Students' Perceptions of and Loyalty towards Internet Banking:
The Case of the Kingdom of Saudi Arabia and the United
Kingdom

A Thesis submitted for the Degree of Doctor of Philosophy

By

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Abstract

The contribution of this study based on the development of a cross-cultural universal framework, which is moderated by the culture dimension (uncertainty avoidance) and examines the factors influencing the individuals' attitudes and behaviour and, ultimately, the individuals' loyalty towards Internet banking across different countries (KSA and the UK). The study will contribute towards filling the gap in Internet banking literature by: 1) examining customers' loyalty as a dependent variable of intention; 2) invariant acceptance of customers across the UK and KSA cultures; 3) and integration of the cultural dimension (i.e. uncertainty avoidance) and demographics (i.e. gender and experience) as factors of invariance across the groups.

The framework is based on a number of constructs adopted from the validated theories in information systems (IS), psychology and marketing literature perspectives. Specifically from a psychology perspective, using Theory of Reasoned Action (TRA) and Social Cognitive Theory (SCT) constructs, Attitude, Intention, Subjective Norms, Self-efficacy and Actual Behaviour (i.e. intention towards loyalty) were integrated. From a technological perspective, using Technology Acceptance Model (TAM) constructs, Perceived Usefulness and Perceived Ease of Use were integrated. Besides these constructs, the model also integrates constructs of privacy, security, communication, customers' experience, Internet banking reputation, trust and loyalty from IS, as well as a marketing perspective.

To examine the hypothetical relationships within the conceptual model, this study applied the positivist philosophical approach with quantitative methodology. Out of 1000 questionnaires distributed amongst undergraduate students in UK and KSA, 532 were useable, i.e. 53%. Due to the multilevel stages of the conceptual model, structural equation modelling (SEM), based on analysis of moment structure (AMOS), was applied to analyse the data. In addition, invariance analyses were applied to see the differences across the groups (i.e. moderation effect).

Initially, sixteen hypotheses were developed in the model but due to the merger of three constructs (i.e. trust, security and privacy) into one construct (i.e. trust), and the deletion of three constructs (i.e. communication, customers' experience and Internet banking reputation) at the confirmatory factor analysis (CFA) process, eleven hypotheses were finally retained for

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examination. The modification indices (MI) suggested three new paths, and hence, the addition of these new hypotheses brought the number up in total to fourteen hypotheses. The results suggest that the conceptualised model was able to fit with the data in both UK and KSA sample. Within the KSA sample, the model explained 45% variance in customer loyalty, but 60% in UK sample. From the path relationships perspectives, out of fourteen hypotheses ten were supported in the KSA and nine were supported in the UK.

The results confirm the study's argument that customer loyalty is the main construct of individuals' behavioural intention to accept Internet banking. Within specific countries' context, after behavioural intention, perceived ease of use was a more important predictor of loyalty in the KSA (i.e. b= 0.28); whereas perceived usefulness was a more important predictor of loyalty (i.e. b= 0.27) in the UK. Furthermore, it was noticed that subjective norm towards behavioural intention, perceived usefulness and ease of use was only significant in the KSA sample.

The invariance analysis across the countries revealed significant differences between the KSA and the UK for nine hypotheses. Furthermore, invariance analysis also revealed significant differences across the cultural dimension of uncertainty avoidance (i.e. high and low), and the demographical variable of gender (i.e. male and female). Contrary to this, no difference was found for the demographic variable of experience (i.e. high and low). Based on these results, theoretical and practical implications are advised.

Dedication

This doctoral research effort is dedicated to my parents and my wife.

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First of all, I would like to thank Allah, the almighty, who made me capable to complete this doctoral thesis.

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I would like to extend my thanks to King Khalid University for funding my study at the UK. I would like to thank them for all the time, support and engorgements that I received from them during the study.

Declarations

I declare that I am responsible for the work submitted in this thesis. Also, I would declare that this thesis is written by me and all verbatim extracts have been distinguished and the sources specifically acknowledged.

List of Publications and Conferences

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  - Al-Ghamdi, A., King, T. & Dennis, C. (2011b) Gender Perception towards Internet banking: An Empirical Evidence, (Eds), Academy of Marketing, 5th-7th of July University of Liverpool.

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LIST OF ABBREVIATIONS

Asymmetric Digital Subscriber Lines	ADSL
Adjusted Goodness-of-Fit Index	AGFI
Analysis of Moment Structures	AMOS
Automated Teller Machine	ATM
Customers' Attitudes	Att
Average Variance Extracted	AVE
Confirmatory Factor Analysis	CFA
Comparative Fit Index	CFI
Capital Market Authority	CMA
Communication	Com
Cross-Validation Index	CVI
The Decomposed Theory of Planned Behaviour	DTPB
Expected Cross-Validation Index	ECVI
Exploratory Factor Analysis	EFA
Experience	Exp
Golf Council Countries	GCC
Goodness-of-Fit Index	GFI
Goodness-of-Fit	GOF
Internet Banking	IB
Information and Communication Technologies	ICT
Innovation Diffusion Theory	IDT
Individualism	IDV
Customers' Intention	Int
Kingdom of Saudi Arabia	KSA
Customers Loyalty	Loy
Long-Term Orientation	LTO
Masculinity	MAS
Mobile-Commerce	M-Commerce
Middle East and North Africa region	MENA
Measure of Sampling Adequacy	MSA
Normed Fit Index	NFI

Perceived Privacy	P
Power Distance	PDI
Perceived Ease of Use	PE
Parsimony Goodness-of-Fit Index	PGFI
Perceived Usefulness	PU
Reputation	Rep
Root Mean Square Error of Approximation	RMSEA
Root Means Square Residual	RMSR
Relative Noncentrality Index	RNI
Perceived Security	S
Saudi Arabian Monetary Agency	SAMA
Saudi Arabia Riyal Interbank Express Electronic System	SARIE
Social Cognitive Theory	SCT
Self-Efficacy	SE
Structural Equation Modeling	SEM
Subjective Norms	SN
Saudi Payment Network	SPAN
Statistical Package for the Social Sciences	SPSS
Standardized Root Mean Residual	SRMR
Saudi Telecommunications Company	STC
Trust	T
Revised Technology Acceptance Model	TAM2
Technology Acceptance Model	TAM
Totally Free Multiple Group Model	TF
Tucker Lewis Index	TLI
Theory of Planned Behaviour	TPB
The Theory of Reasoned Action	TRA
Uncertainty Avoidance	UAV
United Kingdom	UK
Unified Theory of Acceptance and Use of Technology	UTAUT
Variance Inflation Factor	VIF
World Trade Organisation	WTO
Chi-Square	χ^2

Chapter One: Introduction

1.1 Introduction

This chapter provides a brief outline of the overall study. This study is concerned with identifying the determinants of customers' behaviours predictor variables for Internet banking loyalty. It can be seen that in the last two decades many technologies and different computer applications have been introduced into the market by different companies to help them to achieve their strategies. A considerable amount of money has been invested to establish and implement these technologies. The ultimate goal of the technology introduction is the usage by the end users. On the other hand, in order to achieve that aim, these technologies should be used by the users effectively otherwise the companies may lose their technologies investment. The importance of implementing technologies to serve different goals has been highlighted in earlier literature, such as (Taylor and Todd, 1995b, Chau, 1996, Igbaria et al., 1997, Jackson et al., 1997, Gefen and Keil, 1998, Lucas and Spitler, 1999, Lederer et al., 2000). Venkatesh (2000) stated that enhanced productivity can be led by a successful investment in technology, while failed systems might lead to undesirable outcomes and consequences, including financial losses and dissatisfaction among employees. Internet technology has been in focus in recent decades and its importance is increasing over time. This might be because it is accessible and available for many end users all over the world and can be used for different purposes. It can be seen that many of the companies that serve customers provide online services over the Internet to better serve those customers, attract new customers and enhance their competitive advantage in the market. Many companies operate globally so that many customers from different geographical areas can be reached. These services and online products will target end users (for example, customers) so that it is an important issue to understand those customers' behaviours, demands and requirements. This might be because, if the products and services did not match with the customers' behaviours and demands, these services may not be used.

In the current study, a successful implementation of Internet banking services may lead to enhanced banking productivity and customers' satisfaction, while failure to provide banking services over the Internet might influence banking productivity negatively and result in dissatisfaction among customers. Accordingly, the ultimate goal of the current study is to

examine customers' behaviours towards Internet banking loyalty by investigating different variables that will lead directly or indirectly to customers' loyalty towards Internet banking.

This doctoral study empirically investigated factors influencing customers' behaviours towards Internet banking loyalty across two distinct cultures (Kingdom of Saudi Arable and United Kingdom). Some points will be briefly covered in this chapter. First, the areas that are used as bases for the current study will be highlighted briefly, such as customers' loyalty, trust, technology acceptance models and theories. Followed by identifying the research gaps that this study attempts to fill. The study aim and objective will be stated next, followed by methodology and methods used. Fifth, significant contributions to the study are outlined. Finally, the structure of the study is provided.

1.2 The Study Context

González et al. (2004, p 317) state that more than 11,250 e-banking sites have been established across the world; 170 online banking sites are available in Spain alone. An enormous number of banks offering online services are based in the USA, while the largest numbers of e-banking websites in Europe are found in Spain, Germany, the UK, Italy and France. This may indicate that banking infrastructure can be changed according to the IT development. Because of the improvement in IT in different disciplines, including online marketing, many small and large companies use IT such as the Internet to enhance their internal and external communication capabilities and distribute their services electronically. As stated above, 11,250 Internet banking sites across the world represent a real challenge in the financial industry, including the banking sector, to keep competitive advantages in marketplaces. By using online services, banks can compete globally and attract customers from different regions of the world. Banks may lose their market share, or it could be reduced, according to their ability to provide a secure and appropriate financial environment if customers feel confident to conduct and utilize online financial services. This discussion leads to the following question:

- *How can banks provide and create a successful online banking and competitive advantage over other competitors?*

The question may reflect different dimensions, for example banks should be aware of the factors that may in some way affect customers' decisions and attract them to perform Internet

banking. They may also be required to understand how technologies can be used successfully. In the current study, developing a conceptual model that examines factors influencing customers to conduct their financial activities online through their banks' website is the main aim.

Many theories and models were reviewed in order to identify what aspects and factors affect customers' behaviours. The current study based its theoretical background on the Technology Acceptance Model (TAM) (Davis, 1986, Davis et al., 1989, Davis, 1989). TAM was cited in 2893 studies, including Management Science, Management Information Systems, Decision Sciences, Social Psychology, Electronic Commerce, Marketing, Retailing, Services Research, Human-Computer Interaction, Communication, Organizational Behaviour and Human Decision Processes, Strategies, and Medical Informatics Association.

1.3 Theoretical Background to the Research

In recent years, technology has become part of everyone's lives. Technology is part of educational, industrial, economical, and financial systems. In addition, a great deal of information is available immediately. Zakaria et al. (2003) mentioned that in this information age, information can be received, transferred, and exchanged by individuals anywhere, anytime. In addition, many new forms of information technology (IT) can be applied to different purposes. The diffusion of IT could be different in its difficulties and easiness. This may present challenges for planners who find it difficult to create easy and understandable IT. They are required to understand how individuals can behave differently in terms of utilizing IT. Individuals may accept or reject a technology under investigation and IT planners may be required to investigate the factors that attract individuals to accept or reject a technology. In this section, three areas will be looked at: trust, loyalty and technology acceptance.

1.3.1   Customers' Trust

According to a number of theories and models in marketing, including conventional and online marketing, it was agreed that customers' trust is one of the key factors for shaping customers' behaviours towards a phenomena under investigation. The more customers trust, the more they are likely to perform such behaviour. Customers' trust will be more important in the online context where there may be a considerable amount of uncertainties and risks. In the electronic services, face to face contact is eliminated and uncertainties are increased.

Based on the Morgan and Hunt (1994) theory, commitment and trust are key issues in marketing relationships because they encourage marketers to work at maintaining relationship investment by cooperating with exchange partners. It was identified that perceived risk, customers' orientation towards the technology of electronic communication and the Internet, and reputation are the most important dimensions of trust (Mukherjee and Nath, 2003).

Customers trust was identified as a vital factor among different parties in B2B and B2C marketing. In terms of the B2B context several studies focused on how trust among different subjects can be built (Doney and Cannon, 1997, Selnes, 1998, Doney et al., 1998). Whilst in the B2C context, Garbarino and Johnson (1999) and Adamson et al.(2003) examined some factors that influence customers trust. In the domain of the online services, trust was seen a central factor that affects customers' decision to utilize electronic services effectively (Jarvenpaa et al., 2000, Gefen, 2000, Papadopoulou et al., 2001, Cheung and Lee, 2001, Lee and Turban, 2001, McKnight and Chervany, 2002, McKnight et al., 2002, So and Sculli, 2002, Corritore et al., 2003, Corbitt et al., 2003, Joseph et al., 2005).

Based to the previous literature, this may lead to the following questions:

- *What factors can affect customers' trust in the context of online services (Internet banking in both the Kingdom of Saudi Arabia and the United Kingdom)?*
- *Can these factors be different in both countries?*

1.3.2 Customers' Loyalty

Building successful and sustainable relationship marketing with potential customers is a significant matter. Customers' loyalty may depend on how successful and satisfied relationship marketing can be. Gaining customers' loyalty can be a great challenge facing companies. This may be because the numbers of companies are increasing dramatically so that the competition level among these companies is increasing as well. In addition, customers could find different varieties of products and services in the markets so that they may feel they can easily switch providers. This may lead to the following question:

- *What are the factors that influence customers to stay with a particular bank and use a specific financial distribution channel?*

Customers' loyalty has been in focus in online banking (Pedersen and Nysveen, 2001, Tomiuk and Pinsonneault, 2001, Herington and Weaven, 2007, Casaló et al., 2008). Most of these studies found that customers' trust had significant effects on customers' loyalty or it played the role of mediating the affects of customers' loyalty antecedents on customers loyalty (Tomiuk and Pinsonneault, 2001, Herington and Weaven, 2007). For example, customers' trust can mediate effects from online service quality, including personal needs, site organization, user friendliness and efficiency on customer loyalty (Herington and Weaven, 2007). Customers' loyalty was the focus in the traditional banking context and it was found that customers trust and satisfaction mediated the effects of banks' assurance, ease of use, responsiveness, customizations and e-scope on customers' loyalty. In terms of electronic commerce in general, customers' loyalty was seen as an important aspect of successful online services relationships where customers' trust played a significant mediation role (Ribbink et al., 2004, Srinivasan et al., 2002).

In the current study, the aim is to investigate customers' loyalty towards Internet banking. As it was stated above, customers' trust has a considerable effect on customers' loyalty. This might lead to the following question:

- *How can behaviour attentions or adoption of Internet banking affect customers' loyalty towards Internet banking directly?*

It can be said that customers who are technology adopters may continue the relationship, and as a result their loyalty can be increased, whilst customers who did not recognize themselves as technology adopters may state that their loyalty will not change or they may switch to other banks that provide face-to-face contact. It can be stated that customers' loyalty can be seen as an indicator of how successful Internet banking is in both countries (Saudi Arabia and the UK).

1.3.3   Customers' Behaviours towards Technology Adoption

Individuals can behave differently according to their personal character, knowledge, experiences, culture, educations, and so on. Countries are also different with regard to technology adoption and this may have a considerable amount of influence on individuals' behaviours. Individuals can be encouraged to use full range of technologies by their countries. Many technological requirements can be provided, such as computers, educational

centres where individuals can be trained, and qualified trainers are available for support. However, it should be noted that some individuals still do not use all technologies effectively. They may reject technologies. The number of such individuals can be different across countries. This may lead to the following questions

- How do individuals behave towards Internet banking?
- What types of factors have significant effects on individuals' decision to adopt or reject Internet banking?

These are critical questions and should be investigated before any technological creation because a great deal of money will be invested in markets by public and private companies to introduce a new technology or develop an existing one. Companies may have to take decisions about whether technologies are likely to be adopted or rejected by individuals who they think will use them.

Internet banking is one of the important technologies where customers can conduct different financial activities electronically at their own time. Banks may spend a great deal of money to provide a high quality of online services so that they can attract new customers and retain the existing ones. In addition, they may aim to compete globally so that customers can use online services and conduct different financial activities wherever they are. However, a number of customers may not use Internet banking yet. This may be because Internet banking and managing financial accounts electronically is a sensitive environment where many uncertainties can exist. Customers have to provide their personal information in addition to their credit card number which is confidential information that might be taken and stolen by unauthorized individuals. Some customers still worry about using Internet banking. Some of them may check whether there is any new information and go to nearest branches to conduct financial activities face-to-face. Banks should investigate what causes some individuals to accept and reject online services so that customers' behaviour can be determined.

To understand customers' behaviour towards a technology, many theories and models have been reviewed to find out what factors affect customers' decision to adopt or reject a technology. For example, Innovation Diffusion Theory (Rogers, 1962, Rogers and Shoemaker, 1971, Rogers, 1983, Rogers, 1995), Social Cognitive Theory (SCT) (Bandura, 1986), Theory of Reasoned Action (TRA) (Ajzen and Fishbein, 1980, Fishbein and Ajzen,

1975), Theory of Planned Behaviour (TPB) (Ajzen, 1985), Technology Acceptance Model (TAM) (Davis, 1986, Davis et al., 1989), The Decomposed Theory of Planned Behaviour and TAM (DTPB) (Taylor and Todd, 1995b), Technology Acceptance Model (TAM2) (Venkatesh and Davis, 2000), Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2003). More details about these theories and model will be provided in the literature review (Chapter three).

1.4 Research Gaps

The current study has been inspired by several reasons. First, most of the previous studies mentioned earlier that focused on individuals' behaviour towards a technology were mainly conducted in the US and European Countries. A little research has been conducted outside these countries, therefore it can be difficult to state that the findings of these theories and models mentioned are applicable to others countries. The findings of studies that were conducted in the US may not be valid in others countries. As far as the researcher knows, there is only one empirical and comparison study that has been done to investigate customers' behaviour towards Internet banking acceptance between Saudi Arabia and the UK (Alsajjan and Dennis, 2010). In the current study, the difference is that it attempts to investigate more variables which have not been investigated across both countries. A further study has to be conducted in order to investigate whether the findings from the US and European Countries are applicable to other countries such as Saudi Arabia. In addition, its aim is to examine how customers' behaviour can be different between Saudi Arabia and the UK. The current study is designed to fill this gap by examining the proposed model across KSA and the UK.

