since the Internet as a worldwide target" is seldom translated into criteria for website evaluation (Arlt, 2006).

Morrison *et al*., (2004) confirmed that culture is an important factor to be taken into account for evaluating websites. "...Even so, implicit cultural values are part of any evaluation when, for instance, "uncluttered" web- pages are seen as an asset of any website regardless of the targeted audience" It is important that companies consider the cultural aspects of their target segment and should adapt to each source, "stressing common points or explaining local culture in terms that relate to the source culture and therefore are easier to understand and probably more sympathetic to the receiver"(Arlt 2006).

Arlt (2005) produced three golden rules for expanding and extending business internationally. These rules confirm that the users or customers should be able to: "find the online information; understand the online information; and feel comfortable about the way it is presented". These rules support three important issues that should be considered when companies target international users that the e-business websites should be found easily through search engines, use understandable language and content for the targeted segment, and finally make users feel comfortable while browsing the e-business websites.

Colours, images and symbols have different meanings in different cultures. Pictures or images may have certain negative connotations that may annoy users. For example, in an Arab country using pictures on a website of women with skimpy clothes or in bikinis on

the beach or other places, people engaged in drinking beer, disco dancing will probably not succeed. These pictures could succeed in Western countries. Accordingly, providing images should confirm the fact" look and feel" and reflect positive attitude toward the websites.

When applied to website design, interface colours influence user's expectations about navigation, links, background, and content, for example, in addition to overall user satisfaction (Badre, 2000). Table 4.1 below shows some differences between cultures related to colors which firms should consider.

Table 4.1 Colour -Culture Chart

Colour	China	Japan	Egypt	France	United States

Source: Badre, A. (2000) (data removed for copyright reasons) Some studies proposed that graphic and iconic representations are not universally realised and understood, as they are culturally learnt (Del Galdo, 1996; Evers, 2000). Some graphics, symbols and images may offend one group of users on cultural or religious grounds. Yeo and Loo (2004) comment that user- preferred classification schemes changes within cultures, which are dependent on the attributes of their country.

Another example is that a picture of the manager behind the desk will be acceptable in a culture with high power distance such the Arab culture (Hofstede's dimensions) while in

a low power distance the manager's picture should be mixed with employees using a round table setting.

Another important issue that should be considered is navigation around the website. Users from different countries have different methods for reading; the Arabic language is read from right to left while the English language is read from left to write and some Japanese and Chinese scripts are read from top to bottom. Also navigation of the websites should be naturally adopted with users' cultures. Del Galdo (1996) presented that screen design directions have different psychological and social connections in different cultures, and that various users have different concepts of screen usage.

Therefore, as we would expect, website design and content should be customised to "appeal to local users and promote brand loyalty as it relates to the overall website experience. In addition, culturally sensitive images, icons, symbols, and colours should be taken into account as well as, linguistic considerations regarding word choice and the use of clichés and slang" (Becker, 2002). With increasing websites users, companies should consider international users and their cultures.

In the previous section, the review of literature discussed the results of many empirical cultural studies in HCI. These studies do not take into account e-business website usage as it relates explicitly to cultural dimensions. Moreover, there is still little empirical evidence for how consideration of cultural models could improve interface design. Many researchers stress the need for more empirical cultural research into the perception and preferences of users towards the Internet and websites (Bourges-Waldegg, 2000; Evers, 2000).

CHAPTER 5

RESEARCH METHODOLOGY

5.1 Introduction

Research in information systems is a complex multidisciplinary field, which includes particular research styles and uses different methods (Galliers, 1992). According to this notion, different methodologies could be employed to cover all the domains of knowledge essential for such studies (Land, 1992). Thus, in this study, the researcher has taken into account different research approaches and techniques so as to meet the research objectives.

This chapter aims to describe the methodology that is applied by this study, to investigate the relationship between factors that influence website acceptance. Accordingly, this chapter could be described as the core of this study, as it aims to present a comprehensive exploration of its methodological issues.

This chapter is structured as follows: it starts with an overview of research design and philosophy including types or approaches of research, followed by justifications for the chosen study research methodology and design including the study population and sample. Furthermore, the chapter discusses the main data collection methods used in this research for primary data collection; namely, semi-structured interviews, and personally administered questionnaires, in terms of their design, structure, content, and all other issues related to each method. The chapter also discusses the pilot study, objectives, procedures, and results. Finally, the chapter concludes with a discussion of the appropriate statistical methods and techniques used to achieve the research objectives.

5.2 Research Philosophy

Research philosophy refers to the way the researcher thinks about the development of knowledge (Saunders *et al*., 2003). There are two research philosophies that dominate the Western academic literature: positivism and phenomenology (Easterby-Smith *et al*. 2002; Collis and Hussey, 2003; and Saunders *et al*. 2003). These have different assumptions and methodological implications as to how they interpret the social world and how social science should be conducted (Creswell, 1998).

Research philosophy helps decide other elements of a research methodology, such as the research approach, strategies, data collection methods and even the data analysis techniques. According to Easterby-Smith *et al*. (2002), it is useful to understand philosophical issues for the following reasons:

1. To help clarify research designs
2. To help researchers to determine which designs work and which don't. This is particularly useful to avoid researchers deviating from what is required and help understand limitations of certain approaches.
3. To help researchers to create designs which are may not relate to their previous experiences. Also, it provides a means to adapt research designs to different knowledge domains.

Within the positivism paradigm, a researcher develops from the available literature a theory and hypothesis (or hypotheses) about the relationship or effect between two or more variables, which is then tested empirically by gathering data on the relevant variables and then applying statistical tests to the data in order to identify significant relationships.

According to Gill and Johnson (2002) and Collis and Hussey (2003), this philosophy is characterised by five distinguishing features: it is deductive (theory tested by observation); it seeks to explain causal relationships between variables; it frequently utilises quantitative data; it employs controls to allow the testing of hypotheses; it uses a structured methodology to facilitate replication.

On the other hand, a phenomenological philosophy is characterised by focusing on the meanings that research subjects attach to social phenomena. In investigating social sciences, this philosophy views 'reality' not just as objective or exterior but as it were socially constructed and given meaning by people. The main concern of phenomenological researchers is to appreciate what is happening and why it is happening. Such research would be particularly concerned with the context in which events were taking place. According to Leedy and Ormrod (2001), qualitative data in the form of lengthy interviews with a carefully selected sample of participants would be the main method of work for researchers adopting the phenomenological philosophy.

Hussey and Hussey (1997) argue that positivistim and phenomenological paradigms are sometimes described using different terms. The positivistic approach can sometimes be considered as traditional, quantitative, or empiricist 'scientific', whilst the phenomenological approach can be considered as post-positivistic, subjective, or qualitative.

Whether to use positivism or phenomenology is a matter of debate among philosophers. Recently, a combination of both approaches is preferred, not least because the differences in approach re-enforce any conclusion that they both support. The rationale for this combination is that each philosophy has strengths and weaknesses. Thus, using a combination of philosophies would maximise their strengths and minimise their weaknesses as shown in Table 5.1 below:

Table5.1 Strengths and Weaknesses of Research Philosophies

Strengths	Weaknesses

Source: Easterby-Smith *et al*. (2001) and Collis and Hussey (2003) (data removed for copyright reasons)

Hussey and Hussey (1997) discuss the differences between the positivistic and phenomenological paradigms, Table 5.2 below summarises the main features of these approaches.

Table 5.2 The Main Features of the Positivistic and Phenomenological Paradigms

Positivistic Paradigm	Phenomenological Paradigm

Source: Hussey and Hussey (1997) (data removed for copyright reasons)

5.3 Types of Research Methods

Within the research philosophy, there are three types of research methods: quantitative, qualitative and mixed methods.

5.3.1 Quantitative Research

Quantitative research is concerned with explaining the relationships between variables and testing specific hypotheses. Descriptive and inferential statistics are used to evaluate how to describe the way researchers apply quantitative approach. In addition, the quantitative research is suitable to record a small set of previously identified variables.

A survey strategy is the most common quantitative strategy conducted by questionnaire, and interviews. However, as in any other research method, it has its own advantages and limitations. Easterby-Smith (1991) states some of the advantages as follows:

1. Quantitative methods can provide a wide coverage of the range of situations.
2. They are fast and economical, involving statistics aggregated from potentially large samples on which basis they may be of considerable relevance to policy makers.

The disadvantages are:

1. The methods used tend to be rather inflexible and artificial.
2. They are not very effective in understanding processes or the significance that people attach to actions.
3. They are not very helpful as they make it hard for policy makers to infer what changes and actions should take place in the future**.**

However, quantitative methods have been the main consideration with many studies involving social sciences (Cohen, 1988) because of their efficiency and ability to help generalise the data collected. Therefore, many researchers consider data collected by quantitative methods more scientific and supporting (Hartmann, 1988).

5.3.2 Qualitative Research

Qualitative research is defined as: "…A process of enquiry that draws data from the context in which events occur, in an attempt to describe these occurrences, as a means of determining the process in which events are embedded and the persepectives of those participating in the events, using induction to derive possible explanations based on observed phenomena." (Gorman and Clayton, 1997).

According to Spencer *et al*. (2003) "Qualitative research aims to provide an in-depth understanding of people's experience, perspectives and histories in the context of their personal circumstances or setting**".** In contrast with the quantitative research approach, rather than being restricted in a relatively narrow band of behaviour, with the qualitative approach the researchers will find it more convenient to explore the phenomena in their natural environment (Rudestam and Newton 2001). A qualitative approach emphasises data in the form of words as opposed to numbers. There is also more emphasis on description and discovery and less importance is given to hypothesis testing and verification. So more wieght is given to exploratory than explanatory concerns to enable better understanding of the research problem.

Methods like case study, interviews, group discussion, participant observation and documents and records analysis could be applied to this approach. The main advantages of using qualitative research methods are to identify and clarify specific responses, particularly those that are related to the attitudes and behavior of the respondents and to get a deep insight into their organisational climate. In addition, qualitative methods also help to gain more understanding into people and situations and help the respondents to better understand their own world and consider the way they build their reality (Eastrby-Smith, 1991).

5.3.3 A Mixed, Multi-Methods Approach

In reality, research rarely fall under one specific research philosophy like positivism (quantitative) or phenomenology (qualitative). Most research often uses a combination of both philosophies. Saunders *et al*. (2000) emphasise that it is better to combine approaches within the same piece of research. In this context, Easterby–Smith (1991) also argued that the difference between a quantitative and qualitative approach is not always apparent. Some techniques could be used in both approaches, for instance, the interview. Similarly, a single piece of data, such as an interview transcript, can be analysed in both ways. In addition, there is no constraint to use a particular method in a particular circumstance and another for another circumstance.

This approach has many advantages. Mainly, researchers can use combinations of different methods in one single study, either because of the research design or in order to corroborate results from different methods. The above mentioned approach is supported by an approach known as 'triangulation', which is defined by Leedy and Ormrod (2001), as the use of two or more sources of data collection methods within one study in order to help ensure that the data produced by the various methods are consistent to what is expected. Thus the choice of multi-methods of data collection enables triangulation to take place.

More specifically, as suggested by Saunders *et al*. (2003), semi-structured interviews can be a valuable way of triangulating data collected by other means, such as a questionnaire. It increases validity because it ensures that the variable variance is attributed to the trait of the subject examined rather than to the method used for investigation. In short, triangulation consists of crosschecking data for internal consistency and external validity, which are matters of concern for any study (Sounder *et al*., 2000, 2003; and Yin, 1994).

Generally, in information science, Moahi (2000) notes that it is common to use a combination of both qualitative and quantitative methods because information rises above the qualitative and quantitative dichotomy.

The basis of the multi-method approach lies in the fact that qualitative and quantitative methods complement each other rather than compete with each other (Saunders et al., 2003). According to Creswell (1998), the choice of utilising this multi-method approach would make the best of both methods and nullify the disadvantages of each one.

5.4 Deductive vs. Inductive

While research using the inductive approach involves the collection of data and theory development based on the results obtained from data analysis, the deductive approach involves the development of a theory and hypothesis (or hypotheses) and then designing a research strategy to test the hypothesis (Saunders *et al* 2000).

The deductive approach, also known as a "top-down" approach, works for both generic and specific types of research. On the contrary, inductive reasoning, commonly known as "bottom up" reasoning, works on moving from specific observations to broader generalizations and theories (Trochim 2002).

In this type of study, researchers begin by deciding on a theory for the topic of interest. Then they attempts to narrow that down into more specific hypotheses that can be tested; then, they scale down even further, when collecting related data to address the hypotheses. This ultimately enables the researcher to test the hypotheses with specific data, which is a confirmation or verification of the original theories.

Saunders *et al*. (2000) confirm that the deductive approach represents the positivistic paradigm, where the inductive approach represents the phenomenological paradigm.

5.5 Important Criteria when Deciding Research Design and Approaches

Two main issues help to decide the appropriate methodology that could be used. Firstly, the nature of research questions and objectives, where, no single approach could emerge as superior; all depends on what needs to be found and also the type of question the research aims to address. Secondly, it is important to consider cases where the availability of relevant literature is in abundance or scarcity. The deductive (or

quantitative approach) would fit into research where there is availability of literature from which to draw hypotheses, while, when the research topic is new and controversial and there is scarcity of literature, it may be more appropriate to generate data and analyse them to formulate a theory (inductive, qualitative approach).

Creswell (2003) points out that, in quantitative research studies, the problem is derived from the literature, in that a substantial body of literature exists in terms of known variables and existing theories that may need testing or verification.

5.6 The Study Chosen, Research Design and the Rationale Behind this Choice

It is worth mentioning that this research does not fall under one particular research philosophy: positivism or phenomenology. To facilitate a flexible research design and to generate more flexibility when dealing with social issues, a combination of the two approaches will be used.

After general reviewing of literature related to research methods and deciding on the research objectives, as well as taking into account all methodological limitations, and criticisms, the researcher found that the multi-method approach (method of triangulation) conducted through survey questionnaires and semi-structured interviews in a complementary or supplementary way, rather than in competition with each other, is an appropriate and flexible method to conduct this research. The rationale for the methodology is as follows:

- This is an empirical study. As mentioned in chapter (2), there is lack of previous empirical study relating to Arab culture and a lack of study examining the relationships between Arab and other cultures (e.g. UK).
- The research is conducted in the context of Arab and UK tourists. It is designed to investigate the factors affecting users' acceptance and usage of e-business websites. Achieving these objectives requires a multi-method approach

(qualitative and quantitative) including semi-structured interviews, in addition to the survey of the available secondary data.

- The study includes many subjective variables or factors including social behavioural factors, beliefs and attitudes that need to be explored and explained in detail. The intention is to investigate and measure these using both qualitative and quantitative methods.
- This approach enables methodological trangulation through the use of a semi-structured interview, survey questionnaire, and literature review. As discussed by Saunders *et al.* (2003), semi-structured interviews can be a valuable way of triangulating data collected by other means, such as a questionnaire. It increases validity because it ensures that the variable variance is attributed to the trait of the subject examined rather than to the method used for investigation.
- The approach is consistent with other studies related to the influence of culture on technology acceptance in different contexts (At-Twaijri, and Al-Muhaiza.1996; El Said and Hone 2005; Akour, *et al* 2006). This supports comparison between studies and improves consistency, validity and reliability.
- In information systems research, using multiple research techniques is supported by different researchers e.g. (Aladwani, and Palvia, 2002; Robbins, and Stylianou,2003; Amoako-Gyampah and Salam, 2004; Li and Zhang, 2005). Moreover, Winfield, (1991) pointed out that information systems are seen as social communication systems, embedded in cultural context, therefore, multiple perspectives should be considered when researching this subject, where the use of multiple of research techniques is important.
- Statistical analysis of the quantitative data collected will enable synopses, comparisons and generalisation. The qualitative data will provide a platform for amplification, explanation and description of events, actions, attitudes and behaviour.

5.7 The Population

Sekaran (2003) defined a population as "the entire group of people, events, or things of interest that the study needs to investigate". This study investigates factors that influence user acceptance of e-business websites and the cultural differences between two groups of people (Arab and UK) in term of their acceptance and usage of websites. The research population includes all tourists from the UK and Arab countries who visited tourist sites in Jordan.

Previous studies did not provide explicit definitions of the term “nationality”. According to the Oxford English Dictionary the word “nationality” means “the status of belonging to a particular nation by birth or naturalisation”, and “nation” is defined as “a politically organised body of people under a single government”.

Steenkamp (2001) pointed out that culture can only be categorised at the national level if there exists some significant degree of within-country commonality and between-countries’ differences in culture. Therefore, he indicates that culture does not equate with nationality.

Usually, in this domain, researchers use data and statistics that are distributed by specialist and government institutions about tourism activities. The data that is issued is usually classified by tourist nationality but does not provide information about the criteria of this classification or information about culture, ethnicity or religion etc (Pizam and Jeon, 1996).

In general, tourists are usually targeted at national level, not at a cultural level. This study used information provided by Ministry of Tourism and Jordan Tourism Board (JTB) which is based on nationality not on a collective culture. In this case, the passport is used as a means to identify the tourist’s nationality. Based on the statistical report (2004-2006) provided by JTB and Ministry of Tourism in Jordan, Europe tourists are the largest tourist-generating continent in its supply of tourists to Jordan beyond the Arab countries

as noticed in Table 5.3 below. In addition to the above reason, Europe has been chosen because of the historical relationships and the importance of the location of Europe relative to Arab countries.

Table 5.3 Tourists to Jordan by Nationality

Nationality	2004	2005	2006
Africa	7,510	11,033	14,526
America	131,844	157,935	199,210
East, South Asia & the Pacific	138,232	151,172	174,130
Europe	**528,112**	**554,160**	**643,528**
Arab Countries	**1,795,369**	**1,851,099**	**1,918,736**

A review of the average number of visitors to Jordan from European countries in the last available three years (2004-2006) revealed that UK tourists constitute the biggest portion of visitors to Jordan, accounting for 17% of European tourists. Appendix (2) shows the number of European tourists visiting Jordan (2004-2006).

The population for the study consists of Arab and UK tourists who are visiting Jordanian tourist sites.

5.8 Sample Design

For any research, it will be impossible and impractical for researcher either to collect or to analyse all the data available from entire group under study as specified by the objective of the research. So, choosing a small representative sample of the population will be the right method (Sekaran, 2003). In statistical research it is clear that sampling can yield an acceptable overall level of accuracy. This saves both research time and money and other resources (Yoon, 2002).

A number of studies discuss sampling design and its procedures. Sekaran (2003) stated that there are two main criteria that need to be considered in the sample design:

a) The representatives of the sample, and

b) The objectives of the study.

As shown in Figure 5.1, the sample design can be either probability or non-probability sampling based on the importance of the representatives of the sample. The representative nature of the sample is critical for any generalisation of the results (Saunders *et al*. 2000; Tabachnick and Fidell, 2001; Hair *et al*. 2003).

A probability sampling technique means each element of the research population is a known, but not necessarily equal (Sekaran, 2003). In addition, according to Collis and Hussey (2003), the sample should be representative because it is selected at random (i.e. each element of the population must have equal chance of being selected).

Probability sampling techniques can be classified into four types, namely: simple random, systematic, cluster and stratified. Simple random sampling includes choosing the sample at random from the population using either random number tables or a computer. Systematic sampling also involves selecting the sample from the sampling frame but at regular intervals. With cluster sampling the subjects' clusters, where sampling occurs, are selected randomly, it requires the researcher to split the population into discrete categories before sampling (Hair *et al*., 2003). In the stratified technique, the overall sample size is the total of all the elements from each of the strata. The number of elements from each stratum is proportionate to the size of a particular stratum relative to the overall sample size.

Generally, the main advantages of probability samples are that sampling error can be computed and results can be generalised. However, it is limited by its cost, time consuming and requires more time to design and implement.

On the other hand, non-probability sampling is based on a researcher's subjective judgment and providing a range of different techniques (Saunders et. al., 2003). The purpose of the sample is not necessarily made to be tested statistically so as the results could not be generalised. This method relies upon the researcher's personal experience, convenience, expert judgment and so on to choose the elements in the sample (Hair et al et. al., 2003).

According to Samouel et. al., (2003) most common non-probability sampling methods are namely: convenience, quota and judgment sampling. A convenience sample includes choosing subjects who can provide needed information and who are easier to reach to participate in the study. Judgement sampling is to choose a sample element for a specific purpose, those people who are most knowledgeable about particular problem can be selected as sample element. Sometimes it is referred to as a purposive sample because it involves a specific purpose (Hair et. al., 2003). Quota sampling is to have proportional representation of the strata of the target population for the total sample and the certain characteristics describe the dimensions of the population (Cooper and Schindler, 2001).

The main disadvantages of non-probability samples are that sampling error cannot be calculated and results cannot be generalised. On the other hand, the main advantages of non-probability samples are it is: less costly than probability, can be executed more quickly and the results are reasonably representative (Hair, et. al, 2003).

Stratified sampling is divided into:

1. Proportionate stratified sampling, where the sample should be weighted to re-establish the sample size.
2. Disproportionate stratified sampling, which could be applied when the sample is unknown and the sample could not be weighted.

After identifying each stratum where the members of the population are organised into groups (called *strata*) according to certain characteristics of interest, then, a simple random sample is drawn from each stratum.

The stratified sampling technique is used as it increases a sample's statistical efficiency; provides adequate data for analysing the various subpopulations; and enables different research methods and procedures to be used in different strata (Emory and Cooper, 1991).

Simple random sampling is distinguished by its simplicity and ease of application, it is free of classification error, and data collection can be efficiently conducted, it is the most commonly used (Burns and Bush 1998). In addition, this technique does not require any additional information on the population (such as geographic areas) and saving researcher time, money and other resources (Yoon, 2002).

Based on the above discussion and after revision the sample techniques, the decision were made to use a simple random probability sample method in this study.

Figure 5.1 Classification of Sampling Technique

Source: Saunders *et al*. (2000)

5.9 Sample Size

Studies confirm that there is no consensus regarding what is the exact or right number for small or large sample means. Yoon (2002) argues that, in general, there is no correct

sample size although larger sample sizes are always preferable until you have to justify the increase in accuracy against the cost. However, Saunders *et al*. (2003) stated that a sample size of 30 or more is large and adequate to conduct statistical analysis while Hair *et al.,* (2003) confirmed that a minimum of 100 observations should be available and require for Multiple Regressions Statistical techniques. Also, Comrey and Lee (1992) and Tabachnick and Fidell (2001) mentioned that at least 300 cases is deemed comfortable, 500 as very good. According to (Chin, 1998) the sample size needs to be either seven-to-ten times the greatest number of items in any variable, or seven-to-ten times the greatest number of antecedents to a construct.

Furthermore, the minimum requirement of the sample size may be different depending on the statistical analysis that will be used. Table 5.4 below provides a summary of recommendations derived from the literature.

Table 5.4 Statistical Analysis with Minimum Sample Size Requirements

Statistical Analysis	Minimum Sample Size
Factor analysis	Minimum sample size should be at least 100 (Hair, *et al* 2003).
T-Test	Sample size (n) of at least 30 for each group (Pallant 2005).
Regression analysis	300 cases is adequate and 500 is very good (Comrey and Lee 1992; Tabachnick and Fidell 2001).
Structural Equation Modelling (SEM)	Sample size in a range of 150-400 recommended (Hair *et a*l. 2003).

In this study, a random sample of 837 Arab and UK visitors to these sites was selected. This included 624 Arab and 213 UK tourists (A ratio of 3:1) based on visitors to tourist locations. The overall sample exceeds the recommended numbers suggested in the literature for the analysis to be carried out and it seems be an adequate for such research.

5.9.1. Respondents' Profiles

As shown in Table 5.5, of 1017 tourists who were asked to complete the questionnaire 83% agreed to participate. UK tourists were more willing than Arab tourists to participate in the study about their attitude toward using e-business websites. These differences might be related to differences in culture. Moreover, the return rate was 82% is presented in Table 5.5. This high rate possibly refers to method of distribution the questionnaire (self-administered) as well as the continuous following up and the cooperation of the tour guides who kept reminding the participants to complete their copies before finishing their tour. Out of the (679) returned questionnaires, 56 questionnaires were excluded; (17) out the UK sample and (39) from the Arab sample were discarded because they did not answer all the questions. Consequently, 623 questionnaires were valid for more statistical analysis.

Table 5.5 The Number of Questionnaires Distributed and Return Rate

Nationality	Asked to Participate	Accepted	Returned Questionnaires	Analysable Questionnaires	Response Rate	Return Rate
UK	251	213	182	165	84%	85%
Arab	766	624	497	458	81%	79%
Total	1017	837	679	623	83%	82%

5.9.2 Study Sample

Three main locations were chosen to conduct the survey namely, Petra, Jaresh and Amman Citadel. These sites were chosen for the purpose of this study because they have attracted the highest number of visitors in recent years from Arab and Western countries. It is worth mentioning that Petra was chosen as one of the Seven Wonders of the World in 2007. This contributes to increasing number of tourists who are now visiting Jordan.

Table 5.6 shows the number of UK and Arab tourists visiting Petra, Jaresh, and Amman Citadel during the period (2004-2006).

Table 5.6 Average Number of UK and Arab Tourists Visiting Petra and Jaresh, Amman Citadel (2004-2006)

Nationality/ Location		2004	2005	2006
Petra				
United Kingdom		10,851	32,843	37,021
Arab Countries		86399	89039	97793
Jaresh				
United Kingdom		9,336	11,946	10,068
Arab Countries		41970	41018	42204
Amman Citadel				
United Kingdom		12741	12011	14120
Arab Countries		76213	93360	119213
Total	United Kingdom	32,928	56800	61,209
	Arab Countries	204,582	223,417	259210

5.9.3 Unit of Analysis

According to Kervin, (1992) the unit of analysis should be at as low a level as possible. The unit of analysis in this study is the *tourist*.

5.10 Data Collection Methods

Data collection concerns how information is gathered to meet the research objectives. Generally, there are different methods of data collection such as interviews, questionnaires, observations or archival records. As a result, these methods can be used separately or combined.

Two methods of data collection can be used by any research: secondary and primary. Secondary data collection methods include all data resources that could be available to a researcher. There are two types of secondary data according to Saunders *et al*. (2003); documentary data (including written data such as books, journals, and reports) and non-written data such as television programmes, CD-ROMs. On the other hand, primary data can be collected by observation, interviews and/or questionnaires (Hair et. al., 2003). These methods, as suggested by Silverman (2001), must be understood in both approaches: quantitative and qualitative. Researchers using the quantitative approach collect data on predetermined instruments, such as questionnaires that yield statistical data, while researchers using a qualitative approach to collect words and observations.

Researchers strongly recommended that a study should use secondary and primary data and combine quantitative and qualitative methods (Malhotra and Birks 2003; and Saunders *et al*. 2003). Accordingly, in this research, secondary and primary data collection methods were used together to achieve the research objectives.

This study used a multi-method approach through the application of semi-structured interviews, and self-administered questionnaires, as the data collection methods worked in a complementary way with each other rather than be in competition. The following sections will provide more details the used methods of data collection:

5.10.1 Interviews

Since the study is dealing with different subjective factors that need to be explored in depth one of the data collection methods used in this research was face-to-face semi-structured interviews,. In addition, the lack of similar studies about website acceptance and usage makes the survey questionnaire alone insufficient for this kind of study. To investigate the problems in more depth, it was decided that semi-structured interviews were an appropriate support data collection method for this research.

Interviews are a very useful tool in research in general, as they can be employed for different purposes. Interviews can be used in an exploratory phase to help in exploring the research problem and help in identifying the research variables, in addition, they can be used to supplement other data collection methods such as the questionnaire where it can enrich the results and help the researcher to have a deeper understanding of respondents' motivations (Kerlinger, 1986; Kervin, 1992).

In this study, interviews were conducted to supplement the gathered data by the questionnaire survey and to achieve the strength offered by triangulation. However, although the questionnaire is a very useful data collection method and provides more information about the research problem, the flexibility of a semi-structured interview has the advantage of allowing interviewees to provide more detailed and in-depth information based on their experience, expertise and knowledge.

In the present study, the participants in the interviews were included key informants selected from Jordanian universities in IT, social science and experts in website development, i.e. people who have experience and knowledge about the acceptance and usage of e-business websites, as well as website quality. Furthermore, Jordanian academic key informants are expected to have knowledge about Arab culture and its implication for website acceptance. Tourists from the UK and Arab countries were interviewed to explore and identify the main factors that influence the acceptance of e-business websites. As shown in Table 5.7 below, 30 participants were chosen to conduct the interviews. Chapter 7 provides more details about the interviews and its details.

Table 5.7 The Participants – Interview

Participants		Interviews number
Tourists	Arab	18
	UK	6
Arab Academics		6

5.10.2 The Study Questionnaire

The data collection method used in this study was the survey questionnaire. Sekaran (2003) defined the questionnaire as "pre-formulated written set of questions to which respondents record their answers". It allows collection the data from a large sample prior to quantitative analysis.

According to Saunders *at el* (2003), there are many types of questionnaire design depending on how it is administered and the amount of contact with respondents. These designs can be divided into self-administered questionnaires and interviewer-administered questionnaires. Self-administered questionnaires are usually completed by respondents; such questionnaires could be delivered and returned via email or internet (on-line questionnaires), or posted to respondents who return them by post after completion (posted or mail questionnaire), or they could be delivered by hand to each respondent and collected later (a personally administered questionnaire).

On the other hand, interviewer-administered questionnaires include a structured interview where the respondents need to answer a predetermined set of questions based on standardised questions. The choice between these types of questionnaires depends on many factors such as the characteristics of the respondents from which the researcher wishes to collect data, the size of sample required for analysis and the required response rate.

The questionnaire has its own advantages and limitations. The main advantages of the questionnaire seem to be: a very versatile method for collecting data from a population; it is low-cost for both researchers and subjects; there is no requirement for a highly skilled researcher; it is based on advanced statistical analysis of the collected standardised data allowing easy comparison and understanding; On the other hand, questionnaires have many disadvantages: they require expertise in their design, conduct and interpretation.

In this study, the questionnaire was used as there are no previous studies that have investigated these factors influencing the acceptance and use of the e-business websites.

This study aims to get better understanding of individuals' beliefs and attitudes towards new technology such as e-business websites so as to understand and identify the important factors that drive the development and classification of consumer behaviour in relation to their use. Survey research is plausibly the most appropriate method that could help to collect original data describing a large population observing directly (Babbie, 1990). Also, researchers have used the survey in related studies within Arab countries such as (Straub *et al*., 2001; Akour, *et al* 2006).

Two types of question could be used in the questionnaire; open-ended and closed-ended questions. In open-ended questions there are no limitations on the answer and the response are often richer and more detailed, but are difficult to be categories and computerise, while in closed question responses are restricted to a small set of responses that generate precise answers (Riley *et al* 2000).

Two principles form the foundation for good instructions: clarity and courtesy. In other words, this means the questions should be simple, anonymity[4] should be guaranteed for respondents, there should be easy understanding, they should be short with clear instructions and have an easy layout to follow. Generally, it should be 'user friendly' (Riley *et al* 2000; Easterby-Smith *et al.* 2001).

The choice of this research is to use personally administered questionnaire to increase response rate and increase the questionnaire reliability and validity (Babbie 1998; Sounder, *et al*, 2000).

5.10.2.1 Objectives of the Questionnaire

The objective of the questionnaire is to generate sufficient data to construct a valid picture, in this case of the user's acceptance of e-business websites and the influence of culture on their attitudes and this acceptance. This survey will also help to determine for the benefit of tourist businesses the perceptions of tourism customers of what are the factors influence the acceptance and usage of e-business websites. Furthermore, the study

[4] Ensure that the identity of the respondent was not required and an indication of the name of the organisation was optional

aims to establish cultural variables that underlie cross-cultural differences (or similarities) between Arab and European countries in the acceptance and usage of websites. The questionnaire was considered an appropriate method which can help to collect original data that describes large population observation directly (Babbie, 1998).

5.10.2.2 Questionnaire Development

A self-administered structured questionnaire was developed to collect quantitative data relating to impacts of user acceptance and usage of websites. The rationale behind using this method is to increase response rate and increase the questionnaire reliability and validity (Sounder, *et al* 2003). Also this helps the researcher to answer any questions or comments regarding to the survey. Another important issue related to the Arab culture, is that Arabs generally prefer personal contact rather than other communication methods such as emails or letters. Therefore, it seems an appropriate method for collection data within the Arab society.

Furthermore, to reduce response bias and acquiescence bias among the subjects, the information about certain categories is asked in different ways which some times include negative and positive items so as to decrease the bias of question results (Zikmund, 1991; Dillon, *et al*, 1993).

For the purpose of this study a Likert scale is employed as it suggests a simplified method of attitude measurement (Burns, 2000). Likert's scale was found appropriate for this study because it allows for more homogeneous responses and enhances the probability that unitary attitudes are being measured in reasonably high validity and reliability (Burns, 2000), as well as it being the most common method used with factor analysis test (Moser and Kalton, 1983).

In regards to the number of scale points, there is no consensus or agreement rule suggesting an ideal number, but, some researchers notice that opinions can be obtained better with a five to seven point scale (Malhotra, 1999; Sekaran, 2000). Actually, researchers point out that a five-point scale is just as good as any other (Sekaran, 2000) and increasing the scale does not improve the reliability of the ratings (Sekaran, 2000) and can cause confusion to the respondents (Hair *et al*. 2003). Thus, a five-point Likert

Scale is employed in order to obtain data required, where step 1 indicated is not important and 5 is extremely important. In general, the Likert Scale is the most widely used form of scaled items where the respondent chooses a point on a scale that best represents his/her view (Allison *et al*, 1996). The rationale behind using rating scales (Likert and numerical scales) is as follows:

a) It allows the researcher to have a variety of statistical techniques and conduct powerful statistical analysis, e.g. using correlation.
b) Respondents could make good judgements and give some degree of flexibility of choice to reflect the intensity of respondents' views.
c) It does not confuse the respondents with having many choices on its continuum scale.

Despite the Likert Scale's advantages, Cooper and Schindler (2001) admitted that two main errors could be resulted: a central tendency and the halo effect. According to Cooper and Schindler (2001), respondents are reluctant to give extreme judgements, which accounts for the error of central tendency, in particular, when the respondent does not know the object being rated. The halo effect, on the other hand, is the systematic bias that the respondent introduces by carrying over a generalised impression of the subject from one rating to another. For Cooper and Schindler (2001), the halo effect error is difficult to avoid, in particular, if the property being studied is not easily observed or not frequently discussed.

Regarding to the delivery methods of the questionnaire, different alternatives have been evaluated. Online surveys have advantages such as, low cost, faster response rate, the use of interactive instructions, the capability of use multimedia features such as audio and animations, and easier data processing (Dillman, *et al*, 1998; Cobanoglu, *et al*, 2001; McDonald and Adam, 2003). But it was not used, because light users of the Internet might be somewhat intimidated by an online survey, particularly in Arab countries which have relatively low usage of the internet. An online survey, then, might result in a country sample seriously biased toward more sophisticated users. Alternatively, a self-administered print questionnaire was employed (Blake and Neuendorf, 2005). Another

important issue is that the email addresses of the target sample were not available. Furthermore, online surveys have been criticised for low response rates, the ease of opting out, and some technical problems such as data security (Dillman, *et al*, 1998; Couper, *et al* 2001).

In addition to online surveys, different methods also are available such as mail and fax. Table 5.8 summarises the main characteristics of the delivery methods.

Table 5.8 The Main Characteristics of the Delivery Methods

Description	Post survey	Hand survey, In-Person Surveys.	Online survey	Fax survey

Source: Cobanoglu, *et al*, (2001) (data removed for copyright reasons)

Given the advantages of hand to hand [face to face] interviewing or surveying (In-Person Surveys)[5] and mail survey, particularly the high response rate, direct circulation was selected in this study as the questionnaire administration method. The survey questionnaire was handed to the respondents in person in the three locations above (Petra, Jaresh and Amman Citadel). This method also helps researchers to answer any questions or comments regarding the survey. According to Babbie (1998) for such a method of

[5]In-person surveys can be done in different ways. One format is to ask respondents to complete on-the-spot surveys as they receive products or services from the organization. Only very short surveys are practical in this type of situation. The survey administrator usually stands by as the customer completes the survey and might give the customer some small token of appreciation for completing the survey. A second format is to ask respondents to come to a particular location to complete a customer survey. A third format is to visit respondents at their work sites and ask them to complete the customer satisfaction survey. Survey Handbook

collecting data, the typical response rate of 70% is very good; better than other methods such as online or postal surveys.

5.10.2.3 The Content of the Questionnaire

This study aimed to investigate users' intentions towards e-business websites and particularly identify the cultural factors that drive the development and classification of individual behaviour in relation to the use and acceptance of e-business websites.

The questionnaire (see appendix 3) consists of questions related to the respondent's background and possible factors that may influence their acceptance and usage of e-business websites. As a basis for the questions, a Likert five point scale was used ranging from 'strongly agree' to 'strongly disagree'.

The questionnaire is divided into three main sections and includes explanatory remarks and examples to ensure clarity.

Section 1: *Classification data*

This section is concerned with obtaining general background information related to the participants, including age, gender, educational background, monthly income and language. This section also includes usage and experience.

Section 2: *Website quality*

This section includes the different elements of e-business website quality which includes system quality, information quality, service quality, and attractiveness.

Section 3: *Cultural variables*

This section addresses the *cultural variables* that could affect user acceptance and usage of e-business websites including *Subjective norms, Trust, Tangibility, Hofstede cultural dimensions.*

Section 4: *TAM Variables*

This section addresses TAM where the questions were based on the previous studies variables and relevance to *Perceived Usefulness, Perceived Ease of Use* and *Intention to Use.*

The questionnaire was translated into Arabic and this version was distributed to Arab participants. The English version was completed by UK participants. Copies of the English and Arabic versions of the questionnaire can be found in appendix (3 A & B).

5.11 Location

As mentioned above, three main locations were chosen to conduct the survey namely, Petra, Jarash and Amman Citadel. These are the main tourist locations in Jordan (Jordan Tourism Board, (JTB) 2006). These sites were chosen for the purpose of this study because they attracted the highest number of visitors last year from Arab and European countries. In addition, more than one tourist site targeted to avoid uniqueness of one site.