Second, because of the technological improvement, individuals' attitudes towards technologies can change dramatically. Particularly in a sensitive environment such as Internet banking and online shopping where customers have to provide significant details such as their credit card number and personal information such as their name, address, and their contact number. The online environment may create many uncertainties that affect customers' decision and their attitudes toward utilizing online services. Thus, it is important to investigate over time what factors can affect customers' attitudes towards online services. For example, security systems may not be the significant factor that affects customers' behaviour because their attitudes toward security systems may change as many customers may believe that their banks have their own abilities and competences to prevent any misuse. This example may indicate that different new or improved technologies can create different

factors that affect customers' behaviour. Customers' attitudes towards accepting or rejecting Internet banking has been examined (Suh and Han, 2002, Suh and Han, 2003, Ndubisi and Sinti, 2006, Çelik, 2008, Grabner-Kräuter and Faullant, 2008). However, a few researches have examined individuals' attitudes towards online shopping (Jarvenpaa et al., 1999, Luna et al., 2002, Y.K et al., 2002). To the best of the researcher's knowledge, no research has examined customers' attitudes towards Internet banking across KSA and the UK. The current study is designed to fill this gap.

According to the loyalty literature, the relationship between users' behavioural intention and customers' loyalty towards Internet banking has not been examined so that the current research attempts to fill out this gap. In addition, the current research will investigate whether the influence from customers' behavioural intention on their loyalty statistically significant. The literature review chapter will highlight this gap clearly under section 3.3.4.

Moreover, according to the trust literature, the current study tries to examine some constructs namely privacy, security, communication and Internet banking reputation that proved to have such significant influence on customers' trust perceptions towards Internet banking. It can be noted that there are few studies that examined these factors particularly in the cross countries. Accordingly, this study is designed to examine the influences from these factors on customers' trust across KSA and the UK. More details are provided in the literature review chapter under section 3.2.4. The following sections 1.5 and 1.6 will state the aim and the objectives of the current study respectively.

1.5 Research Aim

The present study aims to develop a cross-cultural framework moderated by uncertainty avoidance that examines the factors of customers' loyalty towards Internet banking service across the UK and KSA. More specifically, the framework intends to explain *how customers' loyalty intention towards Internet banking can be developed by examining customers' behavioral intention, which in turn is determined by the factors: attitude, behavioural beliefs (PU and PEOU), subjective norms, self-efficacy, and trust and its antecedents (security, privacy, communication, reputation and experience).*

1.6 Research Objectives

In order to achieve the aim of the study, described in section 1.5, four objectives are set out as follows:

In order to achieve the aim of the study, described in section 1.5, four objectives are set out **as follows:**

1. **To develop a cross-cultural universal framework within the context** of Internet banking, which includes Trust, Subjective Norm and Self-efficacy as antecedents, Perceived Usefulness and Perceived Ease of Use as mediators and uncertainty avoidance as a moderator**.**

2. To validate the conceptual framework using University student populations across KSA (student sample size 284, 'King Khalid' University) and the UK (student sample size 248, Brunel University). Existing measurement items that validated in the previous studies are used to examine the current study's variables. A cross sectional survey is employed for data collection and Structural Equation Modelling to test the Measurement and structural models.

3. This research will enable the development of an empirically supported conceptual model.

4. The contribution of the research will be the development of new empirically tested conceptual model illustrating the strength of Trust, subjective norm, Self-efficacy, Perceived Usefulness and Perceived Ease of Use and their relationship with attitude, Intention and subsequently Loyalty towards internet banking across different students population from KSA and the UK.

1.7 Research Design

Choosing what methodology philosophy, research strategy and methods is controlled by the **research aim and objectives. In the current study, the conceptual framework is developed on** the basis of literature review. Different factors from different theories and models will be **applied in the current study to examine customers'** behaviours and perceptions towards **Internet banking loyalty across different cultures. Accordingly, different hypotheses have** been developed in relation to independent and dependent

variables. Because the current **conceptual framework and hypotheses are** developed by current existing theories and models **and the phenomena has been established, the appropriate philosophy to be applied in the** current study is positivism. It was stated that applying particular theory/s, variables and **developing hypotheses w**ere the main concerns and objectives of the positivism research **(Hussey and Hussey, 1997). From marketing perspective, Arndt (1985), Hunt (1991), Hunt (1993), Hunt (1994), Holden and Lynch (2004) and Hanson and Grimmer (2007) have highlighted the** philosophy and methods that can be applied for marketing discipline. The current study **applied a deductive approach because it involves the development of a theory. Several** significant characteristics of the deductive approach, such as different causal relationships **be**tween variables can be explained and hypotheses can be developed and tested by this **approach. Hunt (1991) claims that the causal explanation is prominently figured consumer** research literature. The data can be collected by a quantitative method in this approach **(Saunders et al., 2003). Accordingly, the objective of the current study is to find out the** causal relationships between the variable in the conceptual framework. As a result of this, the **deductive approach is chosen. Because the objective of t**he current study is to examine **customers' perceptions towards Internet banking, a large number of respondents should be** collected so that the quantitative method seems appropriate for this purpose over other **methods such as qualitative or case study.**

In terms of data analysis, the current study follows some essential and different stages. The analysis is started by developing the measurement items, and then the pilot study will be conducted for face and content validity. After the pilot study, the main data collection will be started. The analysis starts by data screening (missing data, outliers and normality tests). SPSS software is used for this analysis. Then the Exploratory Factor Analysis (EFA) will be performed followed by Confirmatory Factor Analysis (CFI). In order to examine and confirm the hypotheses, Structural Equation Modelling (SEM) will be performed as well. Finally, invariance analysis (multi-groups data analysis) will be conducted to help achieve the seventh study's objective. For CFI and SEM, the current study is using analysis of moment structure (AMOS) 16.0 version software. Figure 5.2 in the methodology chapter (Chapter Five) illustrates the analysis steps that apply in the current study.

1.8 Contribution of the Research

The contribution of this study based on the development of a cross-cultural universal framework, which is moderated by the culture dimension (uncertainty avoidance) and examines the factors influencing the individuals' attitudes and behaviour and, ultimately, the individuals' loyalty towards Internet banking across different countries (KSA and the UK). The proposed framework consists of thirteen factors that are linked directly and indirectly to explain customers' loyalty towards Internet banking. This is the first study to include these factors in one conceptual model and moderated by uncertainty avoidance. This will enhance the existing theories and models in the area of service quality, consumers behaviour and technology acceptance.

It can be noted from the literature review that there are a few studies that have been carried out across countries more specifically between the UK and the KSA. Applying the conceptual model moderated by uncertainty avoidance to these two different countries, it is easy to predict how individuals behave differently according to their own values and believes. The current conceptual model and the findings can help online companies or, more specifically, international banks that would compete in the Saudi market to understand customers' behaviours towards Internet banking. In addition, the current study's results would help to identify what factors influence customers' behaviours towards Internet banking significantly across different countries and what are the relationships that may be moderated significantly by uncertainty avoidance

The current study would contribute to the existing literature by finding out whether there is any significant influence of students' behavioural intentions on their loyalty towards Internet banking. To the best of the author's knowledge, this is the first study to examine this influence. Moreover, this study goes further to test and examine whether this influence would be statistically significant across different countries.

There are several factors that have been stated and identified in the current conceptual model as antecedents of customers' trust perceptions. According to the proposed model, privacy, security, communication, Internet banking reputation and customers experience have all been stated to have significant influence on customers' trust across both countries. Many of these factors have not been examined across countries so that this study would contribute to the existing literature by examining whether there is any significant influence from these factors

on students' trust towards Internet banking. The following section will illustrate the structure of the current study.

1.9 The Structure of the Research

In this section, the number of chapters, and their main parts and points will be illustrated. The following are the outlines of the current study, chapter by chapter:

Chapter 1: Introduction- This chapter highlights the basic introduction of the current study topic. An illustration of the context of the study is provided with a brief introduction about it. This is followed by an overview of the theoretical background, including the main areas this study based on. In addition, the research gaps are clearly stated. This chapter also identifies what the aim of the study is and what are its objectives. The methodology and the methods that are used in the current study are illustrated. Finally, the contributions of the study are clearly stated.

Chapter 2: The Background of the Study in the KSA and the UK - This chapter highlights the study context, including some information and background about the KSA and the UK in terms of their locations, recourses and populations. In addition, it provides and illustrates the importance of technology and of the use of the Internet for online services. This chapter also gave some historical background to the financial sectors. More specifically, it provides and states the definition of Internet banking (the context of the study) and its importance for banks and customers. This chapter highlights the importance of culture, including its definition and levels, why it is importance, and what are the culture frameworks and dimensions. Finally, the chapter illustrates the culture differences between the KSA and the UK.

Chapter 3: Literature Review – This chapter reviews the existing literature concerned with three main areas as stated in the introduction chapter. This chapter is divided into nine sections. The first section (3.1) provides an introduction for the whole chapter. While the second section (3.2) to fourth section (3.4) cover all the three areas that the current study focuses on. The second section (3.2) illustrates the first area of the study (trust). It covers some significant trust topics such as trust definitions, and trust in offline and online contexts. It identifies the factors that influence customers' trust perceptions. Then it illustrates the theoretical gaps that the current study tries to fill. The third section (3.3) covers the literature

that related to customers' loyalty. Definitions of loyalty, factors influencing customers' loyalty in the offline and online contexts, and the theoretical loyalty gap/s are illustrated in this part. The fourth section (3.4) highlights the nine technology acceptance theories and models, and then the fifth section (3.5) will illustrate the theories and models applied in the current study. The sixth section (3.6), the seventh objective (3.7) and the eighth objective (3.8) gave an overview of the previous literature review in the area of TAM, technology acceptance across culture and Internet banking respectively. Finally, the chapter will be summaries in the section 3.9.

Chapter 4: The Conceptual Framework and Hypotheses - This chapter is more specific and concentrates on some particular factors that influence students' loyalty and their behaviours toward Internet banking. This chapter is divided into six sections. First section (4.1) provides an introduction of the whole chapter. The second section (4.2) illustrates and gives an overview about the conceptual model. The third section (4.3) illustrates all the hypotheses based on the literature review and the conceptual model. In total, sixteen hypotheses are illustrated and placed into six groups ranged from 4.3.1 to 4.3.6. Each group covers one factor and its antecedents. The fourth section (4.4) highlights the mediators' role (Perceived Usefulness and Perceived Ease of Use) in the conceptual model. While the fifth section (4.5) illustrate moderator's (Uncertainty Avoidance) role on the conceptual model. The generalizability of the conceptual model across Gender and Experience groups is shown in section 4.6. Finally, the chapter will be summarized in the section 4.7.

Chapter 5: Methodology – This chapter covers important areas concerning how the study is performed. It is divided into ten sections. The first section (5.1) provides an overview of the chapter. Sections 5.2, 5.3, 5.4 and 5.5 cover the research philosophy, approaches, design and strategy respectively. The research population, sampling technique and size, and the instrument used for data collection are illustrated in section 5.6. Section 5.7 describes all the sections and parts of the instrument and what types of information is going to be collected. Because the instrument will be translated from the English Language into Arabic, section 5.8 illustrates the translation process across different cultures. The pilot study and reliability results are illustrated in section 5.9. The ninth section (5.10) covers all the issues that related to the main analysis process and stages. This includes data screening (missing data, outliers detection and normality testing), Exploratory Factor Analysis (EFA), Confirmatory Factor

Analysis (CFA), Structure Equation Modelling (SEM) and Invariance Analysis. Finally, the chapter will be summarized in the section 5.11.

Chapter 6: Main Study Analysis and Findings – This chapter presents the analysis and findings of the main study. It consists of eight sections. The first section 6.1 is providing the chapter's introduction. Section 6.2 provides the descriptive analysis of personal data of the sampling units, such as computer background and experiences, Internet banking usage behaviour, and demographic data. This is followed by section 6.3 which presents the missing data, outliers' detection, and normality analysis. Section 6.4 illustrates the exploratory factor analysis and reliability results of the scale. Section 6.5 provides the confirmatory factor analysis results, while structure model, hypotheses results and mediation results are provided in the section 6.6. The last section (6.7) provides the invariance analysis across the KSA and the UK, low and high uncertainty avoidance, male and female, and low and high experience groups.

Chapter 7: Discussion – Seven sections will be illustrated. Section 7.1 gives the chapter's introduction. Summary of the results is provided in the second section 7.2. This chapter provides an interpretation of the findings as compared with the previous existing literature so that the differences can be detected in section 7.3. Section 7.4 will discuss the findings of one construct and its antecedents in the light of Internet banking context. In addition it will highlight the moderator (Uncertainty Avoidance) on the conceptual model. The mediation results will be discussed in section 7.5. Section 7.5 discusses the mediation results and section, while section 7.6 discusses the generalizability of the conceptual model. The whole chapter will be summarized in the final section 7.7.

Chapter 8: Conclusions – Six sections will be covered in the chapter. First section 8.1 presents the introduction of the chapter. Section 8.2 summarizes the findings of the current study. The chapter provides the theoretical contribution, managerial implications of the study's results, policy maker implications and methodological contributions are provided in section 8.3. Followed by the methodological and theoretical limitations of the study is also provided in section 8.4. Future research directions are illustrated and suggested in section 8.5. Finally, the summary of the chapter is illustrated in section 8.6.

1.10 Summary

This chapter highlighted different areas and provided an overview of the current thesis. Firstly, it illustrated the background of the context of the current study, which includes information about Internet banking in general in section 1.2. it also provide general idea about the fundamental areas that current study based on such as trust in section 1.3.1, customers' loyalty in section 1.3.2 and technologies theories and models in section 1.3.3.

The research's gaps were highlighted in section 1.4 and research's aim and objectives were illustrated in section 1.5 and 1.6 respectively. The current research's designing that includes what research philosophy and strategies are adopted are highlighted in section 1.7. In addition, it illustrated the way the data in the current study is collected and analysized. Section 1.8 provided the significant contributions to the existing literature. Section 1.9 provided an overview of this PhD thesis chapter by chapter with brief information what each chapter is about. Finally, section 1.10 summarizes the first chapter.

Chapter Two: The Study Background in the KSA and the UK

2.1 Introduction

This chapter will provide an overview of the context of the study in four sections. The first section (2.2) will include a brief descriptive of the KSA and the UK, including the countries' location, industry, and natural resources. Next, students' characteristic in both countries is covered in section 2.3. Section 2.4 illustrates the importance of the Internet as a technology for business. Because of the proposed model examined customers' behaviour towards Internet banking services, Internet banking definitions, the advantages of Internet banking for banks and customers and the historical background to Internet banking in both KSA and the UK are provided in the section (2.5). The current study is carried out across two distinct cultures (the KSA and the UK) so it is necessary to highlight several important matters that relate to culture, such as culture definition and levels, the significant of the culture in business studies, culture frameworks and dimensions and finally the culture background in the KSA and the UK. These cultures topics are discussed in section 2.6.

2.2 The Background of the Countries (the KSA and the UK)

The countries have completely different profiles in terms of their size, population, language, religions, industry and natural resources. This section starts by providing KSA's background and is followed by the UK's background.

Kingdom of Saudi Arabia

According to the Internetworldstate (2009), the size of KSA is 1,960,582.00 sq km. It has an estimated population of 27 million, of which 9 million are registered foreign expatriates and an estimated 2 million are illegal immigrants. Saudi nationals comprise an estimated 16 million people. The Saudi population consists of 100% Muslims and the language is Arabic. In terms of the age structure, 29.4% of the population are under 14 years old (3,939,377 are male and 3,754,020 are female), 67.6% are 15 - 64 years old (male 9,980,253 and female 7,685,328), and 3% are 65 years old and over (male 404,269 and female 368,456).

In KSA, crude oil production, petroleum and cement are the main industrial activities. It is the largest state in Western Asia by land area and the second-largest in the Arab world, after Algeria. According to Wikipedia (2011b), Saudi Arabia has the world's second largest oil reserves and is the second largest oil exporter. Oil accounts for more than 95% of exports and

70% of government revenues, facilitating the creation of a welfare state, although the share of the non-oil economy is growing recently. It also has the world's sixth largest natural gas reserves.

United Kingdom

The country's size is approximately 244,820.00 sq km and it is multi-faith. English is the predominant language in the UK, with some areas speaking Welsh and Scottish (Internetworldstate, 2009).

Warwick (2010), the chief economic adviser and director general economic stated that, after business services and wholesale/retail, manufacturing is the third largest sector in the UK economy contributing to the UK Gross Domestic Product. Because the manufacturing sector is diverse, comprising a wide-ranging number of different industries, technologies and activities, it might be useful to highlight some significant manufacturing values. Manufacturing generated £140bn in gross value in 2009, which represent 11% of the UK economy. In addition, the sector employed around 2.6 million people, i.e. 8% of the UK workforce. Food, beverages and tobacco, chemicals and pharmaceuticals, publishing and printing and fabricated metals were the four main major industries contributing to the total manufacturing gross value.

The Office for National Statistics (2012) describes the UK business economy, as measured by the Annual Business Survey (ABS). The report shows that the approximate Gross Value Added at basic prices grew by 4 per cent (£33.8 billion) between 2009 and 2010, with the West Midlands (6.8 billion), the North West (6.4 billion) and London (5.5 billion) being the main regions contributing to the overall growth over this period. Services, production and distribution were the major industries that contributed to the overall economic growth in the UK. The report showed that the service sector recorded growth between 2009 and 2010, with a GVA, turnover and purchases all showing rises of 4 per cent (£20.7 billion, £36.7 billion and £19.8 billion respectively). Computer programming, consultancy and related activities as services were contributing £0.3 billion.

2.3 Students Characteristics in KSA and the UK

This section will concentrate on students' characteristics in both countries. For example, the information will provide details of the number of students, level and mode of study. In

addition, it will also cover what areas that students focused on. The time changes are also be taken into consideration. The section is divided into two subsections: the first will provide information for KSA followed by the UK's information.