The number of tourists of each site was chosen according to the total number of site's visitors as a ratio of total number. According to table 5.9 in 2006, the number of Arab and UK tourists visited Petra was the biggest then Amman Citadel and finally Jaresh. Table 5.9 shows the number of the questionnaires distributed in the targeted locations and return rate.

Table 5.9 The Number of the Questionnaires Distributed in the Targeted Locations and Return Rate

Nationality/ Location		Number of distributed questionnaires	Returned Questionnaires	Return Rate
		Petra		
United Kingdom		130	109	83%
Arab Countries		231	178	77%
		Amman Citadel		
United Kingdom		49	43	86%
Arab Countries		287	239	83%
		Jaresh		
United Kingdom		34	30	88%
Arab Countries		106	80	75%
Total	**United Kingdom**	213	182	85%
	Arab Countries	624	497	79%
Total		837	679	82%

5.12 Fieldwork

As mentioned above, tourism customers were targeted in three tourist locations in Jordan, (Petra, Jaresh and Amman Citadel). Coordination with Jordan Tourism Board (JTB) has been done to choose the right time for distributing the questionnaires and method of distribution.

The high peak of the tourist season in Jordan is from April to September (JTB, 2006). The fieldwork was conduced between 25th of April and the 25th of September 2007. This period has chosen to cover different tourist seasons and to avoid the influence any political problems that could impact tourist activities in Jordan. One of the main issues highlighted in the pilot study and clearly important for the fieldwork was choosing the most suitable time for conducting the questionnaire; , an unhelpful time may discourage the tourist from participating or completing the questionnaire.

In coordination with the JTB, the Public Relations department at the Ministry of Tourism, and the management of each tourist site, the decision was made to distribute the questionnaires near the main entrances of the targeted locations. The researcher stood at the entrance with clip board during various times of day/week where potential respondents were asked to participate in this survey. Only those showing an interest by asking about the questionnaire and study were asked to fill out the questionnaire. In addition, the researcher received permission from site management to relocate in different places, this allow meeting and discussing with more potential respondents.

5.13 Pilot Study

A pilot study was conducted to reduce and minimise any misunderstanding or ambiguous questions and the procedures to be used in conducting the survey which might have affected the data analysis and the questionnaire validity and reliability negatively (De Vaus, 1991, Churchill, 1999).

According to Yin (1994), a pilot study "Helps investigators to refine their data collection plans with respect to both the content of the data and the procedures to be followed". The pilot helps the researcher to cover all of the research questions and objectives; to ensure that the length of the questionnaire is reasonable; to ensure the clarity of instruction and that the layout is clear. In addition, the pre-tested stage increases the questionnaire's reliability and can increase face/content validity by minimising potential variation caused by errors in interpretation. As a result it can reveal potential problems in the data collection tool.

The following sections describe the pilot study's objectives, selection of the participants, the procedures, and the results.

5.13.1 Purposes of the Pilot Study

Testing the questionnaire was the main aim of the pilot study to minimise the serious flaws when used in the field and to validate the survey questions and to check that respondents understood the questions.

In addition, this kind of study has provided information about the response rate and helped in determining the appropriate data collection method in term of content and data procedures. This helped the researcher to develop and test the adequacy of the questionnaire, design a research procedure, assess whether the research procedure is workable, determine sample size, and collect preliminary data (Gilbert 2001).

In addition, in order to achieve the internal validity of a questionnaire, the researcher focused on the following aspects of the process: ask the participants their comments to identify vagueness and difficult questions, the time it took to complete the questionnaire and decide whether it was reasonable, level of comprehension regarding the wording of questions, remove all unnecessary, difficult or ambiguous questions, and assess whether each question gave an adequate range of responses.

5.13.2 Selection of Pilot Study Participants and Procedures

A sample of the survey population was used to test both the questionnaire and the procedures. Churchill (1999) suggested that the pilot study should be 10% of the projected sample size. Also Hunt *et al* (1982) recommend a sample between 12 and 30 subjects, based on the argument above. The sample for the pilot study consisted of 60 subjects. The questionnaire was distributed and completed by users who said they had access to e-business websites. This selection helped to give the best feedback about the contents of the questionnaires and research procedures. Table 5.10 shows a summary of the pilot study sample.

Table 5.10 Summary of the Pilot Study Sample

Category	Distributed questionnaire	Returned questionnaire	Return rate
Arab tourists	48	44	92%
UK tourists	12	10	84%
Total	60	54	90%

At the beginning, after the questionnaire draft became ready, a pilot test was conducted in many stages by many people in different places. Since the participants were Arab tourists and their native language is Arabic[6], the decision was made to translate the questionnaire into Arabic in order to make it clear to Arabic respondents. The draft questionnaire was translated by the researcher as his native language is Arabic, then the questionnaire sent to two bilingual Arab who are proficient in both languages (English/Arabic) to ensure that the two drafts of the questionnaire match together.

The English version was translated into Arabic by a bilingual Arab, and then translated back to English by another bilingual Jordanian working independently. The questionnaires in both language versions were compared in order to resolve any

[6] Regarding the UK tourists, the questionnaire was the original questionnaire in English.

differences. Agreement was reached by the researcher and other translators that there were no significant differences between the translated and the original text.

After this stage, the questionnaire was typed in two languages (Arabic and English). The first stage of the pilot test was conducted by the researcher's supervisor who was more concerned about the content of the questionnaire: to cover all of the research objectives; to assure that the length of the questionnaire was reasonable; to ensure the clarity of instruction and the layout to be as clear and attractive as possible.

The second piloting stage was conducted by some Arab and UK research students at different UK universities who are familiar with Arab culture. As a result of this pilot stage some modifications were made and few questions were added or redesigned.

The third piloting stage was conducted with the pilot group in Jordan to check whether there were any ambiguous or misunderstood questions or any comments. The overall comments were that the questionnaire was a well-organised and comprehensive one.

Also, a covering letter was attached to introduce the study; explain its purpose; who would collect the data; the importance of responding to achieve research objectives. The questionnaires were handed to each potential respondent personally, together with the covering letter.

Furthermore, respondents were instructed to write their comments at the end of each questionnaire with stressing on the importance of completing the questionnaire.

5.13.3 Results and Modifications

The result of the pilot study provided the researcher with a preliminary indication of the influence of Arab culture in using and acceptance e-business websites. In addition, it provided insights into the basic issues being studied. This information was used along with a systematic revision of related literature, so that the ultimate study design was enhanced both by prevailing theories and an updated set of empirical observations. This

information helped to ensure that the study reflects important theoretical or policy issues as well as questions related to the current study itself (Yin, 1994).

The comments and feedback proved to be very useful and allowed the making of any amendments in order to avoid problems and to improve the questionnaire.

One of the pilot study objectives was to estimate the time needed to complete the questionnaire to decide whether it was practical and realistic. The time needed was around 10-15 minutes per questionnaire. Another aspect of this pilot study was to predict the likely response rate which turned out to be 90%. As shown on the table 4.3, 54 questionnaires were returned out of 60 questionnaires distributed. This shows that using a self-administered questionnaire may be the right distribution method in terms of increasing the response rate. It is worth mentioning that the pilot study indicated the importance of such a study and its potential contribution in uncovering the cultural factors involved in using e-business websites.

To this end, as Oppenheim (2000) suggested, the questionnaire was clear and easy to complete, something mentioned by most respondents No further pilot test was required and the draft questionnaire had an acceptable level of content or face validity. A copy of the study questionnaire in English and Arabic language is included in Appendix (3 A and B).

5.14 Validity and Reliability

The impact of any research results depend on the validity and reliability of all its instruments. They are the basic criteria for evaluating the accuracy and precision of research. Validity is concerned with whether the process of the research measures what the researcher intend to measure while reliability concerns whether the measurement repeated by other researchers on different times provides the same results and observations, (Saunders *et al.*, 2003).

However, this study secured validity and reliability through its multi-method approach, employing two data collection methods (personally-administered questionnaire and semi-structured interviews), before, during and after collecting the data. .The following subsections provide more details about these procedures.

5.14.1 Validity

Validity is concerned with whether the process of the research measures what the researcher intends to measure (Saunders *et al*., 2003). According to Babbie (1990) validity refers to "The extent to which an empirical measure adequately reflects the real meaning of the concept under consideration". It is concerned with the soundness and effectiveness of the measuring instrument that must be asked whether the measuring instrument was intended to measure or not, and the degree of accuracy of each measurement (Leedy, 1997). Therefore, the following questions emerged regarding this study, in that namely, what the questionnaire measured what it was intended to measure and; did the questionnaire comply with the following validity criteria?

(1) Face Validity: This refers to whether the questions seemed appropriate or not in the context of the study.

(2) Criterion Validity: This is where validity was determined by relating a performance measure to another measure that may be used as a standard against which results are measured.

(3) Content Validity: This related to face validity. Content validity is whether the accuracy of the instrument in measuring the factors of concern to the study is scrutinized.

(4) Construct Validity: This is the degree to which the content of the study was measured by the questionnaire.

(5) Internal Validity: This is concerned with the information of conclusions based upon the actual results obtained from the study and not based on any opinion that influenced by research bias.

(6) External Validity: This point to the degree the conclusions reached in the study so it may be applied to the broader population and not merely the sample study.

Content validity can be determined by a careful definition of the research topic and the items included in the measurement scale (Punch, 2005). To achieve content validity, an extensive literature review was performed to define and clarify the scales used in this study. Most of the items and scales have been defined and used previously in the literature (Churchill and Iacobucci, 2004). In addition, opinions from field experts were sought to provide relevant inputs adding to what had been identified from the literature. The questionnaire was pre-tested by several PhD students and a panel of academic experts in the UK and Jordan to evaluate the content validity of the questionnaire.

Construct validity shows the extent to which the results obtained from employing of the measure match the theories around which the test is designed (Zikmund 2000). To achieve construct validity, the measurement should present convergent validity and discriminant validity. Convergent validity requires a positive correlation between items that measure the same construct (Parasuraman 1991). Discriminant validity requires that an item does not correlate too highly with other items of different factors (Hair *et al*. 2003). In this study, the correlation matrix and inter-construct correlation were analysed for convergent and discriminant validity.

This study implemented a number of pre-testing stages and pilot work to enhance construct validity. Three pilot studies were conducted to test the questionnaire, validate the survey questions and to check that respondents understood the questions to minimise the serious flaws when used in the field.

The correlation between items in the same variable was tested using the Pearson Correlation coefficient which was computed with a tailed t-statistic test. The results of all correlations between pairs of items within the same variable were significant at the 0.01 level (2-tailed) and considered satisfactory.

5.14.2 Reliability

In order to examine the data collection instrument, all variables of the proposed model were evaluated for reliability, and convergent and discriminate validity. To determine

reliability, the internal consistency for each variable was measured by computing Cronbach's Alpha to ensure that all the items in the scale were sufficiently inter-related.

In this study, different processes were undertaken to confirm that the data collection methods measure was what was it intended to measure and indicate the stability and consistency of the surveys. In the survey questionnaire, some questions were re-posed in different places in a different order to reduce the bias and show if people understood the questions. The researcher, when gathering the questionnaires, tried to ensure that the respondents completed the questionnaire through having an informal discussion where possible. The method of distribution the questionnaire helps avoiding errors resulting from misunderstanding and ambiguity. In addition, adopting some developed questions or scales from previous studies facilities comparing the findings with other studies' results.

Moreover, a Cronbach Alpha test was used for this purpose as it is considered to be one of the best methods for measuring the stability and consistency of the instrument (Sekaran 2003). According to (Hair *et al*. 1995) a good reliability test should produce at least a coefficient value of 0.60 to 0.70, although, Thompson, *et al*. (1995) and Bagozzi (1994) considered 0.60 an acceptable level for a newly developed scale for an application across fields of study.

The reliability of the proposed model constructs was assessed by Cronbach‘s alpha test (α) The results show that all constructs had high internal consistency (0.839) and the scales can therefore be considered reliable.

5.15 Data Analysis

The analysis aims to build upon an extensive literature review related to research area, as an initial phase, and the results of exploratory factor analysis (EFA) of factors influence website acceptance to establish an advanced model of websites acceptance. This analysis will help to identify the patterns of relationships between the main variables of tourist

responses as well as explore any differences patterns for each national group (Arab and UK) by utilising Multiple Regression techniques.

Legris, *et al*, (2003) confirm that a linear regression model was most often used in the original TAM model. Linear regression is based on associations and relationships between the variables, providing a more detailed and sophisticated assessment of the interrelationship of the variables. Stockburger (1998) confirms that regression models are powerful tools for predicting a dependent variable based on independent variables.

The model developed by this study relies on the relationship between the main variables that explain the influence of these factors with more focus on cultural factors in Arab and UK tourists' acceptance of using websites. This model is intended to be embedded in culture as a field and take into account to explain national cultural differences between the targeted groups.

One of the most common parts of a covariance structure model is a factor with its indicators. While a model may contain many factors, each with its own indicator at a time; the complete diagram is best built one factor at a time.

The most fundamental measure of overall fit is the chi-square statistic. Low values which result in significance levels greater than 0.05, indicate that the actual and predicted input matrices are not statistically different, hence a good fit. However, the chi-square measure is often criticised for its over-sensitivity to sample size, especially in cases where the sample size exceeds 200 respondents. If the sample size increases; this measure has a greater tendency to indicate significant differences for equivalent models. Thus the current study does not use the chi-square as a critical measure just as an indicator for fitting a model when reduced.

Taking the initial indicators for each scale of model variables as a starting point, modifications to the values in the model on an iterative basis will vary the parameters until the fit indices reach values within the recommended limits.

5.16 Summary

The research was designed in such a way as to combine both qualitative and quantitative methods in order to reflect the nature of the research problem and to determine whether any relationships between variables can be identified to determine behavioural patterns.

The general approach adopted for this study is a combination of quantitative and qualitative methods which reflects the nature of the research problem. The intention is to determine whether any relationships between variables can be identified with sufficient confidence to determine behavioural patterns. Since the study goes beyond description to improve our understanding of a user's response to website acceptance by analysing behavioural patterns and identifying relationships, it can be classified as analytical and fundamental research. Use of existing theories and models based on the literature review has been made, in order to identify the main variables and issues related to website acceptance and the relationships between them.

The main approach is inductive, even though qualitative research has been used as a precursor to the quantitative survey. Multi-methods of data collection (questionnaire and interview) have been used to enable triangulation to take place. Triangulation consists of crosschecking data for internal consistency and external validity, which are matters of concern for any study (Yin, 1994; and Sounders *et al*., 2003).

Pilot work was done prior to distribution of the final version of the questionnaire as several drafts were prepared and amended in response to feedback received from respondents. The questionnaire design and layout, question types and format, contents of the final version of the questionnaire, population and sample and the procedures of administering the questionnaire were discussed in this chapter. The issues of reliability and validity were also discussed in this chapter. Finally, the chapter ended with a discussion of the main analysis techniques that can be applied in this study.

CHAPTER 6

RESEARCH MODEL AND HYPOTHESES

6.1. Introduction

The theoretical framework provides the basis upon which the whole study is constructed. It shows the relationship between the variables that are related to the research problem. The theoretical framework provides deeper understandings of the research problem and plays a key role in generating testable hypotheses.

This study is grounded in the belief that culture is a discernible factor in the e-business website acceptance process and can be interpreted as influencing users' intentions to use and accept websites. The assumption is that cultural specific factors are related to users' beliefs and opinions on and the consequent acceptance and usage of e-business websites. Users cultural backgrounds will influence their acceptance or rejection of particular e-business websites. Thus, assuming there is a relationship between culture, website quality and the intention to use websites, there is a need to model websites to accommodate users' cultural characteristics.

Based on a review of the current literature, this study identifies variables relevant to the research problem. The dependent variable for this study is *Intention to Use and Accept e-business websites*, while, independent variables include: *Website quality, Cultural variables, Perceived Usefulness, and Perceived Ease of Use.*

The following sections include the proposed theoretical framework. In the light of this framework and literature review, specific hypotheses will be posited to investigate the factors which influence users' acceptance and use of e-business websites and how cultural factors influence perceptions about the acceptance of e-business websites.

6.2 The Proposed Model

6.2.1 The Technology Acceptance Model (TAM)

Several models and theories were investigated before choosing the Davies' TAM model. This has been used for some previous studies in Arab countries (e.g., Straub, *et al* 1997; Al-Sukkar and Hassan, 2005; Akour *et al*, 2006) which found that TAM had a slightly better predictive power than others. TAM was also selected because it is a widely accepted, practical and robust model of technology acceptance covering different issues that emerged within this study. Chapter 2 above provided more details about TAM. Website acceptance, one of the dependent variables, is chosen to indicate user acceptance and adoption as a result of user intention to use the website.

The proposed new model is an enhancement of TAM (Technology Acceptance Model). According to Davies' 1989 TAM model, the behavioural intention to use a system I determined by two constructs

- Perceived usefulness (PU)
- Perceived ease of use (PEOU)

PU is also influenced by PEOU. Davis (1989), defined PU as "...The degree to which a person believes that using a particular system would enhance his or her job performance", while PEOU is defined as "...The degree to which an individual believes that using a particular system would be free of mental or physical effort" (Davis, 1989).

TAM suggests that people's beliefs concerning PU and PEOU would influence their attitudes as part of a *user behavioural intention* to accept and use information technology which in turn leads to actual system use. The PU and PEOU were both influenced by external variables. PEOU was hypothesised to influence perceived usefulness and perceived usefulness was also expected to influence an individual's behavioural intention to actual use (Veiga and Floyd, 2001).

While researchers have found direct relationships between usefulness and usage (Adams *et al*., 1992; Subramanian, 1994), Intention to Use (IN) rather than actual usage use was chosen as a dependent variable in the proposed model. Antecedents of these two beliefs are referred to as "external variables". TAM supposes that the influences of external variables on IN can be fully mediated by PU and PEOU (Davis, 1989). A website acceptance is viewed as an individual's psychological state with regard to his or her intended use of a particular technology (Chau and Hu, 2002). For the purpose of this study, IN is used to indicate user acceptance for different reasons: the use of intention to explain or predict behaviour based on theoretical foundation and is based on sufficiently strong empirical support (Agarwal and Prasad, 1998; Chau and Hu, 2002).

As shown in the acceptance behaviour models in Chapter 2, intention to engage in behaviour is a powerful indicator of acceptance in itself (Gallion, 2000). Consistent with previous studies in technology acceptance conducted by Davis *et al*. (1989), Straub, *et al* (1997) found that TAM predicted self-reported usage behaviour, but did not predict actual usage behaviour. The writers called for a reconceptualisation of the usage factor, as both self-report and objective measures may be insufficient.

Researchers have noticed the difficulties related to objective measurement of behaviour because of the lack of access to such information and issues concerning privacy violations. Moreover, in many modern organisations, the use of IT has become mandatory, and employees and managers require using it to carry out their work. Therefore, real and true acceptance is not easily and consistently related to actual use of the websites. It follows that the management should support employees' intentions to use the internet and the website in the long run and not focus only on the actual usage in the short run.

At the practical level, website use in the workplace of Arab countries is generally at an early level of usage and acceptance; studying the intention to accept and use the internet may provide insights to help and assist its widening usage at a time when website development is experiencing growth in the Arab countries.

According to Davis, *et al* (1989), "...The goal of TAM is to provide an explanation of the determinants of computer acceptance that in general is capable of explaining user behaviour across a broad range of end-user computing technologies and user populations, while at the same time being both parsimonious and theoretically justified".

It is believed that if e-business websites users feel that websites are more practical and less time-consuming than traditional methods of doing business and do not cope well with their cultural values, they will be likely to perceive the system useful and easy to use.

User attitude was dropped from the final model of TAM (Davis, *et al,* 1989) because of its weak influence on IN and its weak direct relation with PU. They contended that individuals might intend to use a technology because it was useful, albeit they did not have a positive attitude towards using it. Also, Taylor and Todd (1995) found that attitude is not a significant determinant of behavioural intention although the relationship between attitude and behavioural intention is more significant for experienced users. Gardner and Amoroso, (2004); and Sun (2003) found also that attitude is not a reliable predictor of intention to use in essence or degree.

Moreover, further studies dropped user attitude as a category in order to simplify the original TAM and instead investigated the effect of PU and PEOU on intention to use (Teo *et al*., 1999; Lederer *et al.*, 2000; Klopping and McKinney, 2004). The model of dropping user attitude will be followed in this study. Figure 6.1 below illustrates the relationships between TAM variables.

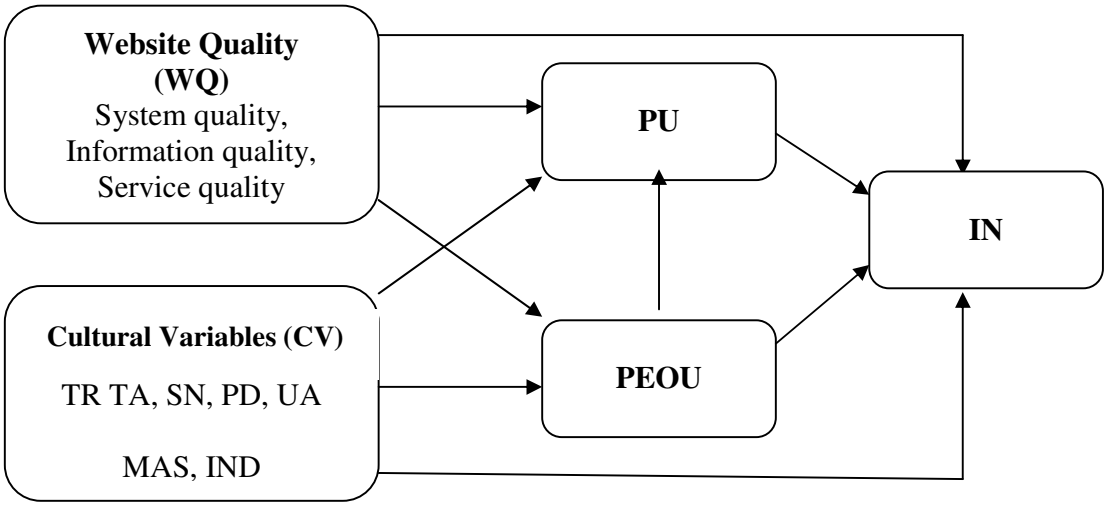
Figure 6.1 Technology Acceptance Model (TAM) Davis (1989)

The objective of this study is to examine the influence of culture on acceptance and usage and revise the model by incorporating Hofstede's cultural dimensions explicitly into TAM.

6.2.2 A Culturally – sensitive Technology Acceptance Model (CTAM)

A Culturally – sensitive Technology Acceptance Model (CTAM) is depicted graphically in Figure 6.2. The model suggests that intention to accept e-business is formed by user perceptions of four key dimensions related to website quality and another seven variables related to culture. In all, these dimensions and variables are believed to affect PU and PEOU which in turn will affect user intention to accept and use e-business websites.

Figure 6.2 CTAM model



TA: Tangibility; SN: Subjective Norms; PD: Power Distance; UA: Uncertainty Avoidance; MAS: Masculinity; IND: Individualism; PU: Perceived Usefulness; PEOU: Perceive Ease Of Use; IN: Intention to Use.

It should be noted that in the proposed model, *Perceived Usefulness* (PU) and *Perceived Ease Of Use* (PEOU) are based on (Davis, 1989, 1992, and 1993) studies. Cultural variables, where drawn, are from Hofstede (1980) (*Power Distance, Individualism vs Collectivism, Uncertainty Avoidance, and Masculinity*), *Trust* is derived from Gefen (2000), *Subjective Norms* is adopted from Venkatesh and Davis (2000). The *Website*

Quality dimensions are taken from a range of factors as outlined and discussed in different studies such as: (Liu and Arnett 2000; Barnes and Vidgen, 2002; Aladwani and Palvia, 2002; Delone and McLean, 2003; Hsu, *et al* 2004; Kim and Kim, 2004 and Cao, *et al*, 2005). Section 6.3.1 will provide more details about each factor.

The model presents these factors as existing within a cultural environment, which exerts influence over how the characteristics are perceived by users and how the perceived characteristics contribute or lead to the ultimate intention to accept or reject e-business use. Each factor of the model is highlighted in the next section.

6.2.3 Research Propositions

The study delineates three central expectations that will be explored. First, it is expected that perceptions of e-business characteristics will differ according to individual national cultures and that these differences will be related predictably to specific factors of the national culture. Second, it is expected that the proposed model will successfully predict intention to use e-business in both national cultures surveyed in this study. Thirdly, it is proposed that the point of strength of the different factors in the proposed model will differ predictably depending on national cultures.

Some of these propositions were supported by (Tsikriktsis 2002; Jack and Mike, 2005; Stengers *et al*, 2005 and Kang and Araujo, 2006) who argued that user perceptions are influenced by their cultural environments. Van Slyke, *et al* (2005) investigated the perceptions of Electronic Commerce (EC) in samples of users from the U.S. and India. The results showed that Indian perceptions of EC were much lower on four of the six factors measured. They suggest that these differences were attributed to a combination of economic and technical factors. It was shown that Indian culture ranks relatively low on Hofstede's IND dimension, which may make e-business websites less compatible with their general preferences for more personal website experiences.

Prior studies' have found that a culture's collectivism and UA are negatively related to individuals' perceptions of e-business. In spite of efforts to introduce more social

presence into e-business websites, the e-business website experience is still an isolated and depersonalised process. Face-to-face encounters between buyer and seller or between one buyer and another are replaced with a computerised setting with social exchanges only in virtual meeting spaces. As a result, users in low IND cultures are expected to report much lower levels of perceived trust compared with users in high IND cultures. It is also expected that users in low IND cultures may also regard the more isolated website experience associated with e-business as lower in prestige than do user in high IND cultures.

Furthermore, studies conducted by (Sheehan and Hoy, 2000; Miyazaki and Fernandez, 2001) show that high levels of UA in a culture may also help to create negative perceptions of e-business. Websites are generally regarded as being riskier than traditional face-to-face dealings because of the impersonal and virtual nature of the transaction process; the inability to physically touch and feel the purchase goods; the reliance on electronic payment systems; the threat of insecure handling of financial or personal information, and unfamiliar or foreign, participants in the exchange who are nearly always remotely located.

Users who are not willing to accept risk in a virtual transaction will have more negative perceptions of the relative advantages provided by e-business. They are also likely to view the virtual experience as more complex and less easy to use, than do users who are less risk averse. Those unwilling to accept risk go through escalated anxiety or find it necessary to exert additional efforts toward reducing the uncertainties faced in using e-business websites.

Arlt (2005) produced three maxims for expansion and extending business internationally. These roles confirm that users or customers should be able to: "...Find online information; understand online information; and feel comfortable about the way online information is presented". These rules support three important issues that should be considered when companies target international users:

- That e-business websites should be found easily through search engines and be easy to locate,

- Be easily understood in terms of language, content and design, and finally
- Users should feel comfortable when browsing e-business websites.

In addition, in terms of visual appeal, colours, images and symbols have different meanings in different cultures. Pictures or images may have certain negative connotations that may annoy users. For example, showing pictures of women wearing bikinis on a beach or other places, drinking beer or disco dancing on tourism websites that can be viewed in a conservative Arab country may be offensive, while these pictures may not be so in the West.

As well as pictures, symbols also have negative and positive impacts on different cultures. For instance, animal pictures (especially those of pigs) may be considered offensive in the majority of Arab and Islamic countries. Websites' background colours or logo are also associated with different cultures and may have different meanings. For example, white colours are often preferable in Japan, while green is quite popular in Islamic countries (Russo and Boor 1993). Table 6.1 below shows some cultural associations of colour.

Table 6.1 Examples of Cultural Associations of Color.

Culture					

Source: (Russo and Boor, 1993) (data removed for copyright reasons)

Another important issue that should be considered is website navigation. Users from different countries have different reading methods. Arabic scripts are read from right to left, Latin script languages are read from left to right. Navigation of websites should be adapted to users' use of script and culture.

Therefore, website design and content should be customised to "...Appeal to local users and promote brand loyalty as it relates to the overall web experience. In addition, culturally sensitive images, icons, symbols, and colours should be taken into account as well as, linguistic considerations regarding word choice and the use of clichés and slang" Becker (2002 P: 265). With increasing numbers of website users, companies should consider international users and their cultures.

As was stated before, Hofstede's model (1980) provides a theoretical foundation for exploring the influence of cultural differences on the acceptance and usage of websites. The current study employs Hofstede's model at two levels. First, the communication practice and acceptance of e-business websites in a society is believed to be related to its dominant cultural values. When an e-business website is compatible with or supportive to the dominant cultural values, then the general rules of the psychological process of technology acceptance should apply. Second, the impact of cultural values on the TAM variables is investigated. A cultural TAM explicitly illustrating the culture -- IT perception relationships would be much more useful if we know which TAM components are subject to cultural impact.

It is interesting to note that Hofstede (1997) confirms that culture "is learned," and not only "inherited." (P. 5-6). This supports the theory of beliefs which states that people can both learn and unlearn cultural attributes, based on environmental impacts such as the using and adopting of new information technologies.

6.3 Conceptualisation and Operationalisation of Research Constructs

The explanation of constructs in this research is done by describing each construct in terms of its conceptualisation, operationalisation, and source. Construct conceptualisation refers to the definition of the construct and what it represents; the operationalisation of the construct refers to the translation process from the abstract meaning of the construct to concrete and measurable items or item, while the construct source refers to published literature, from where the construct was taken.

6.3.1 E-business Website Quality (WQ)

Many studies have investigated website quality, believing it important as one element in website success (Aladwani and Palvia, 2002; Soliman and Youssef, 2003 Delone and McLean, 2003; Hsu *et al* 2004; Kim and Kim, 2004; Cao *et al*, 2005).

These studies and others are derived their models from marketing literature such as Liu and Arnett (2000) and others are based on previous IS models or combinations with other disciplines (Barnes and Vidgen, 2001; Aladwani and Palvia, 2002; Soliman and Youssef, 2003 Delone and McLean, 2003). This section focuses on the identification of the dimensions and features of e-business websites that capture website quality. Based on the previous literature review, with more focus on Cao, *et al*, (2005) a study which built upon TAM, SERVQUAL and the concept of trust (Parasuraman *et al.*, 1985; Davis, 1989; Delone and McLean, 1992; Lin and Lu, 2000; Chen *et al*., 2002)., four dimensions are identified:

1. System quality,
2. Information quality,
3. Service quality and
4. Attractiveness.

The following section will discuss these dimensions in more detail.

1. System quality

System quality is based on the functionality of a website (Cao, *et al*, 2005): usability, availability and response time (DeLone and McLean, 2003). Smith and Merchant (2001) find that users are very particular about having a website easy to read and easy to navigate. Robbins and Stylianou, (2003) confirms the important of a website responsive to users. Weinberg (2000) emphasises that a page design should include the website appearance and loading time. Slow loading time can negatively influence the user's acceptance of a website (Loiacono and Lin 2003). According to Cao, *et al,* (2005) the system quality of a website can be measured by search facility, responsiveness and multi-media capability.

***Search facility*:** Search facility refers to the extent to which a website helps the user to find information as perceived by the user (Huizingh, 2000). One of the problems that can face users in website design is ease in browsing the websites, where users are looking for easy-to-use websites in term of access to information of interest, with the user knowing how to get around the website, by moving from page to page, utilising menus, the existence of clear buttons, a site map, and a search engine, (providing search mechanisms for finding information) (Bhatti *et al.*, 2000; Clyde, 2000; Loiacono and Lin, 2005;). Gefen, *et al*., (2003) stated that usability and navigability make users perceive a website as easy to use.

Navigation tools help users to know where they are, where they have been, and where they can go from their current position. Moreover, these tools enable users to control the system and to manoeuvre through its virtual space (Huizingh, 2000; Nielsen and Tahir, 2002; Liang, and Lai, 2002; Loiacono and Lin, 2005; Cao, *et al*, 2005).

***Responsiveness*:** Responsiveness is concerned with the help online customers receive and the relationships with users and customers through using websites and the speed of interaction with them. According to Wan (2000), the issue of responsiveness can be referred in at least two ways: load time and search time. Search time mostly depends on the size of the database (Cao, *et al,* 2005). Many website pages are designed with a large graphic or multimedia content without considering loading time problems, while some websites are virtually text only.

Nielsen (1998c); and Gann (1999) confirmed that long waiting times experienced by users to download or open websites impacts negatively on website users' experience; users are looking for the quickest and easiest possible use of websites users' load times are critical. People do not want to spend relatively long periods of time waiting for web pages to load fully. Website designers should therefore, aim for less graphic concentration, and use of videos and animations. Lynch and Horton (1999) suggested that 10 seconds could be acceptable for users to download or open web page.

It is important to consider this issue as users in different cultures are becoming less tolerant at waiting for long periods to access a website or to the pages they require access to, or download files or software from, due to the perception that internet speeds are much higher than they were.

Although there is no general agreement between researchers on the exact length of waiting time that would be considered acceptable by the users, Lynch and Horton, (1999) suggested that 10 seconds could be acceptable for users to download or open web page. The style of internet delivery – dial up and broadband are important. This is especially so since those who use broadband expect a higher quality service as broadband is sold on the basis of multimedia access and delivery at speed.

According to Gann, (1999) Zona Research conducted a study to calculate impact of slow download on using a website, they found, if the page downloaded under seven seconds, fewer than 10 percent of users would leave the website and if the page takes eight seconds, 30 percent of users will leave, and if it exceeds 12 seconds, 70 percent will leave. Bearing in mind that customers use the internet for convenience and speed, they will not tolerate slow access. Besides, most researchers and practitioners are agreed that users should access a website in a very short time and should not be kept too long while waiting for a web page to load (Weinberg, 2000).

Multi-media capability: It refers to the availability of non-verbal cues about the product and services that increase the user's feeling of preference for a website. Using suitable graphics, video clips, audio clips and animation to demonstrate products and services are examples of these characteristics. These features can fulfill user information needs, create trust, and help better learning and using experience (Chen, *et al* 2002). In contrast, more use of multi-media such as videos, requires more time to download. Website developers should find a balance between a pleasing design and providing information which is not always easy (Huizingh, 2000). Gehrke and Turban (1999) recommend keeping graphics simple, meaningful, limit the use of animation, and providing 'text-only' choice. People may visit the same website frequently.

2. Information Quality

Researchers confirm that the website content refers to the information provided by the websites; this information should be sufficient and relevant to users (Huizingh 2000; Bhatti *et al*., 2000; Lii, 2005). Rachman and Buchman (1999) stated that content is "...The key factor driving visitors to websites". While Huizingh (2000) mentioned that "Content is king" is a well-known slogan and he emphasises that the basic objective of the website is to 'provide information'.

The information provided should be related to the companies and its products or services and what they are offering. This information should be accessed from the first webpage not the second or third page, according to Lii, (2005), Forrester Research found that 50 % of users will not find their needed information if a product or service was offered on the second or third page. Therefore, it is crucial to provide users with the information about the selection of products and services offered immediately when they access the homepage.

It is worth mentioning that product information and specification is a vital element of customers' purchasing process, Cox and Dale (2002) argue that a website should provide sufficient information about the products or services such as brand, product size, colour, capabilities, price and a product description. The conditions of purchasing a product should be made available to the users for any product advertised on the website with a clear picture to increase users' satisfaction.

In the same vein, information on warranties and guarantees should be made available to the customer either during the selection process or when purchasing through a website (Cox and Dale, 2002). Delivery information which includes shipping cost and expected delivery time is important for online users, users are trying to find the cheapest and quickest way to deliver their products or services, as an important issue, this information should be available on the product page as well as the home page and before users begin to make any purchases (Vassilopoulou and Keeling, 2000).

Kim, *et al,* (2003) revealed that fifty percent of users will leave a website if they cannot find needed information and forty-percent will not come back if they have a negative experience.

Information quality is normally represented by the following constructs: depth of information, clarity, information relevance, currency, concision and scannability and accuracy. (Huizingh, 2000; Cao, *et al*, 2005; Hassan and Li, 2005)

Depth of information is related to the details of the information provided by each topic (Huizingh, 2000). For example, a list of hotels should be included in different categories, so users can choose whatever one they want.

Information relevance refers to the extent to which the information on the website is related to the information needs of the customer (Cao, *et al*, 2005). Companies should not provide the same information to different groups of users (Huizingh, 2000).

Clarity concerns the provision of legible information and the use of straight-forward language and presentation of text i.e., that backgrounds or colours do not make text difficult to read: i.e.; white background with yellow text will not be legible. Avoiding 'marketese' (Nielsen 1998) allows users to capture the required information quickly also the information should be presented in suitable language for users as well as good-quality writing that contains no grammatical errors or colloquialisms (Hassan and Li, 2005).

The currency of written content is normally an important part of the content; it can affect users positively or negatively. Updating the website regularly will attract users to come back and visit the website again (Cao, *et al,* 2005).

McCune (1998) states, that a successful website should be updated frequently to match users' expectations. Websites should be updated more often that every three months (Lu, *et al* 2002). Also, Nielsen (1998) suggests that websites should employ a "content gardener" to comb the old content on the website. This will enhance the reliability of the information on the website.

Information accuracy is the essential capability of a website to provide information about products, services, people, events or ideas. It is a vital element that reflects the company's image and affects users' attitudes toward the company and its website. By providing the inappropriate information on a website, companies can affect their business image negatively.

3. Service Quality

Service quality is an important dimension of Information System (IS) success in the e-commerce environment where customer service is important (DeLone and McLean, 2003). It refers to the overall support delivered to the users by the website. According to Cao, *et al*, (2005) service quality includes two main constructs: trust and empathy.

Trust refers to the extent to which users believe the website is legal, ethical and credible and is able to protect their privacy (Wan, 2002). Most studies (Tierney 2000; Cai, *et al* 2003; Lii, 2005) have shown that the security issue was one of the most important barriers for purchasing online. Users are more concerned with providing their financial information as it has to be transmitted through websites (Vassilopoulou and Keeling, 2000). The risk of fraud on-line is high and users are more reluctant to give credit card details on-line (Cox and Dale 2002).

However, secure personal and financial information of online users is very important to get their trust; users prefer to keep their personal information and not allow it to be used by third parties or by companies to increase their customer base, unless they give permission. Due the global nature of websites, users are worried about their personal information. In some countries this kind of information is legally protected, in others it is not the case (Limayem, *et al,* 2003).

Studies have suggested different methods to enhance users trust for purchasing through the website. (Lii, 2005) suggested that an added third party for monitoring and auditing these services will increase users' trust. Companies such as TRUSTe, for example providing more payment alternatives that websites offer such as fax or telephone calling

for their credit card numbers will increase sales and decrease lost sales (Gehrke and Turban 1999). Presenting Official Recognition (licence) from an appropriate travel body will provide re-assurance for users as to the reliability of the service provider (Limayem, *et al*, 2003).

Empathy: It refers to the extent to which a website offers caring, individualised information and attention to users (Cao, *et al*, 2005). In other words, it includes any contact between the users and the company leading to increase user satisfaction and revisit to the website. The main features of this dimension are:

- FAQs – allowing the users to access frequently asked questions (FAQs) and let them submit their requests (Zahedi *et al*, 2001; Palmer, 2002).
- Feedback – allowing users to send their suggestions about the place as well as the website (Palmer, 2002; Agarwal, and Venkatesh, 2002).
- Interaction with the organisation – providing different ways (media) for contacting the organisation (online and offline) (Loiacono and Lin, 2005).
- Discussion forums – allowing users and companies to discuss and answer user questions. Also allowing interactivity between the users themselves and the experts (Limayem, *et al* 2003; Huang 2006).

4. Attractiveness

Attractiveness is concerned with whether web pages are fun to read and subjectively pleasing (Cao, *et al*, 2005). It also refers to website presentation and design that encourages users to read and understand the information presented (Rachman and Buchman 1999; Huizingh, 2000). Watson *et al*. (1998) use metaphors to label/group sites into different potential attractors (e.g. Entertainment Park, archive and club). They argue that the availability of such features will enhance and increase users' appeal to use the websites. Chen *et al* (2002) study the playfulness and how it affects the quality of website design. His finding suggests that playfulness is an important factor in attracting users. The main attributes of this construct are: playfulness, presentation and visual appeal.

Playfulness includes the features that attract the attention of website users with enjoyable constructs such as online games, software downloads and Q&A (Chen, *et al* 2002). Including playful features within the website differentiates the website from others and enhances the user's perceived level of satisfaction (Liu and Arnett, 2000).

Presentation and visual appeal is concerned with the whole website and of a single page presentation. Specifically, it refers to a single page which includes for instance, paragraph length, text presentation (font colour, style, size), information layout and version of screen (English, Arabic, Japanese, etc) that encourage users to read and understand the information presented (Agarwal and Venkatesh, 2002; Wan, 2002; Limayem, *et al*, 2003; Hassan and Li, 2005).

Also, the layout of the website and each page should be consistent in term of actions, the labelling of links and buttons, and the navigation format (Storey, *et al* 2002).

Consistency should include page layout (e.g., screen size for content display, banners, and menu bar), use of text in terms of its type, font size, and colour and use of navigational aids (e.g., menu bar, buttons, and links in terms of graphics metaphor, size, and colour). .

6.3.2 Cultural Variables (CV)

6.3.2.1 Cultural Dimensions - Hofstede (1980)

Hofstede (1980) based his cultural framework on a multinational survey using 166,000 IBM employees around the world. The study provided four dimensions of cultural value namely: Power Distance (PD), Uncertainty Avoidance (UA) Masculinity (MAS), and Individualism (IND). Hofstede's work enabled reasonable comparisons to be made between cultures in different countries. These four cultural dimensions are of particular importance for e-business acceptance research because of their theoretical relation to communication behavior. This study attempts to find out how these cultural dimensions are related to user acceptance of e-business websites. The following section provides more details about each of Hofstede's dimensions.

Power Distance (PD)

According to Hofstede (1980) the PD dimension is built upon how different societies treat inequalities in social structure. Hofstede claims high PD countries tend to have centralised political and leadership power, large hierarchies in organisations and sizeable differences in salary and work position or status. This is clearer also in management styles. Leaders or managers have marked influence on their subordinate's work so they do what they are told. Parents also teach obedience, and expect respect. Thus, inequalities are expected, and may even be considered desirable, certainly they will come to be perceived as the natural order of things. While, in low PD cultures, subordinates and supervisors work closely together and are more interchangeable, with flatter hierarchies in organisations and less difference in salary and status. Subordinates tend to be more organised and have an informal relationship with their managers.

This approach can also be applied to the relationship between suppliers and users where the services provided by suppliers have power over their customers (Donthu and Yoo, 1998). It has also been shown empirically that customers with high levels of power distance have lower expectations about responsiveness than customers with lower levels of power distance. In the case of website quality, Furrer, *et al* (2000), show that power distance is negatively correlated with reliability, responsiveness, (download time and interaction with the website) and emotional appeal. It is positively correlated with privacy and security, website design and visual appeal. High power distance is associated with lower expectations in terms of the website's responsiveness, flow, emotional appeal, as well as higher expectations about privacy and security, interactivity, design, and visual appeal.

Additionally, Marcus and Gould, (2001) confirm that cultural power distance significantly affects access to information on a website, for low PD content and information should be equally available and easy to find. People in low PD environments demand greater freedom to explore the website, while high PD culture people will accept some restriction to explore the website, and agree that access to the information should be

reserved for a higher social power that acts as arbiter. Therefore, access to information depends on the user's position. According to Singh *et al* (2005) power distance is reflected in:

- Company hierarchy information – information about the ranks of company personnel, information about organisational charts, information about country managers
- Pictures of CEOs and senior mangers including their titles
- A vision statement by the CEO or company head about the vision and mission of the company.

Individualism vs Collectivism (IND)

Hofstede found that the extent to which individuals take care only of themselves or are loyal to a group and society varies according to levels of individualism or collectivism. Individualistic cultures value personal time, freedom, challenge, and such extrinsic motivators as material rewards at work. Individualism concerns the relationship between individuals and other individuals or society; thus, everyone is expected to look after one's self or immediate family but no one else.

In individualist societies, the focus is on the individual and there are weaker ties between individuals. Here, personal freedom is respected and valued and personal decision-making is encouraged. On the other hand, in collectivist cultures, there is more focus on religion, custom and tradition. Also, consensus is very important and there is a strong relationship between individuals and between individuals and groups. Society, therefore, is more homogenous, joined in stronger relationships and the following of societal norms is valued highly, and group decision-making is encouraged (Stengers *et al*, 2005; and Kang and Araujo, 2006).

Tsikriktsis (2002) further states that individualistic customers look for good service, while collectivist customers tolerate poor service because they do not want to appear

disharmonious, and prefer to keep good relationships with other customers and service providers despite their dissatisfaction.

In terms of websites, high IND (Individualism) culture emphasise youth, motivation, action and change, while a collectivist culture emphasises history, tradition and age (Kang and Araujo 2006). Websites targeted at low IND cultures usually feature pictures of products or landmarks more than people (Marcus and Gould, 2001).

Masculinity vs. Femininity (MAS)

The masculinity-femininity dimension proposed by Hofstede (1980) shows and explains the role of masculinity and femininity in different cultures and societies. Masculine cultures value assertiveness, ambition, success, and performance. In such cultures, big and fast is beautiful, and clear gender roles are the norm. On the other hand "feminine" cultures tend to value beauty, nature and nurturance, and blurred gender roles (Kang and Araujo, 2006).

High MAS culture appeals for competition, ambition, action as a motivation providing quick rewards; navigation is based on exploration and control (Marcus and Gould, 2001). In low MAS cultures, on the other hand, there is more emphasise placed on mutual relationships and cooperation rather than competitiveness. Also attention is gained through the arts such as poetry which offers a more emotional appeal especially as this particular art has strong historical and cultural affinities in Arab countries (Stengers *et al*, 2005).

Uncertainty Avoidance (UA)

People have differing levels of anxiety when dealing with uncertainty, as opposed to the more universal feeling of fear caused by known or understood threats. Hofstede shows

that cultures vary in their avoidance of uncertainty with different values regarding formality, punctuality, legal-religious-social requirements, and tolerance for ambiguity.

Hofstede notes that cultures with high uncertainty avoidance tend to have high rates of suicide, alcoholism, and accidental deaths, and high numbers of prisoners *per capita*. In contrast, cultures with low UA tend to have higher caffeine consumption, lower calorie intake, higher heart-disease death rates, and more chronic psychosis *per capita*.

According to Hofstede (1980), the degree to which societies can tolerate uncertainty and ambiguity differs among cultures. Some cultures score highly in their avoidance of uncertainty, as they value security and low-risk situations, while other cultures score lower but have a greater tolerance for ambiguity and risk situations.

According to Nakata and Sivakumar (1996), customers of a high–uncertainty avoidance culture would hesitate to choose uncertain situations, while customers of low uncertainty avoidance are more accepting of uncertainty and risk. Donthu and Yoo (1998) found that high–uncertainty avoidance customers expected higher service quality compared with customers with low uncertainty avoidance. In addition, Furrer, *et al* (2000) found that uncertainty avoidance is positively correlated with reliability, responsiveness, assurance, and empathy, and is negatively correlated with website design and visual appeal.

Regarding website design, high-UA cultures emphasise practical navigation systems, an easy-acting content whose simplicity, would have restricted amounts of data and cues in colour, typography, and sound, for example to reduce ambiguity. On the other hand, low UA cultures place emphasis on helpful navigation systems, more options and a content focus on wider understanding of the concepts rather than merely narrow tasks (Marcus and Gould, 2001).

6.3.2.2 Other Cultural Dimensions

6.3.2.2.1 Subjective Norms (SN)

According to Athiyaman, (2002) subjective norms refer to a person's perception of social and group pressure. Like all the Hofstede dimensions this has a very broad impact, including whether or not the behaviour under consideration is carried out. Considering the fact that Arab culture is more collectivist than individualist (Hofstede, 1980) and that a collectivist culture is more willing to comply with others than is the individualist, it is expected that Arab tourists will be more strongly influenced by reference groups (e.g. friends, family members, managers, etc…). Thus the idea of using the websites will and accepting certain websites will comply strongly with group norms.

Since e-business websites have been developed relatively recently, they are at the early stages of implementation. It is therefore to be expected that subjective norms have a strong influence on the intention to accept e-business websites. It follows that integrating subjective norms will enhance the understanding of differences in behavioural intentions. If understood, it will allow e-business websites better to capture the audience.

Venkatesh and Davis (2000) assumed that SN has a significant relationship with IN in a settings where its use is mandatory and no relationship if the use of the technology is voluntary. However, since the cultural characteristics of Arab countries are strong in social influence (because of high collectivism and power distance) this study assumes that SN will affect IN based on the rationale that "people may choose to perform a behaviour, even if they are not themselves favourable towards the behaviour or its consequences, if they believe one or more important referents think they should, and they are sufficiently motivated to comply with those referents" (Venkatesh and Davis, 2000: p. 187).

For the purpose of this study, it is considered that if people important to users such as managers, friends, and families suggest that e-business websites are useful, users may come to conclude that it actually is useful, and consequently form an intention to use e-

business websites. People usually respond to social normative influences to establish or maintain a favourable image within a reference group (Yu *et al*. 2005).

6.3.2.2.2 Tangibility

Consumers look for tangible cues to decrease uncertainty and increase the reality of the services provided. A customer may find difficultly in evaluating a service before purchasing or visiting. For some services, their intangible nature leads to difficultly in evaluation after consumption. For instance, customers find it difficult to evaluate how pleasant a tourist site is before visiting it because the visit cannot be shown to a customer before the customer uses it.

Word of mouth is considered one of the most critical success factors of promotion of services (Hendrie, 2004). Therefore, promotion should stimulate word of mouth communication and acknowledge the main role of personal effect in the choice process. Due to the intangible nature of e-business services, word of mouth is a vital tool to maintain and enhance customer relationships leading to the achievement of sustainable competitive advantage (Zeithaml and Bitner, 1996). Communication should also be aimed at employees because of their importance in providing and maintaining service quality.

El Said and Hone (2005) confirm that the majority of Egyptian people prefer "to receive items by hand and to pay cash on delivery, when buying from the internet". Moreover, the majority of respondents do not feel secure enough to complete commercial transactions through websites and feel purchasing through websites is more risky. This also supported by another study conducted by El Nawawy (2000).

Straub, *et al*, (1997) state that cultures with high collectivism such as the Arab culture tends to use approaches such as face-to-face meetings for different communication tasks, rather than using email, which reduces and minimises group contact and affect.

6.3.2.2.3 Trust

Trust is a person's willingness to depend on the other party despite the first party being unable to control its outcome or control it (McKnight and Chervany 2002). Purchasing through the internet in Arab countries is a new form of commercial activity, which currently and so far includes a higher degree of uncertainty and risk when compared with traditional methods of purchasing. Users who have got used to buying through traditional methods and who believe in tangibility, people such as this have doubts about the security of websites and may be reluctant to do online transactions and provide personal and financial information.

Trust has been found to be one of the most important factors that affect online shopping. 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). Previous studies (Jarvenpaa *et al.*, 2000; Pavlou and Chai 2002; Heijden *et al.*, 2003) found that trust is a salient determinant of online shopping attitude. Moreover, Lynch *et al* (2001) found that trust significantly affects potential consumers` intentions to shop online.

Moreover, trust generates value by providing relational benefit derived from interacting with a website and minimising the exchange uncertainty (Chiou, 2004). Pavlou and Gefen (2004) assume that trust is an antecedent of both attitude (due to confident expectations) and controllability (due to uncertainty reduction). Gefen *et al*. (2003) found the higher the levels of trust, the more the website was perceived as useful.

It is assumed that adding the concept of trust to the proposed model will improve the predictive ability of the model to investigate the driving factors of acceptance and usage of e-business websites.

6.3.3 Perceived Usefulness (PU)

Davis (1989), defined (PU) as "...The degree to which a person believes that using a particular system would enhance his or her job performance." People assess the results of their behaviour and action in terms of perceived usefulness and establish their choice of behaviour on the desirability of the usefulness (Mathieson, *et al*, 2001; Venkatesh *et al* 2003). Van der Heijden (2003) found that perceived usefulness had a strong direct effect on usage of personal computing in small firms. Sun, (2003) argued that perceived usefulness is the most important factor affecting user acceptance.

The e-business website will be useful or not depending on its design, content, and technological elements. In other words, the user is easily able to find the needed or useful information and is easily able to understand how to interact with the e-business website.

6.3.4 Perceived Ease Of Use (PEOU)

This construct reflects "...the degree to which an individual believes that using a particular system would be free of mental or physical effort" (Davis, 1989). Perceived ease of use has been found to influence usefulness, attitude, intention, and actual use (Chau and Hu 2002).

It has been suggested that PEOU can be corresponded with freedom from efforts and anxiety, which is more of a concern for those with high uncertainty avoidance value. According to Davis (1989), if a technology is easy to use, it would be enjoyable and comfortable to use it and in turn be more useful in improving job performance.

Venkatesh (2000) found PEOU to be more associated with anxiety reduction, which is part of the psychological property of uncertainty avoidance. The positive interacting effect of UA on the PEOU-PU relationship suggests that, in the process of website acceptance, the greater the reduction in uncertainties and resultant anxieties, the more a website will be perceived to be useful because of its ease of use.

All these aspects require an appreciation of cultural factors ios they are to be understood. For instance, for people in the Arabic World a right-to-left flow of information is intuitive. If e-business website is perceived to be ease to use, it will have influence on users' attention to use the website.

6.3.5 Intention to Use (IN)

Intention to use refers to the willingness and desirability of an individual to take certain action or activity (Van der Heijden, 2003; Gardner and Amoroso, 2004). Different studies indicate that user behavioural intention is a good predictor of actual usage and acceptance of new technology (Davis *et al*., 1989; Taylor and Todd, 1995; Venkatesh and Davis, 2000; Sun, 2003). Davis *et al*. (1989) conclude that the use of the new technology by individuals can be predicted from their intentions. Therefore, factors that influence people's behaviour can be seen as indirect influences through his/her intention (Davis, 1989).

Results in prior studies (Davis, 1989; Davis *et al.*, 1989; Taylor and Todd, 1995; Venkatesh and Davis, 2000; Sun, 2003) show that the more useful and easy website is perceived to be, the more likely it is that individuals will accept it.

6.4 Research Hypotheses

If one is allowed to attribute action to an abstract concept, one can say that culture has an influence on user intention to use a website. Users from different cultures prefer and have positive intentions to use a website. A user with a positive attitude toward using an e-business website that reflects and matches his/her cultural value will use e-a business website. E-business websites should address different cultural dimensions that may impact the user's choice of website usage and acceptance.

Huizingh (2000) argues that website content is "…the information or service that is offered on the websites" and design as "...the way the content is made available for website visitors". It is assumed that the e-business website content and design are

compatible to determine website usefulness. If e-business website users found wanted information and can easily surf the website without any effort, this website will be regarded as useful.

Studies show that there is a positive relationship between e-business website content and design and perceived usefulness (Huizingh, 2000; Huang and Law, 2003; Cai, *et al,* 2003).

Davis, *et al*. (1989) assume that perceived ease of use directly and indirectly affect user behaviour through its effect on perceived usefulness. Davis, *et al*. (1989) found these effects to be significant. Thus, it is proposed that perceived ease of use is related to perceived usefulness and website usage, and have direct and indirect effects on usage use through its impact on perceived usefulness.

Perceived usefulness and perceived ease of use have been studied as the main determinants of information technology acceptance and usage (Davis, 1989; Adams, *et al*., 1992; Venkatesh and Davis, 2000; Venkatesh and Morris, 2000). Previous studies using TAM have shown an empirical support for a positive relationship between perceived ease-of-use and perceived usefulness (Van der Heijden, 2003; Sun, 2003; Yu *et al*. 2005).

In an e-business website environment, it is also expected that the easier an e-business website is to learn, use, or navigate, the more useful will it be (Venkatesh and Davis, 2000; and Van der Heijden, 2003; Sun, 2003). Several researchers such as Yu *et al*. (2005) have proved repeatedly the direct impact of perceived ease of use on attitude toward using websites. Yu *et al.* (2005); Chau and Hu (2002) and other studies which were conducted in information technology area, found perceived usefulness to be significant predictor of attitude toward using the websites.

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Perceived usefulness, in turn, is influenced by users' confirmation of expectation from prior use of e-business website; this indicates that perceived usefulness is a major

determinant of behavioural intentions to accept and use websites. (Venkatesh and Davis, 2000; Van der Heijden, 2003; Mao and Palvia, 2006) found that perceived usefulness has a direct effect on use intention and the effect of usefulness on intention to be the strongest which is a direct result of experience (Rogers, 1995; Venkatesh and Davis, 1996; Agrawal and Prasad 1999; Moon and Kim, 2001; Chau and Hu, 2002; Yu *et al*. 2005).

Arising from the discussion above, this study tests the following main hypotheses:

1. There are significant differences between Arab and UK people in acceptance and usage of e-business websites.
2. There are differences between Arab and UK people in acceptance and usage of e-business website that can usefully be ascribed to "cultural" factors.
3. There are relationships between cultural variables and Arab peoples' acceptance of e-business websites.
4. There are relationships between cultural variables and UK peoples' acceptance of e-business websites.
5. There are relationships between Website Quality, Cultural Variables, PU and PEOU and e-business websites acceptance in the Arab sample.
6. There are relationships between Website Quality, Cultural Variables, PU and PEOU and e-business websites acceptance in the UK sample.

CHAPTER 7

INTERVIEW RESULTS

7.1 Introduction

This chapter presents the results of semi-structured interviews that were conducted with the primary aim of identifying, examining and providing better understanding of website quality, cultural factors, usefulness and ease of use that could explain the user's intention to use e-business websites. E-business is about the use of websites to enhance business in a more general sense and E-business websites in this context are used commonly for booking rooms or buying tickets.

Saunders et al. (2000) define an interview as a purposeful discussion between two or more people.. There are two methods of collecting interview data: by face-to-face and remote interviews (via email, telephone, computer and post).

There are three types of interviews that can be utilised according to Saunders *et al*. (2003): structured, semi-structured and unstructured interviews. Structured interviews are used in descriptive studies to obtain quantitative data wherein the researcher reads out each question and then records the response on a standardised schedule, usually with pre-coded answers. Unstructured interviews are non-standardised and usually used in explanatory studies, where the researcher simply has a list of questions and issues to be covered. This allows flexibility so that the researcher can omit or add questions in order to explore topics in more depth (Sekaran, 2003).

The order and formulation of questions may also be varied depending on the flow of the interview (Leedy and Ormrod, 2001). The last type of interview is a semi-structured which is the most common method of interviewing and usually used in the social sciences. This method is used to collect qualitative data.

Some researchers found the face-to-face semi-structured interview technique a successful method of data collection, in addition to questionnaires, to conduct studies in Arab firms because the individuals interviewed preferred to talk rather than to write (Al-Rasheed, 1996 and Al-Ali, 1999; El Said and Hone, 2005).

Semi-structured interviews force the participants to focus on particular theme but allow the interviewer to obtain detailed information which can be translated into qualitative results. So, in general, interviews provide a method of data collection that is characterised by flexibility, ease of use and administration.

As mentioned above and in chapter 5, previous research found that using semi-structured interviews is a very successful and productive method in Arab society (Gefen, *et al*, 2003, Akour, *et al*, 2006, Yasin, and Yavas, 2007) where they prefer to talk rather than to complete a questionnaire. Thus, it was decided that this method would be employed in addition to the completion of a questionnaire. This was especially so with the key informants as they might have been reluctant to spend time providing written explanatory answers.

However, interviews are subject to several serious drawbacks. It can be difficult to identify a large group of qualified experts in the subject area. There can be problems in obtaining agreement from the interested parties on the choice of experts. There can be expensive and time consuming, especially if there are a large number of respondents to be interviewed (Hussey and Hussey, 1997). Finally, as with any verbal scaling, the validity of the measurement can be questioned. For these reasons, interviews are not normally used as the sole source of data collection but are frequently supported by literature and questionnaires.

7.2 The Objectives of the Interviews

The semi-structured interviews are used to complement the questionnaires in order to explore or explain, in depth, any additional details, information, and facts relating to an

individual's responses. In other words, it aims to enhance and validate the questionnaire's findings.

7.3 The Sample

Semi-structured interviews were conducted with tourists (Arab and UK) and academic key informants in IT, social scientists and website developers. 30 participants were chosen to participate in the interviews as part of the main study and shown in Table 7.1 below.

Table 7.1 The participants – Interview -2

Participants		Interviews number
Tourists	Arab	18
	UK	6
Arab academics, social scientists and website developers		6

It should be noted that the participants were informed in advance about the study objectives and the main issues of the interview in order to give them the opportunity to prepare themselves and provide informed responses.

There was a particular need to conduct interviews with Arab academics as there is a lack of research on Arab cultural issues relating to website usage and acceptance. It was decided to not conduct interviews with UK academics as there already exists abundant data relating to UK website usage and acceptance (e.g. Milberg, *et al*, 1995; Watson, *et al*, 1997; Crespi, *et al*. 2004; McKechnie,*et al*, 2006; Zhang, and Nuttall, 2007).

7.4 Instrument Design

The interviews involved three parts. The first part included demographic information such as, age, gender, and use and experience of the Internet.

The second part included questions about website quality and acceptance factors. The aim was to obtain information about the main factors affecting the acceptance of e-business websites.

In the third part, a number of interview questions were designed around different cultural variables known to characterise Arab culture namely: uncertainty avoidance, collectivism, power distance, and masculinity. The aim was to assess whether these variables explain the way in which Arabs perceive and use websites. Appendix (4) includes the interview questions.

7.5 Pilot Study

The interview instrument design was based on previous studies with some amendments to match the research requirements. Website acceptance and usage questions were derived from (Davis, 1989; Venkatesh and Davis, 2000; Akour, *et al*, 2006) while cultural dimensions were derived from (Hofstede 1980, 1991; Tsikriktsis, 2002; Akour, *et al*, 2006).

These questions were subjected to a pilot study which included four Arab research students residing in the UK and four UK students studying in the UK. The questions were also sent by email to three academic lecturers in Jordanian universities specialising in Management Information System (MIS), IT and social sciences. The pilot study resulted in the restructuring of a number of questions, in an attempt to improve reliability and validity in the main study.

7.6 Interview Administration

The main interviews were conducted face-to-face in Jordan during August and September 2007. Tourists were interviewed at three tourist sites: Amman Citadel, Petra, and Jaresh as shows in Table 7.2. The interviews were conducted in Arabic for Arabs (although some English terms were used where needed with Arab tourists) and in English for UK tourists.

Table7.2 Locations of the interview

Participates	Number	Location
Academics	6	Workplace
Tourists	24	Tourists sites (Amman Citadel, Petra and Jaresh)

7.7 Conduct of the Interviews

With regard to the actual conduct of these interviews, a number of practices were observed, in order to reduce bias and improve the quality of responses provided. These are illustrated by the following "best practices" cited in the literature (Oppenheim, 2000):

a) Participants were made to feel comfortable enough to give informative and truthful answers without fear of adverse consequences.
b) Complete confidentiality and anonymity was assured.

The interviews were conducted as follows:

- Participants were informed of how they were chosen for the interview
- Permission was sought to tape – record their responses. Most of the participants declined therefore notes were used for recording data.
- Probing was used to develop discussion on e-business usage and cultural issues.

7.8 Interview Results

The discussion of the interviews results will be divided into two parts: interviews with tourists (Arab and UK) and with academics as key informants.

7.8.1 Interviews with Tourists (Arab and UK)

The analysis of the interview with users reveals primary findings about the main factors influencing the use of websites. The first general finding confirms that Arab tourists

(86.7%) prefer to use websites in the Arabic language as it is easier and more understandable for them. However, users complained that Arabic websites are rarely found on the net. Meanwhile, UK users do not complain about the language as they normally use English language websites.

One Arab user pointed out that *"…Many Arabic e-business websites do not consider Arab cultural aspects as most Arabic language websites use ready-made templates which are designed for general use and so suitable for most other cultures. Many websites continue to base themselves on western sites rather than adapt into their own identity of being an Arab website"* (interview, 7).

Other Arab tourists said they felt more comfortable using Arabic websites for social, religious and political reasons. However, some of the interviewees commented that English websites in technology and business contexts are superior to Arabic websites.

As pointed out in the interview, most Arab users are using websites and the Internet for sending and receiving email to interact with others and enhance social communication. This confirms the findings of (El Nawawy 2000, and Wheeler, 2004) who claim that the main usage of the Internet by Arab users is for receiving and sending emails, chatting and seeking entertainment. While UK respondents mentioned that they visited tourism websites to search for information. All respondents revealed that they visited websites to search for information such as tourism sites, offers, prices and flight details.

With regard to website quality, navigation was seen as the most difficult issue facing Arab users. Most of the respondents declared that they got lost after navigating the first two pages. This shows the importance of website navigation and ease of use for users. Respondents commented that they moved to other websites or cancelled their search if they got lost or cannot find what they want. Also, they mentioned that the most of e-business websites do consider the download problems where (70%) of Arab tourists faced downloading problems.

The Arab respondents considered navigation as the most important factor in website design that is of importance to them; navigation is a major aspect to judge website usability. Consistency of web pages is also important for a culture with high uncertainty avoidance. Different styles of pages will confuse the users and discourage them from using the site. UK tourists share Arab tourists their opinions about the importance of navigation as one of the main features of website quality. Huizingh (2000) confirmed that "it is important that a similar presentation style is used for all pages within the website". In addition, colour coded sections definitely help. Breadcrumbing[7] is an important aspect of a website as it always reminds the user where she/he is at the current moment.

Furthermore, interactivity is an important feature that should be included in websites. One of the participants stated *"An effective website should have forms that allow people to communicate about their experience of visiting the country (i.e. sharing photos, vacation memories, etc)"*(Interview, 4). This allows people to continue living their vacation experience when they return back home or even while still in Jordan. Another interviewee commented that "*the website should also incorporate various means of communication before and after the vacation. For example, an email to the person before they begin their trip with suggestions of what things they will be able to do on their trip will get that person excited about beginning his/her vacation* (interview, 10). Another interviewee added "*Post-vacation communications would increase the likelihood of this person coming back to further experience the destination*" (interview, 11).

Nearly all Arab interviewees stated that they preferred using multimedia features that helped them express themselves successfully while sending an email or chatting with others using websites. While the use of symbols and multimedia features is not unique to Arab culture, the need for such additions could be felt particularly strongly in this oral dominant culture. Multimedia items such as slideshows, videos, and music help enhance the user experience.

[7] A navigation feature that displays a list of places a person has visited or the route a person has taken.

Arab culture is predominantly tangible in the sense that people in the Arab world favour face – to – face interactions over other modalities of doing business. Arab respondents in this study expressed an unwillingness to rely heavily on automated services, as available on websites to complete transactions. Concern over security and fear of technology seems to exacerbate the situation. Language seems to be another barrier contributing to the reluctance of consumers to buy. " *I prefer visiting travel agents to buy ticket or book hotel as it is more trust to perform the transaction, and I can negotiate if there is any other alternatives also I feel more comfortable and trust in touching my ticket or hotel book*" (interview, 7).

Furthermore, Arabic culture is high on group and family collectivism and power distance scales. The results support the theory that Arab culture is a high-context culture where personal relationships and the context of the communication process are more important than the content of the communicated message. Thus, face-to-face communication which is highly interactive and intimate in nature is valued more than e-mail or fax-based communication. On the other hand, UK tourists show less interest in visiting shops for purchasing, so using websites could be more useful in saving time and money. This also raised trust issues, for although it is important for UK tourists, the credibility of websites, company reputation, previous experience and the availability of guarantee certificates contribute effectively to reduce their fear of using websites.

Furthermore, it was noticed that Arab tourists prefer to buy directly from travel agents and tourism companies rather than using the internet. They prefer to visit stores and feel more comfortable with the purchasing process where they can assess and confirm the quality of services or goods. Customers' purchasing decisions are based on word of mouth and personal relationships rather than using the Internet. Physical evidence is very important in Arab culture. It is considered a key factor of the environment in which the service is delivered and where handling of goods facilitates the communication and performance of the service. When inspecting the tangible evidence, customers look for indictors to assess suitability of the service. For instance, prospective customers may stare through a restaurant window to check the décor, furnishings and the appearance of

the waiters (Hendrie, 2004). Furthermore, respondents reported that they prefer to ask friends or families about their experience with the services even when they find full information on the websites.

E-business websites in this context are used commonly for booking rooms or buying tickets. A high percentage of Arab participants expressed their opposition to buying online and did not encourage online shopping of friends and family. The reason for this is that they do not trust e-business websites and they do not want to reveal personal information requested online. A higher percentage of participants (90%) had never used an e-business website for buying products or services. Participants reported a lack of trust in websites and a lack of credit card security. They preferred to visit travel agents or contact them by phone and use cash for payment. This is in line with other studies that confirm the lack of trust is the main barrier to using websites, ((Atif, 2002; Ba, and Pavlou, 2002; Keat, Mohan, 2004; Kong, and Hung, 2006).

Most of the UK tourists show more trust in using e-business websites. Most of them bought tickets through websites. The study showed that most Arab respondents prefer to use familiar websites rather than new ones suggesting that they are avoiding uncertainty.

When the respondents were asked if they preferred to use easy-to-use websites rather than useful websites, around 67% of respondents reported that they prefer easy-to-use ones. There are not willing to use a website if it requires long download times even if the information contains is useful. They also said that they would move to a different website if they got lost and could not find information they were looking for even if they know the information was there.

As far as UK tourists are concerned, many tourists seem to base their purchasing decisions on a process of gathering and analysing information, via the internet and other electronic and non-electronic resources. In the case of Arab tourists, however, the picture is quite different. It would be appear that many Arab tourists base their purchasing decisions on tangible and concrete evidence gained through face-to-face encounters and

real word-of-mouth communications. They visit travel agents' offices in person, judging quality of tourism services on the physical environment rather than travel agents' promises, etc. Even for Arab tourists with computers and the desire to use the internet for information, technical difficulties discourage such behaviour.

Participants in this study cited the following reasons for not using e-business websites:

1. Lack of trust.
2. Lack of information available.
3. Content that contradicts their religion and customs.
4. Preference for face-to-face transactions.
5. Importance of personal recommendations in decision making for planning to travel or booking a hotel, for example.
6. Poor website design and performance, download speedy and navigation.
7. Lack of familiarity with the Internet and e-business website.

Regarding cultural values, respondents reported that there are some restrictions for using websites in their work place. Management tends to restrict employee access though there are fewer restrictions for senior and top management. Also, 75% of respondents claimed that they were restricted in their use of the Internet at home due to their family. This was especially true for women where (90%) claimed that they have different restrictions on using websites and internet at home. The reason given was that husbands and parents see using websites as affecting women's customs and traditions. Websites may also include content that contradicts their religion and values.

There is a perception that using websites and the Internet will lead to change life style and interaction and solidarity between the family and society.

The following quotes highlight the belief that use of the Internet will reflect negatively on relationships with family and friends. "*my father disconnected the internet because he said I was spending a long time chatting and sending emails, he said, that using the internet will affect my relationships with my family and relatives and this is against our*

customs and religion" (interview 8)**,** another respondent mentioned that *"I am always arguing with my wife while I am chatting with friends or searching websites as this keeps me away from my family"* (interview 6).

When the Arab respondents were asked if they faced difficulties or they want to buy through the internet, they prefer to ask their friends or families as they have more experience and trust their opinion rather than searching websites. This also, as mentioned above, is a part of the collective culture where they share and trust their opinions. "*I trust my friend or relative more than a website*" (interview 2).

7.8.2 Interview with Academics

Academics were interviewed to explore the theoretical / academic view rather than the user perspective. They confirmed the importance of using websites as marketing and information tools. They believed that using websites would enable companies to obtain many advantages such as increased revenue and decreased costs, market growth, more efficient use of time, enhanced company image and identity, competitive advantage and better Customer Relationship Management (CRM).

They agreed that the use of e-business websites is still very limited in Arab countries, and they confirmed the main determinants in the use and acceptance of websites as were identified through the interviews with tourists discussed above. They added that there are very limited marketing activities and promotions to support the use of e-business websites. Website quality is frequently poor. There is a weak communication infrastructure. There is also a lack of financial resources and website expertise in Arab regions. All of these factors have an impact on the online buying behaviour of tourists.

With regard to website objectives, academics declared that website owners use websites purely as marketing tools for their products and services. They do not sell through websites because Arab users prefer to use the traditional methods such as visiting and

phone calls. There is however an increase in the use of business – to-business (B2B) communication.

The academics confirmed that culture has an influence on acceptance and the use of websites. They reported that Arab culture predominately is oral and there is a reluctance to write using new technology. Also, there is a belief that using websites will have an impact on social life and on customs, therefore people do not encourage friends and family members to use websites. There is a concern that websites may include information or images that conflicts with the Islamic religion and its values.

Academics stated that most Arabic e-business websites are still undeveloped and contain poor content. Some of the more useful websites are "imported" and translated from western websites which raises concerns as discussed above.

Furthermore, the academics commented that weakness of Arabic website, force users to visit western websites to find information which raises language difficulties.

7.9 Conclusion

As mentioned in chapter 1, this research focuses on the use of e-business websites in general. The domain in which this has been examined is tourism. E-business websites in this context are used commonly for booking rooms, buying tickets and searching for information and online services**.** The interviewees in this study referred to "tourist e-business websites" simply as this was the context in which the questions were asked.

The analysis of the semi-structured interviews suggests that although there are a number of differences in the acceptance and usage of e-business websites across Arab and UK culture, these differences are not only attributed to economic political and social factors. Technological issues, such as the technological infrastructure for electronic data and payment exchange, seem to hinder the wide spread of websites as means for business transactions. This infrastructure is both weak and mismanaged. Continuous disconnections, slow rates of data transfer, and access difficulties have become the rule,

not the exception. For Arab tourists, this situation is rather frustrating and constitutes a waste of time and money.

Furthermore, financial issues, such as the existence of a sound payment system based on credit cards rather than cash money, constitute a big hurdle in the Arab world, as the Arabs prefer cash payments in conducting business, and this behaviour seems to contradict with the viability of B-2-C which requires a well established payment system based on credit cards, it is also evident that the majority of the Arabs, even those who possess credit cards, do NOT trust credit card payment systems for security reasons.

The situation is further exacerbated due to the fact that Arab culture is dominated by tangible and personal keys upon which the quality of almost most things is judged. Arab people are favour interactive and personal relationships, rather than distance dealings. Word-of-mouth communication and face-to-face encounters are the most important modalities of doing business and non-business affairs. Trust in Arab culture is established through an elaborate social process, and technology is NOT included in this process.

Most e-business websites are designed and conducted in the English language, even in the case of the tourism websites which are run by Arab tourism organisations and travel agents. Acceptance and usage of such websites by a high percentage of people in the Arab world who are not familiar with this language becomes impossible. This language barrier for most people in the Arab world coupled with shortage of Arabic software further contributes to the reluctance of consumers.

The situation is furthered worsened by the unwillingness of the majority of Arab governments to actively promote e-business. Resistance to change, and lack of e-business competencies, and lack of financial budgets may stand behind such unwillingness. Arab governments have even hindered developments in the private sector with rigid laws and procedures.

In terms of culture, one ought to emphasis the fact that Arabs are oral communication-driven people. They prefer to talk and listen, but seldom read. Written communication is used, but it is less convincing than oral communication. This is why face-to-face communication, word-of-mouth communication, and personal encounters are more important as influencing factors on behaviour than written communication. Arab culture is a high-context culture where personal relationships and the context of the communication process carry more importance and value than the content of the communicated message. The method of delivering the message is more important than the efficiency in delivering the message. Thus, delivering a message through the internet may NOT be valued or appreciated in the Arab world as compared with the west. In the context of website interaction, the high collectivism Arab culture to focus on chatting and the use of discussion rooms shared by Arab people who generally have the same culture and use the same language.