KSA

The Kingdom of Saudi Arabia established the Ministry of Higher Education in 1975. Its responsibility is to issue and develop educational plans and strategies in order to meet the public requirements and needs. In addition, it aims to improve all sectors (both private and the government) in the Kingdom by providing a knowledgeable workforce who can improve their work's environment Ministry of Higher Education (2012).

According to the Ministry of Higher Education (2011b), the number of government and private universities has increased so that social requirements can be met. The number of universities in 2005 was 15, of which 11 are government universities and 4 are private universities. In six years, the number has doubled. The kingdom has established 17 new universities, giving a total of 32 universities (24 governments and 8 private).

In terms of student numbers, the Ministry of Higher Education stated that in 2011 there were 749,238 (316,757 male and 432,481female) undergraduate students in the kingdom. The following table shows the number of new students from 2005 to 2011:

Table 2. 1: Student Number Indicators in KSA

Educational Level	2005			2011			The Total Growth Percentage		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Low Diploma	72.199	21.769	93.968	97.076	30.072	127.148	34.5%	38.1%	35.3%
Bachelor's Degree	187.489	340.857	528.347	316.757	432.481	749.238	68.9%	26.9%	41.8%
High Diploma	1.548	405	1.953	2.693	2.331	5.024	74%	475.6%	157.2%
Master's Degree	5.551	4.217	9.768	11.501	8.091	19.592	107.2%	91.9%	100.6%
Doctor's Degree	1.293	1.117	2.410	1.815	750	2.565	40.4%	-32.9%	6.4%
The Total	268.80	368.365	636.445	429.842	473.725	903.567	60.3%	28.6%	42%

Source: The Ministry of Higher Education (2011a, p. 22), Kingdom of Saudi Arabia.

It can also be noted that the majority of students are studying Humanity and Art (34.1%) and Social Science, Economics (includes Business), law Science (17%) followed by General

Science (15.4%). The following table shows the percentage in each subject across three levels of average (Saudi's level, Arabic level and international level):

Table 2. 2: The Percentage of Students Enrolled by Course, based on International Standard Category for Education

The Subject	Saudi Arabia Average			Arabic Countries Average			Global Average		
	Male	Female	The Total	Male	Female	The Total	Male	Female	The Total
Education	45%	55%	5%	28%	72%	8%	29%	71%	11%
Humanities and Arts	33%	67%	34%	31%	69%	17%	39%	61%	11%
Social Sciences, Economic and Law	51%	49%	18%	47%	53%	42%	47%	53%	36%
General Sciences	35%	65%	15%	49%	51%	13%	60%	40%	9%
Engineering	91%	9%	12%	71%	29%	10%	76%	24%	14%
Agricultural Sciences	69%	31%	1%	51%	49%	2%	57%	43%	2%
Health Sciences and Social Care	52%	48%	8%	41%	59%	8%	28%	72%	12%
Others	61%	39%	8%	61%	39%	1%	48%	52%	4%

Source: The Ministry of Higher Education (2011a, p. 38), Kingdom of Saudi Arabia

In the Kingdom of Saudi Arabia, students are financially supported. The Ministry of Higher Education provides support for all undergraduate students in the country to help them with their living expenses, such as accommodation, and university requirements and materials. Students receive this support as a monthly income and received approximately £170 a month.

The Kingdom also supports students to improve their education, specifically their computer penetration, through the implementation of different strategies. The Kingdom of Saudi Arabia established a Communication and Information Technology Commission (CITC) to protect and grow through balanced, fair and sustainable regulatory practices and initiatives. This has led to a number of significant developments in information and communication technology in the Kingdom. It also provides essential reports that help researchers to evaluate the current information and communication state. According to the Communication and Information Technology Commission (CITC) (2010), there is strong collaboration between the private sector and academic institutions so that providing technological support for administrative employees, academics and students can be provided by the private sector. The CITC reported that the main form of collaboration between the private sector and universities is in the form of providing work experience programs (internships) for undergraduate students. In addition, 43% of large and 29% of very large companies provide laboratories and other facilities for students' research projects. Moreover, a number of initiatives have been adopted by ICT

Services and Technology Suppliers to increase ICT products and services utilization across various customers segments (B2C, B2B and B2G). These include providing training for university graduates, one-year teaching students courses, hiring talented students, providing scholarships for students and providing funds for ICT students,

The Communication and Information Technology Commission performed a study in (2009) to assess internet and computer adoption and usage levels among educational institutes across the country. It interviewed 710, 709 and 700 students in 2009, 2008 and 2007 respectively. In terms of the computer penetration, the study shows that there is 100% computer penetration across the different education institutions (College/ Universities and Technical Institutes). The report also indicated that, in 2009, 62% of students had computers with internet access and 42% of students accessed the Internet.

UK

Higher education in the UK is different from that in KSA. It can be noted that students in the UK came from different countries and nationalities so that those students have different beliefs, values and cultural background. This may give the current study more value for generalisability (with some caution). Most of the information provided in the current section, published by Statistical First Release (SFR), has been produced by the Higher Education Statistics Agency (HESA) in the UK in collaboration with the UK Department for Business, Innovation and Skills (BIS), the Welsh Government (WG), the Scottish Government (SG) and the Department for Employment and Learning Northern Ireland (DEL(NI)) Higher Education Statistics Agency (2011).

According to the Higher Education Statistics Agency (2011), there were 2,501,295 students enrolled in higher education in the UK for the year of 2010/11. In terms of the difference between the year of 2009/10 and 2010/11, the data indicated that the number of postgraduate students increased by 2%, while undergraduate students slightly decreased. The following figure shows all postgraduate and undergraduate students enrolled in higher education in the UK in both full-time and part-time courses between 2006/7 to 2010/11:

Figure 2. 1: All Students Enrolled in Higher Education Courses by Level of Study and Mode of Study between 2006/7 to 2010/11
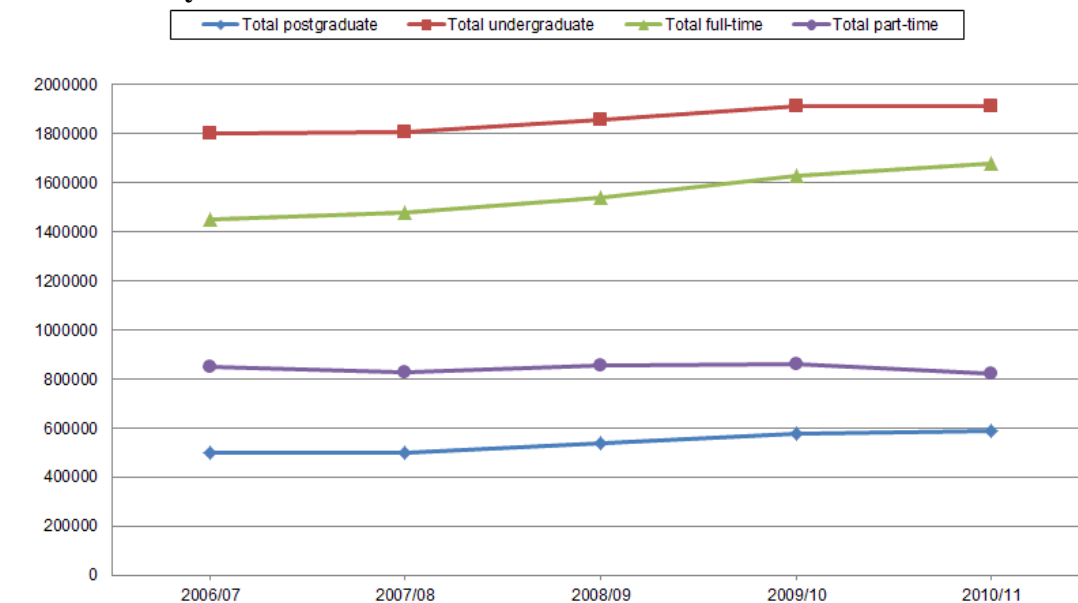
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It can also be noted from the total number of students; there were 1,677,345 full-time students (an increase of 3% since 2009/10) and 823,955 part-time students (a decrease of 4%).

The data also shows the number of the students: UK, EU and non-EU. The following figure indicates that 83% of all enrolments in UK higher education were UK domiciled students in 2010/11, 5% were EU domiciled and 12% came from countries outside the EU. The data also indicates that the number of student enrolments from outside the EU and all other European Union (EU) increased by 6% (from 280,760 to 298,110) and 4% (from 125,045 to 130,120) respectively, while the number of UK domiciled students decreased by 1% (from 2,087,615 to 2,073,070).

Figure 2. 2: Student Enrolments on Higher Education Courses by Level of Study, Mode of Study and Domicile 2010/11
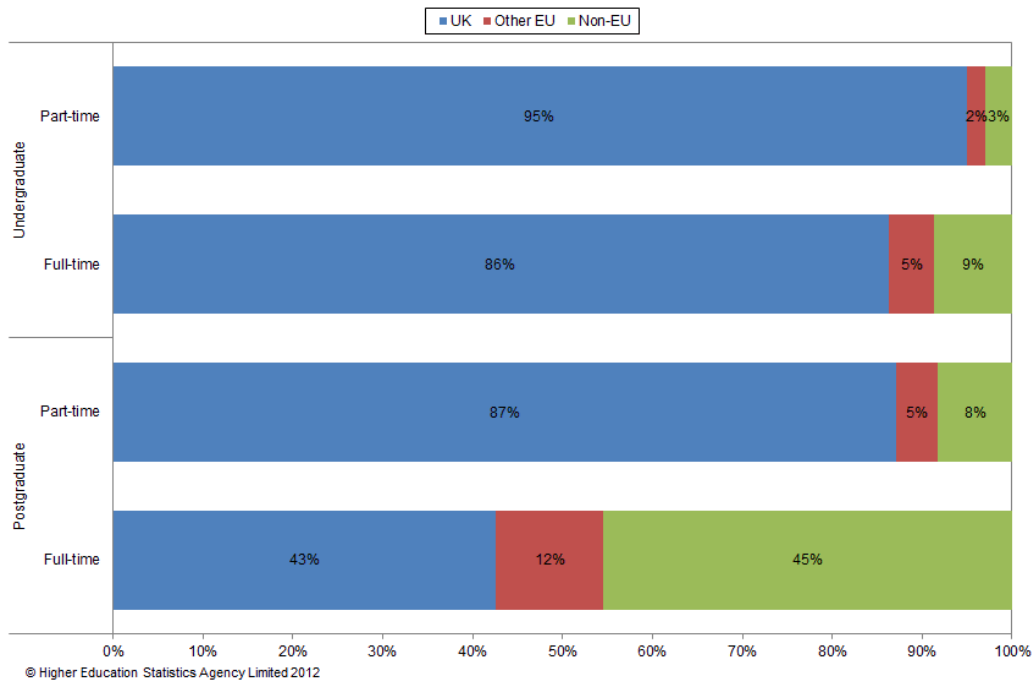
The data also shows the percentage changes in student enrolments based on their subject areas and studying level. It can be seen that Mathematical sciences had the greatest percentage increase of 8% between 2009/10 and 2010/11. In terms of the level of study, the data indicates that Computer Science had the largest percentage (decreased by 6%) in the level of postgraduate, while Architecture, building and planning decreased by 6%.

Figure 2. 3: Percentage Change in Student Enrolments on Higher Education Courses by Subject Area and Level of Study between 2009/10 and 2010/11

© Higher Education Statistics Agency Limited 2012
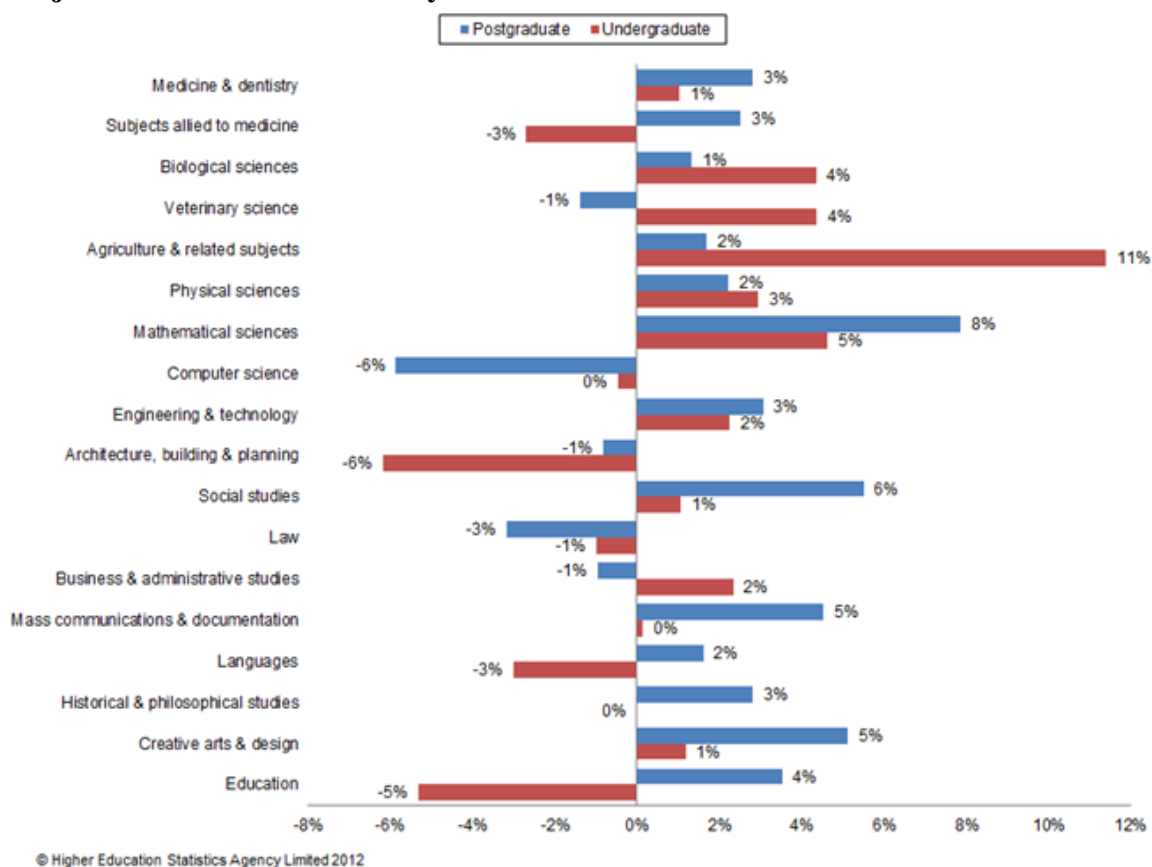
In terms of students' income, the public service in the UK provides financial support for part and full-time students in the UK. This support is not for available for all students but only for some circumstances and under specific conditions. According to public bodies and local councils in the UK (2012),"part-time students on a low income and certain groups of full-time students may be eligible for benefits. These include Income Support, Housing Benefit and Council Tax Benefit". Accordingly, students can obtain the following income support:

Table 2. 3: Students' Income Support in the UK

Your status	**Maximum weekly amount**
Under 25	£56.25
Over 25	£71.00
Couples, civil partnerships	£111.45

44

In addition, the UK government provide a Tuition Fee Loan for full-time and part-time students as followed:

- £9,000 for new full-time students, including full-time distance learning students
- £6,750 for part-time students whose courses are at least 25 per cent of a full-time course each year (e.g. four years part-time instead of one year full-time)

In terms of internet usage, the Internet Advertising Bureau in the UK (2011) carried out a study to examine how students spend their time online. The study found that students are fully equipped with the latest technology, with significantly more saying they own laptops (80%) than TVs (57%), and 50% spend a proportion of their time accessing the Internet via their smart phones. Three quarters claimed that they will be accessing the Internet via a smart phone handset within the next two years.

2.4 Internet Technology and Online Services

Internet technology, and its marketing and technology applications, is important for most individuals' life. It is used for government purposes, such as providing government services and information. In addition, it is used for private sector purposes to provide online services, information and goods to the end customers and users across a wide range of geographical areas.

The telecommunication sector is one of the most important sectors as it has developed the essential and advance infrastructure to provide quality Internet connection to end users. The availability of bandwidth and Internet subscriber numbers has been investigated by the Arab Advisors Group in many Arab countries, including Saudi Arabia, and it has been found that between August 2001 and January 2002 the Internet bandwidth availability increased by 154% to 1.9 Gbps (AlSajjan, 2008). According to AlSajjan (2008), ADSL (Asymmetric Digital Subscriber Lines) is used as an Internet connection that offers 1.5 to 9 mbps downstream and 16 to 640 Kbps upstream capacities, and Saudis with ADSL connections increased from 1 million users in 2000 to 2.8 million users in 2004 with £30 being the monthly cost after the initial installation fee (£45). The Saudi Telecommunications Company (STC) is the key player in the market as the only telecommunication services provider in KSA offering Internet services to most households. Saudi Arabia, as with any other country, is affected by the globalization environment, individuals' needs and development needs, especially after joining the World Trade Organisation (WTO) in 2006. A number of other

players in the market have started providing their online services, including Internet connections from home and wireless connections where the Internet can be accessed from any locations. However, STC remains the main key player in the Saudi market.

The UK, as one of the developed countries within the European Union, has provided Internet services over the past years. According to the Statistics (2011), the characteristic of the UK's broadband infrastructure is an excellent cross-platform competition that has combined DSL and cable networks to reach about half of all households. According to Budde (2011), Virgin Media is the key player in the UK's market and has been recognized as the best provider. It has rolled out a 100Mb/s services across different areas and 200Mb/s service will be available later in 2011. DSL service should cover 66% of the population by 2015. Broadband price has fallen and average data speed increased to reach 8 Mb by mid 2010.

Table 2.1, provided by Internetworldstate (2009), shows the number of Internet users in KSA and the UK. It can be noted that there is a significant difference between the counties in terms of Internet usage. In the UK, individuals are using the Internet in general more than individuals in KSA. The Table shows that 82% of the total population in the UK uses the Internet, while 27% of the total population in KSA.