When it comes to "tangibilties ", the difference between Arab and UK purchasing behaviour becomes clear. People in the Arab world judge things by "feel" and "sight". Shopping is a pleasure when the shopping is in a physical environment and personal interactions is considered "brilliant". These tangible things are highly valued in the Arab culture, at the expense of the sharing and evaluation of information. Information is needed, but is soon dismissed when the physical environment or the personal interactions are seen to be inferior. Not surprisingly for all these reasons, the use and acceptance of e-business websites by the majority of Arab sample is still in its infancy stage.

CHAPTER 8

DESCRIPTIVE ANALYSIS AND FACTOR ANALYSIS

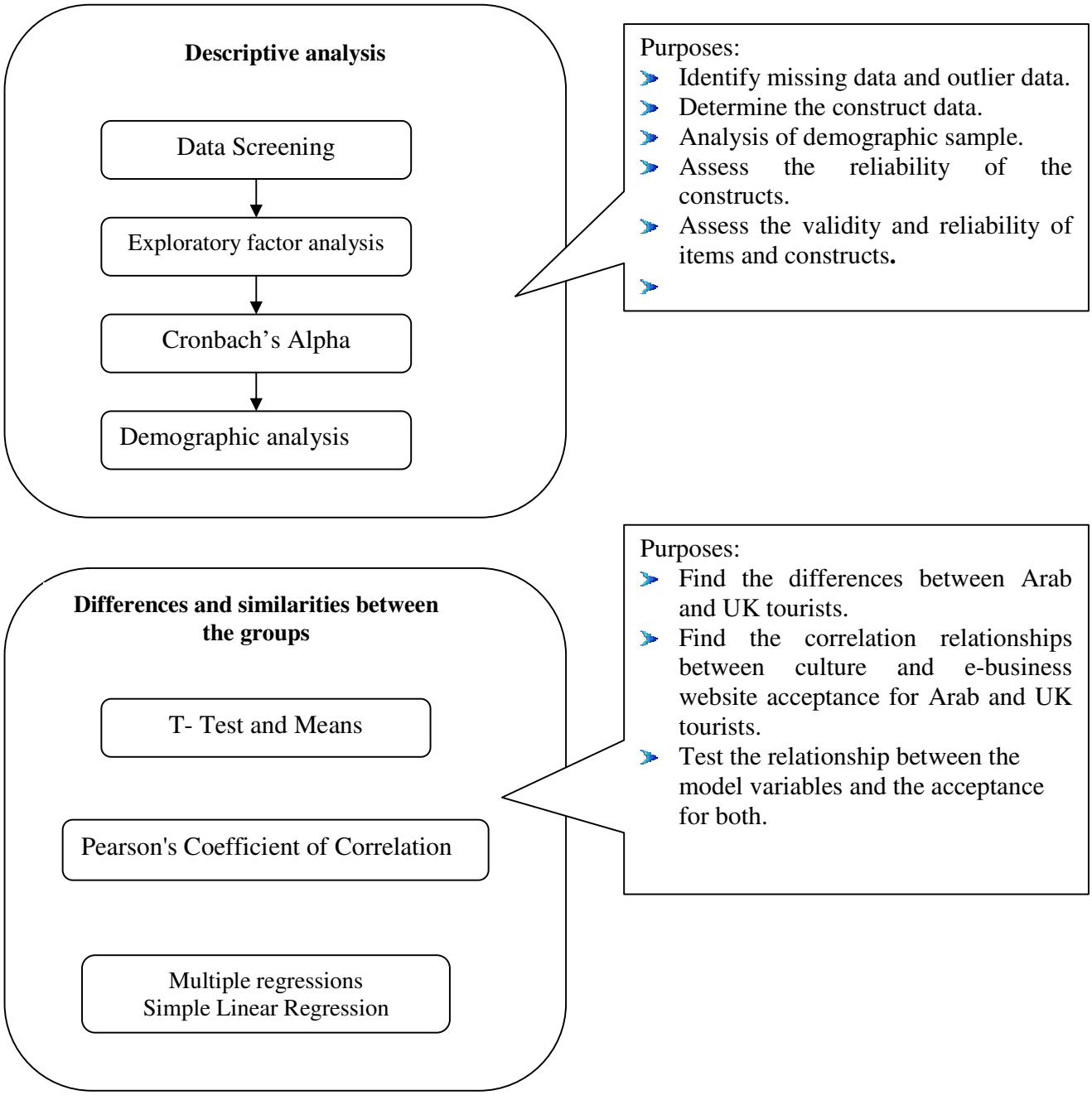
8.1 Introduction

The statistical techniques undertaken in this study are processed consistently with the following sequence. Initially, descriptive and factor analysis processes were carried out. This included data screening, an exploratory factor analysis, and a demographic analysis. Then, the correlation analysis was performed using SPSS16. Next, regression analysis was carried out. This included the measurement model fit analysis, testing of hypotheses and the relationships between the model variables. Figure 8.1 below provides a graphical depiction of the statistical techniques undertaken in this study,

This chapter includes the following sections:

- Demographics and descriptive statistics
- Construct reliability and validity assessment
- Factor analysis
- Chapter summary

Figure 8.1 Data analysis process



8.2 Descriptive Analysis

Descriptive analysis (also called exploratory analysis) includes transformation of the data obtained into a form that presents information the better to describe factors selected for attention in a particular situation. Descriptive analysis was employed to establish the respondents' demographic and general characteristics and to summarise information about the main variables of the study. The discussion of the respondents' demographic information offers a clear perspective of the cultural and other factors that influence using and acceptance of the e-business websites which were investigated in this study.

Frequencies and means were used to achieve the explorative objectives of this study, determine the sample characteristics and to develop primary insights into the data distribution. More specifically, they were used to analyse and interpret the findings of the descriptive statistics analysis for research variables.

8.2.1 Respondents' Profiles

As described in chapter 5 section 5.10.2, the questionnaires were distributed in three tourist locations in Jordan[8]; Petra, Jaresh, and Amman Citadel. They were aimed at two groups of respondents; 837 questionnaires were distributed, UK tourists (213) and Arab tourists (624). Out of the 679 returned questionnaires, 56 questionnaires were excluded (17 from the UK sample and 39 from the Arab sample) due to insufficient data (unanswered questions). Consequently, 623 (UK, 165 and Arab, 458) questionnaires were considered valid for statistical analysis. Appendix (5) provides demographic characteristics and general characteristics of respondents

This section presents a descriptive analysis of the sample to evaluate and provide an overview of the demographic information according to the following criteria:

[8] Petra is located in the south of Jordan; Amman is the capital and located in the middle whereas Jarash is located in the north of Jordan.

8.2.1.1 Age

The study is concerned with two groups of respondents (Arab and UK tourists). Regarding the Arab sample, Table 8.1 shows that the age of respondents in the 20 to 29 group was predominant including over 61% of the sample group; the 30-39 group represented 20%, while the 40-49 age group represented only 7.4%. The smallest age group was the over 50's representing only 1.3% of respondents.

This suggests on the basis of this poll that younger people are ostensibly most likely to visit local tourist sites than their older compatriots. The reasons behind this could be due to the fact that, most of universities and schools arrange social events to visit touristic sites in Jordan. Furthermore, younger people have fewer commitments with regard to family than do older people, therefore they have more free time. This supports Al-Alak's (2005) finding that young people in Arab countries are more likely to visit tourist sites than older people.

Table 8.1 Age-Arab Sample

Age		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 20	46	10.0	10.0	10.0
	20-29	280	61.1	61.1	71.1
	30-39	92	20.1	20.1	91.2
	40-49	34	7.4	7.4	98.6
	50 or above	6	1.4	1.4	100.0
	Total	458	100.0	100.0	

For UK tourists, (see Table 8.2) the sample was weighted towards older age groups with 42 % above 50 years, 25% for the age group between 40-49 years old. 22% between 30-39 years old, and 10% less than 30 years old. This means that older UK people are more likely than younger to visit these tourist places in Jordan.

Table 8.2 Age-UK Sample

Age		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 20	14	8.5	8.5	8.5
	20-29	3	1.8	1.8	10.3
	30-39	37	22.4	22.4	32.7
	40-49	41	24.8	24.8	57.6
	50 or above	70	42.5	42.5	100.0
	Total	165	100.0	100.0	

The overall sample (Arab and UK) shows that the age group including those under 29 represents 55% of the survey and the age group between 30-39 represents around 21% The over 40s represent 24% as shown in Table 8.3.

Table 8.3 Age-Arab &UK Samples

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 20	60	9.6	9.6	9.6
	20-29	283	45.4	45.4	55.1
	30-39	129	20.7	20.7	75.8
	40-49	75	12.0	12.0	87.8
	50 or above	76	12.3	12.3	100.0
	Total	623	100.0	100.0	

8.2.1.2 Gender

The sample is skewed in terms of gender, 71% of Arab respondents were male and 29% were female. This might be due to social factors, which constrain female travel in Arab society. Those who participate and share in such social events are more likely to be male. It was also noticed that males were more likely to fill out questionnaires than females. Table 8.4 depicts these details.

The UK sample relatively shows an equal distribution for each group; males representing 49.7 % and females 51.3 %. This shows that UK females are as likely as males to travel to heritage sites, a matter that can be interpreted in terms of UK culture. The overall sample shows that around 70% of the study sample was male and around 30% were female.

Table 8.4 Gender - (Arab and UK Tourists)

		Arab tourists		UK tourists	
		Frequency	Percent	Frequency	Percent
Valid	male	325	71.0	79	49.7
	female	133	29.0	86	51.3
	Total	458	100.0	165	100.0

8.2.1.3 Education

Table 8.5 shows the distribution of the study sample related to their education. The Arab sample shows that (66%) hold HNDs and BAs, 18% hold high school diplomas while only around 10% hold PG and 6% hold other education certificates, such as professional certificates. Regarding the UK sample, Table 8.6 shows that 44% of the sample holds a BA degree, while 19% have HNDs and less than 6% have a PG, while 27% hold other educational certificates.

Table 8.5 -Highest Qualification Held - Arab

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High school	82	17.9	17.9	17.9
	HND	76	16.6	16.6	34.5
	B.Sc	228	49.8	49.8	84.3
	PG	44	9.6	9.6	93.9
	other	28	6.1	6.1	100.0
	Total	458	100.0	100.0	

Table 8.6- Highest Qualification Held -UK

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High school	7	4.2	4.2	4.2
	HND	31	18.8	18.8	23.0
	B.Sc	73	44.2	44.2	67.3
	PG	10	6.1	6.1	73.3
	other	44	26.7	26.7	100.0
	Total	165	100.0	100.0	

The overall sample shows that 14% hold a high school certificate, 17% an HND, while 48% hold a BA and 20% a PG or other certificate. This means that in general, the respondents were well-educated. It's worth saying that there were comparable levels of education between Arab and UK samples.

Table 8.7 - Highest Qualification Held - Arab and UK

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**High school**	89	14.3	14.3	14.3
	HND	107	17.2	17.2	31.5
	BS.c	301	48.3	48.3	79.8
	PG	54	8.7	8.7	88.4
	other	72	11.6	11.6	100.0
	Total	623	100.0	100.0	

8.2.1.4 Usage and Experience

In order to identify general experiences of Internet usage, the respondents were asked questions relating to (i) Internet usage (ii) use time over the week and (iii) visits to websites associated with the tourism industry.

With regard to internet usage, 22.5% of the Arab respondents started using the internet less than 1 year before the survey was taken; 29.0 % of respondents reported their internet usage as being 1-3 years; 32.3% answered that they started using it 3 -5 years previously, while 16.2% have been using the internet for more than 5 years. It is noticeable that the majority of the Arab respondents (83.8%) are likely to have started using the internet in the last 5 years. This could indicate that the Internet has been only available in Arab countries recent years.

Table 8.8 Usage of the Internet - Arab

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 1 year	103	22.5	22.5	22.5
	1-3 years	133	29.0	29.0	51.5
	3-5 years	148	32.3	32.3	83.8
	More than 5 years	74	16.2	16.2	100.0
	Total	458	100.0	100.0	

The UK sample is more experienced in use of the internet even though they belong to older generation. It is expected that younger groups will have more internet experience. This may due to access and availability and could be cultured.

Table 8.9 Usage -UK

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-3 years	13	7.9	7.9	7.9
	3-5 years	62	37.6	37.6	45.5
	More than 5 years	90	54.5	54.5	100.0
	Total	165	100.0	100.0	

Regarding e-business website usage, around 57% of Arab visitors do not visit e-business websites, while all the UK tourists visiting e-business at least once a month.

Table 8.10 Experience – Arab- (Using e-business websites)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	262	57.2	57.2	57.2
	Less than once a month	124	27.1	27.1	84.3
	1 to 2 times a month	57	12.4	12.4	96.7
	3 to 4 times a month	13	2.8	2.8	99.6
	More than 3 to 4 times a month	2	.4	.4	100.0
	Total	458	100.0	100.0	

Table 8.11 Experience-UK-(Using e-business websites)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than once a month	6	3.6	3.6	3.6
	1 to 2 times a month	55	33.4	33.4	37.0
	3 to 4 times a month	78	47.2	47.2	84.2
	More than 3 to 4 times a month	26	15.8	15.8	100.0
	Total	165	100.0	100.0	

8.2.1.5 Language

The result of the survey showed that 83% of the Arab respondents prefer Arabic to be the main website language while 17 % do not mind using either Arabic or English. The figure of 17 % is really quite high percentage for Arab countries. This could be related to language. However, it may also relate to website design and the navigational structure of Arabic websites. In the UK sample, it was found that 88.5% used websites in English. Interestingly, it was found that 11% used websites in Arabic or English. This was due to the fact that they were originally from Arab countries and still used Arabic.

Overall, as shown in Table 8.12, the sample shows that 61% of the respondents preferred Arabic, 23% preferred English and 16% liked to browse in both languages.

Table 8.12 Language - Arab Sample

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Arabic	380	83.0	83.0	83.0
	Both	78	17.0	17.0	100.0
	Total	458	100.0	100.0	

Table 8.13 Language -UK Sample

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	English	146	88.5	88.5	88.5
	Both	19	11.5	11.5	100.0
	Total	165	100.0	100.0	

Table 8.14 Language - Arab and UK

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Arabic	382	61.3	61.3	61.3
	English	144	23.1	23.1	84.4
	Both	97	15.6	15.6	100.0
	Total	623	100.0	100.0	

8.2.2 Questionnaire Statements Analysis

The Mean (M), Standard Deviation (SD) and Frequencies were used to analysis each statement. The mean categories are as follows:

(1) $M < 2.4$ indicates 'low agreement' level

(2) $2.4 \leq M \leq 3.4$ - indicates 'medium agreement' and

(3) $M > 3.4$ indicates 'high agreement'.

The SD which represents the diversification of respondents' answers was used to reflect the level of agreement over that mean. Generally, high SD reflects a lower level of agreement than a low SD. The following sections explain the results of respondents' answers.

8.2.2.1 Website Quality

Website Quality (WQ) includes four main factors, namely: system quality, information quality, service quality and attractiveness (Liu and Arnett 2000; Barnes and Vidgen, 2002; Aladwani and Palvia, 2002; Delone and McLean, 2003; Hsu,*et al* 2004; Kim and Kim, 2004 and Cao, *et al*, 2005). Results are shown in Tables 8.15 and 8.16.

Although both samples Arab and UK show the importance of website quality in the use of and the acceptance of websites, the analysis shows slightly different results among Arab and UK respondents. Arab respondents revealed that system quality (*search facility*, *responsiveness* and *multi-media capability*) is the most important factor in e-business websites. The average mean of Arab sample for this variable is 3.77 which represent a high level of agreement while the UK sample shows less importance, with a mean of 3.55. Furthermore, UK respondents appear to believe that information quality (*depth of information, information relevance, clarity, currency of written content, and information accuracy*) is more important. Here the mean is 3.82, while the Arab results show somewhat less importance with a mean of 3.57.

The Arab sample shows that service quality *(trust, empathy*) attractiveness *(playfulness presentation and visual appeal)* are more important factors for the Arab sample than the UK sample. Here the mean was higher in the Arab sample, (3.67 vs 3.1) respectively.

Table 8.15 Mean and Std. Deviation (Arab)

		S.Q	I.Q	S2.Q
N	**Valid**	458	458	458
	Missing	0	0	0
Mean		3.7686	3.5721	3.6681
Std. Deviation		.34169	.42638	.31045

Table 8.16 Mean and Std. Deviation (UK)

		S.Q	I.Q	S.Q2
N	**Valid**	165	165	165
	Missing	0	0	0
Mean		3.5545	3.8200	3.0758
Std. Deviation		.32726	.41485	.37685

8.2.2.2 Cultural Variables (CV)

Cultural variables include four main factors, namely: trust**,** tangibility, and subjective norms, in addition to the Hofstede cultural dimensions of Power Distance, Uncertainty Avoidance, Masculinity and Individualism. The sections below discussed the descriptive analysis of the result of the questionnaire.

8.2.2.2.1 Trust

This variable aims to investigate the respondents' trust in using websites for business purposes questions under this category related to use of credit cards to purchase services or products through a website. Table 8.17 shows that out of 88% of Arab respondents who use generally credit cards only around 5.7% are prepared to use their credit cards on a website frequently and 58% of the respondents would not use it at all. This clearly indicates a lack of trust in e-business in the Arab sample.

The UK sample shows that all the respondents have credit cards and only 7.3% had never used their credit card on a website. However, around 52% use their credit card and purchase frequently on the Internet.

A high percentage of Arab respondents (57.9 %) conveyed a dislike of e- business websites and online shopping. The same high majority of respondents do not want to reveal their personnel information when requested on websites or to a third party. A lack of trust is the main reason that prevents them from shopping online.

This supports the finding of a number of previous studies which have claimed that lack of trust is the main reason that discourages online shopping (Atif, 2002; Kong, and Hung, 2006).

In contrast, UK respondents show more trust in using e-business websites, and most of them had bought products and searched for information through websites.

As shown in Table 8.18, high percentage of UK respondents (75%) did not object to using e-business websites or providing their personal information if needed. This shows clearly the difference in trust between the Arab and UK samples.

Table 8.17 Use of Credit Cards in General (Arab & UK)

		Arab		UK	
		Frequency	**Percent**	**Frequency**	**Percent**
Valid	**Yes**	402	87.8	165	100.0
	No	56	12.2	-	-
	Total	458	100.0	165	100.0

Table 8.18 Use of Credit Cards on E-business Websites (Arab & UK)

		Arab		UK	
		Frequency	**Percent**	**Frequency**	**Percent**
Valid	**Never**	265	57.9	12	7.3
	Rarely	107	23.4	17	10.3
	Occasionally	60	13.1	50	30.3
	Frequently	26	5.7	86	52.1
	Total	458	100.0	165	100.0

Table 8.19 Trust (Arab and UK)

		Arab	**UK**
N	**Valid**	458	165
	Missing	0	0
Mean		2.3177	3.7424
Std. Deviation		0.96552	0.92823

8.2.2.2.2 Subjective Norms (SN)

This variable is measured through two statements aimed to investigating the social norms that influence users. The results show that the aggregate level of the Arab sample is

higher than the UK sample. This suggests that in an Arab society social influence from family members, friends, and managers, for example, leads to a higher resistance to online shopping. This demonstrated the increased influence of the social group on decision making in an Arab culture.

The analysis shows that the subjective norms have a strong influence especially in high collectivism cultures, suggesting that people in high collectivism cultures perceive a higher social pressure to use websites if their important referents expect it; this is clear in such Arab culture where social referents play significant roles in the influence of others behaviours. This is not at all clear in low collectivism cultures, however. It is plausibly the case that people with high levels of collectivism may be likely to be more conformist and consider the opinions of others. This result may suggest that it is a useful way of promoting e-business website acceptance in homes or organisations where people are living together and tend to be more collectivist through social influence of managers, friends or peers in the workplace.

Thus, when people perceive their environment as being encouraging to using websites, e-business websites will be perceived to be useful and part of the social life. This finding is consistent with previous studies (Earley, 1994).

Table 8.20 SN (Arab and UK)

N	Valid	458	165
	Missing	0	0
Mean		2.9455	2.0349
Std. Deviation		1.03006	.84193

8.2.2.2.3 Tangibility

The Arab results (M = 3.90) show that visiting travel agencies or tourism shops is preferred to using the Internet. Interaction with a sales employee, could lead to the negotiation of better prices and services. On the other hand, the UK sample (M = 2.01) suggest that they may find using the Internet a better way of obtaining cheap prices and services. It is not surprising that the attitudes of the Arab respondents to doing business

via the internet are not favorable compared to UK participants. This corresponds with Al Alak's (2003) studies which show that Arab people think that visiting a shop or office will improve the tangibility of products and services.

Table 8.21 Tangibility (Arab Sample)

		I prefer to visit e-business shops rather than buying through the websites	Visiting e-business store will enhance my touch feeling about the e-business products and services	A personal contact with e-business shops helps me to get cheaper prices or good offers.
N	**Valid**	458	458	458
	Missing	0	0	0
Mean		3.70	4.03	3.93
Std. Deviation		1.111	.890	1.061

Table 8.22 Tangibility (UK Sample)

		I prefer to visit e-business shops rather than buying through the websites	Visiting e-business store will enhance my touch feeling about the e-business products and services	A personal contact with e-business shops helps me to get cheaper prices or good offers.
N	**Valid**	165	165	165
	Missing	0	0	0
Mean		1.88	2.34	2.07
Std. Deviation		.795	.894	.801

8.2.2.2.4 Hofstede's Cultural Values

Hofstede's cultural dimensions include the following sub-factors: Power Distance, Individualism, Masculinity, and Uncertainty Avoidance. The analysis carried out in this study appear to suggest that cultural dimensions have more influence over Arab behaviour than UK behaviour

8.2.2.2.4.1 Power Distance (PD)

Previous literature pointed out that Power Distance has a direct negative influence on the adoption of new technology (Straub, *et al* 1997; Bagchi *et al*., 2004; Srnka, 2004).

The results from this study support this notion. High PD cultures such as Arab culture expect and accept inequalities among people. Authority is distributed unequally between people, as evidenced by the lack of questioning of managers or superiors. This leads to individuals accepting decisions made by superiors either at home, work or in wider society. It is considered socially improper to object to a superior's ideas in public. As shown in Table 8.25, the mean of the Arab sample for this factor was (3.3574), this means that the majority of the respondents appear to believe inequalities among people are inevitable and tend to assume that website use should be limited to certain people (e.g. parents, managers). This is with agreement with Hofstede's study (1980).

For the UK sample, as shown in Table 8.25 the mean of the sample was 1.9576, respondents confirm the equality between people and consider sharing authority in a society or organisation expected and desired. The decisions of managers influence their life and work so they should to be part of these decisions. This is also clear in their perception of using website where it should be not limited to certain people.

8.2.2.2.4.2 Individualism /Collectivism

The results show that Arab people express negative attitudes towards websites. Collectivists such as Arabs are more committed to their existing relationships and avoid any interruptions that could negatively affect community solidarity. The results indicate that culture could be a barrier to website acceptance in Arab countries, as a result of the highly social and family oriented nature of Arab people. The majority of respondents expressed that they would feel threatened if using websites affected family and social life. In addition, Arab respondents show more trust in friends or families to ask them if they faced any problem while they browsed a website and prefer to ask friends before searching websites. As mentioned above, this refers to the culture and nature of Arab people where the mean was (3.7358) as shown in Table 8. 23. The results are supported by previous research (e.g. Loch *et al* 2003; Akour, *et al* 2006).

While this is not the case for UK sample, which can be characterised as individualistic culture, where people are expected to look out for themselves, and there is little social solidity. The level of connections between an individual in a society can be very low. Individualistic culture tends to encourage individual initiative and is less loyal to the group where people search for personal fulfillment. As shown in Table 8.23 the mean was (2.1354) to confirm that UK culture is highly individualistic (Hofstede, 1994).

Since website usage and acceptance conveys cultural values and use in different cultures, it would require understanding of the cultural factors that explain the possible gaps in related individuals' behaviors. Hofstede (1984: 213) addressed the culture-technology relationship:

"Technologies developed in western individualist settings more or less presuppose an individualist mentality in entrepreneurs, managers, and workers which is part of "modernity". Introducing such technologies in more collectivist countries represents one of the main forces toward a shift of societal norms in those countries. On the other hand, the collectivist value patterns in more traditional societies set a limit to the technology transfer".

8.2.2.2.4.3 Masculinity / Femininity

Femininity versus Masculinity dimensions reflects on the differences between women and men's roles in the community. Masculine cultures tend to assertiveness, independence, an emphasis on power, performance and achievement while feminine cultures are emphasise people and the maintenance of personal relationships, focus more on quality of life; work freedom and low pressure environments (Hofstede, 2001). Femininity and masculinity are established in the social (gender role) rather than the biological (sex) (Shanks, *et al* 2000).

Previous studies propose that masculine cultures are more technically focused, with an interest in technology and website usage to perform tasks and enhance their

achievements. On the other hand, feminine cultures are concerned with people and the role of technology to support this orientation (Gefen and Straub, 1997; Joshi and Kuhn, 2005).

Arab culture displays slightly high masculinity culture and low feminine where the acceptance of e-business websites was low. The mean was (3.7686). Arab Culture's characteristics do not limit their need for quality of life to the needs of the individual, but extend it into work as well. This is also clear in management style where managers consider the attitude of employees, emphasising on the quality of life, communicating, and relationships as social values. In addition, strong relationships between Arab countries and UK have influenced norms and beliefs to promote low levels of discrimination between genders.

The UK sample displays a masculine culture with mean (3.2667). This can be found clearly in the gap of adoption of new technology and usage of e-business websites between the two cultures. People in the UK value, appreciate, and are interested in a quality of life improved by the use of a new technology. They appreciate assertiveness and focus on performance and achievement. This contributed to adoption of the new technology and usage of e-business websites.

8.2.2.2.4.4 Uncertainty Avoidance

People in high UA culture always worry about future and unexpected results, Arab culture can be characterised as high UA (Hofstede, 1980). This culture has direct negative influence on websites usage and the adoption of new technology (Bagchi *et al*., 2004; Zakour, 2004). By nature, people in the Arab countries are not future-oriented and they see the future as a threat with high uncertainty.

The findings of this study indicated that Arab countries are high in uncertainty avoidance culture consisting with previous studies (Hofstede, 1980; Gefen and Straub1997; El Said, and Hone 2005; Yasin and Yavas, 2007). These results could be justified as people in

high uncertainty avoidance culture are expected to have a low tolerance for uncertainty situations (Hofstede, 2001). Buying through e-business websites can be seen as an activity with uncertain results. Therefore, online purchasing presents numerous risks for users (Einwiller and Will, 2001).

On the other hand, UK culture was found to have low uncertainly avoidance, where uncertainty is a normal feature of life. This kind of culture is future- oriented; people see the future as an adventure, worthy of investigation and the future is perceived as something better and more welcome. This culture is suited to the adoption of new technology including the use of websites.

Table 8.23 Hofstede Cultural Values (UK)

		PD	IND	MAS	UA
N	**Valid**	165	165	165	165
	Missing	0	0	0	0
Mean		1.9576	2.1354	3.2667	3.3677
Std. Deviation		.74368	.62023	1.10872	.74228

Table 8.24 Hofstede Cultural Values (Arab)

		PD	IND	MAS	UA
N	**Valid**	458	458	458	458
	Missing	0	0	0	0
Mean		3.3574	3.7358	3.7686	3.2656
Std. Deviation		1.07450	.81490	.64162	.52093

8.2.2.3 Perceived of Usefulness (PU)

The perceived usefulness recorded by the Arab sample shows a lower level of agreement with the mean (2.7), while the level of agreement in the UK sample shows a higher level of agreement (4.1). This means that Arab respondents do not believe that using websites will provide them more useful information e.g. tourism information. Meanwhile, they prefer to use other methods such as visiting tourism shops, and travel agencies to get the

required information or they ask friends and family for advice. On the other hand, the UK sample shows more interest in using e-business websites as a tool for providing useful information about services and products. This might refer to the fact of using the internet; moreover, internet use started in the UK well before Arab countries as well as it being less influential on the social norms of UK people, The fact that government has been pushing the use of IT at schools and in all sorts of other ways e.g. on-line filing of tax returns and even paying a £100 bonus to companies that file online.

Table 8.25 PU (Arab &UK)

		Arab	UK
N	**Valid**	458	165
	Missing	0	0
Mean		2.7067	4.1374
Std. Deviation		1.05345	.47282

8.2.2.4 Perceived Ease of Use (PEOU)

The PEOU within the Arab sample shows a lower level of agreement with mean (2.6), while the level of agreement within UK respondents shows a higher level of agreement (4.2). This means that Arab respondents do not believe that using websites will be easy and free of effort; they think that using other methods will be easier for them such as visiting shops, travel agencies to get the required information or ask friends and family for advice. On the other hand, the UK sample shows more interest in using e-business websites as easy tools and being free of efforts and money. This might refer to the fact that UK respondents have more experience in using the internet than Arab respondents.

Table 8.26 PEOU (Arab & UK)

		Arab	UK
N	**Valid**	458	165
	Missing	0	0
Mean		2.6692	4.1879
Std. Deviation		1.08716	.69482

8.2.2.5 Intention to Use

The results show varied degrees of approval among samples toward intention to use e-business websites; The Arab sample indicates a lower intention to use or recommend the visiting of e-business websites with mean (2.64), where the UK sample has a higher intention to use e-business websites with mean (4.22). In addition, this could refer to the fact that UK tourists are used to visiting tourism websites before travelling to get more information about the destination while the Arab sample demonstrate that they do not have this intention.

Table 8.27 IN (Arab & UK)

		Arab	UK
N	**Valid**	458	165
	Missing	0	0
Mean		2.6463	4.2242
Std. Deviation		1.15268	.62812

8.3 Reliability Analysis

In order to examine the data collection instrument, all variables of the research model have been evaluated for reliability and, convergent and discriminate validity. Regarding the reliability test, the internal consistency for each variable was measured by computing Cronbach's Alpha to ensure that all the items in the scale were sufficiently inter-related.

A Cronbach Alpha was used for this purpose as considered to be the most common method used for measuring the stability and consistency of the instrument (Sekaran 2003). According to Nunnally (1975), reliability estimates of 0.50 to 0.60 were considered sufficient for basic research, whereas other researchers considered a good reliability should produce at least a coefficient value of 0.70 (Pallant 2005). However, Bagozzi and Yi (1994) considered 0.60 to be an acceptable level for a newly developed scale or an application across fields of study.

In this study, the reliability analyses of all variables show that Cronbach's Alpha value was (0.84) as shown in Table 8.28

Table 8.28 Cronbach's Alpha Value

Reliability Coefficients	
N of Cases = 623	N of Items = 44
Alpha = 0.839	

Table 8.28 shows the internal consistency between the variables was high and more than the recommended minimum mentioned above. Furthermore, the reliability for the developed model dimensions was assessed by Cronbach‘s alpha test (α). The results show that all measurers had strong and adequate reliability. Thus all scales were reliable and had high internal consistency. Table 8.29 shows Coronach Alpha for each variable.

Table 8.29 Reliability Coefficient for the Research Model Constructs

Construct	Cronbach's Alpha
Perceived Usefulness (PU)	.826
Perceived Ease of Use (PEOU)	.857
Intention to Use (IU)	.846
Websites quality	.768
Cultural variables	.721

In order to test the correlations between items in the same variable, convergent validity was employed. Pearson Correlation coefficient was computed with –tailed t-statistic test. The results of all correlations between pairs of items within the same variable were satisfactorily significant at the 0.01 level (2-tailed). Convergent validity was achieved, which means that all variables item are high correlation.

8.4 Factor Analysis

Factor analysis is a statistical technique aims to look for a method that could help to reduce and summarise the collected data for small groups of factors (Hair *et al*., 1992). According to Hair *et al*. (2003), factor analysis is a part of multivariate statistical technique which aims to address the interrelationships between variables by defining a set of common underlying factors.

There are two main approaches to factor analysis; exploratory and confirmatory (Pallant, 2005). Exploratory factor analysis was used in the early stage of research after collecting data to explore the correlation among a set of variables, while confirmatory factor analysis which is more sophisticated and complex was used to confirm the hypotheses concerning the structure underlying a set of variables (Pallant, 2005).

In this study, Exploratory Factor Analysis (EFA) was performed on the data set so as to identify and extract the large number of variables into smaller number of factors underlying conceptual constructs (Tabachnick and Fidell 2001). In order to perform factor analysis, the sample data must show a number of key characteristics:

1. The sample should be as heterogeneous as possible (Kline, 1994);
2. The sample should match as closely as possible the target population for which the instrument is intended, in this case the Arab and UK tourists visiting Jordan.
3. Sample size must be large enough to reduce standard error of correlations to negligible proportions. The minimum acceptable sample size is around 100 (Tabachnick and Fidell 2001); the sample size for this study is 623 respondents.

Like any statistical techniques, factors analysis is subject to measurement and sampling error (Chatterjee, *at al* 1991). Darden, and Dorsch, (1998) mentioned that principal components are sample specific and may, in part, be the result of sampling difference. Thus, future studies with large samples and replication are two of the greatest necessities for the reliable identification of variables in such studies (Mostafa, 2006). However, according to Pallant, (2005), the following steps involved in factor analysis:

- **Assessment of the Suitability of Data**

This assessment includes two factors: sample size and strength of the relationship among the variables. As mentioned in the chapter five, there is no agreement about the sample size, as most of researcher recommend, 'the large, the better' this could help to generalise the results, according to Saunders, *et al* (2003) the minimum sample could be 30. In addition, for performing factor analysis, Hair, *et al* (2003) suggested the minimum sample size should be 100 at least. However, the sample size of this study is (623) which exceeds the recommended number and enhances the generalisability of results.

- **Factor Extraction**

This step involves determining the factors that can be used to best represent the interrelations between the items (Pallant 2005). Although there are different types of extraction techniques that could be used (e.g. Principal Component, factor component, alpha factors) but the most commonly used is Principal Components (Pallant, 2005).

To determine the number of factors to retain, Pallant (2005) suggests a number of techniques that could be used, such as Kaiser's criterion and scree plot. Kaiser's criterion, which called also Eigenvalue, should be 1.0 or more which represents the amount of total variance explained by this factor. Scree plot includes plotting each type of the eigenvalue of the factors and looking the plot to find a point at which shape of the curve changes direction and become horizontal. The Scree Plot helps the researcher to determine the numbers of factors to be retained in the factor loading (Francis, 2004).

- **Data Rotation :**

Factor extraction assists to determine the number of factors to be retained for further investigations (Pallant, 2005). These factors are difficult to interpret; therefore, factor rotation is needed.

Two main approaches could be used for rotation: orthogonal and oblique. According to orthogonal approach; the underlying constructs are not correlated. It used to maximize

the variance of factor loadings by making high loading higher and low ones lower for each other (Tabachnick and Fidell, 2001). In other words, variables loading higher than 0.3 will be retained while low loading variables will be removed (Pallant, 2005).On the other hand, the oblique approach assumes that underlying constructs are correlated (Tabachnick and Fidell, 2001). Researchers tend to use orthogonal approach due to its ease to be interpreted and deemed appropriate for this research. For the purpose of this study, the Varimax rotation (orthogonal) was used.

Within these approaches, the most commonly statistical technique used is orthogonal varimax which aims to minimise the number of items that have high loading in each factor (Pallant, 2005).

According to George and Mallery, (2006) factor loadings show the strength of relationship between the variable and factor which is vary between -1.0 and +1.0. Factor loadings higher 0.4 which is the cut-off limit for loading variables is considered acceptable and show excellent face validity while factor loading less 0.4 show poor indicates to the variable and should be eliminated from analysis (Garson, 2001; Al-Hawari and Hasan, 2004). Some researchers (George and Mallery, 2006) recommend the loading factor should be above 0.5 while others (Leo, *et al*, 2005) recommend the loading factor should be above 0.3. For the purpose of this study loading factor will be above 0.4 where it is used by previous researchers in the same field (Yaseen, 2005).

8.4.1. Results of Factor Analysis

Before executing any factor analysis, three steps should be performed as mentioned above, which included determining the factors, interpretation of the factors and the selection of the final factor solution (Stapleton, 1997).

• Suitability of the Data for factor Analytic Techniques

Initially, the suitability of data for factor analysis was assessed. The Kaiser-Meyer-Oklin value (KMO) was used for this purpose. According to (Norusis, 1994) KMO measure

more than 0.50 is satisfactory for factor analysis to be valid, a value of 0.70 is considered "reasonable" and a value of 0.80 is considered "great" and values above 0.9 are excellent.

The initial solution of our factor analysis revealed a KMO value of 0.845, which is great according to Norusis, (1994) and exceeding the recommended value of 0.6 (Tabachnick and Fidell, 2001; Pallant, 2005). Bartlett Test of Sphericity was significant ($p<0.001$) supporting the factorability of the correlation matrix as shown in Table 8.30 below. The results of these two tests pointed that the data was an appropriate for a factor analysis.

Table 8.30 KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		**.845**
Bartlett's Test of Sphericity	**Approx. Chi-Square**	**12645.597**
	df	**861**
	Sig.	**.000**

Regarding to the sample size, as mentioned above, there is no agreement of the sample size to perform the statistical analysis. Hair, *et al* (2003) suggested the minimum sample size should be 100 at least to execute the factor analysis. However, the sample size of this study is (623) which is exceed the recommend number and enhancing the results generalisation.

- **Factor Extraction**

After confirming the suitability of data for performing factor analysis, factor extraction involves identifying the factors that can be used for further analysis. Table 8.31 shows the eigenvalues associated with each factor before extraction. Generally, the eigenvalues associated with each factor show the variance explained by that particular linear component as well as the table presents the eigenvalue in terms of the percentage of variance explained (e.g., factor 1 explains 23.750% of total variance). It is noticed that the first 13 factors explain relatively large amounts of variance (68.924%) where following the factors explain only small amount of variance around 31% as well as the

table shows thirteen factors with eigenvalues more than (1.00). The result of extraction yielded 13 factors that could be used to determine the appropriate number of factors for further analysis.