Table 2. 4: Internet Growth and Population Statistics (KSA and the UK)

	KSA			The UK		
YEAR	Users	Population	% Pop.	Users	Population	% Pop.
2000	200000	21624422	0.009	15400000	58789194	0.262
2003	1500000	21771609	0.069	35807929	59889407	0.598
2005	2540000	23595634	0.108	38512837	60363602	0.638
2007	4700000	24069943	0.195	48755000	61113205	0.798
2009	7761800	28686633	0.271	51442100	62348477	0.825

The source: Internetworldstate (2009) at http://www.internetworldstats.com

According to McKechnie et al. (2006), 61 per cent of adults in Great Britain used the Internet in the last three months. Of those adults, 51 per cent bought or ordered goods, tickets or services. Information and communication technology was a significant industry that contributes to the total UK income. According to Warwick (2010) provided that the

information and communication technology (ICT) such as hardware, software and computer services generated £100bn that represent 7% of GDP and 1.2 million people were employed. In addition, mobile phones, MP3 player and Digital cameras are the key component of many consumer electronic products (Warwick, 2010).

In terms of the e-commerce, Ohlenburg and Mohamed (2011) stated that e-commerce is Worthing £495 billion in the UK, of which £320 billion was generated by B2C (140.6 billion) and B2B (178.9 billion) platforms (following figure shows the annual sales). In addition, they show that retail had one of the lowest levels of dependency on online channel with 4.7% turnover. ICT (internet and a computer network) and utility websites had the highest availability level and less affected by website failure. According to the national statistic office, there are three e-commerce channels in the UK (B2C, B2B and Electronic Data interchange (EDI) and e-mail) (Ohlenburg and Mohamed, 2011). The following figure shows the annual UK sales in billions in 2010.

Figure 2. 4: E-commerce Market 2010 Annual Sales, Billions of Pounds (Current Prices)
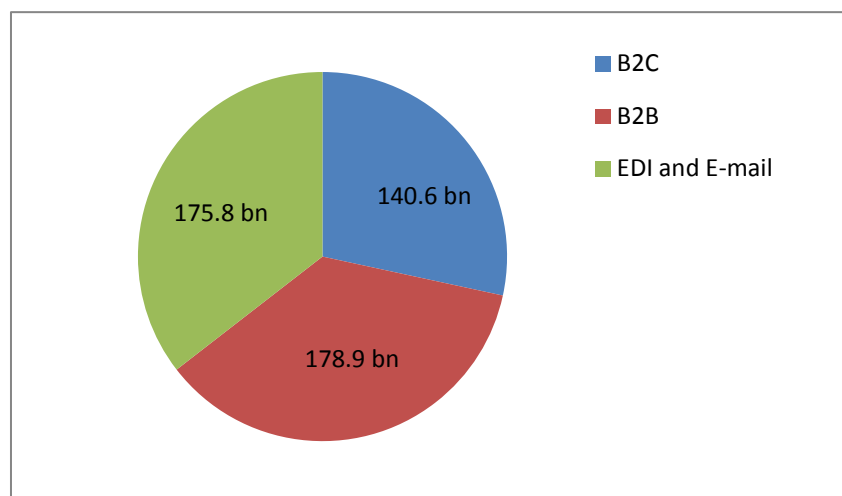
2.5 Banking Sector in (KSA and the UK)

Saudi Arabia is one of the developing countries and one of its strategic aims is to develop services to better serve both government and private sectors. Different and specific organizations and strategic plans were established by the Saudi government to achieve this aim. For example, the Saudi government in 1952 established the Saudi Arabian Monetary Agency (SAMA) in Jeddah city. The aims of establishing SAMA are to setup most of the

financial regulation, and issue and develop the Saudi currency (Riyal) laws. SAMA established its branches in different main cities in the country, such as Makkah, AL-Daman and AL-Taif. In 1966, SAMA created a banking control law so that banks activates in the country can be controlled, managed and developed. The Minister of Finance in 1981 introduced new commercial licenses for running money-changing businesses, recognizing that the function of supervision and control resolutions were the important SAMA's obligations. The ministerial committee established and developed the Stock Market in 1984 with the Ministry of Finance, the Ministry of Commerce and Industry and SAMA. SAMA in 1990 established the Saudi Payment Network (SPAN) so that the use of e-transaction provided by the banking system can be encouraged. In 1997, the Saudi Arabia Riyal Interbank Express Electronic System (SARIE) was established to facilitate electronic transactions. SAMA developed another system that called SADAD Payment System in 2004. It is an intermediary system between billers and the domestic banks used to facilitate and accelerate the e-payment process via all banking channels, such as ATMs, phone banking and online banking (SAMA, 2011). SAMA (2010) has taken some steps for banking transaction security protection. For example, all domestic banks will be inspected to ensure that the security and control systems protections for phone-Internet-banking have been met, complaints that are related to modern technologies and banking services through the Internet were considered and some bank security measures for electronic banking services were tested. Accordingly banks will be directed to upgrade such security aspects. Oliver (2000) reported that Mile White (the marketing manager of Gulf business Machines, IBM representative in Kuwait) said that the United Arab Emirates, Kuwait, Bahrain and Saudi Arabia have the most sophisticated banks in the Middle East cited in (AlSajjan, 2008). In addition to SAMA, the Capital Market Authority (CMA) was established in 2003, preparing and issuing rules and implementing regulations for the regulation and development of the domestic capital market in KSA. At the end of 2001 Tadawul was provided as an electronic and automated system to facilitate electronic transaction in the stock market for all investors. According to Saudinf (2011), there are 80 firms listed on the stock market.

According to Jasimuddin (Not stated), financial services are provided by eleven commercial banks with 1201 branches across the KSA. In the UK, there were 83 banks with total assets amounting to £426.4 billion (Sayar and Wolfe, 2007). The following Table shows some figures concerning the banking sector in both markets

Table 2. 5: Banking Sector (KSA and the UK)

	Kingdom of Saudi Arabia	The United Kingdom
Number of retail banks	11 Banks with (1201branches)	83 Banks
Number of which have websites	---	83 Banks
Number of which have Internet branches	8 Banks (73%)	33 Banks
Internet branches introduction	2000	1997

The source: Jasimuddin (Not stated) at http://www.arraydev.com/commerce/JIBC/0103_02.htm

According to the above Table, it can be noted that it should be possible to differentiate between banks that have their own websites but customers are not allowed to carry out any financial transaction, with banks that have also established their own websites and let customers carry out their financial transactions by themselves. The following section 2.4.1 will illustrate this point clearly.

2.5.1   Internet Banking Definitions

The Internet banking definitions were provided in different studies such as (Aladwani, 2001, Pikkarainen et al., 2004, Wan et al., 2005, Corrocher, 2006, Sayar and Wolfe, 2007, Herington and Weaven, 2007, Chong et al., 2010). Table 2.3 shows those definitions. It can be noted that most of the these definitions emphasize that banks should provide online services where customers be able to perform different activities, such as balance reporting, bill payment, making investments, opening an account, transferring funds and electronic online payments. It can also be noted that some of these definitions that have been provided by Wan et al. (2005), Herington and Weaven (2007) and Chong et al. (2010) did not differentiate between Internet banking and Internet branch. Sayar and Wolfe (2007) give a clear differentiation between the concept or the meaning of Internet banking and Internet branch. Sayar and Wolfe (2007) stated that Internet branch is a website homepage that can be used to access the Internet banking account and perform financial activities, which means that customers have to access the bank's homepage and then click the icon that leads to the Internet banking accounts. Thus, that it can be said that any bank with only a homepage that is used for providing information about the services or products, without letting customers conduct any financial transactions will not be considered to offer Internet banking services.

Here, the concept and definition of Internet banking would be applied because the current study attempts to assess the behaviour of Internet banking users who performed financial transactions online so that the current study defines Internet banking as a portal that allows customers to access their Internet banking account from different places and times, and perform different types of financial transactions, ranging from opening online accounts to making investments. It can be noted from this definition that customers have full control of different financial activities.

Table 2. 6: Internet Banking Definitions

The author/s	Year	The definition
Aladwani	2001	Online banking refers *"to several types of services through which bank customers can request information and carry out most retail banking services such as balance reporting, inter-account transfers, bill-payment, etc., via a telecommunication network without leaving their homes or organizations"* (p. 214).
Pikkarainen et al.	2004	Internet banking is *"an Internet portal, through which customers can use different kinds of banking services ranging from bill payment to making investments"* (p. 224).
Wan et al.	2005	The virtual bank can be defined as a *"non-branch bank"* (p. 256).
Corrocher	2006	The term Internet banking refers to *"the use of the Internet as a remote delivery channel for banking services, which include both traditional ones, such as opening an account or transferring funds, and new ones, such as electronic online payments"*(p. 536).
Herington and Weaven	2007	Internet banking is *"a form of e-service in that customers will learn from the electronic interface and customer service may be significantly influenced by customer performance"* (p. 408).
Sayar and Wolfe	2007	The term "Internet banking" is used to describe *"the case where banks' customers conduct banking transactions on the Internet"* (p. 123).
Chong et al.	2010	Internet banking as *"a new type of information system that uses the innovative resources of the Internet and WWW (world wide web) to enable customers to effect financial activities in virtual space"* (p. 269).

The following section will illustrate the importance of Internet banking services as an IT technology for banks and customers.

2.5.2   The Importance of Internet Banking (IB)

The importance of Internet banking can be seen from different perspectives. It can be seen from a statistics viewpoint as the number of Internet banking websites and the world trend of the Internet banking. It can also be seen from a banking perspective as the advantages that can banks obtain from adopting and providing online services. Finally, it can be seen from a customers' perspective that highlights the advantages those customers can get from using and adopting Internet banking.

2.5.2.1   Internet Banking From a Statistics Viewpoint

It can be noted from the literature that Internet banking is growing dramatically in both developed and developing countries. A considerable number of existing researches were conducted in many countries with different cultures, values and beliefs to examine customers' behaviours towards Internet banking. According to Barwise (1997) cited in Sathye (1999), in ten years' time it is estimated that 60% of retail banking transactions will be carried out online. Booz et al. (1997) cited in Sathye (1999) estimated that over the next five years 20% of retail and 30% of corporate customers will use some forms of Internet banking.

According to Aladwani (2001), the online banking adoption rate in European Union countries is increasing dramatically (Irish_Times, 1999) and international banks and financial institutions operating online are also growing rapidly. Polatoglu and Ekin (2001) stated that Internet banking transactions cost the banks only one twentieth of a teller transaction. González et al. (2004) state that more than 11,250 e-banking sites have been established. 170 online banking sites were available in Spain alone. The largest numbers of e-banking websites in Europe are in Spain, Germany, UK, Italy and France.

2.5.2.2   Internet Banking from a Bank's Viewpoint

Banks has been encouraged to adopt online services (Internet banking) to achieve some strategic goals and meet market demands. Internet banking has been stated as an important strategic tool that can be adopted to achieve different goals (Sathye, 1999, Aladwani, 2001, Polatoglu and Ekin, 2001, Thornton and White, 2001, Nielsen, 2002, Bradley and Stewart, 2003b, Devlin and Yeung, 2003, Mukherjee and Nath, 2003, Rotchanakitummuai and Speece, 2003, Corrocher, 2006, Gan et al., 2006) . For achieving strategic goals, reducing operating costs might be one of the significant issues that encourage banks to adopt Internet

banking. According to Sathye (1999), there will be significant reduction in structure costs over traditional delivery channels when Internet and other virtual banks channels are adopted, because for average banks, Internet banking can be operated at an expense ratio of 15-20 per cent, compared to 50-60 per cent for traditional channels (Booz et al., 1997). According to Shroder Salomon Smith Barney (1999), cited in Corrocher (2006), when banking channels are compared, it can be noted that Internet banking costs less than 1% and telebanking costs less than 50% of traditional branch banking, while ATM transactions costs 50% of telephone banking. From the market perspective, Sathye (1999) stated that Internet banking would be forced to be adopted by banks in order to meet the competitive pressures from new players, such as software and telephone companies, that have intentions to enter to the online banking market. In addition, many customers from different geographical areas can be reached and general information about the banks' services and products can be provided. In addition, performing interactive retail banking transactions can be done by adopting telecommunication systems and technologies such as telephone banking and Internet banking (Aladwani, 2001). Currie (2000) stated that enhancing the competitive position, meeting consumer demand, creating new distribution channels, improving business image and reducing costs are the important business drivers to adopt technologies. Polatoglu and Ekin (2001) provided an example of one of the five largest commercial banks in Turkey (Garanti Bank). Its aim was to move from branch-dominated banking into multi-channel banking in order to achieve goals such as customer involvement in financial services so that branches' workloads can be reduced, the cost of transactions can be reduced, and customer retention and loyalty by offering further conveniences and ease to access to banking services can be improved.

Nielsen (2002) stated that long-term relationships with customers can be enhanced by adopting advance technologies and communication tools and providing service quality and market responsiveness so that banks can achieve a differentiation advantage. Mukherjee and Nath (2003) stated that an important issue is the continuous interaction between the seller and buyers to establish mutually beneficial relationships, especially in e-commerce such as relationship banking which is more market challenged. Rotchanakitummuai and Speece (2003) mentioned that different distribution channels are important and powerful because they can retain, for example, current online users to use the services from any locations. By using Internet banking, banks can maintain their relationship with their customers and providing different and new services and products so that price discrimination over the

Internet can be implemented (Corrocher, 2006). In order to have competitive advantages in the market, customers' information might be the important issue in order to provide and deliver quality services to the customers. A considerable amount of customers' information can be saved in the web. Taking permission from customers to use their personal information for marketing or service improvement purposes, customers' demographics, cultural backgrounds and websites behaviours can be collected in order to better serve customers, and different services can be customized to fit with customers' requirements and needs.

2.5.2.3 Internet Banking from Customers View Points

Customers can gain some advantages from using Internet banking such as sufficient information and price transparency, as well as 24/7 accessibility being possible (Bradley and Stewart, 2003a). Internet banking providers can provide different information that can help and guide customers as to how financial transactions can be performed, as well as increase customers' own financial knowledge so that their skills and abilities to evaluate the banks' services can be improved. As a result of providing a relative, quality and ease information, the more customers can recognize the benefits of the banks' online services that the more their perceptions of how useful the website can be improved so that this may directly or indirectly influence their satisfaction and loyalty with their current banks, and their banks will be more favourable than others in the market.

In addition to the quality information that can be provided via Internet banking, it can also provide some different advantages such as customers being able to perform their financial transactions at any time from anyplace so that the boundaries will disappear. For example, customers can access their online accounts from home and work instead of going to the physical branches where the time that customers will taken for service can be long and the travelling cost may be high compared with when they perform their financial transactions from home or when they have free working time. Rotchanakitummuai and Speece (2003) stated that having direct access to the financial information and undertaking financial transactions without the need to go to the bank can be possible for Internet banking customers.

Compared with the use of traditional branches, Internet banking can provide customers with full control of their accounts so that the most cited transactions that customers are likely to perform, via the Internet branch, are opening a bank account, transferring funds from

different accounts and electronic online payments such as bills payments or shopping payments. Moreover, customers can setup standing orders and direct debits. They will also be able to carry out some investment activities, such as stock market investment and it was noted that customers can perform different financial transactions, such as opening an account, transferring funds and electronic online payments (Corrocher, 2006, Chong et al., 2010). By using Internet banking, customers are allowed to perform a wide range of financial transactions electronically via the banks' website at anytime, from anywhere, faster and at lower fees than with traditional banking branches (Tan and Teo, 2000, Grabner-Kräuter and Faullant, 2008).

In traditional banking services, customers might be charged for the services such as transferring money internationally. For example, when the customer wishes to transfer money from the UK to the USA, the HSBC banks will charge customers £37 for the services in the branch, but when this transaction is carried out via the Internet banking branch, the customer was charged only £9. Thus, a considerable saving can be made from using Internet banking (real example from the researcher).

2.5.3   Internet Banking in KSA and the UK

As it was stated in Table 2.2, Internet banking was first provided in the UK in 1997, while it was introduced into KSA in 2000. According to Alhudaithy (2009), a variety of online financial services can be performed by banks for Saudi customers, such as bill payment, funds transference, applications forms for loans and credit cards can be filled out, and access to a considerable amount of banking information and making investment.

Alwabel (2005) developed Diniz's (1998) model and stated that the contents of the Saudi banks' website can be categorized into three different levels. Banks that used the web to deliver information such as promotional information, banks' contact details, offers announcement, search engines, report downloads, customizing resources and discussion groups. The second category is banks using the web for relationships tools with their existing customers, such as providing e-mails, making suggestions or complaints, calculators and selectors, and videoconferencing (face-to-face banking). The third category identifies the banks that use the web for the transactions performing, such as opening accounts, making products, services, card, investment requests, accessing to accounts' information can be

possible, transferring fund and paying bills cited in (Alhudaithy, 2009). The following table shows all these categories in details (Alhudaithy, 2009, p. 102):

Table 2. 7: Framework for Banking Website Classification

Information Delivery		
Basic Interactivity Level	Intermediate Level of Interactivity	Advanced Interactivity Level
Electronic Brochure	Report downloads	Use customising resources
Promotional information	Recruitment forms	Some subscription option
Contact and location details	Hot links to other sites	Advertisement
Special offer announcements		Discussion groups
Banks use the Web to improve relationship with customers		
Basic Interactivity Level	Intermediate Interactivity Level	Advanced Level of Interactivity
E-mail and forms are the ways a client has to make suggestions and complaints	Advising tools (calculators)	Videoconferencing
The Web is a vehicle for the most common transactions		
The lowest level of interactivity	Intermediate Interactivity Level	Advanced level of interactivity
Opening accounts	Clients can access their account details and statement online	Promoting e-cash as a way to develop Web-based transactions
Requesting products and services	Fund transfer	
Card request	Bill payments	
Investment and credit application	Client has to have some access to the bank's database	

Source: adapted from (Alwabel, 2005)

Alwabel (2005) found that the first category of website contents was found on all Saudi websites banks, while the second and third categories of contents were found to differ across Saudi websites banks. Sohail and Shaikh (2008) found that managing online current accounts, personal loans, brokerage services, buying and selling stocks and shares, mutual funds and credit cards issues were the most common online banking services provided. For example, Tadawul, a financial website for buying and selling stocks and shares, controlled by the Capital Market Authority (CMA) in KSA, reported the number of customers registered as using that website between 2006 to the first quarter of 2010 (SAMA, 2010). The following table shows the customers registered in Tadawul:

Table 2. 8: Number of Customers Registered in Tadawul and Participating in Online Trading via the Internet

Year	No. of customers registered in Tadawul	Annual % Change	No. of customers participating in on-line trading	Annual % Change
2006	3,577,618	39.0	543,046	121.2
2007	3,669,538	2.6	407,041	-25
2008	3,954,132	7.8	190,764	-53.1
2009	3,997,556	1.1	106,117	-44.4
2010	4,009,694	1.1	90,615	-44.4

Source: Capital Market Authority (CMA) at www.sama.gov.sa/sites/samaen/AboutSama/Pages/SAMAHistory.aspx

Grais and Kantur (2003) developed a paper to provide strategies for the opportunities and challenges that experiencing by the changes in the world financial industry in the Middle East and North Africa region (MENA) for policy makers and market participants. They stated that MENA region is behind the penetration on online banking and even the GCC region has significant improvement in the technologies adoption, it still less than half of the average world trend. The following figure shows the information.