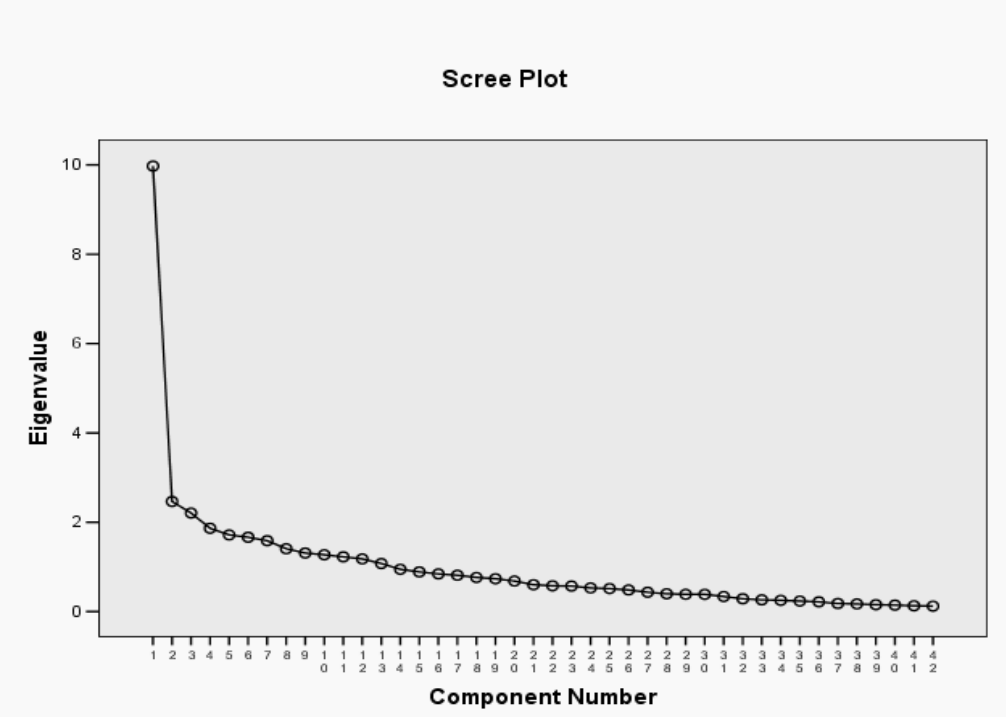
Table 8.31 Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	9.975	23.750	23.750	9.975	23.750	23.750
2	2.465	5.869	29.619	2.465	5.869	29.619
3	2.206	5.254	34.872	2.206	5.254	34.872
4	1.865	4.441	39.313	1.865	4.441	39.313
5	1.716	4.087	43.400	1.716	4.087	43.400
6	1.664	3.961	47.361	1.664	3.961	47.361
7	1.587	3.778	51.139	1.587	3.778	51.139
8	1.408	3.351	54.491	1.408	3.351	54.491
9	1.311	3.120	57.611	1.311	3.120	57.611
10	1.272	3.029	60.640	1.272	3.029	60.640
11	1.226	2.918	63.558	1.226	2.918	63.558
12	1.179	2.807	66.365	1.179	2.807	66.365
13	1.075	2.559	68.924	1.075	2.559	68.924

The Number of Factors

There are different methods help to determine the number of factors to choose, the latent root criterion is the most common, used, according to (Mitchell, 1994). For principal component analysis, only variables values with an Eigenvalue of greater than one could be considered to be significant. The scree plots test also a good indicator of the number of factors that should be reserved for the factor loading. The scree plot shows points of inflexion on the curve located after the fourth factor (see figure 8.1 below). This indicates that these factors should be considered to determine the number of retaining factors.

The component matrix before rotation was performed to produce the loadings of each variable into each factor. These results supported by the scree plot results and the decision to retain five factors for further analysis.



The decision was made to consider these factors as these factors account for a high percentage of the total variances (39.313%) as seen in Table 8.31. These factors also supported by the literature review and the results of the interviews, thus, these factors will be appraised and investigated further in the reminder of the PhD study.

Researchers confirm the fact that using factor analysis as a data exploration not a rigid and solid statistical technique (Tabachnick and Fidell, 2001). The factor analysis should be used to help and guide the researcher to make rational decisions about the number of factors should be removed or retained (Hair, *et al*, 2003).

- **Data Rotation**

Once the numbers of components have been identified, the next step is to determine the pattern of loadings. As mentioned above, there are two main approaches for rotation: orthogonal and oblique. For the purpose of this study, the Varimax rotation (orthogonal) was employed because of its ease to be interpreted.

Using the EFA test, item loadings in excess of 0.30 were retained, in agreement with the recommendations of Pallant (2005), who also noted that item loadings should be higher

for the constructs they are meant to support, in comparison with other factors. The greater the loading, the more the variable is a pure measure of the factor. The cut-off point for interpretation in this study is all loadings exceeding 0.30.

In some cases, some variables do not load on any factor. In this case the researcher has two options; first, interpret the solution as it is and simply ignore these variables, or second, exclude these variables. Hair, *et al*, (2003) contended that ignoring the variables should depend on the contribution of variable (s) to the research objectives.

In the next stage, after rotating the data, the results need be interpreted. According to (Tabachnick and Fidell, 2001) only variables with loading of 0.30 and above could be interpreted. In this stage, naming the factors will be carried out, to do so, the variables with high loading were *Website quality, Cultural Variables, Perceived Usefulness* and *Perceive Ease of Use.*

The first component was named *Website Quality* (WQ) as the items in this dimension reflected the characteristics and main factors of e-business website quality. The second dimension was named C*ulture Variables* (CV) which include: (1) Tangibility: as the variables reflect the respondents desire to buy through the websites or using traditional methods such as visiting shops. (2) Trust: as the items contained different questions reflect to which extent the respondents trust using e-business websites. (3) Subjective norms as it contains variables which show the influence of social norms on respondents' behaviour and usage of e-business websites. (4) Hofstede's cultural dimensions, such as the items contained, reflect the cultural dimensions of the respondents based on Hofstede's cultural dimensions.

The third dimension was named *Perceived of Usefulness (PU)* as the items reflected to which extent that the respondents feel that using e-business websites will be useful for them. The fourth dimension was named *Perceived Ease Of Use* (PEOU) as the items reflected the extent to which those respondents believe that using e-business websites will be free of effort.

8.5 Summary

This chapter introduced a descriptive data analysis for the demographic factors in research after the process of data-collection. Generally, this chapter provides a contribution in describing the relationship between the sample and its population, describing the characteristics of the participants (i.e. age, education, etc.) that are common to both the sample and the population. Accordingly, the first section commenced by illustrating and describing the demographic variables in frequency tables using SPSS to illustrate the basic statistical relationships.

The analysis shows that there are relatively more than a few differences in the usage of e-business websites and its importance between Arab and UK respondents. Cultural values result shows that there are clear cultural differences between Arab and UK respondents, and this is in-line with previous studies such as (Hofstede, 1980).

Using principal component analysis as the extraction method and varimax rotation methods with KMO, the most related factors emerged with Eigenvalues over 1.00. These factors are Website quality, cultural variables, perceived usefulness and perceived ease of use. These factors were perceived as the most important drivers of the intention to use and accept tourism websites. Moreover, the results confirmed the existence of factors that accounted (39.313%) for the total variance.

CHAPTER 9

DIFFERENCES AND SIMILARITIES BETWEEN ARAB AND UK TOURISTS IN CULTURE AND E-BUSINESS ACCEPTANCE

9.1 Introduction

The previous chapter analysed the demographic characteristics of the respondents and summarised information about the main factors of the study. In this chapter, the differences and similarities between Arab and UK tourists in terms of culture and e-business acceptance are discussed, and the levels of cultural variables compared.

Means and independent-sample t-tests are used to find the significant differences between Arab and UK tourists. The aim of the analysis is to answer the following questions:

- Are there any differences in cultural variables between Arab and UK tourists in the acceptance and usage of e-business websites?
- Are there any other differences between Arab and UK tourists in the acceptance and usage of e-business websites?

A cultural variables and acceptance index was organised for each variable by averaging responses to the corresponding items (Yoo and Naveen, 2002). For each variable, 5 represents the maximum score and 1 the minimum where the Likert scale indicates "1" stands for "strongly disagree" and "5" stands for "strongly agree".

9.2 Acceptance of E-business Websites

The Significant level for Levene's Test was found to be .000. This is less than the cut-off of 0.5 which means that the assumption of equal variance has been violated. For this reason, equal variances rather than assumed variances were used (Pallant, 2005) in the analysis. Means and t-tests for e-business acceptances are reported in Tables 9.1 and 9.2

Table 9.1 Comparison of Acceptance Mean Scores					
	Nationality	N	Mean	Std. Deviation	Std. Error Mean
IN	Arab	458	2.6463	1.15268	.05386
	UK	165	4.2242	.62812	.04890

Table 9.2 Independent Samples Test of Acceptance E-business

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
IN	Equal variances assumed	174.010	.000	-16.708	621	.000	-1.57795	.09444	-1.76342	-1.39249
	Equal variances not assumed			-21.691	525.672	.000	-1.57795	.07275	-1.72086	-1.43504

The mean score was 2.64 for Arabs and 4.22 for UK people, the results of t-test was ($t = -21.691$; d. f. = 525.672.; $p < 0.001$).These results show that there is significant difference between Arab and UK tourists in intentions regarding the acceptance of e-business websites.

9.3 Cultural Variables

9.3.1 Trust

The Sig. level for Levene's Test in this case is .026. Again, this is less than the cut-off of 0.5. This means that the assumption of equal variance has been violated, therefore, equal variances not assumed were used. Means and t-tests for trust are reported in Tables 9.3 and 9. 4.

Table 9.3 Comparison of Trust Mean Scores

	Nationality	N	Mean	Std. Deviation	Std. Error Mean
TR	Arab	458	2.3177	.96552	.04512
	UK	165	3.7424	.92823	.07226

Table 9.4 Independent Samples Test of Trust

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
TR	Equal variances assumed	4.981	.026	-16.417	621	.000	-1.42474	.08678	-1.59516	-1.25431
	Equal variances not assumed			-16.724	300.390	.000	-1.42474	.08519	-1.59238	-1.25709

The mean score for variables associated with trust is 2.3 for Arabs and 3.7 for the UK sample. From this it can be said that the UK sample trusts in e-business websites more than the Arab sample ($t = -16.724$; d. f. = 300; $p < 0.001$).

9.3.2 Tangibility

Here, the Sig. level for Levene's Test is .190. This is higher than the cut-off of 0. 05. which means that the assumption of equal variance has been not violated and equal variances assumed can be used. Means and t-tests for the tangibility are reported in Tables 9.5 and 9.6.

Table 9.5 Comparison of Tangibility Mean Scores

	Nationality	N	Mean	Std. Deviation	Std. Error Mean
TA	Arab	458	3.8857	.81667	.03816
	UK	165	2.0970	.72135	.05616

Table 9.6 Independent Samples Test of Tangibility Variable

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
TA	Equal variances assumed	1.723	.190	24.855	621	.000	1.78877	.07197	1.64744	1.93009
	Equal variances not assumed			26.346	325.519	.000	1.78877	.06790	1.65520	1.92234

The means of the tangibility variables are 3.88 for Arabs and 2.09 for UK people, indicating that tangibility is more important to the Arab sample than to the UK sample. The results show a significant differences ($t = 24.85$, d. f. $= 621$; $p < 0.001$).

9.3.3 Subjective Norms

The Sig. level for Levene's Test is 0.357. This is higher than the cut-off of 0.5. Therefore equal variances were used. Means and t-tests for subjective norms are reported in Tables 9.7 and 9.8

Table 9.7 Comparison of Subjective Norms Mean Scores

	Nationality	N	Mean	Std. Deviation	Std. Error Mean
SN	Arab	458	3.5180	.87994	.03275
	UK	165	2.6189	.91823	.07170

Table 9.8 Independent Samples Test of Subjective Norms

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
SN	Equal variances assumed	.848	.357	11.717	884	.000	.89910	.07674	.74849	1.04971
	Equal variances not assumed			11.406	235.777	.000	.89910	.07883	.74381	1.05440

The mean of the Subjective Norm variable was 3.51 for the Arab sample and 2.61 for the UK sample, showing that Arab people are more influenced by their peers, friends, managers, etc in their decisions than the UK sample ($t = 11.406$, d. f. = 235.777; $p < 0.001$).

9.3.4 Power Distance

Again, the Sig. level for Levene's Test is .000.. Means and t-tests for Power Distance are reported in Tables 9.9 and 9.10.

Table 9.9 Comparison of Power Distance Mean Scores

	Nationality	N	Mean	Std. Deviation	Std. Error Mean
CPD	Arab	458	3.3574	1.07450	.05021
	UK	165	1.9576	.74368	.05790

Table 9.10 Independent Samples Test of Power Distance

PD	Levene's Test for Equality of Variances		t-test for Equality of Means						
								95% Confidence Interval of the Difference	
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Equal variances assumed	68.526	.000	15.450	621	.000	1.39978	.09060	1.22185	1.57770
Equal variances not assumed			18.266	418.490	.000	1.39978	.07663	1.24914	1.55041

Power Distance mean is 3.35 for Arabs and 1.95 for the UK sample, indicating a high power distance for Arabs and low power distance for UK sample. This confirms Hofstede's (1980) results. ($t = 18.26$, d. f. = 418.49; $p < 0.01$).

9.3.5 Collectivism

Means and t-tests for power distance are reported in Tables 9.11 and 9.12.

Table 9.11 Comparison of Individualism/Collectivism Mean Scores

	Nationality	N	Mean	Std. Deviation	Std. Error Mean
IND	Arab	458	3.7358	.81490	.03808
	UK	165	2.1354	.62023	.04828

Table 9.12 Independent Samples Test of Individualism/Collectivism

IND	Levene's Test for Equality of Variances		t-test for Equality of Means						
								95% Confidence Interval of the Difference	
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Equal variances assumed	11.151	.001	22.943	621	.000	1.60045	.06976	1.46346	1.73745
Equal variances not assumed			26.027	378.834	.000	1.60045	.06149	1.47954	1.72136

The collectivism mean is 3.73 in Arabs and 2.13 in UK sample indicating that the Arab sample is significantly more orientated towards collectivism than the UK equivalent ($t = 26.02$, d. f. = 378.83; $p < 0.001$). Again, this is consistent with Hofstede's results.

9.3.6 Masculinity

Means and t-tests for Masculinity are reported in Tables 9.13 and 9.14.

Table 9.13 Comparison of Masculinity Mean Scores

	Nationality	N	Mean	Std. Deviation	Std. Error Mean
MAS	Arab	458	3.7686	.64162	.02998
	UK	165	3.2667	1.10872	.08631

Table 9.14 Independent Samples Test of Masculinity

MAS	Levene's Test for Equality of Variances		t-test for Equality of Means						
								95% Confidence Interval of the Difference	
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Equal variances assumed	101.625	.000	6.978	621	.000	.50189	.07193	.36064	.64315
Equal variances not assumed			5.493	204.890	.000	.50189	.09137	.32174	.68204

Here, both samples present a positive orientation towards Masculinity. The means are 3.76 for Arabs and 3.26 for the UK sample. In fact, the Arab sample presents a significantly higher Masculinity orientation than the UK sample. Taking Hofstede's (1980) cultural dimensions into account, this is an interesting result. Hofstede reported a Masculinity orientation for his UK sample that was higher than the Arab one (Masculinity scores were 52 and 66 for Arabs and UK citizens, respectively).

9.3.7 Uncertainty Avoidance

Means and t-tests for Uncertainty Avoidance are reported in Tables 9.15 and 9.16.

Table 9.15 Comparison of Uncertainty Avoidance Mean Scores

	Nationality	N	Mean	Std. Deviation	Std. Error Mean
UA	Arab	458	3.9557	.73203	.02724
	UK	165	2.7683	.66807	.05217

Table 9.16 Independent Samples Test of Uncertainty Avoidance

UA	Levene's Test for Equality of Variances		t-test for Equality of Means						
								95% Confidence Interval of the Difference	
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Equal variances assumed	.154	.695	19.047	884	.000	1.18739	.06234	1.06504	1.30974
Equal variances not assumed			20.175	259.663	.000	1.18739	.05885	1.07150	1.30328

The means for Uncertainty Avoidance were 3.95 and 2.76 for the Arab and UK samples respectively. These results correspond with Hofstede's findings. Hofstede described Arab culture as having high uncertainty avoidance and UK culture as having low uncertainty avoidance. (Uncertainty avoidance scores were 68 and 35 for Arab and the UK, respectively). To confirm the results above, aggregate means and t-tests were performed as shown in Appendix (6).

9.4 Discussion of the Cultural Differences

Cultural variables include three main factors, namely: trust**,** tangibility and subjective norms. In addition, the study considers Hofstede's four cultural dimensions: power distance, uncertainty avoidance, masculinity and collectivism. The following sections discuss the results of the t-test analysis in terms of all these variables.

9.4.1 Trust

Trust has been found to be the vital element that affects online shopping. Trust refers to the confidence an individual has in their favourable expectations of what other people will do, based, in many cases, on previous interactions and experience (Gefen, 2000). Previous studies (Heijden *et al*., 2003; Gefen *et al.* 2003) found that trust significantly affects potential users` intentions to shop online; the higher the levels of trust, the more the website was perceived as useful.

The results presented here show a significant difference between Arab and UK tourists in regard to the acceptance of e-business websites**.** Arab respondents have significantly less trust in using e-business websites than the UK sample (Mean TR Arabs = 2.3, mean TR UK 3.7). The Arab respondents show less trust in accepting e-business websites and engage less in online shopping. The majority of Arab respondents are concerned about their financial and personal information. It is possible that they consider e-business to be insecure and his may prevent them from shopping online.

In addition, Straub *et al* (2001) indicate that cultures with high power distance were less trusting towards IT. Yamagishi and Yamagishi, (1994) found collectivist cultures are less trusting and more committed to their existing social relations by keeping away from newcomers and only following the good reputation of those already accepted (Yamagishi and Yamagishi, 1994).

In contrast, UK tourists appear to be more trusting in their use of e-business websites with a mean of 3.7. Most of them bought their flight tickets and searched for flight

information through websites. The UK sample shows a stronger intention to use e-business where providing their financial or personal information was needed. 75% of the UK sample indicated that they would provide financial or personal information if required. They also liked online shopping. 52% of UK respondents use their credit cards and purchase through websites frequently. Arab respondents however, do not trust e-business websites and are more reliant on the tangibility of the product and services provided in the high street.

9.4.2 Subjective Norms

The Subjective Norm variable concerns the influence of social norms in users' intentions to use e-business websites. The results show that subjective norms are highly significant within Arab culture. This could be related to the values whereby Arab culture has been categorised as collectivist. People in high collectivist cultures perceive higher social pressure on using websites if their important referents expect it. This is clear in Arab cultures where social referents significantly influence others' behaviour.

Arab culture has been described as an oral dominant society (Zaharna, 2000) where people prefer speech rather than other communication methods such the Internet (Akour, *et al*, 2006). Word of mouth is considered one of the most effective marketing tools within Arab culture.

Furthermore, the cultural characteristics of Arab countries are strong in social influence (because of high collectivism and high power distance). People may choose to perform behaviour based on their referents' recommendations or influences. This is not the case for the UK sample, where UK tourists show less influence from others since it is a low collectivism and power distance culture; personal opinions and individual experience play a high role in their decision for using these websites.

Based on the Hofstede cultural model, it can be concluded that cultural values maintain significant influence on some users' intention to buy due to group influence. People with high collectivistic culture may tend to be more traditional and in turn place greater

importance on the opinions of others. Arguably, the opinion of referents shapes an individual's subjective norms as the affect the use of websites. This finding may suggest that an effective method for encouraging e-business website acceptance would be through organisations and the workplace.

On the other hand, the UK sample show less influence from the opinions of others or referents; actions reflect personal judgment, including whether to use the websites or not. The results agree with previous studies (Venkatesh and Davis, 2000; Yu *et al*. 2005).

9.4.3 Tangibility

The results of means and t-tests show that Arab tourists prefer visiting travel agencies or travel shops to using e-business for purchasing or finding information. It could be that Arab tourists feel that using websites will be more risky. Visiting shops or travel agencies makes the business more credible giving them greater confidence about the services or products they provide. It also allows the opportunity for interaction with the staff which could lead to better prices. In Arab countries, negotiation over the price in the market is normal and people usually get better prices and services after face-to-face meetings.

In contrast, the UK sample displayed a more positive attitude towards the use of e-business websites. They may view e-business websites as a better method of getting cheap prices and services and also saving time. The UK, however, tends to have fixed prices and there is more trust in the quality of services or obtaining discounts.

It is not surprising that the attitudes of the Arab tourists to doing business via the Internet are not favorable comparing to UK tourists. This corresponds with previous studies (Al alak, 2005; El Said and Hone 2005; Yasin and Yavas 2007) which show that Arab people think that visiting a shop or office will improve the tangibility of products and services.

9.4.4 Power Distance

Means and t-test findings show that Arab people have a higher power distance than UK people, (Mean PD Arab = 3.35, mean PD UK 1.95). This is consistent with Hofstede's (1980) findings. The score for Arabs was 80 while for UK was 35[9].

The survey results supported this notion. Arab culture expects and accepts inequality between people. Power and influence are distributed unequally between people, and individuals are obedient to more influential people. This is due to the factors of the Islamic religion, as well as tribal and clan loyalty[10] where people are expected to respect influential people's expectations and their right to govern.

Prior research revealed that high PD has a direct negative influence on the adoption of new technology (Straub, *et al* 1997; Bagchi *et al*., 2004; Srnka, 2004). This is apparent where Arab respondents think that using websites should be limited to certain hierarchical levels while UK respondents think that using websites should be open for all levels as it affects their lives directly. The results are consistent with Hofstede (1980).

9.4.5 Collectivism

Arab cultures can be categorised as low in individualism with a score of 38 (Hofstede 1980) according to while UK culture can be characterised as high in individualism with a score of 89. The results from t-test and means support this notion with means of 3.73 for Arab and 2.13 for UK.

[9] For Hofstede dimensions scores, see appendix (1)

[10] The Clan or tribe is a group of people who are related to each other. And so is like an extended family. They have shared values, beliefs, goals, and a shared vision of unity (Cameron and Quinn, 1999). The clan culture is a friendly place for work where members share their values and support each other. The leader or head of clan is respected by all members and follow his instructions and advice.

A collectivist culture is keen to keep community solidarity and is more likely to be concerned with existing relationships between members and the avoidance of any disruptions that could influence group harmony. The literature suggests new technology acceptance and usage is more acceptable in individualist cultures than collectivist cultures (Kankanhalli et al., 2005). The results of this study indicate that culture could be an obstacle to website acceptance in Arab countries, as a result of the highly inward and family-oriented nature of Arab society.

The majority of Arab respondents expressed the opinion that they would feel threatened if using websites influenced family and social life negatively. Besides, Arab respondents show more trust in friends or families when facing problems. Moreover, they prefer to ask friends even before searching websites. As mentioned above, this refers to the culture and nature of Arab people. The results are supported by previous research (Loch *et al* 2003; Akour, *et al* 2006).

As the UK sample can be characterised as coming from a highly individualistic culture, people are expected to look out for themselves, as there is little social solidarity. The level of connections between an individual in a society can be very low. Individualistic culture tends to encourage individual initiative and is less loyal to the group within which people search for personal fulfillment. The results support Hofstede's (1980) findings.

9.4.6 Masculinity

With regard to the Masculinity, as mentioned above, both samples present a masculinity orientation. Mean MAS Arab = 3.76 mean MAS UK= 3.26. Yet, the Arab sample presents a significantly higher masculinity orientation than the UK sample. Taking Hofstede's (1980) cultural dimensions into account, this is an interesting result**.** Hofstede (1980) reported a masculine orientation for UK higher than Arab (Masculinity scores were 52 and 66 for Arab and the UK, respectively).

The importance of Femininity versus Masculinity reflects on the differences between women and men's roles in the community. It focuses in the social gender roles within the society (Shanks, *et al* 2000). Masculine cultures tend to assertiveness, self-confidence, independence, an emphasis on power, performance and achievement, while feminine cultures emphasise people and the maintenance of personal relationships, quality of life, work freedom and low pressure environments (Hofstede, 2001).

The results of this study contradict Hofstede's (1980) results. It was expected that the mean for Masculinity would be lower for Arab sample the UK. This was not the case. Arab people who have been exposed to websites and the internet during their education and training in Western organisations or universities may have deviated from the general norms and cultural values towards femininity (Akour, *et al*, 2006). They may be more masculine than the typical Arab. The results may point toward a social change in Arab culture.

9.4.7 Uncertainty Avoidance

With reference to uncertainty avoidance results, mean UA = 3.95 and mean UA UK = 2.76. This show that Arab culture tends to be highly uncertain about the future, shows less tolerance about ambiguous situations and demonstrate a need for formal guided rules (Hofstede, 1980).

People in high UA culture are usually worried about their future and unexpected results. This culture has a direct negative influence on website usage and the adoption of new technology (Zakour, 2004). By nature, people in the Arab countries are not future-oriented and they see the future as a threat with a high level of uncertainty.

People in low UA cultures (UK) are more accepting of risk and adventure, optimistic for success, and believe that rules are there to serve people not to hinder their progress or to complicate their lifestyle. Therefore, they tend to adopt and use websites easily, while, people from high UA cultures (especially Arabs) are concerned about unclear and vague,

changeable situations and an unpredictable future, and they are less keen to use new technology (Hofstede, 2000).

Furthermore, Arab people tend to be resistant to change. Rules and systems should be respected and not broken, 'even if they are for a society's benefit' (Abdul Rashid *et al*., 2004). These characteristics affect perceptions negatively in their acceptance of e-business websites. For Arab culture, buying through e-business websites can be seen as an activity with uncertain results. Therefore, using e-business websites and online purchasing presents numerous risks for users (Einwiller and Will, 2001). The results were consistent with previous studies (Hofstede, 1980; Gefen and Straub1997; El Said, and Hone 2005; Yasin and Yavas, 2007).

In conclusion, analyses of cultural values confirmed Hofstede's results (1980) except *viz* Masculinity / Femininity values which are different for Arab culture. This is something that should be investigated by future studies.

9.5 Summary

The results show that Arab sample less trust in using e-business websites than the UK sample. In contrast, UK sample appear to be more trusting in their use of e-business websites. Furthermore, the findings show that Arab culture has high subjective norms. This could be related to the cultural values where Arab culture has been categorised as collectivist. In the case of tangibility, the results presented that Arab people more tangible and Arab tourists prefer visiting travel agencies or travel shops to using e-business for purchasing or finding information. Visiting shops or travel agencies makes the business more credible giving them greater confidence about the services or products provided. In contrast, the UK sample displayed a more positive attitude towards the use of e-business websites. They may view e-business websites as a better method of getting cheap prices and services and also saving time.

With regard to Hofstede study, the results of this study are in general agreement with the findings of Hofstede (1980). The Arab sample here did indeed exhibit a higher power

distance than UK people. For collectivism, the results from t-test and means support the notion that Arab culture is high collectivism. In contract the UK sample shows higher individualism.

With reference to uncertainty avoidance results, Arab culture tends to be highly uncertain about the future, shows less tolerance about ambiguous situations and demonstrate a need for formal guided rules.

However, a major difference was noticed in terms of Masculinity. The results have suggested a shift in attitudes toward higher Masculinity in Arab countries rather than Hofstede pointed out.

The results of this study contradict Hofstede's (1980) results. It was expected that the mean for Masculinity would be lower for Arab sample the UK. This was not the case where Arab sample shows more masculinity than UK sample. The results may point toward a social change in Arab culture. This would also indicate that women in the Arab countries still have limited in their rights, it may be due a cultural paradigm.

CHAPTER 10

DATA ANALYSIS AND RESULTS

10.1 Introduction

The previous chapter discussed the differences and similarities between Arab and UK tourists in terms of culture and e-business website acceptance. Patterns in the variables between Arabs and the UK respondents were also compared. This chapter aims to provide a discussion of the relationships between the cultural and e-business variables. To perform the analysis for each group, the total sample was split into two groups (Arabs and UK) and analysed separately for correlation and regression.

In addition, this chapter attempts to answer the research questions concerning e-business website acceptance factors using multiple regression analysis techniques. This chapter starts with an analysis of the main assumptions of the regression technique including the tests of normality, linearity, and homoscedasiticity, then an assessment of multi-co-linearity**.** Finally, the outcomes of regression models will be discussed. In particular this chapter aims to answer the following research questions:

1. Is there a correlation relationship between the cultural variables and e-business website acceptance of Arab people?
2. Is there a correlation relationship between the cultural variables and e-business website acceptance of UK people?
3. Is there a relationship between website quality, cultural variables, PU and PEOU, and e-business website acceptance for the Arab sample?
4. Is there any relationship between website quality, cultural variables, PU and PEOU and e-business website acceptance for the UK sample?

Initially, AMOS software was used to analyse the data. However, perhaps due to the fact that the purpose factors include a number of sub-factors and other items this produced an explanatory complicated model

The aim of the statistical analysis is to facilitate interpretation of the collected data, support the theoretical background and enhance the research generality. After starting the data analysis phase, it was found using AMOS testing, that the research model as a whole was very complicated because of the proposed factors include a number of sub-factors and their items.

Finally, after consulting five academics and experts in statistics and MIS in the UK and Jordan, the decision was made to drop the AMOS approach and to adopt regression analysis as the technique for analysing of the data.

Based on the factor analysis, there were five main factors which emerged. These were: Website Quality (WQ), Cultural Variables (CV), PU, PEOU and IN. All these factors have been investigated and are supported by literature in previous chapters (2, 3, 4, and 6) as the main factors that influence the intention to use e-business websites.

To find the correlation relationship between the CV and e-business website acceptance of Arab and UK tourists, Pearson's correlation coefficient was employed. The coefficient measures linear relationships in parametric tests, i.e. the coefficient of correlation exposes only the existence of linear association between two variables or more (Tabachnick and Fidell, 2001). Its use is discussed in detail in Section 10.2.

The rationale behind choosing regression analysis was in its suitability for hypotheses testing and examining how independent variables (in this case WQ, CV, PU, and PEOU) can be used to predict a dependent variable (Intention to Use (IN)). Furthermore, it is consistent with methods applied in similar previous studies, such as Davis *et al.* (1989); Straub *et al.* (1997); Moon and Kim (2001); Sigala and Sakellaridis (2004); Chesney, (2006). Amoako-Gyampah (2007) comments that using regression analysis is an appropriate method as it has been used in prior TAM and extensions studies to assess the relationships between the model variables and thus it is used in this study.

'Model fit' is based on standard regression analysis. The analysis depicts how much of the total variance in the dependent variable, IN, it is possible to explain by use of the

independent variables; WQ, CV, PU, and PEOU. The Analysis Of Variance (ANOVA) analysis helps to determine the statistical significance of the correlations between the selected variables. The F-statistic measured the influence of the independent variable on the dependent variable. A high value of the F-statistic indicates significance, while a low F-statistic value indicates a lack of statistical significance.

In the analysis, the P-value of the F-test should be less than 0.05, which indicates a significant relationship between the dependent and independent variables. A P value between 0.05 and 0.10 indicates weak significant relationships. When the P-value is more than 0.10, it shows that the relationship is not statistically significant though, of course, readers may regard is as suggestive. The R^2 value indicates how much of the variance in the dependent variable is explained by the variables in each model, and is used to evaluate each model. An adjusted R^2 indicates the goodness of fit of the model to the study population taking into consideration the sample size and the number of items used value.

To get a better understanding of the variables included in the model that contributed to the prediction of the dependent variable, Figures 10.1 and 10.2 show the hypothesised CTAM model (before the analysis was carried out).

Figure 10.1 CTAM - Model

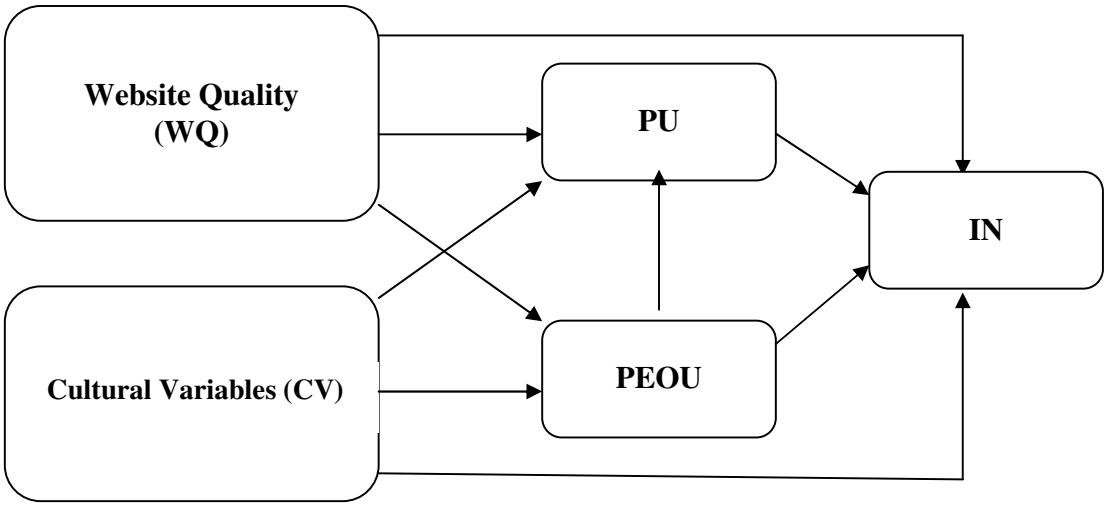
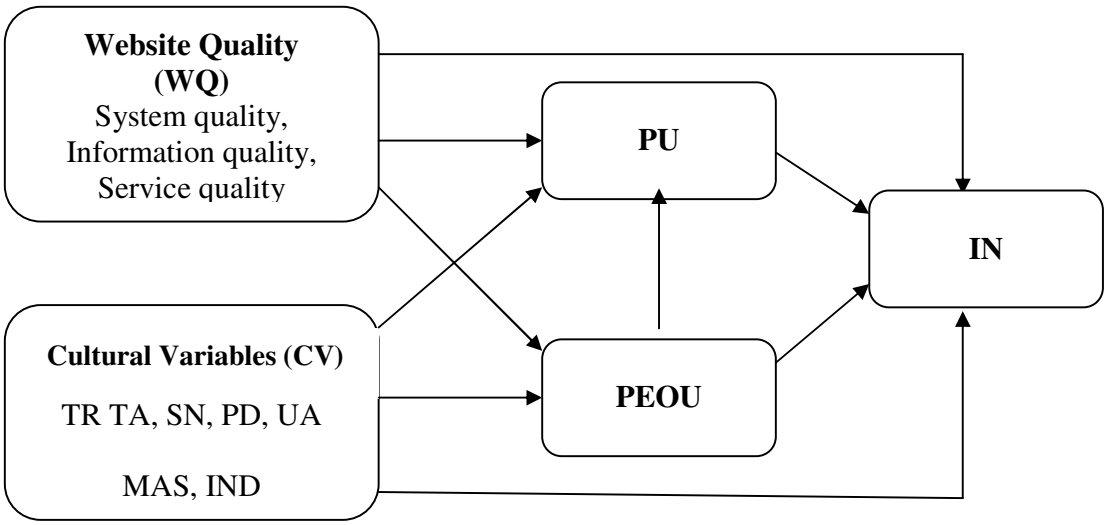


Figure 10.2 CTAM model including sub-variables



TA: Tangibility; SN: Subjective Norms; PD: Power Distance; UA: Uncertainty Avoidance; MAS: Masculinity; IND: Individualism; PU: Perceived Usefulness; PEOU: Perceive Ease Of Use; IN: Intention to Use.

10.2 Correlation Analysis

Correlation coefficients measure aspects of the relationship between variables showing the direction of correlation and its strength. It only indicates the existence of relationships between the variables not the causality of the variables (Schumacker and Lomax 2004). In this study, Pearson correlation analysis was used to test the bivariate correlation relationships between the CV and e-business website acceptance of Arab and UK tourists.

10.2.1 The relationship Between the Cultural Variables and E-business Website Acceptance of Arab Tourists

Here, Pearson correlation analysis is used to include all aggregate CV. Further investigation will consider each CV variable in detail.

Table 10.1 Correlations Between the Aggregate CV and IN of Arab Sample

		IN	CV
IN	Pearson Correlation	1.000	-.503**
	Sig. (2-tailed)		.000
	N	458.000	458
CV	Pearson Correlation	-.503**	1.000
	Sig. (2-tailed)	.000	
	N	458	458.000
**. Correlation is significant at the 0.01 level (2-tailed).			

Table 10.2 Correlations Between the CV and IN of Arab Sample

		IN	MAS	TA	PD	IND	UA	SN	TR
IN	Pearson Correlation	1.000	.104*	-.445**	-.262**	-.397**	-.575**	.105*	.300**
	Sig. (2-tailed)		.027	.000	.000	.000	.000	.025	.000
	N	458.000	458	458	458	458	458	458	458
*. Correlation is significant at the 0.05 level (2-tailed).									
**. Correlation is significant at the 0.01 level (2-tailed).									

IN: Intention to Use**, TR:** Trust**; TA:** Tangibility**; SN:** Subjective Norms**; MAS:** Masculinity**; PD:** Power Distance**; IND:** Individualism**,** and **UA:** Uncertainty Avoidance**.**

As can be seen from in Tables 8.1 and 8.2, significant results were obtained for all CV relationships with IN. i.e. they do show consistent correlations These results as discussed below show the direction of correlation and the strength of correlation (including positive and negative relationships).

The results presented in Table 10.2 indicate that trust is associated with IN ($r = 0.300$; $p \leq 0.01$) where correlation is significant at the 0.01 level (2-tailed). This suggests that trust has a high influence on Arab tourists' intention to use websites. There is a positive significant relationship between trust and intention to use. In other words, increasing an

individual's trust will lead to an increase in an individual's intention to use e-business websites. These results are consistent with the previous research that examines trust and use of websites (Lee and Turban 2001; Gefen *et al*, 2003; Suh and Han, 2003; Siala *et al*. 2004).