Figure 2. 5: Online Banking Customers (% of total bank customers)
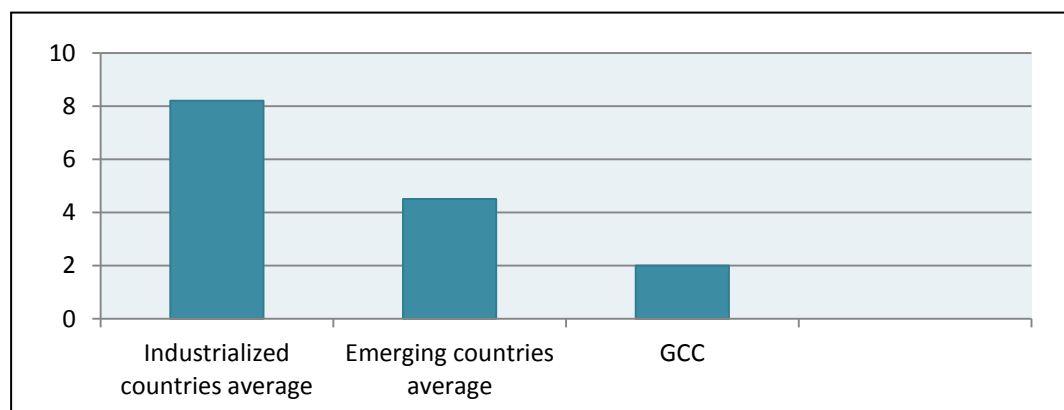
Source: Grais and Kantur (2003).

In addition Grais and Kantur (2003) found that only 18% of the top 100 Arab banks currently offer e-banking services, and the internet is rather seen as a marketing and information dissemination tool. The figure 2.2 shows the information

Figure 2. 6: E-Banking statues of the Top 100 Arab Banks (Asses sizes, year 2000)
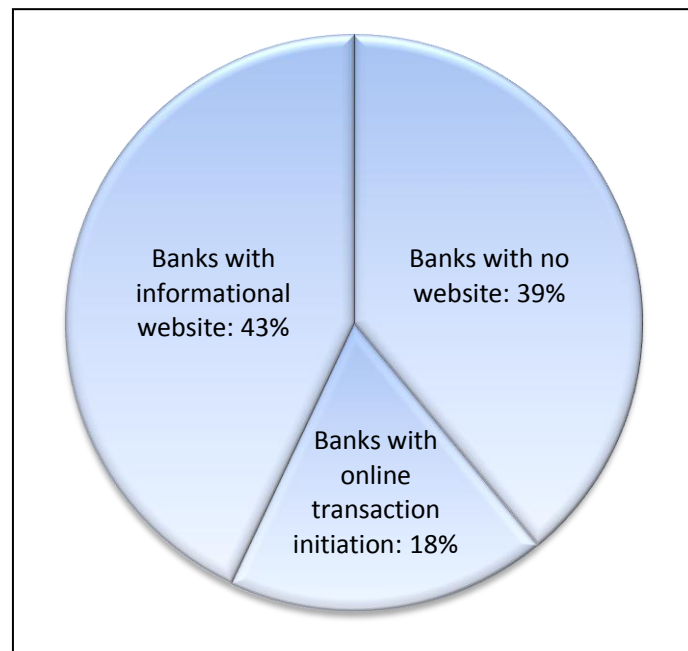
Source: Grais and Kantur (2003)

In the UK market, Tait and Davis (1989) in the early 1980s, first launched electronic banking with the "Homelink" services that was provided by the Nottingham Building Society and the Bank of Scotland, but these services were not continued as stated by (Vinson and Mcvandon, 1978). With technology developments, other electronic banking distribution channels were provided, customer intentions and attitudes toward these electronic channels such as the Internet banking were changed (Daniel, 1999). Howcroft et al. (2002) mentioned that in June 2001, Barclays (the largest Internet banking in the UK) had 2.7 million users compared to the beginning of the year 2000, when it had 780,000 customers. Approximately 16.9 million customers (one-third of the UK's adult population) used online banking services in 2006 (Çelik, 2008). AlSajjan (2008) reported that HSBC, Royal Bank of Scotland, Barclays Bank, Lloyds TSB Bank and others are the key players in the UK's market to provide online services to the end users and Atlas listed HSBC and the Royal Bank of Scotland among the biggest banks in the worlds as shown in the following Table.

Table 2. 9: Top Ten World Banks (Bank Atlas)

Rank	Company	Shareholders' Equity ($m)
1	Bank of America	135,271 $
2	Citigroup	119,783 $
3	JP Morgan	115,790 $
4	HSBC	114,928 $
5	Mitsubishi UFJ Financial Group	81,940 $
6	Royal Bank of Scotland Group	78,730 $
7	ING Group	78,088 $
8	Crédit Agricole	77,462 $
9	Wachovia Corporation	69,716 $
10	BNP Paribas	67,378 $

Source: Adopted from (AlSajjan, 2008, p. 27)

According to the above information particularly that was shown in the figures 2.1 and 2.2, there is a need to examine the area of Internet banking acceptant and what factors drive individuals to adopt Internet services in general and Internet banking in specific especially in Saudi Arabia where a considerable amount of investment on technology was delivered as stated by Grais and Kantur (2003). The low rate of Internet banking adoption encourages current study to develop a model that may help to understand customers' behavioural towards Internet banking by examining specific factors that has been developed and examined in the existing theories and models.

2.6 Culture Background

This section is divided into four further sections. The culture definitions and levels; the importance of culture in business studies; culture frameworks and dimensions; and finally the cultural differences between KSA and the UK will be provided in sections 2.5.1, 2.5.2, 2.5.3 and 2.5.4 respectively. The following will illustrate these points.

2.6.1   Culture Definition and Levels

Culture is a complex concept and has been in focus for many years. Section 2.5.2 will illustrate the importance of culture, while the current section will give brief information about its definitions and levels so that the culture definition and its level can be identified and stated in the current research.

In terms of the culture definitions, the following Table 2.7 that is developed by the researcher shows that most of the previous literature applied Hofstede's definition of culture (Tsikriktsis, 2002, Liu et al., 2004) to examine how technologies can be accepted across different cultures. In 1980, Hofstede defined culture and stated that individuals who belong to the same group tend to have similar characteristics and values as a response to their environment, as shown in the Table 2.7. From 1984 to 1994, almost the same culture definition was provided by Hofstede; culture is the collective programming of the mind that differentiates one group or category of people from another (Hofstede, 1984, Hofstede, 1991, Hofstede, 1993, Hofstede, 1994). Other researchers who have defined culture include (Parsons and Shils, 1951, Lachman, 1983, Erez and Earley, 1993, Matsumoto, 1993, Triandis, 1995). Most of this research illustrated that individuals who are from the same culture tend to have similar shared social system characteristic (Parsons and Shils, 1951), values and beliefs formed during childhood and reinforced throughout life (Lachman, 1983, Triandis, 1995), shared values of a particular group of people (Erez and Earley, 1993), shared attributes, beliefs and behaviours (Matsumoto, 1993), and shared values and norms among a group of people that constitute a design for living.

According to the above definitions, the current research will adopt Hofstede's definition that culture is a collective programming of the mind which distinguishes one group or category of people from another. This definition will help to distinguish individuals' behaviours across KSA and the UK. Section 2.5.4 will provide the culture differences between KSA and the UK based on Hofstede's culture dimensions.

Table 2. 10: Culture Definitions

The Reference/s	Culture Definitions
Parsons and Shils (1951) cited in Shore and Venkatachalam (1996, p. 20)	National culture defined as *"shared characteristic of a high-level social system"*.
Hofstede (1980, p. 21)	National culture is "the interactive aggregate of common characteristics that influences a human group's response to its environment".
Erez and Earley (1993) cited in Shore and Venkatachalam (1996, p. 20)	National culture defined as *"the shared values of a particular group of people"*.
Hofstede (1993, p. 89)	Culture is *"the collective programming of the mind which distinguishes one group or category of people*

The Reference/s	Culture Definitions
	from another".
Lachman (1983) and (Triandis, 1995) cited in Shore and Venkatachalam (1996, p. 20)	National culture *"reflects the core values and beliefs of individuals formed during childhood and reinforced throughout life"*.
Hofstede (1984, p. 21)	Culture defined as *"the collective programming of the mind which distinguishes the members of one group from another"*.
Hofstede (1991) cited in Liu et al. (2004, p. 19)	Culture defined as *"a collective programming of the mind that distinguishes a group or category of people from another"*.
Hofstede (1994, p. 4)	Culture defined as *"collective programming of the mind which distinguishes the member of one group or category of people from those of another"*.
Matsumoto (1993) cited in Cyr et al. (2005, p. 27)	Culture is characterized as *"the degree to which people share attributes, values, beliefs and behaviours"*.
Doney et al. (1998, p. 67)	Culture is *"a system of values and norms that are shared among a group of people and that when taken together constitute a design for living"*.
Tsikriktsis (2002, p.103) Applied Hofstede (1994, p. 4)	Culture defined as *"collective programming of the mind which distinguishes the member of one group or category of people from those of another"*.

Hofstede (1993) stated that there were two levels of culture: national and organizational. In terms of the national level, Hofstede stated that culture contains invisible values that are held by a majority of individuals in that culture, acquired in early childhood, while the organizational level of culture has values and beliefs that are visible in practices of the organization and acquired by socialization of the new young adults who have joined and become members in that organization. Accordingly, the national level of culture will be focused in the current research because the target is to examine individuals' behaviours towards Internet banking system. Their tendency to adopt and use online banking services will be controlled by themselves so that the organizational level of culture is out of scope in the current research. The following section will illustrate why the culture is an important issue particularly in the technology acceptance and usage behaviours.

2.6.2 The Importance of Culture

Many of the cross-culture studies were reviewed and they stated that culture is a significant issue that has to be studied, because individuals' behaviours reflect what values and beliefs

those individuals have, and they will behave according to their culture values. Accordingly, individuals from different cultures may be more likely to behave differently. It has been noted in the previous sections of this study that most of the consumers' behaviour models and theories (TRA, TPB, TAM, SCT, TAM2, DTPB and UTAUT) were developed in the western culture, such as USA, and a few studies have focused or validated these theories and models in the context of eastern cultures. Lee and Green (1991, p. 289) questioned "to what extent can consumer behaviour theories widely accepted in the United States be applied outside this country?" and claimed that consumer behaviour models that have been formally tested cross-cultures were few.

In markets, many companies are extending their services outside their local market so that managers in the USA may need to understand in advance how much their services and products or their technological innovation can be influenced by different cultures (Straub, 1994). This because the differences between success and failure in IT implementation can be impacted by the managers' culture knowledge (Straub et al., 1997). Shore and Venkatachalam (1996) emphasized the role of national culture in the process of IT transference. Luna et al. (2002) and Liu et al. (2004) stated that a consideration of how culture-specific contents, portrayed on websites, should be taken carefully by online companies that deliver their goods and services internationally. Singh et al. (2005) stated that identifying and satisfy consumer needs are the importance marketers' job that have been agreed generally in the marketing literature. Al-Gahtani et al. (2007) stated that the importance of the evaluation of computer applications issues is increasing, especially when these applications are delivered in different cultures.

The theoretical foundations of the current research are based on TRA, TAM and SCT which were developed in the context of western culture (USA). To examine and validate these theories outside this context is the main objective of the current research. It was stated that there is a need to re-examine TAM in other cultures around the world to meet the rapid globalization changes in the business and systems (Straub et al., 1997). In order to achieve this objective, the proposed model in the current study will be examined empirically across different cultures (KSA and the UK). The following section will provide an overview of the cross-culture frameworks and dimensions.

2.6.3 Culture Frameworks and Dimensions

In the last three decades, different models and frameworks have been proposed and tested to investigate culture differences among different groups of people. Some of these frameworks examined the culture differences at the national level and others in the organizational level. Appendix 1 illustrated the culture dimensions and values in the domain of IS developed by (Ali and Brooks, 2008).

One of the most widely used frameworks in the management and marketing domain is that of Hofstede (Hofstede, 1980, Hofstede and Bond, 1988, Hofstede, 1991, Hofstede, 1993, Hofstede, 1994). In 1980, Hofstede proposed and empirical tested four dimensions of culture: power distance (PDI), individualism (IDV), masculinity (MAS) and uncertainty avoidance (UAV), to which a fifth dimension was developed: long-term orientation (LTO) (Hofstede, 1991). These four dimensions were examined with 72,215 employees, working in 66 different national subsidiaries of IBM Corporation between 1967 and 1973.

However because of the popularity and wide use of Hofstede's study, there were some criticisms. Shore and Venkatachalam (1996) stated that Hofstede carried out his research on just one single organization (IBM) so that its generalizability might be questioned and, as it focused on just four dimensions, might be not sufficient to examine all aspects of culture differences. In addition, Furrer et al. (2000) reported that internal validity of the dimensions and the method of constructing the scales might be significant criticisms of Hofstede study.

In contrast to the above criticisms, there are some strengths that make Hofstede's study very popular in examine culture differences. For example, Hofstede's study used large sample size (72,215) employees. Shore and Venkatachalam (1996) stated that the strength of Hofstede study is its large sample size and codification of cultural attributes using numerical indices. Søndergaard (1994) reported that during the period from 1980 to September 1993, it was found that 1,036 quotations from Cultures and Consequences (Hofstede, 1980). Moreover, many previous literatures applied Hofstede's framework to examine users and customers' behaviours towards adopting and using such systems such as (Straub, 1994, Shore and Venkatachalam, 1996, Gefen and Straub, 1997, Straub et al., 1997, Jarvenpaa et al., 1999, Furrer et al., 2000, Liu et al., 2001 , Tsikriktsis, 2002, Singh et al., 2005, Gefen and Heart, 2006, Al-Gahtani et al., 2007, Jin et al., 2008, Kim, 2008, Reimann et al., 2008, Singer et al.,

2008, Vance et al., 2008, Schoefer, 2010). Hofstede's fifth dimensions of culture are highlighted below.

Power Distance

Hofstede (1993, p. 89) defined power distance as *"the degree of inequality among people which the population of a country considers as normal: from relatively equal (that is, small power distance) to extremely unequal (large power distance)"*. Individuals in a high power distance culture tend to accept the inequality in society so that those in the high positions and with statue have considerable power, authority lines, and high responsibility over other members in the society. In terms of the low power distance society, individuals will have equivalence power, and the differences among them are low as they tend to have their own participating power in decision making. For example, users in low power distance will have significant influence in system transfer processes and are entitled to express their own views on the new system and application to the host and headquarters management (Shore and Venkatachalam, 1996).

Uncertainty Avoidance

In terms of the uncertainty avoidance dimension, individuals in high uncertainty avoidance tend to avoid as much as they can the uncertainty situations where the outcomes of involving in such situation cannot be predicted. Uncertainty avoidance was defined as *"the degree to which people in a country prefer structured over unstructured situation"* (Hofstede, 1993, p. 90). In a high uncertainty avoidance culture, individuals are more likely to perform their behaviours in structured situations where most of the rules and regulations on how they should behave are stated clearly and written down or imposed by tradition (Hofstede, 1993). While in a culture with low uncertainty avoidance, individuals have a tendency to take an action in situations that have a certain level of risk or where the outputs of those situations cannot be predicted exactly. They might be more flexible and easy-going compared with high uncertainty avoidance people.

Individualism and Collectivism

Hofstede (1993, p. 89) defined individualism culture as *"the degree to which people in a country prefer to act as individuals rather than as members of groups"*. People in high individualism culture tend to believe their own opinions and views and have a little or no influence from others members in the society. They also have their own interests and

feelings. In individualist culture, individuals learned from their childhood to think of themselves as 'I' instead of 'We' and have no protection from the group any more (Hofstede, 1993), while in the low individualism culture (collectivism culture), individuals learned to respect the group that belongs to such as family, tribe and religions. Those individuals in collectivism culture tend to be loyal to their group for the long-term or for life. Al-Gahtani et al. (2007) stated that in collectivism culture, everyone will be responsible for fellow members of their group.

Masculinity and Femininity

In addition, Hofstede classified culture into masculinity and femininity cultures. He defined this dimension as *"the degree to which tough values like assertiveness, performance, success and competition, which in nearly all societies are associated with the role of men, prevail over tender values like the quality of life, maintaining warm personal relationships, service, care for the weak, and solidarity, which in nearly all societies are more associated with women's roles"* (Hofstede, 1993, p. 90). Gefen and Straub (1997) mentioned that a consistent pattern of men and women was found (Hofstede, 1980), that men rated advancement and earning power more highly, while women rated interpersonal aspect, service and physical environment more important. According to this dimension, men presented a high masculinity score, while women achieved a low masculinity score (femininity).