As stated in chapter 6 no attempts have yet been made to investigate the relationship between TA and IN. In this study it is proposed that there is a relationship between tangibility and user intention to use e-business websites. Straub (1997) stated that cultures with high collectivism prefer to use tangible media (e.g. face-to-face meeting) to enhance social presence rather than email, for example which leads to minimal social interaction. The results in Table 10.2 indicate that tangibility is a significant factor. Tangibility negatively relates to individuals intention to use e-business websites.

The relationship between SN and IN was not strongly correlated (r=0.105), and correlation was not found to be significant at the 0.025 level (2-tailed). Previous studies conducted by Venkatesh and Davis (2000) hypothesised that the relationship is significant only where the use of the technology is forced, and there is no significant influence of SN on IN if the use of the technology is voluntary. However, since the cultural characteristics of Arab countries contain a strong social influence due to high collectivism and power distance, this study has proposed that SN would directly influence IN.

The analysis results indicate that SN has no significant direct effect on IN. Since the e-business website use in this study is of a voluntary nature, this finding is in agreement with Venkatesh and Davis' (2000) findings. The results of a non-significant link between SN and IN provides more evidence to support the suggestion that the direct compliance impact of SN on IN does not work in a voluntary cases (Venkatesh and Davis, 2000) even in a context like Arab countries where social influence is supposed to be strong.

In addition, it can be added that after users have had experience of using websites (even a low level of experience), their behavioural intention to use mainly on their own personal

assessment of the website, rather than friends, peers or social influence. In fact, Davis *et al*. (1989) did not find a significant influence of subjective norms on intention to use.

The results confirm that PD, IND and UA negatively influence intention to use (r = -.262;-.397, and -.575) respectively P= 0.05 level (2-tailed). The results confirm those previous studies discussed in chapter 3 section 3.5 and interview chapter (7) section 7.8. Interestingly, however, Masculinity shows a slightly positive relationship (r=0.104), the correlation is significant at the 0.05 level (2-tailed). Studies discussed in section 3.5.1.4 would lead us to expect that Arab tourists show more masculine tendencies than UK tourists. This was not the case, and the results presented have appear to contradict Hofstede's (1980) findings (see chapter 3 section 3.5)

As discussed in chapter 9, this may be due to a change in culture over time. It may be that Arab people who are exposed to websites and the Internet during their education and training in Western organisations or universities may have deviated from the general norms and cultural values of femininity (Akour, *et al,* 2006).

The main findings of this element of the study are:

- Trust and tangibility are significant factors influence user IN to use e-business.
- SN has no significant direct effect on IN.
- Masculinity shows a positive correlation in the Arab sample. This is higher than UK sample which contradicts the findings of Hofstede's study (1980)..

10.2.2 The Relationship Between the CV and E-business Websites Acceptance of UK Tourists

In this section, the relationship between aggregate CV and website acceptance are investigated using Pearson correlation analysis. The results shown in Table 10.3, suggest that for the UK sample there is no significant relationship between CV and IN. The details in Table 10.4 show that there is a relationship between CV and some cultural

variables but the relationships are not as strong as for the Arab sample. The section below provides more discussion about the results.

Table 10.3 Correlations Between the Aggregate CV and IN of UK Sample

		IN	CV
IN	Pearson Correlation	1.000	-.143
	Sig. (2-tailed)		.068
	N	165.000	165
CV	Pearson Correlation	-.143	1.000
	Sig. (2-tailed)	.068	
	N	165	165.000

Table 10.4 Correlations Between the CV and IN of UK Sample

		IN	TR	TA	SN	PD	IND	UA	MAS
IN	Pearson Correlation	1.000	.047	-.297**	.083	-.154*	-.339**	.119	.145
	Sig. (2-tailed)		.546	.000	.289	.049	.000	.129	.063
	N	165.000	165	165	165	165	165	165	165
**. Correlation is significant at the 0.01 level (2-tailed).									
*. Correlation is significant at the 0.05 level (2-tailed).									

In the UK model, the results show no significant relationships between, trust, subjective norms, uncertainty avoidance or masculinity. This suggests differences in the role of culture in the acceptance of e-business websites.

10.3 Regression Analysis

As mentioned above, to perform the regression analysis, the total sample was divided into two groups (Arab and UK). Initially, the main assumptions of regression were tested for total sample then the analysis was carried out for each group.

10.3.1 Testing the Assumptions of Multiple Regression

Multiple regressions are statistical analyses that can be employed to analyse the relationship between a single dependent variable and independent variables. The purpose of multiple regressions is to employ the several independent variables to anticipate the single dependent value selected by the researcher (Hair *et al*, 2003).

There are three assumptions of regression analysis that should be considered in order to investigate the existence of errors in the data and suitability of the data to regression models (Hair *et al.* 1998). These are normality of the data, linearity of the phenomenon measured and homoscedasticity. Furthermore, in real cases, the data (especially data collected about behavioural constructs such as in this study) will not completely satisfy all of these basic assumptions. However, Hair *et al* (2003) state that regression analysis can still be considered providing the data do not significantly violate these assumptions. The following sections discuss these assumptions in more detail.

10.3.1.1 Normality

To perform regressions analyses, it is assumed that the research variables have normal distributions. Non-normally distributed or highly skewed data can distort relationships and significance tests. Normally, it can be identified either through visual inspection of data plots, frequency distributions, skew, kurtosis, or P-P plots. De Vaus, (2002) pointed out that normality no longer has a severe effect on analysis outcomes where the sample size is large enough (i.e., 100 or more) to presume acceptable normality in the scales (StatSoft Inc, 2003).

In this study, the normality of the data was assessed and it was found to be almost normally distributed as shown in Figure 10.3, below. Also the Scatterplot of standard residuals is roughly rectangularly distributed with most of the scores concentrated on the centre as shown in Figure 10.4.

Figure 10.3 Distribution of the Data

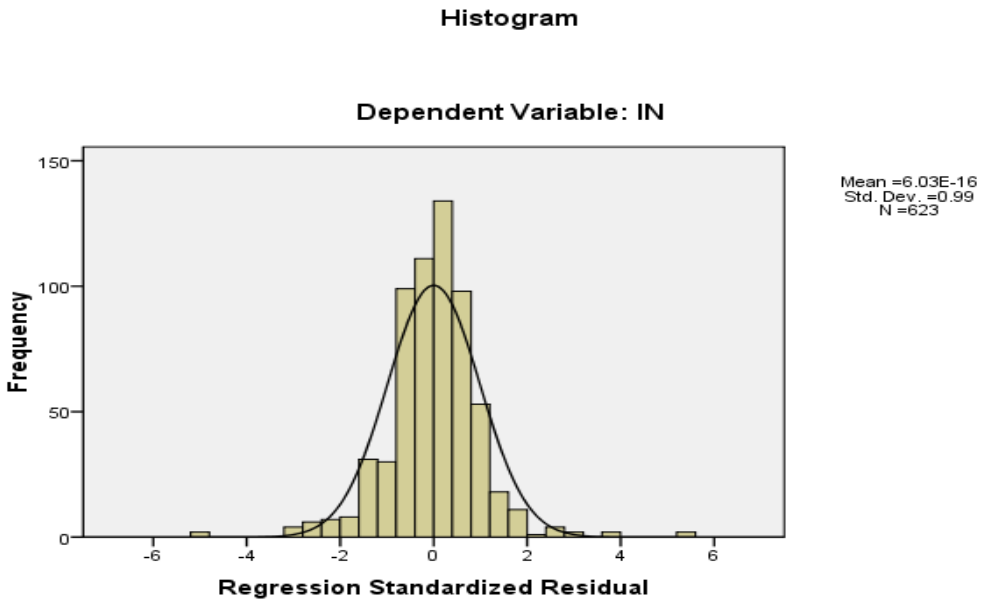


Figure 10. 4 Distribution of the Data - Scatterplot

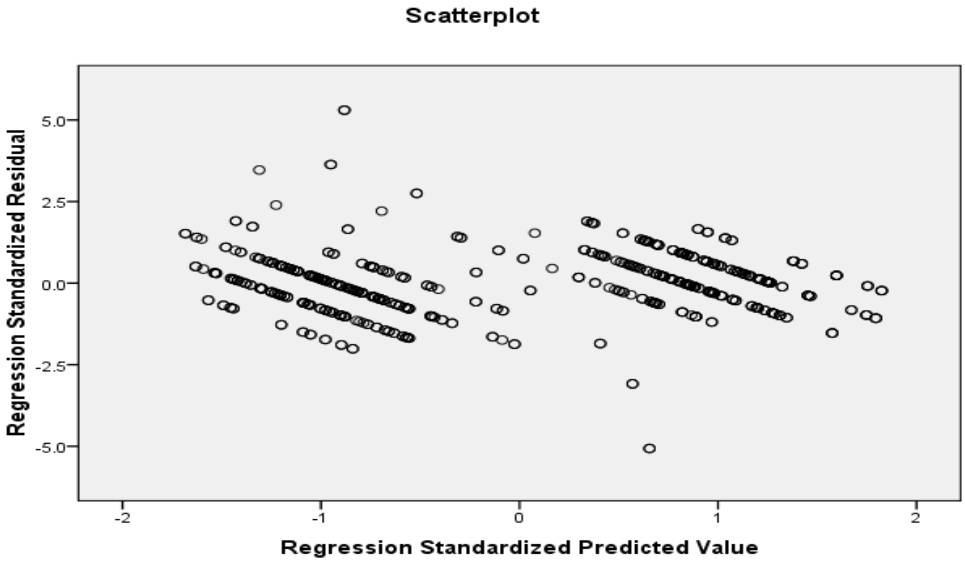


Table 10.5 The Residual Statistics

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	1.2072	4.8601	3.0642	1.09805	623
Std. Predicted Value	-1.691	1.636	.000	1.000	623
Standard Error of Predicted Value	.040	.153	.085	.019	623
Adjusted Predicted Value	1.2025	4.8685	3.0643	1.09782	623
Residual	-3.01166	3.22980	.00000	.60008	623
Std. Residual	-4.970	5.330	.000	.990	623
Stud. Residual	-5.022	5.357	.000	1.000	623
Deleted Residual	-3.07436	3.26213	-.00013	.61221	623
Stud. Deleted Residual	-5.125	5.483	.000	1.006	623
Mahal. Distance	1.780	38.757	11.981	5.775	623
Cook's Distance	**.000**	**.040**	**.002**	**.004**	**623**
Centered Leverage Value	.003	.062	.019	.009	623
a. Dependent Variable: IN					

The residual statistics (Table.10.5) show information about cases that have standardised residual values in the range - 3≤ -3. In a normally distributed sample, it is expected that only 1 percent of cases would not be included (Pallant, 2005). The residual statistics table indicates whether any outliers could have undue influence on the results of the model as a whole. The value of Cook's Distance should be less than 1. If it is more than 1, outliers could influence the model significantly (Tabachick and Fidell, 2001). As shown in Table 10.5, the value of Cook's Distance is less than 1. This means the outliers will not influence the model significantly.

10.3.1.2 Linearity

The results of the regression analysis will be accurate if the relationships between the independent and dependent variable are linear. To detect the linearity, Pedhazur, (1997) suggests examining residual plots of the standardised residuals as a function of standardised predicted values. This can be evaluated by running regression analyses that include curvilinear components or through the use of the nonlinear regression options

accessible in several statistical packages. If the residuals are randomly and evenly spread throughout the scatterplot, assumptions of linearity are met. It was clear from the scatterplots (see Figure 10.4) that the dependent variables do not violate the assumption of linearity.

10.3.1.3 Homoscedasticity

Homoscedasticity indicates whether or not the variance of errors is the same across all levels of the independent variable. If homoscedasticity is found, it can lead to serious distortion of results and undermine the analysis (De Vaus, 2002). The main method of checking for the existence of homoscedaticity is a visual examination of residual plots of the actual standardised values (De Vaus, 2002). It is included in the regression analysis implemented by SPSS. The Scatterplot (figure 10.4) shows that there is no existence of homoscedaticity in this case.

10.3.1.4 Multicollinearity

Multicollinearity refers to the intercorrelation of independent variables. The presence of multicollinearity influences the internal validity of regression analysis and enhances the probability of type II errors in hypothesis testing (Field, 2000). The preferred methods of assessing multicollinearity are the Variable Inflation Factor (VIF) and Tolerance Value (TV) (De Vaus, 2002). The acceptable value of TV is ≥ 0.1 and the VIF value below 10 (Kolacz, 2002). Table 10.5 and Appendix 7 show the values of TV and VIF for the data. All the TV values are greater than 0.1, and all the VIF values are less than 10, i.e. both are in an acceptable range

Table 10.6 Collinearity Statistics of CTAM variables

Coefficients[a]			
Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	S.Q	.854	1.171
	I.Q	.864	1.157
	S.Q2	.708	1.413
	TR	.502	1.993
	TA	.512	1.954
	SN	.764	1.308
	PD	.737	1.357
	IND	.637	1.570
	MAS	.879	1.138
	UA	.925	1.081
	PU	.283	3.538
	PEOU	.289	3.465
a. Dependent Variable: IN			

10.4 Analysis of the Regression Models

The basic hypotheses are concerned with the influence of four independent variables namely, CV, WQ, PU, PEOU on IN as discussed in chapter 6.

As stated in section 10.2.1, a series of regression analyses was employed to analyse the gathered data. Each linear regression depends on the relationships between a set of independent variables and a single dependent variable. Regression analyses were run with four independent variables and one dependent variable. As the data was collected from two samples (Arab and UK tourists), regression analysis was used for each sample as well as an aggregate model for both samples. The multiple regression equation for factors in this study is as follows**:** $Y=B_0 +B_1 X_1+ B_2 X_2+ \ldots+B_n X_n + E$. Y is the response

variable; X_1 X_2…X_n are the predictor variables; B_0 B_1 B_2 …B_n are the partial regression coefficients and, E reflects is the error, or residual.

10.4.1 CTAM Model for Arab Sample

This section presents the overall multiple regression models and discusses whether the model successfully explains the factors influencing e-business website acceptance. The results indicate how well the proposed model predicts e-business website acceptance within the Arab sample.

Table 10.7 The Multiple Regression of Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.908[a]	.825	.824	.48411
a. Predictors: (Constant), PEOU, WQ, CV, PU				
b. Dependent Variable: IN				

Table 10.8 ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	501.034	4	125.258	534.471	.000[a]
	Residual	106.165	453	.234		
	Total	607.199	457			
a. Predictors: (Constant), PEOU, WQ, CV, PU						
b. Dependent Variable: IN						

Table 10.7 shows a model summary as produced by SPSS 16. In this model, four predictors are being used. It includes all the independent variables (CV, WQ, PU, and PEOU) and the dependent variable (IN). The table also presents more useful information about the model: the values of R, R^2 square and the adjusted R^2.

As shown in Table 10.8, the regression model is significant at the .001 level (F=534.471) with the power to explain 82.4 % (R square = 0.824) of the variation in e-business website intention to use. Thus, approximately 82% of the variance in the dependent variable (IN) can be explained by the four main variables in the proposed model. These

results represent a high explanatory power. The results of R^2 indicate an excellent fit for CTAM.

The Standardised Coefficients (Beta) were used to investigate the individual contribution of each of the independent variables (PU, PEOU, CV and WQ) in explaining the dependent variable (IN).

Table 10.9 The Standardised Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1						
	WQ	.800	.061	.372	13.015	.000
	CV	-.530	.064	-.241	-8.235	.000
	PU	.181	.037	.165	4.826	.000
	PEOU	.282	.036	.266	7.890	.000
a. Dependent Variable: IN						

As shows in Table 10.9**,** the WQ make the largest contribution (beta=0.372). CV, PU, and PEOU are also highly significant although PU has a lower significance level compared to other variables. Accordingly, it can be argued that these factors are key determinants in the use of e-business websites in Arab countries.

In the following section, the relationships between the independent variables and the dependent variable are investigated individually using multiple regression analysis.

10.4.1.1 Website Quality and Intention to Use

Website quality includes three sub-factors; *System quality* (SYQ), *information quality* (INFQ), and *Service quality and attractiveness* (SRQ2). To perform the regression analysis, IN was used as the dependent variable, and the WQ sub-variable was used as independent variable. The use of sub-variables provides better understanding of the role of each sub-variable in acceptance of e-business websites.

The SYQ of a website can be measured by search facility, responsiveness and multi-media capability. Moreover, INFQ is represented by depth of information, clarity, information relevance, currency, concision, scannability, and accuracy. SRQ2 also includes two main constructs: trust and empathy.

Table10.10 Results of Multiple Regression Analysis: WQ and IN

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig[a].
		B	Std. Error	Beta		
1						
	SRQ2	.173	.060	.087	2.863	.004
	SYQ	.747	.052	.458	14.384	.000
	INFQ	.707	.051	.439	13.745	.000
Equation						
R			.829[b]			
R Square			.687			
F			332.809			
Sig.			000			
a. Predictors: (Constant), SYQ INFQ, SRQ2,						
b. Dependent Variable: IN						

Table 10.10 presents the results of the regression analysis. The regression model is significant at the .001 level with the power to explain 68.7 % (R square=0.687) of the variation of WQ. The individual contribution of each sub-variable from WQ to the regression model is expressed by the Standardised Coefficients (Beta). The regression coefficient of SRQ2 was (Beta = 0.087, t = 2.863, p < .001) is very weak. The regression coefficient of SYQ was (Beta =. 458, t = 14.384, p < .001) and INFQ was (Beta =. 439, t = 13.745, p < .001).

It should be noted that SYQ makes the largest contribution (beta = .458) to the model. As mentioned in chapter 6, section 6.2.1, SYQ refers to the functionality of a website which indicates usability, availability and response time.

The results suggest that Arab users are more interested in functionality than content. I.e. they are more interested in having a website that is easy to read and easy to navigate rather than being useful *per se*. This is in agreement with the results of the interview (Chapter 7) where most of the Arab respondents emphasise the importance of navigation (almost 86 %) and ease of use. If the website is useful but it is not easy to find the required information or the opening of a web page is very slow then the user will move to another website and not probably revisit.

10.4.1.2 Cultural Variables and Intention to Use

CV includes the following sub-variables; Trust (TR), Tangibility, (TA) Subjective norm (SN), Power Distance (PD), Uncertainty Avoidance (UA), Individualism (IND) and Masculinity (MAS). To perform the regression analysis, IN was used as the dependent variable, while each of the CV sub-variables was used as the independent variable.

Table 10.11 Results of Multiple Regression Analysis: CV and IN

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)					
	TR	-.280	.035	-.272	-8.048	.000
	TA	-.255	.034	-.254	-7.393	.000
	SN	-.014	.039	-.010	-.359	.720
	PD	-.230	.034	-.211	-6.724	.000
	UA	-.283	.040	-.233	-7.170	.000
	IND	-.194	.034	-.173	-5.737	.000
	MAS	.077	.050	.043	1.542	.124
Equation						
R			0.810[a]			
Adjusted R Square			0.651			
F			122.630			
Sig.			.000[b]			
a. Predictors: (Constant), MAS, SN, UA, IND, PD, TR, TA						
b. Dependent Variable: IN						

As shown in Table 10.11, the Standardized coefficient (beta) values for TR, TA, UA, IND, PD are positive and significant (p=0.000<0.1). Also, the results show that there is no significant relationship between SN and MAS and IN where p=.720, .124>0.1. The individual contribution of each sub-variable was different. The highest was TR with contribution (0.272). TA was the second highest with Beta= 0.254.

Arab culture involves high power distance, high collectivism, low masculinity and high uncertainty avoidance (Hofstede, 1980). These cultural characteristics seem to reject and not support the use of new technology (Akour, *et al* 2006). In Arab countries, attempts to adopt computer technology have been obstructed by conflicting values, which have to be determined before computer integration into work or personal use occurs. Furthermore, the results support the above where respondents show negative response in the use of e-business websites.

With regard to the trust, this corresponds with the results of the interviews where the respondents showed less trust in the use of e-business website. A higher percentage of participants (90%) never used e-business websites for buying products or services. Participants reported lack of trust in websites and lack of credit card security as well and that they preferred to visit travel agents or at least contact them by phone and use cash. Studies confirm the lack of trust as the main barrier to using websites, (Keat and Mohan, 2004; El Said and Hone, 2005; Kong and Hung, 2006).

The results of the relationship between SN and IN is positive but not significant where (P=0.058 > 0.001). In a previous study conducted by Venkatesh and Davis (2000) it was hypothesised that the relationship is significant only in a mandatory cases and there is no significant influence of SN on IN if the use of the technology is voluntary. However, since the cultural characteristics of Arab countries have a strong social influence due to high collectivism and power distance, this study has hypothesised that SN (cultural variables, sub-factors) will directly influence IN.

However, the analysis indicates that SN has no significant direct effect on IN. Since the e-business website use in this study is of a voluntary nature, this finding is in agreement with Venkatesh and Davis' (2000) findings that in the setting of voluntary IT use, SN has no direct impact on IN. The results of non-significant link between SN and IN provides more evidence to support the suggestion that the direct compliance impact of SN on IN does not work in voluntary cases (Venkatesh and Davis, 2000) even in a context like the Arab countries where social influence is supposed to be strong.

In addition, it can be added that after users have had experience in using websites (even low level experience); their behavioural intention to use (decision) would depend mainly on their own personal assessment of the website, rather than on friends, peers or external social influence. In fact, Davis *et al*. (1989) did not find a significant influence of subjective norm related to the intention to use.

Users who are not willing to accept risk in a virtual transaction will have more negative perceptions of the relative advantages provided by e-business. They are also likely to view the virtual experience as more complex and less easy to use, than do users who are less risk averse. Those unwilling to accept risk go through escalated anxiety or find it necessary to exert additional efforts toward reducing the uncertainties faced in using e-business websites. Straub (1997) stated that culture with high collectivism such as Arab culture prefers to use media such as face-to-face meeting to enhance the social presence where using email for example leads to the minimisation of social and group interaction. Furrer *et al*. (2000) also found that power distance culture is positively correlated with assurance and tangibles.

Trompenaars (2009[11]) comments that "……Given Arab culture's reliance on the spoken form as again, the geography of the Arabian peninsula has created a nomadic culture where the use and storage of written materials was impractical. Therefore the use of

[11] Personal interview with Fons Trompenaars conducted in Abu Dhabi within The 2009 Leadership Lecture - "Developing a Culture of Excellence" Abu Dhabi – UAE -Tuesday 10th March 2009. For more details see appendix (8)

poetry and memory techniques led to a mainly oral culture. Documents were actually people, the historian and recorder in the tribe who was usually the poet: hence the prestige given to the poet and poetry in the Arab world".

It is arguable that a culture's collectivism and UA are *negatively* related to individuals' perceptions of e-business. In spite of some efforts to introduce more social presence into e-business websites, the e-business website experience is still an isolated and impersonalised process which in the case of Arabs, goes against much of the weight of the Arab culture where everything is face to face and social. Face-to-face encounters between buyer and seller or between one buyer and another are replaced with monitor screen with social exchanges taking place in virtual arenas. As a result, users in high IND cultures report much lower levels of trust compared with users in low IND cultures.

Atkine (2004) posits that Arabs believe new technology will threaten their traditions and life style, especially with regard to group or family relationships. However, they are willing to use the technology as long as there are no obvious negative social effects in their lives, The idea could be expressed by saying: 'We want your TV sets but not your programmes, your DVD players, but not your movies'. Although this resistance to external cultural norms does not show a realisation that the mere application of the new technology has made a difference to culture. Where Arabs once used camels in their everyday lives, the 4x4 has replaced it forcing camels to the side, creating new purposes that have come from their previous redundancy. Now they are for milk and meat that are not central to their diet but a traditional throwback.

The whole culture has moved sideways and forward at the same time. Technology has moved the central arena of Arab life to the periphery. Atkine (2004) adds that "This will be the battleground of every Arab nation for the coming generation". The results show that Arab people are willing to use the new technology that fit their culture values, but are almost certainly not aware of the fundamental undercurrent that alters traditional society just by the mere incorporation of limited technology into the heart of the culture.

Although a slower engine of change, change it does indeed bring about, and for its hidden nature, is perhaps all the more insidious.

Other research was done by Alkadi (2005) about the impact of the internet on social life in Jordan. The results show the dissatisfaction of people with the internet's influence on social life, particularly on marriage arrangements and gender relationships. Alkadi (2005) comments that Arab people do not want to change their life style, traditions, and customs of interaction and solidarity between the groups.

Furthermore, studies conducted by (Sheehan and Hoy, 2000; Miyazaki and Fernandez, 2001) show that high levels of UA in any culture may also help to create negative perceptions of e-business. Websites are generally regarded as being riskier than traditional face-to-face dealings because of the impersonal and virtual nature of the transaction process; the inability to physically touch and feel the purchase goods; the reliance on electronic payment systems; the threat of insecure handling of financial or personal information, and the unfamiliar or foreign, participants in the exchange who are nearly always remotely located and beyond the culture in which the individual is based.

The negative relationship effect discovered in this study might be explained by the fact that individuals tend to avoid activities that are deemed inappropriate in regard to their power and status in a group (Robinchaux and Cooper, 1998), even if they are persuaded to believe that the activities are useful to them. For individuals with high PD value, email use is considered as improper given that communications using email would equalise social status differentials in organisations.

Straub, *et al* (1997) propose that power distance should have a distinct impact on communication patterns. They pointed out that the levelling effect of CMC technology is not seen as a desirable feature in high PD societies, in which individuals would show respect to authority by refraining from using email in the form of simple textual message. Therefore, email should be limited by such social norms (Straub, *et al*, 1997).

Therefore, it is not unreasonable to believe that people's perception of PD in work may lead them to think that e-business website use is not desirable as it may reduce a perceived deference to leaders or mangers or make them feel less powerful due to its levelling influence on power and hierarchy manifestation (Sarbaugh-Thompson and Feldman, 1998).

The implications are that despite its widely accepted instrumentality in cost saving and efficiency improvement, e-business website may be perceived as less able to fulfil the desired aim of social interaction for people with high PD values. Moreover, it could be said that technologies with equalising influence would not be as useful to preserve social hierarchies for people with high PD values.

So, in spite of efforts made to promote the use of new technologies and e-business websites, which may be regarded as a major source of SN, individual employees may be less than willing to use them because of the equalising effect. This is consistent with some research that e-business website can have unwanted effects when "rich" communication is needed (Walther, 1995). It can be therefore argued that to better spread e-business website use, real and actual use by mangers and superiors would be more effective in alleviating concerns on the employees' part over equalising or levelling effects.

10.4.1.3 Regression Analysis of PU, PEOU and IN

To perform the regression analysis, PU and PEOU were used as independent variables and IN was used as dependent variable.

Table 10.12 Results of Regression Analysis for PEOU & PU vs. IN

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1						
	PEOU	.507	.045	.479	11.368	.000
	PU	.438	.046	.400	9.511	.000
Equation						
R Square			.690			
Adjusted R Square			.689			
F			506.076			
Sig.			.000[a]			
a. Predictors: (Constant), PU, PEOU						
b. Dependent Variable: IN						

Table 10.12 indicates that the more useful and easy to use a website is perceived to be, the more it is expected that people will accept and use it. The results show that PEOU has a strong positive direct effect on website acceptance and shows that e-business websites perceived to be high in significance will contribute to a higher acceptance rate.

PU also has a strong positive direct effect on e-business website acceptance which is less than PEOU. The beta coefficient for PEOU and PU was (0 .479, 0.400) respectively.

This confirms the fact that PEOU is an important factor in accepting e-business websites within Arab culture. Also, the results indicate that Arab users prefer easy to use websites rather than useful ones. The results show that PEOU is still the main concern for using e-business websites. PU, however, has less effect on the intention to use. Thus, to promote a user's intention to accept using e-business websites, firms and companies should promote the website's ease of use than its usefulness. Enhancing website usefulness alone would not increase user acceptance of e-business websites.

In the original TAM, Davis, *et al*, (1989) pointed out that the total influence of PU is larger than PEOU on IN. This contradicts the results of this study, where the influence of PEOU is bigger than PU on IN. The results exposed that PEOU is more important than PU in user acceptance of e-business website for the Arab sample. This is in agreement the findings of Igbaria *et al.* (1997). In other words, Arab users are driven to accept e-business websites mainly on the basis of ease of use rather than on their usefulness. The results also contradict Al Sukkar and Hasan 2005; Cao, *et al*, 2005; Abd Aziz*, et al,* 2006. Furthermore, the results support the fact that PU and PEOD (the main components of the TAM) are shown to be significant in influencing user intentions to use the e-business websites outside of North America.

10.4.1.4 Final CTAM Model – Arab Countries

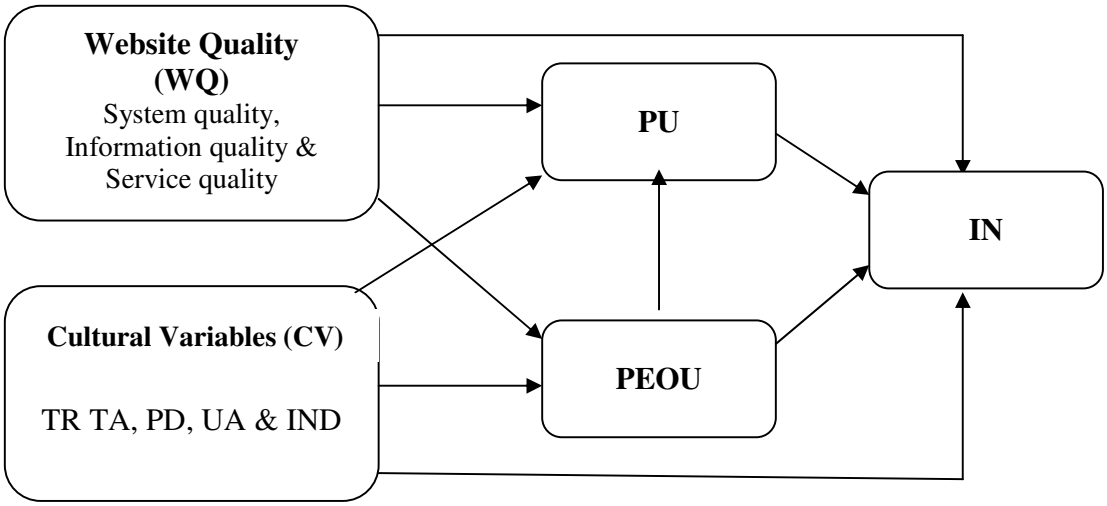
After performing the regression analysis, the final CTAM for Arab culture will not include MAS and SN. By excluding the non-significant sub- variables of CV (SN and MAS), the final model includes the following variables website quality, cultural variables (TR, TA, UA, PD, and IND), PU, PEOU and IN. Figure 10.5 shows the final CTAM.

As can be seen from Table 10.13, the model fit is slightly improved by excluding the sub-variables of the cultural variable (SN and MAS) which were not significant. R square increased from 0.825 to 0.829 and adjusted R^2 increased from 0.824 to 0.828. The final model therefore includes the following variables WQ, CV (TR, PD, and IND), PU, PEOU and IN. Figure 10.5 shows the final CTAM for the Arab sample.

Table 10.13 The Multiple Regression of Model Summary Before and After Excluding the not Significant Variables

	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
Before	1	.908[a]	.825	.824	.48411
After	1	.911[a]	.829	.828	.47811
a. Predictors: (Constant), PEOU, WQ, CV, PU					
b. Dependent Variable: IN					

Figure 10.5 CTAM Model Including Sub-variables – Arab Sample



TR: Trust**; TA:** Tangibility**; PD:** Power Distance**; UA:** Uncertainty Avoidance**; IND:** Individualism**; PU:** Perceived Usefulness**; PEOU:** Perceive Ease Of Use**; IN:** Intention to Use**.**

10.4.2 CTAM Model for the UK Sample

10.4.2.1 Aggregate Model

This section explains the overall multiple regressions model and explains whether the model successfully explains the factors of e-business website acceptance. In other words, the results will show how well the proposed model contributes significantly to the prediction of e-business website acceptance within the UK sample. The results of the analysis are shown in Table 10. 13 below

Table 10.14 Multiple Regression Analysis – CTAM – UK

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1						
	WQ	.450	.112	.303	4.000	.000
	PU	.447	.085	.336	5.260	.000
	CV	-.011	.020	-.033	-.563	.575
	PEOU	.250	.068	.264	3.666	.000
Equation						
R			.740			
R Square			.547			
Adjusted R Square			.536			
F			48.290			
Sig.			.000[a]			
a. Predictors: (Constant), PEOU, CV, PU, WQ						
a. Dependent Variable: IN						

Table 10.13 includes all the independent variables (CV, WQ, PU, and PEOU) and the dependent variable (IN). The table also presents more useful information about the model: the values of R, R^2 and the adjusted R^2. The basic hypotheses are concerned with the influence of four independent variables namely, CV, WQ, PU, PEOU on the dependent variable (IN).

As shown in Table 10.13 above, the regression model is significant at the .001 level (F= 48.290) with the power to explain almost 55% (R^2 = 0.547) in the variation e-business website intention to use. Thus, approximately 55% of the variance in the dependent variable (IN) can be explained by the four main variables in the proposed model. All the variables have significantly correlated with the independent variable except culture, which was not statistically significant where P> 05. This finding was surprising given the results of prior studies regarding culture and website acceptance. This is ostensibly due to the fact that preceding website acceptance studies integrate a larger sample than the current one. Further research in this area is called for.

Furthermore, the results present good explanatory reasons and explain the factors that influence e-business website acceptance. The results of R^2 indicate a high appropriateness of fit in the CTAM (0.740).

To investigate the individual contribution of the independent variables (PU, PEOU, and WQ) in the explanation of the dependent variable (IN), the Standardised Coefficients (Beta) has been used. As shows in Table 10.13, the PU makes the largest contribution (beta=0.336). In addition, other variables (PEOU and WQ) also remain highly significant while culture become statistically not significant. Accordingly, it can be argued that these factors are a key determinant in the use of e-business website usage in the UK.

In the following section, the relationships between the independent variables and the dependent variable will be investigated individually by using multiple regression analysis.

10.4.2.2 Website Quality and Intention to Use

As used in CTAM Arab model, website quality includes three sub-factors; System Quality (SYQ), Information Quality (INFQ), and Service Quality and attractiveness (SRQ2). To perform the regression analysis, IN was used as the dependent variable, while the WQ (sub-variables) was used as the independent variable. The use of sub-

variables will provide better understanding of the role of each sub-variable in the acceptance of e-business websites.

Table 10.15 Multiple Regression Analysis – WQ and IN – UK

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1						
	SRQ2	.328	.110	.220	2.984	.003
	INFQ	.309	.102	.268	3.031	.003
	SYQ	.293	.102	.248	2.869	.005
Equation						
R			.623[a]			
R Square			.389			
Adjusted R Square			.377			
F			34.097			
Sig.			.000[a]			
a. Predictors: (Constant), SYQ, SRQ2, INFQ						
a. Dependent Variable: IN						

Table 10.14 shows the results of the regression analysis, the regression model is significant at the .001 level with the power to explain 0.39% (R^2 =0.389) in the variation of website quality. The individual contribution of each sub-variable from WQ to the regression model was as follows: SRQ2 (Beta =. 220, t = 2.984, p = .003), SYQ (Beta = .248, t = 2.869, p = .003) and finally, the beta coefficients of INFQ were (Beta = .268, t = 3.031, p = .005). This implied that there was a significant positive relationship between website quality and the IN. INFQ has shown the biggest contribution to the IN, in other words, availability of a useful and high quality of information could lead UK people to visit e-business websites, and moreover that other factors such as system quality and service quality, although important, have a lower usefulness as the information indicates.

This confirms the fact the UK users are more interested in having a useful website rather than one that is easy to use. The results show that UK users are more interested in depth of information, clarity, information relevance, currency, concision and scannability and accuracy of the information. This is in agreement with the results of the interview

(Chapter 7) where most of the UK respondents confirm the importance of information and credibility of the information provided by the e-business website. This is actually the opposite of Arab users where Arab users indicate the importance of ease of use.

Moreover, Marcus and Gould, (2000) stated that cultural power-distance significantly affects access to information on a website. For those in a PD culture, content and information should be equally available and easy to find, they demand greater freedom to explore the website. In addition according to Marcus and Gould, (2000), low UA cultures emphasise a helpful navigation system, more options and a content focus more on understanding the concepts rather than on narrow tasks.

10.4.2.3 Cultural Variables and Intention to Use

As mentioned above in section 10.3.1.1.2 CV include the following sub-variables; Trust (TR), Tangibility, (TA) Subjective norm (SN), Power Distance (PD), Uncertainty Avoidance (UA), Collectivism and Individualism (IND) and Masculinity / Femininity (MAS). The results show that CV are not statically significant where P> 0.05. However, because this variable includes other sub-variables, regression analysis was conducted to investigate each sub-variable to see if there was any significant relationship with IN**.** To perform the regression analysis, IN was used as the dependent variable, while the CV (sub-variable) were used as independent variables. The use of sub-variables will provide better understanding of the role of each sub-variable in the acceptance of e-business websites.

Table 10. 16 Results of Multiple Regressions Analysis: CV and IN

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1						
	TR	.244	.084	.223	2.888	.004
	SN	.053	.053	.072	1.010	.314
	TA	.068	.062	.079	1.100	.273
	PD	.175	.062	.207	2.833	.005
	IND	.259	.076	-.256	3.398	.001
	UA	-.011	.063	-.013	-.172	.864
	MAS	.189	.097	.153	1.956	.052
Equation						
R			.509[a]			
R Square			.259			
Adjusted R Square			.226			
F			7.834			
Sig.			.000[a]			
a. Predictors: (Constant), MAS, SN, TA, CPD, UA, IND, TR						
b. Dependent Variable: IN						

As shown in Table 10.15**,** the Standardized coefficient (beta) value for TR, PD, and IND, is a positive and significant one ($p=0.00 \leq 0.05$). Also, the table shows there is no significant relationship between the SN, TA, UA, and MAS with IN where p= 0.314, 0.273, 864 and.052 >0.05 respectively. The individual contribution of the significant sub-variable of each cultural aspect was different, where the highest was trust with contribution (0.223).