Long-Term Orientation

Long-term orientation individuals tend to find values towards the future such as saving, while in short-term orientation, individuals tend to have less vision towards their past and present, such as respect for tradition and fulfilling social obligations (Hofstede, 1993). Based on Hofstede (1980), Kim (2008, p. 18) stated that long-term orientation refers to *"the degree to which society does or does not embrace long-term devotion to traditional values"*. Individuals in high long-term orientation cultures tend to have long-term commitments and respect for tradition and might evaluate plans in terms of customs, traditions or history. The changes in this type of culture might be low and take a long time (Kim, 2008). In contrast, in cultures with low or short-term orientation, individuals tend to be more accepting of changes and have short goals and vision. The following section is an illustration of culture differences between KSA and the UK.

Many of the previous studies that have been carried out within different cultures to examine technology acceptance and usage across different types of systems have not measured the culture differences (Straub, 1994, Shore and Venkatachalam, 1996, Gefen and Straub, 1997, Jarvenpaa et al., 1999, Al-Gahtani et al., 2007). In the online context, Luna et al. (2002) examined the site content characteristics which ultimately influence customer purchases via the Internet in Spain and USA. Other studies have developed and examined models within different cultures but they have not measured the culture itself (Liu et al., 2004, Gefen and Heart, 2006). Some studies have conceptually and empirically examined users' perceptions towards websites (Cyr and Trevor-Smith, 2004, Cyr et al., 2005, Singh et al., 2005, Cyr, 2008), and more details of these studies are provided in section 3.7.

A number of studies have examined and measured culture differences. These include Furrer et al. (2000), who linked all the five cultural dimensions (mentioned above) originally developed by Hofstede (1980, , 1991) with all five service quality dimensions developed by Parasuraman et al. (1985, , 1988). This led to the development of a Cultural Service Quality Index (CSQI) in the context of retail banking services. Liu et al. (2001) used the measurement items that were previously applied by Furrer et al. (2000) to examine the relationship between culture and customers' behavioural intention and perceptions towards services quality. Tsikriktsis (2002) applied Hofstede's cultural dimensions to examine the relationship between culture and website quality expectations in the context of web banking services. Kim (2008) measured the culture dimensions to examine how trust determinants were affected by culture. Reimann et al. (2008) examined the influence of uncertainty avoidance as one of the culture dimensions that moderate the relationship between service quality and customer satisfaction in the context of B2B relationship. Singer et al. (2008) carried out a content analysis of online banks' websites and tested 19 cultural attributes to examine how these websites respond to cultural diversity. Vance et al. (2008) developed a model to examine the mediator role of trust between services quality perceptions and intention to use mobile commerce across culture. They identified the culture dimension of Uncertainty Avoidance as an important construct. Schoefer (2010) examined the moderator role of culture on the relationships between perceived justice and emotions on perceived satisfaction.

According to the above literature, it is possible to confirm that culture has a significant impact on how technology is accepted and how customers' perceptions differ from one

culture to another. This study argues that the processes of examining and measuring culture dimensions are important issues in the context of Internet banking enabling the influence of culture on Internet banking acceptance to be detected. The current study is limited to examining just one culture dimension (Uncertainty Avoidance) as a moderator of the relationships in the conceptual model, as illustrated in figure 4.1. This study argues that uncertainty avoidance might be more important than other dimensions, particularly in Internet banking, because this context involves a considerable amount of risk, such as access from unauthorised parties allowing customers' private information to be stolen and used. In addition, customers who worry about using an open environment, such as the Internet, might choose not to use Internet banking because this environment is difficult for banks to control. Moreover, some customers with limited skills or low experience in self-services may think that they could do something wrong when undertaking financial activities. Because of these issues, customers who have a culturally high level of uncertainty avoidance, such as Saudis, may limit their Internet banking usage.

As in previous studies, such as Reimann et al. (2008) and Vance et al. (2008) that measure the uncertainty avoidance dimension, the current study examines uncertainty avoidance as a moderator and investigates whether the conceptual model can be generalized across high and low uncertainty avoidance groups. As stated previously, choosing just this particular dimension is clearly important especially in situations that involve risks, such as the adoption of new IT (Vance et al., 2008). More details are provided in the fourth chapter in section 4.5.

2.6.4 Culture Background (KSA and the UK)

As stated above (section 2.5.3), in Hofstede culture framework (Hofstede, 1980) four dimensions can be used to distinguish different cultures; namely power distance, uncertainty avoidance, masculinity and individualism. It can be noted from the following Table (2.8) that KSA is a collectivism, high power distance, high uncertainty avoidance and moderate level of masculinity and femininity culture, while the UK is an individualism, low power distance, masculinity and low uncertainty avoidance culture.

Table 2. 11: Culture Dimension Differences across KSA and the UK

Culture Dimensions	Kingdom of Saudi Arabia	United Kingdom
Individualism/Collectivism	38 (low)	89 (high)
Low/High Power Distance	80 (high)	35 (low)
Masculinity/Femininity	52 (moderate)	66 (high)
Low/High Uncertainty Avoidance	68 (high)	35 (low)
Long-term Orientation (LTO)	Not Applicable	25 (low)

Source: Hofstede (1980)

Individualism and Collectivism

The above table 2.8 indicated that KSA is collectivism culture. It has low score (38) in the individualism scale, while the UK has high score (89) that indicated individualism culture. This means that individuals from KSA are more likely to respect their family, tribe and religions. In addition, they are more likely to be influenced by their groups' members. People from KSA are learning from each others, asking for advance and recommendations from their groups' members. They are also responsible for their own people.

On the other hand, individuals from the UK are more likely to be independent. They believe their own opinions and have self-interest. According to this dimension, individuals may not be influenced by their groups (families, friends and colleagues). They depend on themselves in decision making. They develop their own skilled and knowledge. They cannot be protected by any member of the group.

Power Distance

It can be noted from the above table that KSA classified as high power distance culture with (80). Individuals from KSA are more likely to accept the inequality in the society. Individuals in the high position and who with high social power and authority in the society consider themselves to be responsible for others. According to this dimension, there is a large gap between individual in high and low positions in KSA.

On the other hand, the UK was classified as low power distance. Individuals tend to be equal and no large difference can be found. Inequality is not acceptable position in the UK culture. In addition, they tend to have an equivalence power in the decision making and providing their opinions.

Uncertainty Avoidance

According to the above table, high uncertainty avoidance culture was highly considered in KSA. KSA scored high in this dimension at (68). This indicated that individuals tend to avoid the uncertainty situation in which the outcomes cannot be predicted. They are more likely to follow a clear, save and detailed structure so that any risk or unwanted outcome can be avoided.

On contrary, UK was considered as low uncertainty avoidance. Individuals tend in some level accept situation that have a certain level of risk and the outcomes cannot be predicted. They are more likely to be self-confidence to take a risky action and be responsible about their behaviour.

Masculinity and Femininity

According to the above table, KSA had a moderate score in the masculinity and femininity scale. This indicated that individuals from KSA neither masculinity nor femininity but between the two. Individuals tend to be assertive, successful and competitor. In addition, they consider the values of quality of life and having good and healthy personal relationships are importance in the society.

In contrast, in the UK, masculinity culture is more value comparing with femininity. This indicated that individuals are more likely to focus on the assertiveness, performance, success and competition.

Long-Term Orientation

This dimension of culture was not measured in the culture of KSA, but it was measured in UK culture. The more score country has, the more it has long-term orientation. This dimension was examined across 23 countries and Britain was ranked in 18 with 25 score in the long-term orientation scale. According to this result, the UK was considered to be short-term orientation culture. This indicated that individuals tend to have personal steadiness and stability, protect their "faces" and respect for tradition. They also less vision towards the past and present. Individuals are more likely to accept changes and have short goals and vision.

The first four culture dimensions (Individualism and Collectivism, Power Distance, Uncertainty Avoidance and Masculinity and Femininity) are importance for the current study for a number of reasons. First, they are the most cited dimensions of culture and have been applied for many of the previous studies including marketing and information technology acceptance such as (Straub, 1994, Gefen and Straub, 1997, Straub et al., 1997, Furrer et al., 2000, Liu et al., 2001 , Liu et al., 2004, Gefen and Heart, 2006, Al-Gahtani et al., 2007, Jin et al., 2008, Kim, 2008, Reimann et al., 2008, Vance et al., 2008, Schoefer, 2010). In addition, they were applied in the context of online banking (Tsikriktsis, 2002, Singer et al., 2008). Second, these four culture dimensions are the only dimensions that have been measured in the environments of KSA and the UK. They might be helpful for explaining how individuals might behave in both cultures so that the results can be understood clearly. For example, individualism and collectivism is an important dimension of culture that might explain some constructs in the conceptual model such as trust, subjective norms and behavioral intention toward internet banking. In addition, using internet banking involves some risks that customers might face so that uncertainty avoidance maybe a significant dimension to explain customers' behaviour intention. Accordingly, Hofstede's culture dimensions are considered to be more appropriate for the current study than others dimensions that stated in the appendix 1.

2.7 Summary

This chapter highlighted the demographic characteristics of KSA and the UK in terms of their size, geographic locations, populations, language, religion, industry and natural resources in section 2.2. This chapter also illustrated the students' characteristics in section 2.3. Section 2.4 the importance on the internet technology in general and more specific in the KSA and the UK. It also covers and illustrates information concerning the context of the study (Internet banking) in section 2.5. This section also illustrated the Internet banking definition, the importance of Internet banking from banking and customers' perspectives. This is followed by illustrating the Internet banking in KSA and the UK. Because the current study is carried out across different countries, culture background of the countries is provided in section 2.6. The section highlighted the culture definition and levels, the importance of culture, culture frameworks and dimensions. The study illustrated specifically Hofstede's culture dimensions. According to Hofstede's culture dimension, the culture differences in KSA and the UK are highlighted.

The following chapter will provide a review of previous literature in the area of trust, loyalty, psychology theories, technology acceptance models, across culture studies and Internet banking. It will also illustrate the theoretical gaps that the study's conceptual model tries to fill.

Chapter Three: Literature Review

3.1. Introduction

The objective of this chapter is to explore the factors that impact customer loyalty directly or indirectly in the context of Internet banking. In order to achieve the objective, different areas will be reviewed such as offline and online trust (section 3.2), including trust definitions and previous literature that has examined trust in different contexts and objectives. Communication between customers and services' and products' providers will be reviewed .Also section 3.3 will illustrate the existing studies that examined communication as a construct. Its definitions will be highlighted and its definition for the current study will be stated. Reviewing Customers' experience is provided in section 3.4. The section highlights the definition of customers' experience from offline and online context markets. In addition, it provides an overview of existing literature from offline and online context markets. This includes the studies that carried out in the context of Internet banking. Section 3.5 illustrates corporate reputation factor. The section provides the definitions of corporate reputation and highlights a number of its existing literature. Customers' loyalty is reviewed in section 3.6. It includes loyalty definitions, existing literature in the online and offline marketing context.

Nine significant theories and models will be provided (section 3.7). It highlights Innovation Diffusion Theory (IDT), Theory of Reasoned Action (TRA), Theory of Planned Behaviour (TPB), Social Cognitive Theory (SCT), Technology Acceptance Model (TAM), The Decomposed Theory of Planned Behaviour (TPB) Model (DTPB), Technology Acceptance Model (TAM2), Unified Theory of Acceptance and Use of Technology (UTAUT) and Technology Acceptance Model (TAM3).

This chapter illustrates the theory that applied for the current study in section 3.8. This section highlights previous theories and models' limitations and how the current study avoids these limitations. Because the current study' theoretical background based on Technology Acceptance Model (TAM), Section 3.9 provides an overview of the TAM's existing literature. Then, section 3.10 highlights the TAM's existing literature that carried out across culture. Many of the existing literature in the context of Internet banking are provided in section 3.11. Finally, section 3.12 provides the chapter's summary that will give an overview

of the chapter, highlights the significant theoretical issues and provides directions and a brief introduction of the following chapter.

3.2. Customers Trust

The definitions of customers' trust are provided in the following section (3.2.1). This will be following by trust in tradition context (3.2.2) and trust in the context of online (3.2.3). Finally, based on the literature reviewed, some theoretical gaps that the current study attempts to fill out will be stated in section 3.2.4.

3.2.1. The Definition of Trust

Trust has been stated as a strong factor affecting individuals' behaviours in many different context and relationships, such as organizational relationships and offline and online marketing relationships. Doney et al. (1998) stated that the nature of a trustor's beliefs should be focused on defining trust so that these beliefs will be changed from one discipline to another. For example, costs and benefits will be emphasized as important trusting beliefs in the economist relationship, while psychologists focus on consistent and benevolent behaviour, and sociologists consider aspects of society. Accordingly different trust definitions were provided. In terms of the organizational relationship, Mayer et al. (1995) and Lewicki et al. (1998) defined trust in similar ways. For example, both agreed that individuals need to have a level of willingness to depend on another party. This means that individuals with low willingness level are more likely to not trust other parties. Both definitions emphasized that those individuals' expectations towards others' behaviours are a significant indication about their trust. As defined by Lewicki et al. (1998), positive expectation leads to trusting behaviour, while negative expectation leads to distrusting behaviour. It can be noted also from these definition that trustees' behaviours cannot be controlled by trustors. Therefore, trustors will be vulnerable to the trustees' actions behaviour in performing particular activities that are important to trustors. A similar definition was provided by (McKnight et al., 1998, Sheppard and Sherman, 1998).

In terms of the marketing context, trust definitions can be divided into offline or traditional marketing and online marketing (e-commerce). In terms of the traditional marketing, trust definitions were stated by different theories and models (Morgan and Hunt, 1994, Doney et al., 1998, Geyskens et al., 1998, Sichtmann, 2007). Commitment-trust theory (Morgan and

Hunt, (1994) defined trust as a trustor's confidence that a trustee has reliability and integrity, while Doney et al. (1998) stated that individuals must be willing to trust another party to take such actions so that they will be vulnerable to the other party. Sichtmann (2007) emphasized the customers' expectations that the trustee will provide service quality based of the past interactions, where purchase uncertainty, vulnerability and lack of trustors' control are high.

Trust definitions in the online marketing context were provided and stated in a variety of studies in different situations by (Jarvenpaa et al., 2000, Gefen, 2000, Lee and Turban, 2001, McKnight and Chervany, 2002, McKnight et al., 2002, Corritore et al., 2003, Suh and Han, 2003, Ribbink et al., 2004). It can be noted that trustors' expectation of the trustees' behavioural has been stated in many of these definitions (Jarvenpaa et al., 2000, Gefen, 2000, Lee and Turban, 2001, Corritore et al., 2003). Customers' confidence and willingness to rely on trustees to perform such activities that are important to them were stated as conditions for trust behaviour (Lee and Turban, 2001, McKnight and Chervany, 2002, McKnight et al., 2002). The following Table 3.1 shows all these definitions.

Table 3. 1: Trust Definitions

The author/s	Year	Trust definition
Morgan and Hunt	1994	*"Existing when one party has confidence in an exchange partner's reliability and integrity".* (p. 23)
Mayer et al.	1995	*"The willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party".* (p. 712)
Doney et al.	1998	"A *willingness to rely on another party and to take action in circumstances where such action makes one vulnerable to the other party".*(p. 604)
Lewicki et al.	1998	"Trust *in terms of confident positive expectations regarding another's conduct, and distrust in terms of confident negative expectations regarding another's conduct. We use the term "another's conduct" in a very specific, but encompassing, sense, addressing another's words, actions, and decisions (what another says and does and how he or she makes decisions").* (p. 439)
Sichtmann	2007	*"The belief, which a consumer in a purchase situation characterized by uncertainty, vulnerability, lack of control and the independent-mindedness of the*

The author/s	Year	Trust definition
		transaction partners, relies on to the effect that a company identified as a corporate brand will deliver a good or service at the quality which the consumer expects, on the basis of experiences which the consumer has made in the past".(p. 1001)
Jarvenpaa et al.	2000	*"As a trustor's expectations about the motives and behaviours of a trustee".* (p. 45)
Gefen	2000	*"The confidence a person has in his or her favourable expectations of what other people will do, based, in many cases, on previous interactions".* (p. 726)
Lee and Turban	2001	*"The willingness of a consumer to be vulnerable to the actions of an Internet merchant in an Internet shopping transaction, based on the expectation that the Internet merchant will behave in certain agreeable ways, irrespective of the ability of the consumer to monitor or control the Internet merchant".* (p. 79)
McKnight and Chervany	2002	*Defined trusting intention as one that is "willing to depend on or intends to depend on the other party even if one cannot control that party".*
McKnight et al	2002	*Defined disposition to trust is "the extent to which a person displays a tendency to be willing to depend on others across a broad spectrum of situations and persons".* (p. 339)
Corritore et al.	2003	*"An attitude of confident expectation in an online situation of risk that one' vulnerabilities will not be exploited".* (p. 470)
Ribbink et al.	2004	*"The degree of confidence customers has in online exchange or in the online exchange channel".* (p. 447)
Suh and Han	2003	*Trust is "a belief that one can rely upon a promise made by another and that the other, in unforeseen circumstances, will act toward oneself with goodwill and in a benign fashion".* (p. 137)

Consumer trust in Internet shopping was defined as *"the willingness of a consumer to be vulnerable to the actions of an Internet merchant in an Internet shopping transaction, based on the expectation that the Internet merchant will behave in certain agreeable ways, irrespective of the ability of the consumer to monitor or control the Internet merchant"*(Lee and Turban, 2001, p.79). Based on this definition, customers' trust in the current study can be conceptualized. It can be seen as existing customers having confidence and willingness to

rely on banks actions for financial transaction based on the expectation that the Internet banks will behave in certain agreeable ways, irrespective of the ability of the monitor or control the Internet banks.

3.2.2. Trust in Traditional Context

Trust has been recognized as a significant factor in different relationships. As stated in its definitions, there are different perspectives and areas that emphasize that trust is essential in any starting relationships in the individual's, organizational and marketing (B2B or B2C) levels. A considerable number of previous literatures examine trust from theoretical and empirical perspectives and state that trust had significant influence on individuals' behaviours. Different concepts, models and theories were created and provided to explain how trust affects individuals' behaviours in organizational context (Mayer et al., 1995, McKnight et al., 1998, Sheppard and Sherman, 1998, Lewicki et al., 1998) and business context (Morgan and Hunt, 1994, Selnes, 1998, Doney et al., 1998, Geyskens et al., 1998, Wong and Sohal, 2002, Adamson et al., 2003, Sichtmann, 2007, Grayson et al., 2008).

Morgan and Hunt (1994) introduced the Commitment-Trust Theory. According to this theory, trust and commitment are central factors for building and maintaining market relationships. The assumption is that marketing relationships will be maintained unless there is a sufficient level of trust and commitment among different parties involved in marketing relationships. Trust and commitment will mediate the effects of the relationships antecedents to relationships outputs. The theory proposed that relationship termination costs, relationship benefits and shared values will affect relationship acquiescence, and propensity to leave cooperation through marketing relationship commitments, while trust will mediate the relationship between shared values, communication, and opportunistic behaviour and cooperation, functional conflict, and uncertainty. The theory also proposed that trust will have a significant and positive effect on relationship commitment. All the relationships were supported except the relationship from relationship benefits to commitment. This theory has been partially applied in the online relationship marketing and supported (Mukherjee and Nath, 2003).

Trust was also examined in a marketing context to investigate the complementary role of satisfaction and trust in maintaining the relationship marketing between a supplier (a food producer) and a buyer in Norwegian market (Selnes, 1998). The study proposed that supplier

competence and communication will affect customers' trust, and communication commitment and conflict handling will affect customers' satisfaction. Trust and satisfaction will affect relationship marketing enhancement and continuity. The study found that all the relationships were supported with the exception of the effect of competence and trust.

Doney et al.(1998) developed a framework that described five cognitive trust-building processes in business contexts in the USA. They proposed that trust can be enhanced by calculative, prediction intentionality, capability and transference processes that will be done by trustors. Geyskens et al. (1998), in their meta-analysis, stated that there are five antecedents namely environmental uncertainty, own dependence, partner' coercive power use, communication, and economic outcomes that affect marketing trust in B2B context. Trust and commitment have been empirically examined in the context of Australia in two retail relationships' levels; namely the salesperson and store levels, and their influence on relationship quality (Wong and Sohal, 2002). Wong and Sohal (2002) found a significant relationship between salesperson trust to store trust and salesperson commitment. In addition, salesperson trust was found to have significant effect on relationship quality directly and indirectly through salesperson commitment and store commitment. Adamson et al. (2003) applied the commitment-trust theory (Morgan and Hunt, 1994) to explore corporate customers' perceptions of their relationships with their banks in Hong Kong. Adamson et al. (2003) found that effective communication had a significant positive effect on customers trust with their banks, while bank's negative reputation, customer-centred strategy, and long term orientation has significant negative influence on their trust. Sichtmann (2007) created a framework that helps to understand customers trust in a corporate brand and identified the antecedents and consequences of trust in mobile phone services in Germany and how these factors differ among customers and non-customers. Sichtmann (2007) found significant effects of credibility and competence on customers trust with the services' providers in both groups. Grayson et al. (2008) empirically examined the impact of trust in the broader context of customer perception and behaviour in the UK and Taiwan by using the Institutional Theory Model and the Functionalist Theory Model. They found that narrow scope trust was affected significantly by system trust government in the UK, while it was affected significantly by generalized trust and system trust government in the case of Taiwan.

In the organizational context, Mayer et al. (1995) provided a model of trust at the individuals level. They proposed that individuals' trust can be enhanced by trustors' propensity and

trustees' ability, benevolence and integrity. While McKnight et al. (1998) proposed a model of particular relationships among several trust-related constructs and two cognitive processes. McKnight et al. (1998) proposed that trusting intention can be influenced by trusting beliefs (benevolence, competence, honesty and predictability), disposition to trust (trusting stance and faith in humanity) and institution-based trust (structural assurance and situational normality) beliefs. Sheppard and Sherman (1998) proposed a model that helps to understand the trust concept by providing four distinct and ordered forms, namely shallow dependence, shallow interdependence, deep dependence and deep interdependence. These forms will be determined by the nature of the interdependence between trusting parties. Lewicki et al. (1998) introduced a new theoretical framework to understand simultaneous trust and distrust relations within organizations. Lewicki et al. (1998) provided a variety of scenarios in different conditions in parties' relationships, such as where parties have low trust and low distrust, high trust and low distrust, low trust and high distrust, and high trust and high distrust, so that the parties relationship can be changed according to these different scenarios.

3.2.3. Trust in Online Context

Trust is a critical factor to maintain a long-term relationship between customers and firms, particularly in the online environment, because face-to-face contact has disappeared. How firms can gain customers trust, why some customers revisit a particular website or what factors may cause customers to switch to another provider are crucial questions that need to be understood. If a company would like to be competitive in terms of providing services online, it has to be aware of the elements which help customers gain trust. Accordingly, in the last ten years, a considerable body of literature has examined and investigated theoretically and empirically factors that influence customers' trust (Gefen, 2000, Lee and Turban, 2001, Cheung and Lee, 2001, McKnight et al., 2002, So and Sculli, 2002, McKnight and Chervany, 2002, Corritore et al., 2003, Gefen and Straub, 2003, Corbitt et al., 2003, Harridge-March, 2006, Shalhoub, 2006, Chen and Barnes, 2007, Mukherjee and Nath, 2007, Connolly and Bannister, 2008).

Different factors affecting customers' trust were examined and tested in different contexts and targets. For example, Gefen (2000) carried out research that examined customers' trust towards Amazon.com services in USA and stated that familiarity with Amazon as well as customers' disposition to trust were significant factors affecting customers' trust. Whilst Lee

and Turban (2001) stated that consumers' trust in Internet shopping will be influenced by trustworthiness of the Internet merchant (ability, integrity, and benevolence), trustworthiness of the Internet shopping medium (technical competence, reliability, and medium understanding) and other contextual factors (effectiveness of third party certification and effectiveness of security infrastructure). Lee and Turban (2001) proposed that the effects of these factors on consumer trust will be moderated by individuals' trust propensity. McKnight and Chervany (2002) and McKnight et al. (2002) proposed and validated measures for a multidisciplinary and multidimensional model in e-commerce trust. They proposed that trusting intentions towards using online vendor services will be impacted by trusting beliefs (competence, benevolence, and integrity), institution-based trust [situational normality (general, competence, benevolence, and integrity) and structural assurance], disposition to trust [faith in humanity (competence, benevolence, and integrity) and trusting stance] and perceived site quality. So and Sculli (2002) theoretically examined how trust, quality, value and risk influence online business relationships at the individuals' level. While Corritore et al. (2003) conceptually stated that, in online services, trust can be influenced by customers' perception of e-vendor credibility, website ease of use, and risk perception. Gefen and Straub (2003) investigated the influence of social presence on consumer trust in e-services using the extended Technology Acceptance Model (TAM) (Davis, 1989, Davis et al., 1989) in the USA and found a significant influence of social presence on consumers' trust. Corbitt et al. (2003) identified key factors that affect customers' trust in the B2C context. They also proposed that users' web experience, perceived risk, perceived site quality, perceived market orientation and perceived technical trustworthiness will affect customers' trust, and found that users' experience, perceived technical trustworthiness, perceived site quality and perceived market had significant effects on perceived trust, while trust had no influence on trust. Harridge-March (2006) theoretically examined the role of trust and risk in consumer behaviour and how the behaviour of those consumers can be changed from Internet browsers to potential online purchasers. Shalhoub (2006) examined the lack of trust in online transactions in the six countries of the Gulf Cooperation Council (GCC) by conducting a content analysis of the privacy policies and security mechanisms, finding that a large percentage of sites state privacy statements that include notice and awareness. However, none of the sites inform users about how they can complain. Chen and Barnes (2007) investigated empirically how online customers' initial trust and purchase intentions towards Taiwanese online bookstores can be developed. Chen and Barnes (2007) proposed that perceived usefulness, perceived security, perceived privacy, perceived good reputation, perceived willingness to customise,

and personal trust disposition had significant influences on online initial trust in e-commerce. Mukherjee and Nath (2007) also applied the commitment-trust theory to examine the antecedents and consequences of commitment and trust in the online context, finding that trust in the Internet was significantly influenced by shared values, communication, opportunistic behaviour, privacy and security. Finally, Connolly and Bannister (2008) tested some fundamental factors that influence consumer trust in Internet shopping in Ireland. They found that perceived security control, perceived integrity, perceived competence, experience and age had significant impact on trust in Internet shopping.

3.2.4. Trust Theoretical Gap/s

A considerable body of research has proved that trust as an important factor determines customers' relationship marketing from both traditional and online contexts. It can be noted from the literature review above that different models were stated, tested and provided. In the offline context, it can also be noted that different factors have been approved to influence customers trust directly or indirectly, such as shared values, communication and opportunistic behaviour (Morgan and Hunt, 1994), ability, benevolence, integrity and trustor propensity (Mayer et al., 1995), cognitive processes (calculative, prediction intentionality, capability and transference, norms, values, national culture (relation to authority, self and risk) (Doney et al., 1998), environmental uncertainty, own dependence, partner' coercive power use, communication and economic outcomes (Geyskens et al., 1998), trusting beliefs (benevolence, competence, honesty and predictability beliefs), institution-based trust (structural assurance and situational normality), cognitive processes (categorisation processes and illusion of control process) and disposition to trust (trusting stance and faith in humanity) (McKnight et al., 1998), competence and communication (Selnes, 1998), bank's negative reputation, communication, customer centred strategy, long term orientation (Adamson et al., 2003), competence and credibility (Sichtmann, 2007).

In the online context, several studies provided different factors affecting trust perceptions; such as familiarity with online stores and disposition to trust (Gefen, 2000); Internet merchant's ability, integrity and benevolence, competence, reliability and understanding of the Internet shopping medium, effectiveness of third party certification, and security infrastructure (Lee and Turban, 2001); disposition to trust, institution-based trust, trusting beliefs (McKnight et al., 2002); perceived risk and service quality (So and Sculli, 2002); perceived credibility, and ease of use and risk (Corritore et al., 2003); social presence (Gefen

and Straub, 2003); users' web experience, perceived risk, perceived site quality, perceived market orientation and perceived technical trustworthiness (Corbitt et al., 2003); perceived usefulness, perceived security, perceived privacy, perceived good reputation, perceived willingness to customise and personal trust disposition (Chen and Barnes, 2007); shared values, communication, opportunistic behaviour, privacy and security (Mukherjee and Nath, 2007); and perceived security control, perceived integrity, perceived competence, experience and age had significant impacts on trust in Internet shopping (Connolly and Bannister, 2008). Some other studies were reviewed (section 3.6) and noted that trust was determined by calculative-based, institution-based structural assurances, institution-based situational normality and knowledge-based familiarity (Gefen et al., 2003b); reputation, satisfaction with past transaction and frequency of use (Pavlou, 2003); e-interactivity, web atmospheric and navigation (Dennis et al., 2009). In cross-culture research (section 3.7), trust has been determined by perceived size and perceived reputation (Jarvenpaa et al., 1999), privacy dimensions (notice, access, choice and security) (Liu et al., 2004), trust processes (familiarity and predictability) and trust beliefs (ability, integrity and benevolence) (Gefen and Heart, 2006), navigation, visual, and information designs (Cyr, 2008), firm reputation (Jin et al., 2008), transference-based trust (third-party seal and referral) and self-perception-based trust (security protection, privacy concern and system reliability) (Kim, 2008), institution-based trust, uncertainty avoidance culture dimension, perceived ease of use, navigational structure and visual appeal (Vance et al., 2008) and perceived manageability and subjective norms (Alsajjan and Dennis, 2010). In the Internet banking context (section 3.8), trust was determined by perceived ease of use and usefulness (Suh and Han, 2002), shared value (security and privacy), communication and opportunistic behaviour (Mukherjee and Nath, 2003), authentication, non-repudiation, confidentiality, privacy protection and data integrity (Suh and Han, 2003), service quality (Herington and Weaven, 2007), propensity to trust and Internet familiarity (Grabner-Kräuter and Faullant, 2008) and traditional bank attributes (size and reputation), attributes of the e-banking website (perceived security, privacy, usefulness and ease of use) and traditional service quality (reliability, assurance, responsiveness, tangibles, and empathy) (Yap et al., 2010).

From the above studies, the relationship between privacy and trust has been tested in an online trust context by (Chen and Barnes, 2007, Mukherjee and Nath, 2007), in cross-culture between USA and Taiwan (Liu et al., 2004), between USA and South Korea (Kim, 2008), in the context of Internet banking (Mukherjee and Nath, 2003, Suh and Han, 2003, Yap et al.,

2010). Accordingly, this current study would argue that there may still be a need to examine this relationship, particularly across cultures, as few studies have tested this relationship between countries such as USA and Taiwan, and USA and South Korea. More specifically, and to the best of my knowledge, no previous study has examined this relationship between KSA and the UK in one model and time. Examining how privacy would affect trust perceptions across the two countries would fill this gap and contribute to the previous literature.

In terms of the relationship between security perception and trust, a number of previous studies have examined the relationship in the online trust context (Chen and Barnes, 2007, Mukherjee and Nath, 2007, Connolly and Bannister, 2008), in a cross-culture research (Liu et al., 2004, Kim, 2008) across USA and Taiwan and USA and South Korea respectively, and in the Internet banking context (Mukherjee and Nath, 2003, Yap et al., 2010). It can be noted that there are few studies that have examined the relationship across culture and no research has examined the relationship in the context of Internet banking across KSA and the UK. Accordingly, the current research attempts to fill this theoretical gap so that a significant contribution can be provided to the pervious literature in the online marketing area.

In addition, the effect of marketing communication on trust perception was examined in the context of traditional marketing (Morgan and Hunt, 1994, Geyskens et al., 1998, Selnes, 1998, Adamson et al., 2003), in the online trust context (Mukherjee and Nath, 2007) and in the Internet banking context (Mukherjee and Nath, 2003). It can be noted that few studies have examined this relationship and no cross culture studies were found that examined the relationship. Accordingly, the current research would fill this gap in knowledge by examining the effect of communication and trust perception across KSA and the UK.

According to the above literature, it can be noted that a few studies that examined the relationship between reputation and trust in different context and proved that it had significant influence on trust perceptions. For example, it has been examined in the tradition marketing trust (Adamson et al., 2003), online trust context (Chen and Barnes, 2007), technology acceptance context (Pavlou, 2003), cross-culture studies (Jarvenpaa et al., (1999) across Australia, Israel and Finland and (Jin et al., (2008) across USA and South Korea, and in the online banking context (Yap et al., 2010). It can also be noted that this relationship has

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not been examined in the context of cross-culture study across KSA and the UK so that the current study attempts to fill this gap and to contribute to the existing literature.

Finally, it was proved that users' or individuals' experiences in using self-services and their familiarity with online services had significant influence on trust perception. According to the previous literature, the influence of users' experience and their familiarity with Internet and online services has been examined in the online trust context (Gefen, 2000, Corbitt et al., 2003, Connolly and Bannister, 2008), in the technology acceptance context (Gefen et al., 2003b), in cross-culture research (Gefen and Heart, 2006) across USA and Israel, and in the Internet banking context (Grabner-Kräuter and Faullant, 2008). Accordingly, no previous study has been found that examined the relationship between customers' experience and trust perception, so the current study attempts to fill this gap by investigating this relationship across KSA and the UK. The full discussion of these relationships in the proposed model will be provided in the next chapter.

3.3. Communication Perceptive

One of the most significant factors that influence the relationship between different parties is the performance and effectiveness of communication. The more successful communication is between, for example customers and their service and product suppliers, the more confidence can grow and a long relationship can be established between them. In this section, the study will highlight the communication so that a definition of the context of Internet banking can be identified. In addition, it will provide an overview of the previous studies that have examined communication empirically or conceptually so that the antecedents and consequences can be identified and the theoretical gap can be illustrated. Accordingly, this section consists of three sections. The first section (3.3.1) will highlight the definition of communication, while the second section (3.3.2) provides an overview of the previous studies. Finally, the third section (3.3.3) highlights the theoretical gap.

3.3.1 Communication Definition

Communication is an important construct for building relationship marketing. Its importance has increased in the last few decades because of the high competition in marketplaces. The numbers of companies that provide similar services has increased so that, in order keep position in the marketplace and provide competitive advantages, companies need to build

successful communication with their existing and potential customers: that is, communication that provides timely and quality information that meets customers requirement. From the offline marketing context, Gross (1968, p. 37) defined marketing channel communication as a "set of procedures for exchanging information so that marketing channel members may operate in union". This definition has been cited by Bialaszewski and Giallourakis (1985) to examine the relationship between communication and trust in the context of B2B relations. Morgan and Hunt (1994) introduced the Commitment-Trust Theory of relationship marketing and stated that shared values among different parties, communication and opportunistic behaviour are the main factors that influence trust perception. According to Anderson and Narus (1990, p. 44), Morgan and Hunt (1994, p. 25) identify communication as "the formal, as well as informal, sharing of meaningful and timely information between firms". In addition, Selnes (1998) developed a model to address the role of satisfaction and trust in enhancing the relationship between a supplier and a buyer in the context of offline marketing. Selnes (1998, p. 313) identified communication as " the ability of the supplier to provide timely and trustworthy information". From the B2B perspective, Ruyter et al. (2001) stated that communication can be either formal and informal sharing of information via frequent two-way interchanges.

In the banking sector, Adamson et al. (2003) explore how small financial institutions in corporate business use a relationship market paradigm to achieve competitive advantage in the market of Hong Kong. They suggested three conceptual dimensions of relationship marketing; namely the economic, strategic and behavioural dimensions. In terms of the strategic dimension of relationship marketing, three areas that should be focused on are value outcomes, the form of interaction process and the planned communication (Adamson et al., 2003). Accordingly, it can be said that communication is a strategic tool that can be used to enhance relationship marketing. In the context of internet banking, and based on Anderson and Narus (1990), Mukherjee and Nath (2003, p. 8) suggest that communication could be defined as "the formal as well as informal sharing of meaningful and timely information".