With regard to the trust, this is correspondence with the results of the interviews (Chapter, 7) where the respondents showed more trust in using e-business websites. A higher percentage of participants (75%) used the e-business websites for buying products or services. Participants reported more trust in e-business websites and more use of credit card as well, and using the e-business websites for buying products or services. Studies

confirm that the culture with low UA and high individualism (UK) are more trusting of websites (El Said and Hone, 2005; Kong, and Hung, 2006).

With regard to SN, the results show that there is no significant relationship between SN and IN where (P=0. 314 > 0.05), as mentioned in section 10.3.1.1.2, the previous study conducted by Venkatesh and Davis (2000) hypothesised that the relationship is significant only in a mandatory cases and there is no significant influence of SN on IU if the use of the technology is voluntary.

The study hypothesis that SN only influences on a voluntary basis, is in agreement with Venkatesh and Davis (2000). In addition, it can be added that, UK users have a long experience in using the internet and new technology, therefore this experience enhances the personal work on an e-business website and their behavioural intention depends ion their personal experience. This is supported by the nature of the culture where people's high individualism is depending on themselves to develop their skills. In fact, Davis *et al*. (1989) did not find a significant influence of subjective norms on intentions to use.

UK respondents show more interest in using e-business websites to buy or search for information as its more convenient and using e-business websites saves their time and money. This lessens interest in real shops and enhances the credibility of websites. Also, culture with low PD, UA and COLL are less anxious about their future and more willing to accept risk where the influence if the group is less than high collective culture (Furrer *et al*. 2000). To conclude, culture with low PD, UA and COLL is less interested in the tangibility and more trusting in websites. Furthermore, Sheehan and Hoy, (2000); Miyazaki and Fernandez, (2001) show that high levels of UA in a culture may also help creating negative perceptions of e-business.

In step with prior studies' suggestions, it is suggested that a culture's collectivism and UA be negatively related to individuals' perceptions of e-business. Those from Individualist cultures depend more on themselves. This also creates more interest in the investigation of the e-business website and its use. In addition, using the e-business website will not threaten their life style and influence in their relationship with the

community and family relationship. This is match what the previous studies confirm about the use of the internet is more in individualism culture (Hofstede, 2001). With regard to relationship between MAS and IN this is not supported. This suggests that the people have a higher masculine quotient and did not necessarily have a more positive perception of e-business websites as an effective tool in enhance their intention to use e-business websites.

10.4.2.4 Regression Analysis for PEOU & PU vs. IN

To test the relationship between the PEOU & PU and IN, multiple regressions analysis (coefficient (beta)) was used between PU, PEOU, as independent variables, and the IN dependent variable. As shown in Table 10.16, the relationship is significant (p=0. 0.00<0.01).

Table 10.17 Results of Regression Analysis for PEOU & PU vs. IN

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	PU	.573	.078	.460	7.360	.000
	PEOU	.358	.059	.377	6.034	.000
Equation						
R			.727[a]			
R Square			.528			
Adjusted R Square			.522			
F			90.544			
Sig.			.000[a]			
a. Predictors: (Constant), PEOU, PU						
b. Dependent Variable: IN						

Table 10.16 indicates that the more useful e-business website is perceived to be, the more expected that people will accept and use it. The results show that PU has a strong positive direct effect on website acceptance and shows that e-business website perceived to be

high in significance will contribute to a higher acceptance rate. The e-business website that provides higher quality of information would result in a greater perceived usefulness from the user.

PEOU also has a strong positive direct effect on e-business website acceptance which is less than PU. However, the current study also revealed that the PU has greater influence on IN than PEOU where the Standardized Coefficients (beta) for both was (0.460; 0.377) respectively. This is in correspondence with the previous TAM results (Davis, *et al*, 1989; Davis, 1993) where they found that the influence of PU is greater than PEOU.

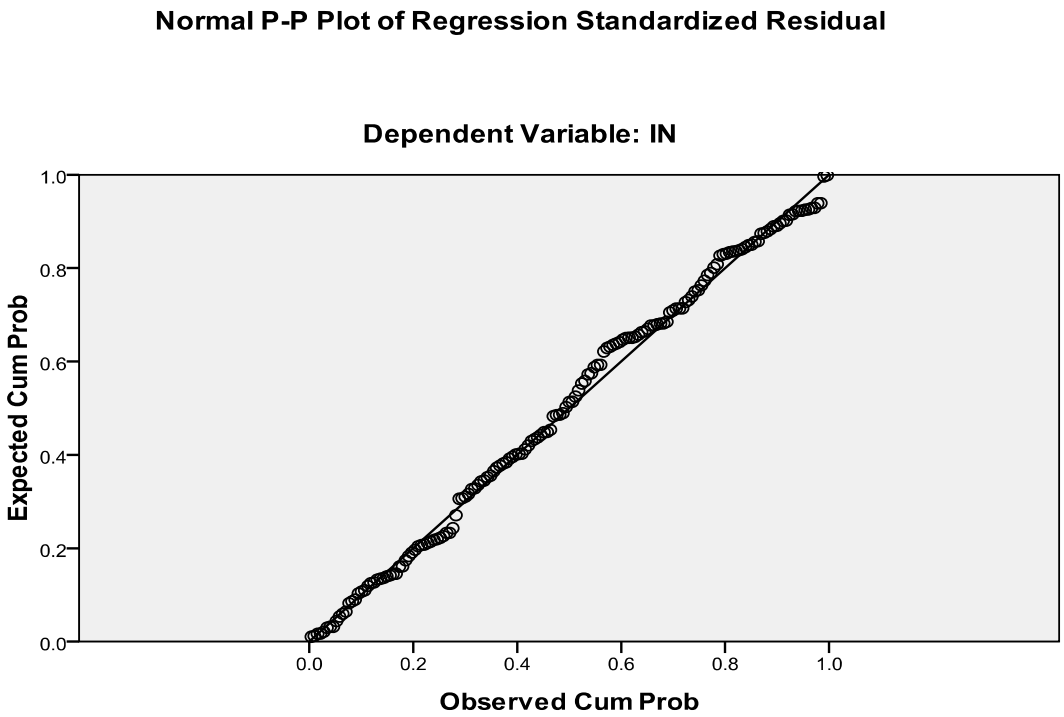
On the other hand, Igbaria *et al*. (1997) found PEOU is greater than PU in user acceptance of email. In addition, Hu *et al*., (1999) found there is no relationship between PU and PEOU. This suggests that users in the UK were driven to accept e-business websites mainly on the basis of usefulness more than its easy of use. In other words, this can imply that an e-business website that may seem useful and informative in the end will be accepted and used rather than its found easy to use. In addition, the results supported with the results of the interview (chapter, 4) where the respondents confirm the importance of the information and website usefulness. In addition, as noticed in section 10.3.1.2.2**,** respondents were confirmed the importance of information quality.

Linearity of the Regression Model - UK model

As mentioned in section 10.3.1.2, multiple regressions will be accurate if the relationship between the dependent and independent factors are linear. However, this is might not the case for social sciences in which nonlinear relationships occur (Hair et al, 2003). Non-linear relationships require special estimation methods to be used in the regression analysis. Different methods can be employed to test the linearity such as the scatterplot. In this study, the linearity was tested at the beginning for both samples and found not violated. However, because of the differences in the results between Arab and UK models, it was decided to test the linearity of the UK model. The results of linearity of

UK sample show that the dependent variable is not violating the assumption of linearity as can be seen from Figure 10.6.

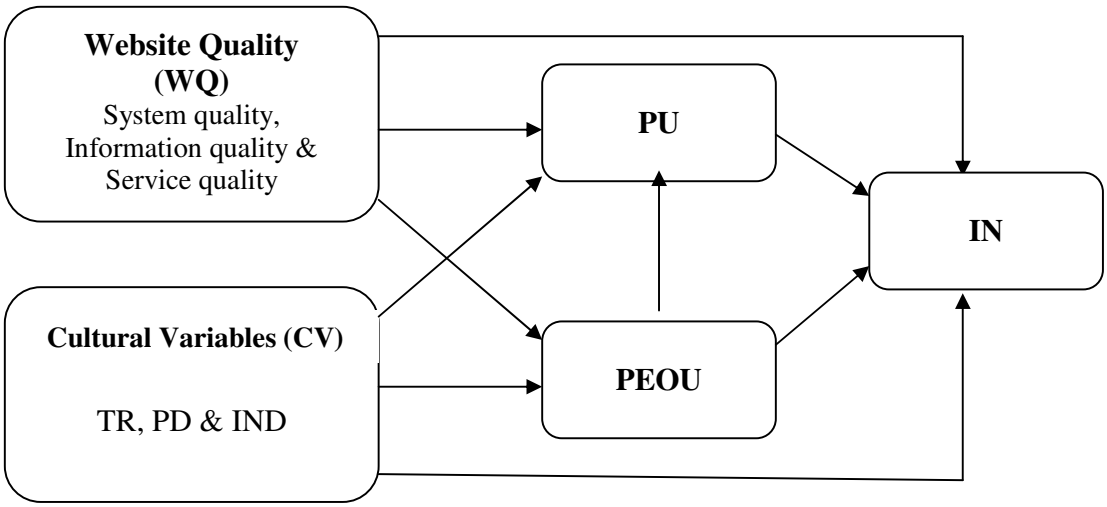
10.6 Normal P-P Plot of Regression Standardized Residual of UK model



10.4.2.5 Final CTAM Model –UK sample

Here, the model's fitness is improved by excluding the sub- variable of cultural variable (TA, SN, MAS and UA) which were not significant. In this case R square increased from 0.389 to 0.582 and adjusted R^2 increased from 0.377 to 0.566. The final model therefore includes the following variables website quality, cultural variables (TR, PD, and IND), PU, PEOU and IN. Figure 10.7 shows the final CTAM.

Figure 10.7 CTAM Model Including Sub-variables – UK Sample



TR; Trust**; PD:** Power Distance**; IND:** Individualism**; PU:** Perceived Usefulness**; PEOU:** Perceive Ease Of Use**; IN:** Intention to Use**.**

10.5 Summary

This chapter presents the data analysis processes which includes – in this chapter- two main phases, the first which is interested to find the correlation relationship between culture and website acceptance for both samples (Arab and UK) The results indicate that there is a significant relationship between CV and e-business website acceptance. In the second phase, multiple regression analysis was employed to find the relationship between the independent variables (WQ, CV, PU, and PEOU) and dependent variable (IN).

The results indicate that some of the cultural variables are not significant for both samples, within the Arab sample, SN and MAS are not significant with IN while for UK sample TA, SN, MAS and UA were not significant.

In the following, the conclusion of the study, implications, limitations and further study will be discussed and presented.

CHAPTER 11

CONCLUSION AND FURTHER RESEARCH

The purpose of this chapter is to combine the key findings from the data analysis with the main content and theory chapters that answered the research questions. Furthermore, it addresses the contribution that this study potentially offers to research and practice in the future. The chapter also aims to presents the limitations of the study. Finally, there is the attempt to synthesise and suggest future research directions.

11.1 Introduction

With the current shift in the global economy brought about by the credit-induced crises of late 2008, Arab countries are beginning to emerge in relative terms as one of the economic powerhouses of the early C21. What was seen as something inevitable in the long term is now seen as an emerging reality. Behind this surge, there is an acceptance of new technology that Arab countries have in the past been slow to incorporate. There have, as mentioned previously, been few studies that examined both technology acceptance and national culture and hence little work has been done to integrate these two topics.

The extensions of TAM to e-business websites research could be understood as indicating inadequacies in the original model in explaining all factors of acceptance (Legris *et al*. 2003 and Karahanna *et al.* 2006). This integration is particularly relevant given the international proliferation of the internet and other information technologies, as well as the rise in the globalisation of business in general and the increase of multinational teams operating at a single site.

TAM has generally been seen as a prudent and well-tolerated model that predicts acceptance of an information technology. TAM has mostly been tested (as well as developed) within the US which is by far the earliest and most extensive user of what we still think of as "new technology". This study has added to TAM other variables involving differences between cultures (trust, subjective norms and tangibility) which enhance its use in settings involving cultures other than that of the US. In the past, the US cultural model was taken as a given, but it was soon realised by theorists that the US cultural model would not give generalisabile results as culture was seen to be influential in the uptake of technology. This study's revised model allows for the assessment of technology acceptance and of technology acceptance models across multiple cultures.

The data analysis process included three main phases;

- The first which looked at the differences between Arab and UK tourists in term of acceptance and culture (chapter 8). The results indicated that there were significant differences between Arab and UK tourists in terms of acceptance and culture.
- The second which aimed to find relationships between culture and website acceptance for both samples (Arab and UK). The results indicated that there was a significant relationship between cultural variables and e-business website acceptance.
- The third phase, in which multiple regression analysis was employed to find the relationship between the independent variables (WQ, CV, PU, and PEOU) and one dependent variable (IN), (the Intention to use e-business websites). The results indicate that some of the cultural variables are not significant for either sample. Within the Arab sample, TR, TA, PD, UA and IND were significant but SN and MAS were not significant while for the UK sample TR, PD and IND were significant but TA, SN, MAS and UA were not significant.

The extensions of TAM in e-business website research could be read as an indication of the original culturally-slanted TAM model being inadequate in explaining all factors of acceptance (Karahanna, *et al* 2006). It is rational to think that there are more factors involved here than PU and PEOU that have a direct influence over user acceptance of e-business websites. Furthermore, TAM does not explain why users perceive usefulness or ease of use. The use of websites and the internet has grown dramatically over the last few

years, with an increasing range of benefits accruing to users and companies alike. It is hypothesised that cultural variables and website quality have an influence on user perceptions when using e-business websites. It can be argued that the original TAM does not sufficiently include all aspects of user acceptance. Therefore, the model developed by this thesis will extend the perspective of e-business websites acceptance with two additional perspectives: cultural variables and website quality.

11.2 Research Summary and Hypotheses Discussion Based on Data Analysis Results

This research deals with the relationships between factors that influence user acceptance of e-business websites (Cultural Variables, Website Quality, Perceived Usefulness, and Perceived Ease of Use). The analysis of the data for both the semi-structured interviews and the questionnaires are discussed below in relation to the research hypotheses and questions identified in Chapters 1 and 5.

This study set out to test a number of hypotheses described in chapter 5, which were accomplished as follows:

1. **There are significant differences between Arab and UK people in acceptance and usage of e-business websites.**
2. **There are culturally-related differences between Arab and UK in acceptance and usage of e-business websites.**

The research aimed to show what was initially conjectured about cultural differences in technology uptake between Arab and UK people: namely, that Arab culture itself was a major factor in the acceptance of e-business websites.

The cultural variables of the case also showed demonstrable evidence of cultural factors. In the t-tests, the mean trust score was 2.3 for Arabs and 3.7 for UK people, thus revealing that the UK sample has an ostensibly higher trust in e-business websites than the Arab sample. For tangibility, the mean was 3.88 for Arabs and 2.09 for UK people, indicating that Arabs are driven more by “tangible” factors than their UK equivalents. The Subjective Norm’s mean was 3.51 for the Arab sample and 2.61 for the UK sample.

The results show that Arab people are more influenced by their peers, friends, managers, etc in their decisions, while the UK sample shows less influence attributable to the opinions of others. For the "power distance" factor (PD), the means are 3.35 for Arabs and 1.95 for UK people, indicating that power dimensions play a significantly greater role in the opinions and behaviours of Arab people.

The Arab sample is significantly more orientated towards collectivism, than the UK equivalent. This is consistent with Hofstede's study results. And with regards to masculinity, both samples present an orientation towards masculinity. The means are 3.76 for Arabs and 3.26 for the UK sample. Yet, the Arab sample presents a significantly higher masculinity orientation than the UK sample. Taking Hofstede's (1980) cultural dimensions into account, this is an interesting result. Hofstede reported a masculine orientation for his UK sample higher than the Arab one (Masculinity scores were 52 and 66 for Arabs and UK citizens, respectively).

Finally, concerning the means of uncertainty avoidance for the Arab sample (3.95) and for the UK sample (2.76), the results correspond with Hofstede's findings. Hofstede described Arab culture as having high uncertainty avoidance and UK culture having low uncertainty avoidance. (Uncertainty avoidance (UA) scores were 68 and 35 for Arab and the UK, respectively, a most significant difference).

3. **There is a relationship between cultural variables and Arab peoples' acceptance of e-business websites.**
4. **There is a relationship between cultural variables and UK peoples' acceptance of e-business websites.**

Cultural variables include three main factors, namely: trust, tangibility and subjective norms, added to this are Hofstede's cultural dimensions: PD, UA, MAS and IND. Trust was found to be the vital element that affects online shopping. In addition, Straub *et al* (2002) indicate that cultures with high power distance were less trusting towards IT. However, the results indicate that UK tourists are more trusting in their use of e-business

websites. The results show that Arab culture clearly has high subjective norms where the social influence from family members, friends, and managers, for example, is high.

There are different methods to enhance and encourage users to buy through the website. Providing more payment alternatives that website offers such as fax or call their credit card number will increase sales and user trust. Presenting Official Recognition (license) from an appropriate tourism body will provide re-assurance for users as to the reliability of the service provider. Furthermore, added third party for monitoring and auditing these services will increase users trust such as TRUSTe.

Moreover, secure personal and financial information of online users is very important to get their trust. Users prefer to keep their personal information and not use for third party or by the companies to increase their customer base, unless they give permission. Due the global nature of the website, users are worried about their personal information. In some countries this kind of information is legally protected, in others it is not the case, (Ody, 2000) some Arab countries (i.e. Egypt, Jordan, and UAE) enact a new legislation to protect online users and intellectual property recently. Ultimately, security and privacy measures have a positive effect on the effectiveness of e-business websites.

Furthermore, the cultural characteristics of Arab countries are strong in social influence (because of high collectivism and power distance), therefore, people may choose to perform a behaviour, based on their referents' recommendations or influences. This is not the case for the UK sample, where UK tourists show less influence from others since it is a low collectivism and power distance culture, and their personal opinions and individual experience play a high role in their decision to use these websites. Based on the Hofstede cultural model, it can be concluded that cultural values maintain significant influence on some users' intention to buy due to group influence.

With regards to tangibility the results of means and t-tests show that Arab tourists prefer visiting travel agencies or travel shops to using e-business websites for purchasing or finding information. The UK, however, tends to have fixed prices and there is more trust in the quality of services or obtaining discounts. It is not surprising that the attitudes of

the Arab tourists to doing business via the internet are not favorable compared to UK tourists.

Arab culture expects and accepts inequality between people. Power and influence are distributed unequally between people, and are obedient to more influential people, due to the factors of the Islamic religion, as well as tribal and clan loyalty where people are expected to respect influential people's expectations and their right to govern. A collectivist culture is keen to keep community solidarity and is more likely to be concerned with existing relationships between members and the avoidance of any disruptions that could influence group harmony. The literature suggests new technology acceptance and usage is more acceptable in individualist cultures than collectivist cultures (Kankanhalli *et al*., 2005).

The importance of Femininity versus Masculinity reflects on the differences between women and men's roles in the community. It focuses in the social gender roles within the society (Shanks, *et al* 2000). In contradiction with Hofstede's (1980) results, the results presented in this study for Arab culture display a highly masculine culture. This could imply that Arab people do not limit their needs for quality where they think to become more assertive, self-confident and focus on achievements. Finally, with reference to uncertainty avoidance results, the results showed that Arab culture tends to be highly uncertain about the future, shows less tolerance about ambiguous situations and demonstrates a need for formal guided rules.

In conclusion, analyses of cultural values confirmed Hofstede's results (1980) except *viz* Masculinity / Femininity values which are different for Arab culture. This is something that should be investigated by future studies.

5. **There are relationships between website quality, cultural variables, PU and PEOU and e-business websites acceptance by the Arab sample.**
6. **There are relationships between website quality, cultural variables, PU and PEOU and e-business websites acceptance by the UK sample.**

With regard to the correlation relationships between the cultural variables and the acceptance of e-business websites, a Pearson correlation analysis was used. Significant results were obtained for all cultural variables relationships with intention to use. Results yielded consistent correlations which either positive or negative.

Tangibility negatively related to individuals perceptions of using e-business websites. Previous studies pointed out that the high PD culture had a direct negative influence on the adoption of new technology (Straub, *et al* 1997; Bagchi *et al*., 2004; Srnka, 2004). The results are consensus with Hofstede (1980).In regard to the relationship between UA and IN, a direct negative relationship was found. Previous studies showed that the culture with high UA such as Arab culture tends to use new technology less (Hasan and Ditsa 1999; Taylor, 2004; Fagan, *et a1*.2004; Akour, *et al* 2006). The relationship between MAS and IN was positive, the results showed that Arab tourists showed more masculine tendencies than did UK tourists and this is in contradiction with the Hofstede (1980) results where Arab tourists displayed low masculine culture.

As mentioned chapter 10, to perform the regression analysis, the total sample was divided into two groups (Arab and UK). Initially, the main assumptions of regression were tested for total sample then the analysis was carried out for each group in normality of the data, linearity of the phenomenon measured and homoscedasticity.

As mentioned above, a series of regression analyses was employed to analyse the gathered data. Each linear regression depends on the relationships between a set of independent variables and a single dependent variable. Hence, the results of regressions analyses were run with four independent variables and one dependent variable. In the CTAM Model for Arab sample the basic hypotheses were concerned with the influence of four independent variables namely, Cultural Variables (CV), Website Quality, PU, PEOU as well as, the dependent variables is IN. The regression model was significant at the .005 level with the power to explain 82.4 % (R^2 = 0.824) in the variation e-business website intention to use. Thus, approximately 82% of the variance in the dependent variable (IN) can be explained by the four main variables in the developed model. These

results presented a high explanatory power and explained the factors influencing e-business website acceptance. The results of R^2 indicate an excellent fit for the CTAM.

To investigate the individual contribution of the independent variables (PU, PEOU, CV and WQ) in explaining the dependent variable (IN), the Standardised Coefficients (Beta) was used. Website quality made the largest contribution. Other variables also remained highly significant but PU was less significant when compared with other variables. Accordingly, it can be argued that these factors are a key determinant in the use of e-business websites in Arab countries.

Website quality included three sub-factors; System quality (SYQ), information quality (INFQ), and Service quality and Attractiveness (SRQ2). To perform the regression analysis, IN was used as the dependent variable, while the website quality (sub-variable) was used as the independent variable. This provided better understanding of the role of each sub-variable in acceptance of e-business websites.

SYQ made the largest contribution more than the other factors (SRQ2 and INFQ). As mentioned in chapter 6, section 6.2.1, SYQ refers to the functionality of a website (Cao, *et al*, 2005): usability, availability and response time (DeLone and McLean, 2003). The system quality of a website can be measured by search facility, responsiveness and multi-media capability. Moreover, information quality (INFQ) is represented by depth of information, clarity, information relevance, currency, concision, scannability, accuracy and service quality (SRQ2). It also included two main constructs: trust and empathy (Cao, *et al,* 2005).

Cultural Variables include the following sub-variables; Trust (TR), Tangibility, (TA) Subjective norm (SN), Power Distance (PD), Uncertainty Avoidance (UA), Individualism (IND) and Masculinity (MAS). To perform the regression analysis, IN was used as the dependent variable, while the cultural variables (sub-variables) were used as independent variable.

The use of sub-variables again provided a better understanding of their role in the acceptance of e-business websites. The Standardized coefficient (beta) value for TR, TA, UA, IND, and PD is positive and significant. Also, there were no significant relationships between the SN and MAS with IN. The individual contribution of each sub-variable from cultural variables was different. The highest contribution comes from trust, followed by tangibility. The results of the relationship between SN and IN were positive but not significant.

To perform the regression analysis, PU and PEOU were used as independent variables and IN was used as dependent variable. The more useful and easy to use a website is perceived to be, the more it is expected that people will accept and use it. The results show that PEOU had a strong positive direct effect on website acceptance i.e. e-business websites perceived to be easy to use contribute to a higher acceptance rate. PU also has a strong positive direct effect on e-business website acceptance which is less than PEOU.

After performing the regression analysis, the final CTAM for Arab culture did not include MAS and SN. By excluding the non-significant sub- variable of cultural variables (SN and MAS), the final model included the following variables: website quality, cultural variables (TR, TA, UA, PD, and IND), PU, PEOU and IN.

Within the UK sample, by excluding the sub-variables of cultural (TA, SN, MAS and UA), which were not significant, the model's goodness of fit improved. The final model include the following variables website quality, cultural variables (TR, PD, and IND), PU, PEOU and IN.

Ostensibly, the conclusion can be drawn that both of the models, the Arab and the UK respectively, show both similarities and differences in regard to their cultural variables.

With regard to the similarities, it is apparent that TR, PD and IND are statistically significant in both models, especially with regard to trust. The evidence shows that both samples increased their likelihood of using e-business websites based on their level of

trust in the particular website. Therefore, the website developer and manager could plausibly enhance website usage through increasing the level of trust by using methods such as cues, certificates, testimonials, pictures with dimensions, and other similar strategies that are able to increase user trust in e-business websites.

PD and IND were found in the study to be statistically significant. Within UK culture, a positive relationship was found with these factors. This is because the individualistic culture is generally more interested in using and accepting e-business websites while in the Arab sample it was also significant, but was a negative result. The results clearly indicate that collectivist cultures have an overall lower intention to use e-business websites. Previous studies confirm that UK culture is more individualistic than typical Arab culture (Hofstede, 1980, 1991).

What is more, according to the regression analysis that were carried out in this study and model development analysis, it was found there were some significant differences between Arab and UK sample in different areas to those already mentioned. These differences were found mainly in Tangibility, UA, and COLL and provided a noticeable insight into the make up of the two cultures and their ultimate influence on user behaviour with regard to technology uptake and usage tendencies viz websites.

Tangibility was found to be highly significant when correlated with user intention to use within Arab culture, while it was not overly significant within the UK sample. People in the Arab world, it can be argued, judge things more by "feel" and "sight". Shopping is a only pleasure when the shopping is in a physical environment and personal interaction is involved. These tangibles are highly valued in Arab culture, at the expense of the dissemination and evaluation of information. Information is needed, but can be ignored when the personal requirements of physical environment or personal interactions are seen to be inferior and override the previous conditions.

The consequence of this information is that Arab mangers and website designers should be focused in enhancing the tangibility of e-business websites by using different methods

of technology i.e. technology that uses a virtual 3D environment to enhance the tangibility of the experience for Arab users. By letting the picture talk, Arabs are made to feel that the experience is a more real one than would be the case with a two—dimensional experience. By providing a more realistic example of the product – to the point in a virtual environment where the object can be 'touched', will enhance the marketability of the product and hence the website itself. By providing a 'sample' of the product where possible such as the software, book, etc, by providing similar products without any evident difference from the real one, with testimonials, with warranties, and with clear after-sale support, with clear and easy-to-find company contact information and with clear, privacy and security policies, the Arab customer will be persuaded to buy. In addition, these issues could well enhance user trust in the e-business website and increase user acceptance site-wide.

Another major factor in addition to the above is UA. This was found to be highly significant when correlated with intention to use within the Arab sample, while it was not significant within that of the UK sample. This is plausibly due to high UA within Arab culture. This requires Arab managers and website designers to consider the issue by working to reduce UA across use e-business websites through the development of websites which are easy to use, easy to navigate and have clear directions to another webpage, as well as clear information and directions for the website use, and the provision of FAQs.

11.3 Research Contributions

11.3.1 Contribution to Theory

The lack of cultural orientation in TAM neglects an important aspect of technology user acceptance information systems. This study stretches previous researchers' call for more vigorous and empirical research to examine the influence of culture on user e-business website acceptance at national levels. This work adds a number of contributions to the theory of IS.

This thesis promotes TAM by joining together two sets of research – technology acceptance and culture. Cultural variables have been found to have either a direct influence on or relationship with user acceptance of e-business websites. This assists researchers in making predictions of e-business website acceptance in different environments depending on the relationship between culture and e-business website acceptance. In previous research, very few studies have looked at the relationship between cultural values and e-business website acceptance using a multi-disciplinary approach. This combination is particularly pertinent in the face of growing globalisation.

Neglecting the cultural variables in TAM has been one of its main limitations when considering international dimensions. The inclusion of cultural variables helps the generalisability of TAM. Moreover, this study also contributes to technology and IS research in identifying the cultural variables involved when including other variables integrated with the Hofstede dimensions. The results reveal how people with different cultural values accept an e-business website, thus providing insights to researchers to predict website acceptance behaviours across different cultures.

For example, within high collectivist culture, Subjective Norms (SN) was found to be an effective mediator of e-business website acceptance. Thus, emphasising a standard e-business website between organisations might be more efficient in increasing overall usefulness as a perception with users, especially if the organisational culture reflects collectivism as a central tendency. It will encourage the use of the e-business website as a collective norm, and will increase peoples' perception of e-business website usefulness. However, for some people, the measure may not be as effective. While for people with high PD culture, an organisational culture believing that e-business website use does not stabilise status differences would be effective in improving e-business website acceptance, because the interaction influence of PD on SN-IN relationship is of a lower level among people with a higher PD culture.

In addition, there is a scarcity of studies on technology acceptance research throughout the Arab world, so, this study attempts to participate in filling part of this gap. Moreover, this study is the first to present a comparison between Arab and UK cultures as well as attempting to investigate the influence of their cultures in user acceptance of e-business websites. Finally, the study makes a contribution to the technology acceptance literature by shedding light on the factors that influence e-business website acceptance.

11.3.2 Contributions to Practice

The results present some important managerial implications. This study reveals that cultural variables significantly influence user e-business website acceptance through a direct relationship. Organisations and companies can represent the outcomes as actions to facilitate e-business website acceptance based on the role of cultural variables in website acceptance.

For example, within Arab countries where people with high uncertainty avoidance consider e-business websites to have little usefulness, design and training practice should emphasises ease of use in the interface. This may change or minimise the unfavourable opinions people have in Arab countries of e-business websites. In general, managers should recognise the influence of culture on website acceptance and should work to maximise and support e-business website acceptance.

A better understanding of cultural variables of user acceptance will help businesses to enhance e-business website acceptance in both Arab and UK cultures. In the context of the Arab world, support from top management could be an effective method to encourage e-business acceptance, because the norms of e-business website use will dominate if they correspond to the norms of the collective.

Accordingly, to facilitate organisational e-business website acceptance, the following guideline may be beneficial. First, the using of e-business website within the organisation should consider cultural factors that influence acceptance. Organisations with a high collectivism or PD central tendency where they have e-business websites used by managers or peers, would find an increase in the overall perception of usefulness and

intention to use e-business website. In addition, training on the use of e-business websites could increase user experience and the general information richness of e-business websites in a high context culture, and could be useful methods of imitating a flavour of the specific social cues and enhance the relationship of trust.

Second, is the initiation of a comfort level for e-business use. For example, when there are a clear rules and uncertainty avoidance dominates within the work place and style, a clear organisational norm on e-business use is desirable. This could be in the structure of a brochure showing the legal effectiveness of e-business use. Finally, in order to achieve this, organisations need to provide an environment and facilitate to support employees in such activities.

Finally, managers should be aware that e-business acceptance differs in each culture. In UK culture, perceived usefulness was shown to be more important in determining user acceptance, while ease of use is a key in Arab culture. Communication about the introduction of the e-business, like training manuals, marketing and face-to-face contact, should thus convey different messages dependent on the culture in which the e-business is to be used.

Global and international firms should to pay more attention to cultural differences when planning to target users in Arab countries. The results of this study may be of use to managers and website designers in getting them to focus more attention on the accommodation of cultural values of Arab countries. The implementation depends a great deal on its fit with an Arab culture which differs greatly from UK and other developed countries.

This study also has potential for practical application in the development and acceptance of e-business website. The results of the study confirmed TAM. This means that website developers should consider ease of use and usefulness in design to promote e-business usage. It also suggests that developers should emphasise specific factors when they create new websites. For example, it suggests that website quality i.e., information quality,

system quality, service quality and attractiveness are very important and should be considered by developers and managers.

Trust is an important factor for all e-business website users irrespective of their culture. This is not surprising considering that the acceptance of e-business has been globally influenced by users' concerns regarding online security (Sigala, 2004b). This issue can be addressed by publishing online clearly written and transparent privacy policies and by the adoption of substantial security procedures that reduce fraud.

Finally, website privacy and security policies should be easy to find and linked in appropriate web pages (e.g., in the webpage linked to the order form, the payment methods, and so on.). Furthermore, because of the lack of a face-to-face interaction, tangibility can be increased for Arab users through cues relating to the technical aspects of the online transaction and the logistics of receiving and returning the product. Hence, online managers need to evaluate their websites for important aspects such as clarity, ease of use and technical support.

11.4 Limitations

Although the findings can be considered statistically significant, the current study has several limitations that influence the reliability and validity of the results. The present study used a cross-sectional design, which was carried at one point in time. This does not demonstrate how the peoples' behaviour may change over time. Although, this study produces a useful 'snapshot' of user data that helps to understand the phenomenon of the study, it could not explicate possible changes in user attitudes over time. Nevertheless De Wulf, (1999) points out that a series of cross-sectional studies, can help to detect the attitude change over the time (as indeed may have been demonstrated in the changes detected in masculinity in this study).

The UK sample was relatively small (n=165) therefore, frustrating the use of powerful statistical techniques such as SEM, which needs large samples (Mulaik and James, 1995). Therefore, this study utilised regression analyses. Furthermore, the exploration of cultural impact is limited to Hofstede's cultural dimensions. Other cultural factors values may

also impact e-business acceptance such as language, population density and other shopping habits. In addition, other researchers could be considered such as (Hall, 1976, Trompenaars, 1993).

There is a possibility that some words in the questionnaire could be misunderstood due to the lack of an exact translation from English to Arabic, e.g. icon. This is unlikely to have affected the results as the researcher was available to provide more information if required when the questionnaire was administered. However, future researchers may wish to clarify these words at the beginning of the questionnaire to reduce the possibility of confusion.

Despite these limitations, the current study provides valuable insights into the study of e-business acceptance. These limitations pave the way and should be considered by future researchers.

11.5 Directions for Future Research

Future research could consider this study and replicate it in different countries to evaluate the relations identified here between cultural variables and e-business acceptance. Other aspects of culture could also be studied for their potential influence on acceptance, such as user gender, experience, user characteristics and language.

The respondents in the interviews indicated that religion plays a significant role in the lives of Arabs and impact in user behaviour particularly with reference to e-business. Religious factors should be investigated and considered in future research. Additional research on Hofstede's culture dimensions is also needed. Hofstede's dimensions were developed almost three decades back and many changes and developments have occurred in Arab countries since that time. Culture will continue to develop and change and research is needed to ensure that this is taken into account when new technologies are introduced.

The use of the Internet changed many traditional businesses into e-businesses. Frontier technologies associated with Mobile Commerce have provided even more impetus for businesses to convert from traditional methods into digital methods.

With an increase in the number of users of mobiles in Arab and UK countries, special attention might be given to cultural issues relating to the use of M-Commerce. Future research could include work on validating, extending, and enhancing the CTAM model to enable its use as a tool for formulating M-Commerce strategy. Comparisons of M-Commerce usage could then be made between Arab countries and other western or developing countries.

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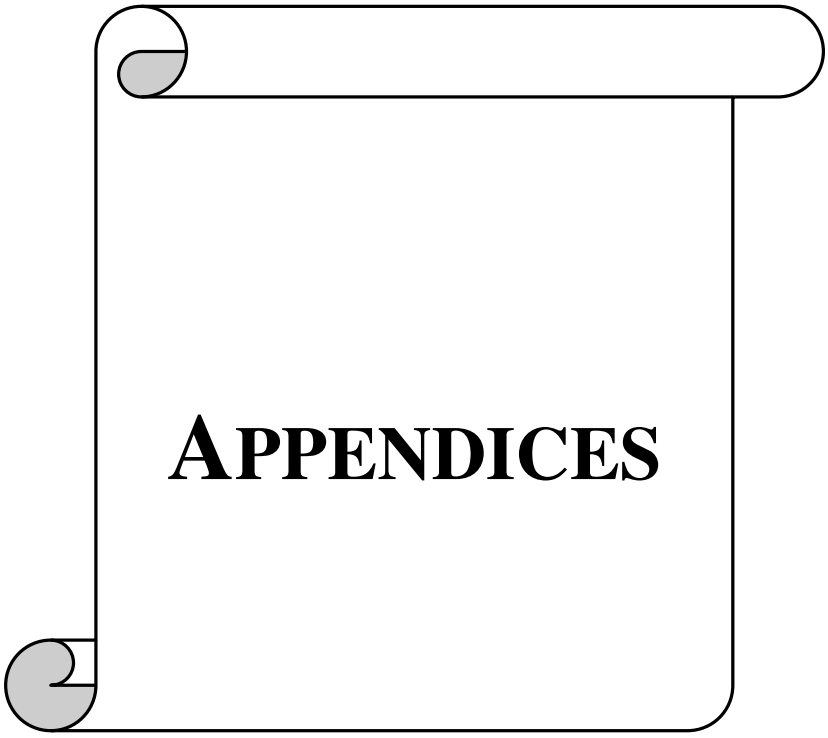
APPENDICES

Appendix (1)

Hofstede's Dimension of Culture Scales				
Country	**Power Distance**	**Individualism**	**Uncertainty Avoidance**	**Masculinity**
Arab countries	80	38	68	53
Argentina	49	46	86	56
Australia	36	90	51	61
Austria	11	55	70	79
Belgium	65	75	94	54
Brazil	69	38	76	49
Canada	39	80	48	52
Chile	63	23	86	28
Colombia	67	13	80	64
Costa Rica	35	15	86	21
Denmark	18	74	23	16
East Africa	64	27	52	41
Equador	78	8	67	63
Finland	33	63	59	26
France	68	71	86	43
Germany FR	35	67	65	66
Great Britain	35	89	35	66
Greece	60	35	112	57
Guatemala	95	6	101	37
Hong Kong	68	25	29	57
India	77	48	40	56
Indonesia	78	14	48	46
Iran	58	41	59	43
Ireland	28	70	35	68
Israel	13	54	81	47
Italy	50	76	75	70
Jamaica	45	39	13	68
Japan	54	46	92	95
Malaysia	104	26	36	50
Mexico	81	30	82	69
Netherlands	38	80	53	14
New Zealand	22	79	49	58
Norway	31	69	50	8
Pakistan	55	14	70	50
Panama	95	11	86	44

Peru	64	16	87	42
Philippines	94	32	44	64
Portugal	63	27	104	31
Salvador	66	19	94	40
Singapore	74	20	8	48
South Africa	49	65	49	63
South Korea	60	18	85	39
Spain	57	51	86	42
Sweden	31	71	29	5
Switzerland	34	68	58	70
Taiwan	58	17	69	45
Thailand	64	20	64	34
Turkey	66	37	85	45
Uruguay	61	36	100	38
USA	40	91	46	62
Venezuela	81	12	76	73
West Africa	77	20	54	46
Yugoslavia	76	27	88	21

Appendix (2)

Number of European Tourists Visiting Jordan (2004-2006)

Nationality	2004	2005	2006
Bulgaria	1,292	1,485	1,579
Czech Rep	2,003	2,685	3,037
Slovakia	1,778	4,589	1,355
Hungary	23,706	4,925	1,207
Poland	3,051	4,533	6,415
Romania	2,165	2,070	1,592
Russia	13,574	18,136	25,309
Azerbaijan	1,288	33	4,940
Ukraine	2,657	3,446	3,651
Kazakhstan	343	298	612
Portugal	435	852	1,082
Yugoslavia	1,376	852	793
Greece	2,939	3,294	4,120
Macedonia	2,132	2,572	2,525
Croatia	561	770	687
Slovenia	1,540	3,093	717
Italy	16,368	19,652	19,561
Bosnia & Herzq	1,302	2,534	1,743
Malta	210	223	283
Spain	15,431	28,865	19,704
U.K	**54,118**	**56,807**	**68,210**
Norway	2,011	2,563	2,872
Finland	1,407	1,124	1,462
Ireland	2,566	2,882	3,120
Iceland	150	37	176
Denmark	4,014	4,160	4,973
Sweden	6,658	7,332	9,835
Switzerland	5,485	5,405	6,830
The Vatican	119	137	156
France	23,074	28,855	32,097
Belgium	3,849	4,140	5,305

Luxembourg	90	117	164
Germany	27,982	29,872	35,663
Austria	4,741	5,335	5,020
Netherlands	9,175	10,681	12,113
Cyprus	1,261	1,434	1,816
Turkey	113,387	104,852	143,724
Israel	171,376	175,656	203,019
Other Europe	2498	7,864	7640
Total Europe	**528,112**	**554,160**	**643,528**

Appendix (3-A)

The study questionnaire

No: ( )

Date: _____

The relationship between culture and e-business acceptance

(A comparative study of Arab and UK cultures)

Dear participants,

I am a research associate at Coventry University. Currently, I am investigating the relationship between culture and e-business websites acceptance, supervised by Dr. Alison Todman.

The success of this research in achieving its research objectives is depending upon your response and the completion of the research questionnaire. You may rest assured that any data collected will be treated in the strictest confidence. Any result reported will be used in aggregate to protect your anonymity and will not identify any participant identity.

I would highly appreciate your participation in the success of this research by completing the questionnaire. If you have any inquiry about the completion of the questionnaire, in particular, or about the research, in general, please do not hesitate to contact me on the telephone number or via the e-mail address listed below.

Many thanks for your cooperation,

For more information, please contact:

Saad Khushman
PhD – Research student
csy167@coventry.ac.uk
0044 (0) 2476 88 7047
Faculty of Engineering and Computing
Coventry University - United Kingdom

Instructions:

Dear Participant,

Thank you for your participating in the questionnaire survey. This survey will take approximately 10-15 minutes of your time.

For demographic questions simply tick in the square (**x**) that corresponds to your answer, as in the examples below.

Example (1):

Gender Male ☐ Female ☒

For most of the questions simply tick [√] the number that corresponds to your answer, as in the examples below.

Example (2):

		Strongly agree [1]	Agree [2]	Neutral [3]	Disagree [4]	Strongly disagree [5]
	I prefer to have multiple ways of accessing the same information.			√		

Section (1): Classification information:

A. Demographic information:

1. **Age:** less than 20 ☐ 20-29 ☐ 30-39 ☐ 40-49 ☐ 50 or above ☐

2. **Gender**: Male ☐ Female ☐

B. Educational Background:

High School Certificate ☐ HND Diploma ☐ Bachelor degree ☐ Postgraduate ☐ Other ☐

C- Language:

1. What language do you prefer to use when you are surf the internet?

Arabic ☐ English ☐ Both ☐ Other ☐ Please specify_____

D- Usage and experience:

1. For how long you have been using the Internet?

Not at all ☐ Less than 1 year ☐ 1-3 years ☐ 3-5 years ☐ More than 5 years ☐

2. How many times do you use the Internet during a week?

Not at all ☐ once/wk ☐ 2-3/wk ☐ several times/wk ☐ once/day ☐

3. How frequently do you visit websites associated with e-business industry e.g. hotels, flights, tourist sites attraction. etc.

Not at all ☐ Less than once a month ☐ 1 to 2 times a month ☐ 3 to 4 times a month ☐ more than 4 times a month ☐

Section (2): Website quality

Based on your preferences and needs, please, indicate below which of the listed website features are important to you when you use a e-business websites. E-business websites could be a website of a hotel, travel agency, or government and non-governments institutions.

Imagine the situation, when you are looking for a e-business product/service to buy and browsing a related website with this purpose. A e-business product or service may be, e.g., a flight details, hotel room, ticket to a tourist site, or others. You can choose either to buy it on the internet or via other channels (fax, phone, tourist agency, etc.).

Please, indicate your choice by marking the appropriate answer alternative ("1" stands for "strongly disagree" and "5" stands for "Strongly agree"):

	E- business Websites	**Strongly disagree [1]**	**Disagree [2]**	**Neutral [3]**	**Agree [4]**	**Strongly Agree [5]**
	System quality					
1.	I prefer to have multiple ways of accessing the same information.					
2.	I prefer to use e-business website that have effective search engine.					
3.	I prefer to use e-business website that have different icons which show my browsing positions.					
4.	I will move to another website when ever I faced slow download or upload.					
5.	Although opening of the web page is quite slow, I will wait to get the required information.					
6.	I prefer to use e-business website with more pictures, animations, videos…etc.					
	Information quality					
7.	I prefer to use e-business website that provides me a general information rather than detailed information					
8.	I do not prefer to read any information that is not related to my request.					

9.	I do not like to spend more time in interpreting the required information.					
10.	I believe that dated information is useless.					
11.	I will not revisit a website that provides inaccurate information.					
	Service quality & Attractiveness					
12.	I have no problem to provide my personal information to e-business website when it's required.					
13.	I prefer to use e-business website that perform personal and financial transaction through trusted third party.					
14.	I prefer e-business website that enables me to contact and interact with the company and other customers.					
15.	I prefer e-business website that enable me to customise the web pages that I use.					
16.	I prefer e-business website that provide entertainment facilities (e.g. online games, videos, songs)					
17.	I think that the web page colours are very important to visit the website					
18.	I think that e-business should have a unified layout.					

Section (3): Cultural aspects

3.1 Trust

Please, tick (√) your appropriate answer.

Do you use credit cards in general? Yes ☐ No ☐

If yes, how many times you have given your credit card number on a website?

Never ☐ Rarely ☐ Occasionally ☐ Frequently ☐

Please indicate the extent to which you agree or disagree with the following statements "strongly disagree [1] Disagree [2] Neutral [3] Agree [4] Strongly agree [5]".

	Trust	Strongly disagree [1]	Disagree [2]	Neutral [3]	Agree [4]	Strongly Agree [5]
21	I think that e-business websites are not secure enough to protect my financial and personal information.	.				
22	I did not trust performing purchase transaction through the e-business websites.					

3.2 Tangibility

	Tangibility	Strongly disagree [1]	Disagree [2]	Neutral [3]	Agree [4]	Strongly Agree [5]
23	I prefer to visit shops rather than buying through the websites.					
24	Visiting a store will enhance my touch feeling about the e-business products and services.					
25	A personal contact with shops helps me to get cheaper prices or good offers.					

3.3 Subjective norms

No.	Statement	Strongly disagree [1]	Disagree [2]	Neutral [3]	Agree [4]	Strongly Agree [5]
	Subjective norms					
26	People who are important to me think that I should use e-business websites.					
27	People who influence my behavior think that I should use e-business websites.					

3.4 Cultural dimensions

	Cultural Dimensions	Strongly agree [1]	Agree [2]	Neutral [3]	Disagree [4]	Strongly disagree [5]
	Power Distance					
28	Inequalities among people are both expected and desired.					
29	I believe that website usage should be limited to certain people (e.g. Parents, mangers).					
30	Employees should refer to their mangers to get permissions before using websites.					
	Collectivism					
31	Using websites affect my relationship with my family and friends.					
32	If I faced any problem while I am browsing a website, I will ask my friend for help.					
33	If I want to buy a ticket or book at hotel, I prefer to ask my friends before searching.					
	Masculinity					
34	I prefer to use a website with high emotional appeal.					
35	I prefer a website that emphasises on a mutual					

	relationship and cooperation rather competitiveness between men and women.					
36	I prefer to use a website where I can control and explore easily.					
	Uncertainty Avoidance					
37	To search for booking a room or buying a ticket, I prefer to search for new websites.					
38	I prefer visit a website that I visited before.					
39	I prefer to visit well known companies' websites.					

Section (4): TAM constructs

Please indicate the extent to which you agree or disagree with the following statements "strongly disagree [1] Disagree [2] Neutral [3] Agree [4] Strongly agree [5]".

	Perceived Usefulness	**Strongly disagree [1]**	**Disagree [2]**	**Neutral [3]**	**Agree [4]**	**Strongly Agree [5]**
40	Using e-business websites enables me to save time and efforts.					
41	Using e-business websites makes it easier to purchase my needs.					
42	E-business websites help me to search more quickly for information I need.					

	Perceived Ease of Use	**Strongly agree [1]**	**Agree [2]**	**Neutral [3]**	**Disagree [4]**	**Strongly disagree [5]**
43	I think, it is easy to find information on the e-business websites.					
44	I think that e-business websites are easy use.					

	Intention to use	Strongly agree [1]	Agree [2]	Neutral [3]	Disagree [4]	Strongly disagree [5]
45	I intend to use the websites for searching information and buying products and services.					
46	I recommend my friends to visit e-business websites.					

Section (5):

If you have any comments to add, please use the space below:

_____
_____
_____
_____
_____
_____

Thank you for your time and effort in completing this questionnaire

Appendix (3-B)

( )

"

للمزيد من المعلومات يرجى الاتصال ب :
سعد علي الخشمان
البريد الالكتروني: csy167@coventry.ac.uk
رقم الهاتف: 0044 (0) 2476 88 7047
كلية الهندسة والحاسب الآلي
جامعه كوفنتري
ألمملكه المتحدة

تعليمات:

عزيزي المشارك ،،،

إن الإجابة على الاستبيان ستستغرق من وقتكم قرابة 10- 15 دقيقة.وللتوضيح الية الإجابة أورد الباحث المثالين التوضيحيين الآتيين :

مثال 1

	غير موافق بشدة	غير موافق	محايد	موافق	موافق بشدة
أفضل استخدام المواقع الالكترونية السياحية سهلة التصفح والتنقل في داخلها			√		

الأسئلة الديموغرافيه , الرجاء كتابة علامة (x) في المربع مقابل الاجابه، كما هو موضح أدناه.

الجنس: ذكر☐ أنثى☒

مثال 2
توضع أشارة √ مقابل الاختيار المرغوب، كما هو ادناة.

نشكر لكم تعاونكم

الجزء الأول :

أ- معلومات ديمغرافية:

1. **العمر:** اقل من 20 سنة ☐ 20 - 29 ☐ 30 -39 ☐ 40-49 ☐ أكثر من 50 سنة ☐

2. **الجنس** : ذكر ☐ أنثى ☐

ب- المؤهل العلمي: شهادة ثانوية عامة ☐ دبلوم ☐ بكالوريوس ☐ دراسات عليا ☐

ج - الاستخدام والخبرة :

1. كم مرة تستخدم الانترنت خلال الأسبوع:

لا استخدمها نهائيا ☐ مرة واحدة ☐ من 2-3 ☐ مرات عديدة ☐ مرة كل يوم ☐ مرات عديدة في اليوم ☐

2. ماهي عدد سنوات الخبرة لديك في استخدام الانترنت:

اقل من سنة ☐ من 1- 3 سنوات ☐ من 3 - 5 سنوات ☐ أكثر من 5 سنوات ☐

3. ما هو معدل زيارتك للمواقع الالكترونية السياحية (الفنادق ,حجوزات الطيران .....)

لا أزورها نهائيا ☐ أقل من مرة واحدة في الشهر ☐ من 1-2 في الشهر ☐ من 3-4 في الشهر ☐ مرات عديدة في الشهر☐

د- اللغة

1. ماهي اللغة التي تفضل تصفح المواقع الالكترونية بها

عربي ☐ انجليزي ☐ كلاهما ☐ أخرا ☐ الرجاء التحديد _____

الجزء الثاني:

إن الجدول الاتي يحتوي مجموعة من خصائص المواقع الالكترونية السياحية , فنرجوا منك ان تشير الى مدى موافقتك على كل من الخصائص المدرجة بالنسبة اليك عند تصفحك المواقع السياحية معتمدا في ذلك على حاجاتك ورغباتك .علما بان المواقع السياحية هي المواقع التي تؤدي خدمات سياحية والتي قد تعود الى مؤسسات سياحية حكومية أوغير حكومية مثل (الفنادق ,المطاعم السياحية ,وكالات السفر , المكاتب السياحية .....) .

عزيزي المشارك تخيل انك تنوي شراء منتج/خدمة سياحية وتقوم بتصفح المواقع الالكترونية ذات العلاقة علما بان المنتجات /الخدمات السياحية قد تكون : تفصيلات رحلة جوية , حجز فندقي ,تذكرة دخول الى موقع سياحي ....الخ،ولك الخيار في ان تقوم بشرائها اما عن طريق الانترنت او من خلال القنوات الاخرى (الفاكس , الهاتف , وكالات السياحة والسفر).

الرجاء وضع أشارة(√) مقابل كل سؤال من الأسئلة التالية وحسب الخيارات التالية:

غيرموافق ابدا [1] غير موافق[2] محايد [3] موافق[4] موافقجدا[5]

	جودة الموقع الالكتروني	غيرموافق ابدا [1]	غير موافق [2]	محايد [3]	موافق [4]	موافق جدا [5]
	جودة النظام					
.1	انني ارغب بوجود عدة طرق للوصول الى نفس المعلومة					
.2	انني ارغب بوجود محرك بحث فعال					
.3	انني ارغب بوجودعدة ايقونات لمعرفة موقعي اثناء استخدام الموقع الالكتروني.					
.4	سوف انتقل الى موقع اخر اذا كان الموقع الالكتروني بطيئا في التنزيل والتحميل					
.5	على الرغم من بطء فتح الموقع الالكتروني فانني سوف انتظر للحصول على المعلومة المطلوبة					
.6	انني افضل استخدام عناصر الوسائط المتعددة (صوت ،صورة ، حركة) لتقديم فكرة عن المنتجات والخدمات السياحية التي يقدمها الموقع الالكتروني.					
	جودة المعلومات					
.7	انني افضل الموقع الالكتروني الذي يزودني بمعلومات عامة وليست مفصلة عن الموضوع					
.8	لا افضل قراءة اية معلومات ليست لها علاقة بما طلبت او ارغب الحصول علية					
.9	لا افضل قضاء وقت اطول لترجمة وفهم المعلومات المطلوبة					
.10	اعتقد ان المعلومات المحدثة عديمة الفائدة					

11.	لن ازور موقع الالكتروني معلوماتة غير دقيقة					
	جودة الخدمة					
12.	ليس لدي اية مشكلة لتقديم معلوماتي الشخصية والمالية للمواقع الالكترونية السياحية عند الطلب					
13.	افضل استخدام المواقع السياحية لتقديم معلوماتي الشخصية والمالية بوجود طرف ثالث محايد					
14.	افضل المواقع الالكترونية السياحية التي تجعلني اتفاعل مع الشركة والزبائن الاخرين					
15.	افضل المواقع الالكترونية السياحية التي تمكنني من تكييف الموقع وتعديله بما يتلاءم وحاجاتي					
16.	افضل المواقع الالكترونية السياحية التي تزودني بوسائل ترفيهية مثل الالعاب والاغاني وفيديو					
17.	اعتقد ان لون الصفحة الالكترونية مهم لزيارة الموقع					
18.	اعتقد ان نسق موحد للموقع الالكتروني مهم					

الجزء الثالث: العوامل الثقافية

1- الثقة :

الرجاء وضع أشارة √ مقابل كل سؤال من الأسئلة التالية وحسب خيارات الإجابة التي تليه:

هل تقوم باستخدام البطاقات الالكترونية في العموم ؟

نعم | | لا | |

إذا كانت الإجابة " نعم" ;كم مرة قمت فيها بإعطاء رقم بطاقتك الاعتمادية للموقع الإلكتروني ؟

مطلقا ☐ نادرا ☐ أحيانا ☐ غالبا ☐

الى إي مدى تتفق أو تختلف مع كل من العبارات التالية؟ الرجاء وضع أشارة (√) مقابل كل سؤال من الأسئلة التالية وحسب الخيارات التالية:

غير موافق بشدة [1]	غير موافق [2]	محايد [3]	موافق [4]	موافق بشدة [5]

	الثقة	غير موافق بشدة [1]	غير موافق [2]	محايد [3]	موافق [4]	موافق بشدة [5]
19	اعتقد ان المواقع الالكترونية هي غير امنة و لاتحفظ معلوماتي الشخصية والمالية					
20	انني لا اثق في تنفيذ عملية الشراء من خلال المواقع الالكترونية					

2- الاشياء الملموسة

	الاشياء الملموسة	غير موافق بشدة [1]	غير موافق [2]	محايد [3]	موافق [4]	موافق بشدة [5]
21	افضل شراء المنتجات والخدمات مباشرة من مراكز البيع على القيام بذلك باستخدام المواقع الالكترونية.					
22	ان زيارة مراكز البيع الخاصة بالمنتجات والخدمات يعزز اتصالك بهذه المنتجات والخدمات.					
23	ان الاتصال المباشر مع مراكز بيع المنتجات والخدمات يساعدك في الحصول على اسعار اقل وعروض افضل.					

3- معايير ذاتية

إلى إي مدى تتفق أو تختلف مع كل من العبارات التالية؟ الرجاء وضع أشارة (√) مقابل كل سؤال من الأسئلة التالية وحسب الخيارات التالية:

غير موافق بشدة [1]	غير موافق [2]	محايد [3]	موافق [4]	موافق بشدة [5]

الرقم	السؤال	غير موافق بشدة [1]	غير موافق [2]	محايد [3]	موافق [4]	موافق بشدة [5]
	معايير ذاتية					
24	الأشخاص المهمين بالنسبه الي يرون انه يجب علي استخدام المواقع الالكترونية.					
25	الاشخاص الذين يؤثرون في تصرفاتي يعتقدون انه يجب علي استخدام المواقع الالكترونية					

4- الجوانب الثقافية

إلى إي مدى تتفق أو تختلف مع كل من العبارات التالية-والتي تتعلق بالقيم الثقافية؟ الرجاء وضع أشارة (√) مقابل كل سؤال من الأسئلة التالية وحسب الخيارات التالية:

غير موافق بشدة [1]	غير موافق [2]	محايد [3]	موافق [4]	موافق بشدة [5]

	الجوانب الثقافية	غير موافق بشدة [1]	غير موافق [2]	محايد [3]	موافق [4]	موافق بشدة[5]
	الفروقات الطبقية					
26	عدم المساواة بين الأفراد شي متوقع ومرغوب.					
27	اعتقد ان استخدام المواقع الالكترونية يجب ان يكون محدودا لاشخاص معينين مثل الاهل والمدراء					
28	الموظفين يجب ان يحصلوا على موافقة واذن من مدرائهم قبل استخدام المواقع الالكترونية.					
	الفردية والجماعية					
30	ان استخدام المواقع الالكترونية سوف يؤثر على علاقاتي الشخصية مع العائلة والاصدقاء.					
31	أذا واجهتني أي مشكلة أثناء تصفحي المواقع الالكترونية فاني سوف أستشير أصدقائي وعائلتي.					
32	اذا اردت شراء تذكرة او حجز فندق فانني افضل ان اسال أصدقائي قبل					

	الشراء.					
	الذكورة والأنوثة					
34	انني افضل استخدام المواقع الالكترونية التي تحتوي بشكل كبير على الايماءات العاطفية					
35	انني افضل استخدام المواقع الالكترونية التي تركز العلاقة التبادلية والتعاون اكثر من المواقع التي تركز على المنافسة بين الجنسين					
36	انني افضل المواقع الالكترونية التي استطيع السيطرة والاستكشاف بسهولة					
	تجنب المخاطرة					
37	لحجز غرفة فندقية او شراء تذكرة فانني افضل البحث في موقع الالكتروني جديد					
38	انني افضل زيارة موقع الالكتروني زرته سابقا.					
39	افضل زيارة المواقع الالكترونية لشركات مشهورة ومعروفة					

الجزء الرابع: عوامل القبول

الى إي مدى تتفق أو تختلف مع كل من العبارات التالية-والتي تتعلق بالقبول؟ الرجاء وضع أشارة (√) مقابل كل سؤال من الأسئلة التالية وحسب الخيارات التالية:

غير موافق بشدة [1]	غير موافق [2]	محايد [3]	موافق [4]	موافق بشدة [5]

	فائدة المواقع الالكترونية السياحية	غير موافق بشدة [1]	غير موافق [2]	محايد [3]	موافق [4]	موافق بشدة[5]
40	المواقع الالكترونية تساعدني في توفير الوقت والجهد.					
41	المواقع الالكترونية تساعدني في تسهيل شراء احتياجاتي.					
42	المواقع الالكترونية تساعدني بالبحث عن المعلومات بسرعة.					

	سهولة الاستخدام	غير موافق بشدة [1]	غير موافق [2]	محايد [3]	موافق [4]	موافق بشدة [5]
43	اعتقد انه من السهولة ايجاد المعلومات المطلوبة من خلال المواقع الالكترونية.					
44	اعتقد ان استخدام المواقع الالكترونية سهلا					

	الرغبة في إعادة زيارة المواقع الالكترونية السياحية	مطلقا	نادرا	أحيانا	غالبا	دائما
45	انوي استخدام المواقع الالكترونية للبحث عن المعلومات وشراء المنتجات والخدمات.					
46	أوصي أصدقائي بزيارة المواقع الالكترونية.					

الجزء الخامس:

اذا كان لديك تعليق يرجى إضافته بالأسفل :

_____

_____

_____

_____

_____

نشكركم جزيل الشكر لتعبئة هذا الاستبيان

Appendix 4

The relationship between culture and e-business acceptance

(A comparative study of Arab and UK cultures)

Semi-Structured Interview Items

Icebreaker questions:

How's your stay so far? Are you having fun? Have you been anywhere nice?

Purpose of visit:

Duration of stay:

Classification information:

Nationality: _____

A: **Demographic information**

1. **Age:** less than 20 ☐ 20-29 ☐ 30-39 ☐ 40-49 ☐ 50 or above ☐

2. **Gender** Male ☐ Female ☐

B. Educational Background:

High School Certificate ☐ Bachelor's degree ☐ Master's degree ☐ PhD ☐

C- Use and experience:

1. How long have you been using the internet?

Less than 1 year ☐ 1-3 years ☐ 3-5 years ☐ More than 5 years☐

D- Language:

1. Which language do you prefer to use when you surf the internet?

Arabic ☐ English ☐ Both ☐ Other, please specify_____.

E-business website acceptance

1. What motivates you to surf the net: email? Chatting? E-commerce? Searching for information. Other_____
2. What are the main difficulties you generally face when you browsing the net?
3. What are the normal errors you make when you browse the net?
4. Do you find locally designed websites, (for Arab tourists: even if it is in English), easier to use? Why?
5. Do you prefer to work on an easy to navigate site rather than working on a more difficult to operate but more useful site? Why?
6. Do you have any objections to using tourism websites for the purpose of shopping?
7. Have you ever bought any products or services online through tourist websites during the past year?
8. If the answer is **YES**, how many times did you buy anything during the past year? Times ☐
9. If the answer to the previous question is **NO**, what are the basic aspects that discourage you from buying through tourist websites?
10. From your own experience, do you encourage others to use tourist websites for buying and selling tourism products and services? Yes ☐ No☐

Hofstede's Culture values:

Uncertainty Avoidance

1. When you want to visit a website, do you prefer to search for a new one or do you keep visiting a familiar one?

2. When you browse a tourism website but you fail to find your objective, what do you do?

- ☐ Cancel the search
- ☐ Try again.
- ☐ Move to another website.
- ☐ Ask for help from your friends.
- ☐ Other. Please specify: _____

3. Would you prefer to read a brochure or daily journal from the Internet with the same format you are used to in paper format, or do you prefer to have a different format that facilitates your search for news?

Individual / Collectivism

1. Do you think that the frequent use of websites will keep you away from your family and friends?
2. When experience difficulty using e-business websites, do you prefer online help or do you feel more comfortable asking a friend?
3. If you need to buy something from the internet for the first time and you do not know a website providing such a service. How do you obtain the URL?
   - ☐ Search the web with a search engine
   - ☐ Ask a friend for a recommended website

Power distance

1. Are there any restrictions to the use of websites at work, or at home?
2. Do you think that the use of certain websites will change your traditions, values, and lifestyle?
3. Do you prefer a website that emphasises a particular social and moral code (e.g., nationalism or religion) and its symbols?

Masculinity-femininity

1. Do you think that gender has any influence on how people use websites? Why?
2. Do you prefer to use a website that contains more images of women/men or both?

Questions for academics:

1. What are the factors that influence the acceptance of e-business websites in Arab countries?
2. In your opinion, to what extent are Arab people using e-business websites?
3. How do you think Arab cultural values influence the acceptance and usage of e-business websites?
4. Do you think such studies could be useful in improving Arab countries' websites productivity?

Appendix (5)

Demographic Characteristics and General Characteristics of Respondents

Demographic variables		Arab Sample		UK Sample		All Sample	
		Frequency	Percent	Frequency	Percent	Frequency	Percent
Age							
	less than 20	46	10.0	14	8.5	60	9.6
	20-29	280	61.1	3	1.8	283	45.4
	30-39	92	20.1	37	22.4	129	20.7
	40-49	34	7.4	41	24.8	75	12.0
	50 or above	6	1.3	70	42.4	76	12.2
Gender							
	Male	325	71.0	79	49.7	407	65.3
	Female	133	29.0	86	51.3	216	34.7
Education							
	High school	82	17.9	7	4.2	89	14.3
	HND	76	16.6	31	18.8	107	17.2
	BA	228	49.8	73	44.2	301	48.3
	PG	44	9.6	10	6.1	54	8.7
	other	28	6.1	44	26.7	72	11.6
Usage and experience							
	Less than 1 year	103	22.5			103	16.5
	1-3 years	133	29.0	13	7.9	146	23.4
	3-5 years	148	32.3	62	37.6	210	33.7
	More than 5 years	74	16.2	90	54.5	164	26.3
Using tourism websites							
	Not at all	262	57.2			262	42.1
	Less than once a month	124	27.1	6	3.6	130	20.9
	1 to 2 times a month	57	12.4	55	33.3	112	18.0
	3 to 4 times a month	13	2.8	78	47.3	91	14.6
	More than 3 to 4 times a month	2	.4	26	15.8	28	4.5
Language							
	Arabic	380	83.0	-	-	382	61.3
	English	-	-	146	88.5	144	23.1
	Both	78	17.0	19	11.5	97	15.6
	Total	458	100%	165	100%	623	100%

Appendix (6)
Aggregate means and t-tests

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
TR	Equal variances assumed	4.981	.026	-16.417	621	.000	-1.42474	.08678	-1.59516	-1.25431
	Equal variances not assumed			-16.724	300.390	.000	-1.42474	.08519	-1.59238	-1.25709
TA	Equal variances assumed	1.723	.190	24.855	621	.000	1.78877	.07197	1.64744	1.93009
	Equal variances not assumed			26.346	325.519	.000	1.78877	.06790	1.65520	1.92234
SN	Equal variances assumed	.848	.357	11.717	884	.000	.89910	.07674	.74849	1.04971
	Equal variances not assumed			11.406	235.777	.000	.89910	.07883	.74381	1.05440
PD	Equal variances assumed	68.526	.000	15.450	621	.000	1.39978	.09060	1.22185	1.57770
	Equal variances not assumed			18.266	418.490	.000	1.39978	.07663	1.24914	1.55041
IND	Equal variances assumed	11.151	.001	22.943	621	.000	1.60045	.06976	1.46346	1.73745
	Equal variances not assumed			26.027	378.834	.000	1.60045	.06149	1.47954	1.72136
MAS	Equal variances assumed	101.625	.000	6.978	621	.000	.50189	.07193	.36064	.64315
	Equal variances not assumed			5.493	204.890	.000	.50189	.09137	.32174	.68204
UA	Equal variances assumed	.154	.695	19.047	884	.000	1.18739	.06234	1.06504	1.30974
	Equal variances not assumed			20.175	259.663	.000	1.18739	.05885	1.07150	1.30328

Summary of cultural variables mean scores

Cultural aspects	Nationality Group	N	Mean	Std. Deviation	Std. Error Mean
TR	Arab	458	2.3177	.96552	.04512
	UK	165	3.7424	.92823	.07226
TA	Arab	458	3.8857	.81667	.03816
	UK	165	2.0970	.72135	.05616
SN	Arab	458	3.5180	.87994	.03275
	UK	165	2.6189	.91823	.07170
PD	Arab	458	3.3574	1.07450	.05021
	UK	165	1.9576	.74368	.05790
IND	Arab	458	3.7358	.81490	.03808
	UK	165	2.1354	.62023	.04828
MAS	Arab	458	3.7686	.64162	.02998
	UK	165	3.2667	1.10872	.08631
UA	Arab	458	3.9557	.73203	.02724
	UK	165	2.7683	.66807	.05217

Appendix (7)

Collinearity Statistics of the variables

Coefficients[a]										
		Unstandardized Coefficients		95% Confidence Interval for B		Correlations			Collinearity Statistics	
Model		B	Std. Error	Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	.146	.451	-.738	1.031					
	S.Q	.028	.075	-.119	.176	-.181	.015	.007	.854	1.171
	I.Q	-.103	.060	-.220	.015	-.194	-.069	-.033	.864	1.157
	S.Q2	.146	.081	-.013	.305	.243	.073	.035	.708	1.413
	TR	-.035	.030	-.094	.024	.483	-.047	-.023	.502	1.993
	TA	-.026	.030	-.086	.033	-.484	-.035	-.017	.512	1.954
	SN	.041	.028	-.015	.096	.311	.058	.028	.764	1.308
	CPD	-.034	.024	-.082	.013	-.372	-.057	-.027	.737	1.357
	CIND	-.024	.029	-.082	.033	-.477	-.034	-.016	.637	1.570
	CMAS	.024	.032	-.038	.086	-.104	.031	.015	.879	1.138
	CUA	-.022	.043	-.106	.062	.017	-.021	-.010	.925	1.081
	PU	.476	.040	.396	.555	.835	.430	.228	.283	3.538
	PEOU	.461	.038	.387	.535	.836	.444	.238	.289	3.465

a. Dependent Variable: IN

Appendix (8)

Personal interview with Fons Trompenaars conducted in Abu Dhabi within The 2009 Leadership Lecture - "Developing a Culture of Excellence" Abu Dhabi – Tuesday 10th March 2009.

The genesis of any culture is one that can plausibly be linked back to genetics as genetics is a driving force in the evolutionary process. The aim of life, in a teleological sense, is to survive and multiply and overcome the obstacles the natural world puts in its way.

Culture has many roots that ultimately become integral with the culture itself until they become identifiable aspects of a particular culture. Geography, as an external force, or rather climate within a geographical region, leads to particular choices or at least reactions by organisms if they are likely to survive the external pressures on that organism. In fact, by adapting their behaviours they are able to interact with their genome and change quite basic areas of biology that become intertwined with the culture itself. They are normalised as being of a particular social group.

Each part of the culture was originally, it can be argued, an individual acceptance of a behaviour that has brought about changes in behaviour and in physiology at the most extreme. Anyone who has been a tourist in a new place will have experienced the upset stomachs that come from interacting with new strains of bacteria that do not exist at home. These new strains are finally overcome by settlement.

In the same way, indigenous problems—such as the malarial mosquito, are particular problems that humans have struggled to overcome for millennia. More people have died at the proboscis of the mosquito than in all the wars ever fought. But there are ways that this can be mitigated against.

It is now understood that there is an evolutionary advantage in the chronic thalessaemia. A blood disease similar in nature to sickle cell anaemia, the carrier and sufferer of this disease cannot contract malaria. Thalessaemia is also endemic in many areas where

malaria should be a major inhibitor to population growth. The fact that it has taken hold in Arab populations, for example, may add weight to the hypothesis that the intermarriage of close family in Arab regions, could be tied to the thalassaemia factor. The disease is bad for the group, but on evolutionary terms not as bad as malaria, as the group is able to overcome its greatest obstacle to expansion.

In hundreds of generations ago, it would have been noticed that certain people did not die in malaria attacks – the reasons were not clear, but that was irrelevant. The fact that certain families did not die would have made them useful marriage fodder for those who did. Naturally, the discovery that close marriage made the prospect of survival from thalassaemia (which can be fatal, but not to the same degree as malaria) attractive. It would also have been noticed that by 'thinning' the blood line by external marriage would also have diluted the effect.

Eventually, a closed system would have developed, which does explain on one level why Arab culture ostensibly remains to this day a closed one to marriage from outsiders.

Add to this other cultural factors such as language group, religion, and resistance to invader, and you have a cocktail of factors that is likely to bring about a style of society that fits the current model: something that has developed over millennia.

An interview and discussion

Solving problems between people was the main interest of Trompenaars' (1993) cultural model. He identifies seven dimensions of culture that characterise the way cultures solve problems. These are described below (Gould *et al*., 2000) and offer insights into how Arab culture fits into these categories.

- Universalism vs particularism: Universalists refer to the application of the rules of morality, ethics and the right or logical solution with regards to the relationship between people. While particularists refer to the solution of the problem with other people and are

prepared to break the rules if necessary.

- Neutral or emotional: This refers to the emotional relationships between people and the arrangement of these relationships especially when dealing in a business environment and show their emotional reaction clearly. On the other hand neutral person keeps their emotions in check with more control and focuses on the argument. In contrast, emotional people show their reactions and expect emotional reactions in return.
- Individualism vs collectivism: this refers to the people of cultures who are willing to isolate themselves and care and look purely to their own interests, not those of others, while collectivism refers to a cultural solidarity and harmony where others are cared for as a priority and the individual is marginalised.
- Specific vs diffuse: this refers to a relationship between people and measures the range of involvement that people have with others in their lives; specifically-oriented cultures are split between business, and friend or family relationships. In diffuse cultures, business relationships and communication is based on strong personal relationships such as liking and trust, before co-operation can begin.
- Achievement vs Ascription: Achievement is where individuals are judged on what they have achieved and on their record. Ascription is where status is attributed by social factors such as gender, age, interpersonal connection, or profession, not on one's performance.
- Time: This includes Hall's definition of polychronic and monochronic time, as well as a culture's attitude towards the past, the present and the future and the relationship between them.
- Environment: this refers to specific cultural attitudes toward the environment and an ability to control nature and develop the environment.

As noted above, Trompenaars' model includes only subjective culture as all of the above variables relate to beliefs, and values, rather than artefacts and institutions .The interview discussed a number of issues relating to Arab culture and society which the author had briefly mentioned in his previous literature.

He made three main points: firstly that Arab culture was resistant to new technology, even though it had begun to accept existing technology, but at a much reduced rate to its western equivalent; that Arab culture was one that answered to a 'use' factor, ie, that only those aspects of the outside influence that worked in tandem with the cultural norms of Arab culture would or could be subsumed into the greater Arab tradition would face acceptance; and lastly that 'ease of use' was a major factor, as Arab culture was one that accepted functional ease as a priority, and that 'ease of use' was a major factor in the acceptance of outside influence. This could come from language factors or other surface matters as well as following a similar social discourse to Arab culture.

According to Trompenaars (1993), Arab culture is highly ascriptive, where a person's background, connections, relationship and education, rather than actual achievements and actions increase and enhance respect and status.

Given Arab culture's reliance on the spoken form as again, the geography of the Arabian peninsula has created a nomadic culture where the use and storage of written materials was impractical. Therefore the use of poetry and memory techniques led to a mainly oral culture. Documents, were actually people, the historian and recorder in the tribe who was usually the poet: hence the prestige given to the poet and poetry in the Arab world.

In the context of attitudes to websites, this might affect users judgments for a website "...if any of the pages were recognised, had a reputation or were associated with prestigious institutions" (El Saiid and Hone, 2005). Furthermore, Zaharna (1995) stated that Arab culture is oral dominant and relies more on emotion and symbolism than on "…factual accuracy and the analytical content of a message".

That is to say that life in the peninsula relied on a particular trust that still exists in the honour codes of the Bedouin. To survive in the sands one would need the help of even one's deadly enemy. This required a particularly strong trust that did not brook questioning. A naïve trust that was not on point of honour broken. This trust and prestige in oaths and honour is evident in many other cultures that have since lost this particular

way of life – the Anglo-Saxons spring to mind, with their oral culture, sense of honour and trust, hospitality and difficult existence although in somewhat different geography.

Added to this is the myth-building norm of Arab society both before and after the Islamic conversion. All of these aspects which lie in historical discourses that have variable relationships with present social factors are reasons for the particular approach of Arabs towards modern views on technology and cultural integration and change.