In the online business setting, interactivity with a website is a significant indication of customers loyalty; the more interaction with a website, the more customers may gain satisfaction and then loyalty. Interactivity has been examined empirically in online settings to understand customer loyalty (Srinivasan et al., 2002, Shankar et al., 2003). Srinivasan et al. (2002) examined factors that influence e-loyalty in B2C relationships. They stated that

contact interactivity is one of the important factors that influence customer loyalty in the online environment and identified it as "the dynamic nature of the engagement that occurs between an e-retailer and its customers through its website" (Srinivasan et al., 2002, p. 42). They described contact interactivity as the availability and effectiveness of customer support tools on a website and the degree to which two-way communication with customers is facilitated. Shankar et al. (2003, p. 159) identified interactivity as "the ability of websites to dynamically generate outputs based on customer queries and searches". Some researchers, such as Gummerus et al. (2004) and Ribbink et al. (2004), indentified responsiveness as an important factor effecting loyalty. Gummerus et al. (2004, p. 177) defined responsiveness as "the extent to which customer feedback is taken into consideration, and the promptness of reply". Responsiveness has been also examined by Ribbink et al. (2004), identifying the relationship between responsiveness and e-satisfaction. They measured responsiveness by three measurement items which focused on how easy it is to contact with the company, the feedback provided and how quickly the company replies to customers' requests. From the B2C perspective, Song and Zinkhan (2008) stated that control (internally based efficacy), responsiveness (externally based system efficacy) and communication are three main dimensions of perceived interactivity between online business companies and their customers.

According to the above stated definitions of communications, it can be noted that in order to provide effective communication, companies should provide timely communication, where customer and companies exchange formal and informal information and trustworthiness can be provided (Gross, 1968, Bialaszewski and Giallourakis, 1985, Anderson and Narus, 1990, Selnes, 1998). From the online business perspective, including online banking, communication was investigated to indicate timely and quality information and communication between banks and their existing customers (Mukherjee and Nath, 2003). In addition, some other researchers, such as Srinivasan et al. (2002) and Shankar et al. (2003), examined communication as interactivity between online firms and customers, and providing online customers support, while others stated that responsiveness as the two-way communication and where customers' feedback and easy and quickly contacts can be effectively provided (Gummerus et al., 2004, Ribbink et al., 2004). According to the previous communication definitions specifically based on Mukherjee and Nath (2003), the current study identifies communication as the way banks provide timely and quality information, where customers can provide or receive feedback and get quick responses on their enquiries.

Thus, the communication construct is considered as multidimensional, consisting of quality of information, speed of response and openness.

After the definition of communication, the following section will provide an overview regarding the studies that were performed to examine the influence of communication between firms from both the offline and online perspectives in the B2B and B2C relationships. The aim of this section is to provide an insight into the consequences of communication.

3.3.2 Communication an Overview of the Previous Studies

Communication has been examined from different point of views; for example, from offline and online views in different contexts, such as the organisational context, banking context or general shopping context. This section will provide an overview regarding these studies.

In the offline context, a number of studies examined communication in the B2B relation (Bialaszewski and Giallourakis, 1985, Ruyter et al., 2001, Joshi, 2009). Bialaszewski and Giallourakis (1985) examined the relationship between communication and trust, more specifically how the communication techniques that are used by the channel manager can be developed. Bialaszewski and Giallourakis (1985) found that the less satisfied distributors are with channel manager communication, the lower trust will be. In addition, Ruyter et al. (2001) developed and examined a conceptual model in the B2B context to investigate factors influencing loyalty intention and proposed that relationship characteristics (account support, communication from supplier to customer, co-operation and harmonisation of conflict) will have significant influence on relationship building and, ultimately, on loyalty intention. Ruyter et al. (2001) found that relationship characteristics had significant influence on trust and effective commitment. In Canada, Joshi (2009) proposed a model to examine empirically the influence of manufacturers' collaborative communication, including frequency, reciprocal feedback, formality and rationality on continuous supplier performance improvement. Joshi (2009) found that collaborative communication had a positive and significant influence on supplier performance.

In the financial sector, it was stated that building market relationships with customers is an important issue for customer retention (Farquhar, 2003, Jones and Farquhar, 2003, Farquhar, 2004, Farquhar, 2005, Farquhar and Panther, 2008, Farquhar et al., 2008). Farquhar (2003)

claimed that power distribution between partners, where participants share information, listen to each other and interact over a period of time, will build successful relationships. In the UK retail banking industry, Jones and Farquhar (2003) performed a quantitative study to examine how customer loyalty can be influenced by contact management in the B2C relationship. Jones and Farquhar (2003) stated that contact management is a significant strategic tool which can be used to enhance customer loyalty because companies will be able to provide marketing communication more efficiently and effectively in one-to-one contact with customers. In the Hong Kong market, Adamson et al. (2003) proposed and examined a model to explore corporate customers of their banks. They proposed that effective communication and a bank's negative reputation will have significant influence on trust and long term orientation, customer-centred strategy and relationship benefits proposed to impact commitment. Adamson et al. (2003) found significant influence of a banks' effective communication with customers and corporate customers' trust. In addition, Farquhar (2004) supported the building of one-to-one relationships between stakeholders in a network, so that responding to and understanding customers requirements can be effectively met. From managers and staff perspectives, Farquhar (2005) reports empirical research into customer retention in traditional retailers of financial services in the UK market. Farquhar (2005) found that managing customer information was very important to managers and staff, but the difficulty was managing information that was not understood by branch staff so that loyal and profitable customers could not be identified. It was stressed that customer relationship management (CRM) becomes a significant marketing feature, especially with the increasing power of information technology (Farquhar and Panther, 2008). Farquhar et al. (2008) highlighted the importance of managing electronic banking channels to develop customers loyalty and stated that providing different banking service channels (Internet, branches and telephone) will give more options from which customers can choose to match their preferences.

From the offline marketing context, Morgan and Hunt (1994) introduced the Commitment-Trust theory to examine marketing in the B2B relationship. Morgan and Hunt (1994) developed a model, proposing that communication is one of the trust's antecedent for building the relationship, for example, between companies and their customers. They found that trust was significantly influenced by communication, so that cooperation and functional conflict were increased and uncertainty perception was decreased. In B2B relationships, Geyskens et al. (1998) performed a meta-analysis and developed a conceptual model. They

proposed that communication acts as antecedent of trust that ultimately influences long-term orientation and satisfaction. All proposed relationships were supported. From B2C relationship, Selnes (1998) developed a model to examine the relationship between trust and satisfaction antecedents, and their consequences between a supplier and a buyer in the Norwegian market. Selnes (1998) proposed that a buyer's trust and satisfaction is enhanced by a supplier's competence, communication, commitment and conflict, and the consequences of trust and satisfaction will be enhancement and continuity relationships. Selnes (1998) found the influence of communication on trust and satisfaction positively and significantly supported. In the Australia market, Wong and Sohal (2002) examined the influence of trust and commitment on salesperson and store relationship level on relationship quality, finding that salesperson and store trust and commitment had significant influence on building quality relationship with customers. Customer relationship management (CRM) has been highlighted by Mascarenhas et al. (2006). They stated that CRM is the relationship that customers have with the firm, store or individual sales associates. It has significant influence on total customer experiences and loyalty (Mascarenhas et al., 2006).

In the context of Internet banking, communication was one of the significant construct influences on banks and customers behavior. It was the focus of many researchers (Nielsen, 2002, Bradley and Stewart, 2003b, Devlin and Yeung, 2003, Mukherjee and Nath, 2003, Joseph et al., 2005, Shah and Siddiqui, 2006, Walker and Johnson, 2006, Herington and Weaven, 2007, Kuisma et al., 2007, Sayar and Wolfe, 2007). Nielsen (2002) developed a model to examine the antecedents of Internet banking adoption and their influence on relationship marketing performance across four countries, namely Denmark, Finland, Norway and Sweden. Nielsen (2002) found that market orientation and inter-firm cooperation were one of the Internet banking adoption antecedents that focused on internal and external resources to facilitate the adoption of Internet banking. From the banking perspective, Bradley and Stewart (2003b) investigated the factors that drive and inhibit adoption of Internet banking in Northern Ireland, the Republic of Ireland and the United States. They found that ability to deal with customers and communication by other industry members were the significant factors influencing online banking. Devlin and Yeung (2003) examined factors that explained why a number of customers switched from traditional methods of performing their banking activities to Internet banking. They found that customers who were satisfied with their banking services and responded to their needs without face-to-face interaction were more likely to switch to Internet banking. In India, Mukherjee and Nath (2003) developed a

model based on the Commitment-Trust theory of Morgan and Hunt (1994) to examine customer trust in the context of Internet banking and proposed that communication will positively and significantly influence customer trust. They found that customer trust was influenced by communication. In the UK, Joseph et al. (2005) emphasized the relationship between communication and trust, stating that because of the changes that have been made in the banking industry there was increased pressure on banks to improve their services and communications channels to meet customers' expectations. In addition, Shah and Siddiqui (2006) highlighted that influence of business interaction with customers and adoption of Internet banking, stating that when customers interact with their banks their data are more likely to be gathered, thus allowing data to be analyzed and quality services via the Internet can be provided effectively. Walker and Johnson (2006) found a significant and negative relationship between personal contact and Internet banking usage. Herington and Weaven (2007) found that the relationships between banks and customers, via online services, were strongly related to efficiency and user friendliness component factors of online service quality. Kuisma et al. (2007) also found that lack of information, lack of computer access, lack of internet connection and lack of an official receipt were significant reasons for not being Internet banking users.

In the context of organisation system usage, Gefen and Keil (1998) developed a model based on the Technology Acceptance Model (Davis, 1989, Davis et al., 1989) to examine the influence of perceived developer responsiveness on users' evaluation of perceived usefulness, ease of use and self-reported use. They argued that social exchange can play a significant role for software development because of a developer's responsiveness to users' requirements and feedback of a particular system. The more social and communication exchange between the developers and users, the more users perceived the system easy to use and useful. Gefen and Keil (1998) found a positive and significant relationship between perceived responsiveness and perceived ease of use and usefulness.

3.3.3   Communication Theoretical Gap

According to the above studies, communication has been examined in the online and offline contexts. It also contributed to an explanation of users' behaviour. It was examined in the offline context, and linked conceptually and examined empirically in the offline market context to customers' trust perception (Morgan and Hunt, 1994, Geyskens et al., 1998, Selnes, 1998, Wong and Sohal, 2002). In the context of Internet banking, it was conceptually

linked to trust and empirically examined (Mukherjee and Nath, 2003, Joseph et al., 2005) and services quality (Herington and Weaven, 2007). Communication also was found to be a significant factor influencing customers to accept or reject online banking (Nielsen, 2002, Bradley and Stewart, 2003b, Devlin and Yeung, 2003, Shah and Siddiqui, 2006, Walker and Johnson, 2006, Kuisma et al., 2007). The current study would argue that there is still a lack of study in the online context. In addition from a cultural perspective, no research was found to examine and validate the relationship between communication and trust across different cultures. The current study attempts to fill this significant gap and contribute to the existing literature in the Internet banking context.

3.4. Customers' Experience

In business today, customers' experience is the significant factor that influences customers' behaviour to engage in a particular relationship. It was argued that focusing on physical aspects of products and services, such as quantity, quality, functionality, availability, accessibility, delivery, price and customer support, was no longer a successful strategy for gaining competitive advantages in marketplace or competing against others competitors (Mascarenhas et al., 2006). Thus, companies should find other strategies to compete for competitive advantage that cannot be provided by other competitors. Companies in both online and offline contexts focus on how customers' experience can be built, developed, how it can be influenced and what are its consequences. Accordingly, this section attempts to highlight the definition of customers' experience. This will be followed by an overview of the studies that have been carried out.

3.4.1   Customers' Experience Definition

In order to understand customers' experience, it is important to identify the meaning of customers' experience so that it will be easy to identify its scope and dimensions. For example, Mascarenhas et al. (2006, p. 399) provide a workable definition of total customers' experience, stating that " it is a totally positive, engaging, enduring, and socially fulfilling physical and emotional customer experience across all major levels of one's consumption chain, and one that is brought about by a distinct market offering that calls for active interaction between consumers and providers". Verhoef et al. (2009) defined customer experience as "holistic in nature and involve[ing] the customer's cognitive, affective, emotional, social and physical responses to the retailer. This experience is created not only by those factors that the retailer can control (e.g. service interface, retail atmosphere, assortment,

price) but also by factors outside the retailer's control (e.g. influence of others, purpose of shopping)" (Verhoef et al. 2009, p. 32). The customer experience definition of Verhoef et al. was cited by Grewal et al. (2009) to examine how customer experiences and their behaviors may be influenced by retail environment macro factors. Based on TAM2, Abbasi et al. (2011) examined customers' experience in the organizational context and identified it as "individuals' involvement/action in something over a period of time" (Abbasi et al., 2011, p. 37).

In the online context, a number of studies examined customers' familiarity with a specific objective. They used familiarity as a construct that reflects individuals' experience that is accumulated over time by previous online interactions. For example, familiarity was defined as "an understanding, often based on previous interactions, experiences and learning of what, why, where and when others do and what they do" (Gefen, 2000, p. 28). Guriting and Ndubisi (2006, p. 8) identified users' prior computing experiences in the context of Internet banking as "users' previous experience with using computers in general". In the online banking context, Grabner-Kräuter and Faullant (2008, p. 489) identified familiarity as "the number of product-related experiences that have been accumulated by the consumer". In the online shopping context, Gefen et al.(2003b, p. 63) identified customer familiarity with an e-vender to reflect their experience as "experience with the what, who, how, and when of what is happening".

Based on the previous definition of customers' experience (Mascarenhas et al., 2006, Abbasi et al., 2011, Gefen, 2000), the current study defines customers' experience as being "a total positive and familiar engagement via Internet banking that fulfills physical and emotional customer experience across all major level of the consumption chain".

3.4.2 Customer Experience Prior Studies

Previous studies in customer experience focused on different relationship, such as B2C and B2B relationships (Mascarenhas et al., 2006, Grewal et al., 2009, Abbasi et al., 2011). Those studies examined customer experience in the offline context. Mascarenhas et al. (2006) examined total customers experience conceptually and its relation to lasting customer loyalty. As stated above, they argued that customer experience in the last decade became an important asset for companies looking to provide competitive advantage and be different from others in the market. Grewal et al. (2009) developed a conceptual model to examine how macro factors

in the retail environment, such as psychographic variables, low price products and compensation offerings, can shape customer experiences and behaviour. They proposed that customers' experience will be affected by firm controlled factors, such as promotion, price, merchandise, supply chain and location, and macro factors as stated above. Meanwhile, Abbasi et al. (2011) extended the Technology Acceptance Model and examined empirically the model in the context of higher education in Pakistan. They investigated how the relationship between perceived usefulness and behavioural intention; perceived usefulness and behavioural usage; perceived ease of use and behavioural intention; and subjective norm and behavioural intention are moderated by experience. Abbasi et al. (2011) found that only the relationships between perceived usefulness and behavioural usage, and perceived ease of use and perceived usefulness were moderated by individuals experience.

In the online marketing context, customer experience was examined (Gefen et al., 2003a, Boyer and Hult, 2006, Puccinelli et al., 2009, Hong and Sternthal, 2010, Sun et al., 2010). Gefen et al. (2003a) developed and examined a model in order to compare the relative importance of customers trust towards e-vender (amazon.com) to TAM constructs (perceived ease of use and usefulness), between new (potential) customers and experienced (repeat) ones. They found that potential customers' behavioural intention was significantly influenced by trust perception and familiarity with the website but not by perceived usefulness, while it was affected significantly by perceived usefulness, trust and familiarity in the case of experienced customers. They also found that potential and repeat customers' trust perception was impacted by familiarity and their disposition to trust. In the B2C relationship, Boyer and Hult (2006) proposed a model which was examined empirically across US, the UK and Canada to determine customer experience in the growing market for groceries and foodstuffs ordered via the Internet and telephone delivery picking methods. They found that customers experience had significant influence on behaviour intention for repeat and new customers. Puccinelli et al. (2009) developed a consumer decision process and investigated conceptually how customer experience can be managed. They argued that when marketers understand how customers make their decision towards a particular service or product, customers' experience can be successfully managed. They stated that customers' decisions went through five stages: need recognition, information search, evaluation, purchase and post-purchase. At each of these stages, customers decision will be influenced by their goals, schema and information processing, memory, involvement, attitudes, affect, atmospherics attributions and choices. In the USA market, Hong and Sternthal (2010) examined under which conditions consumers'

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prior knowledge influence the subjective experience that arose from their judgment and decision-making process. They found that customers' experience changes when prior knowledge was either limited or extensive. Product evaluation and information processing and style changed across customers with limited or extensive prior knowledge. Sun et al. (2010) developed a theoretical model to examine how perceived ease of use in prior e-commerce experiences affected by the motivational factors (general self-efficacy, technological innovativeness and consumer self-determination and found all the proposed relationships were supported.

A number of studies have examined how prior experience with service influence customer loyalty (Shankar et al., 2003) and how quality of prior experience with the online seller and quality of prior experience with e-commerce influence loyalty perception towards the online seller and e-commerce (Pizzutti and Fernandes, 2010). Shankar et al. (2003) found significant influence of prior experience on overall satisfaction and loyalty. While, Pizzutti and Fernandes (2010) examined prior customer experience as a moderator for Internet shopping, in general, and customer interaction with a particular online seller. They found that customers' prior experience with a specific online seller moderated the relationship between satisfaction with complaint handling and trust, while the relationship was not moderated by quality of prior experience with e-commerce. This indicated that when customers with prior positive experiences did not have any complaints about poor handling, they tend to excuse the company (Pizzutti and Fernandes, 2010). In the online trust literature, Gefen (2000) developed a model to examine how the importance of trust in the context of e-commerce varies with different tasks and examines the relationship between familiarity and inquiry and purchase tasks. Gefen (2000) used familiarity with a particular website (amazon.com) to reflect customers' experiences. The influence of familiarity on inquiry and purchase tasks were supported. McKnight et al. (2002) validated measures for a multidisciplinary and multidimensional model of trust in e-commerce in the context of USA and proposed that general web experience will have significant influence on institution-based trust. They found that web experience contributed significantly to institution-based trust. The importance of customers' familiarity with e-commerce for building trust and reducing risk perception was highlighted (So and Sculli, 2002). Harridge-March (2006) explored the role of trust and risk to convert customers from Internet browsers to potential online purchasers. They argued that over time, customers are more likely to improve their experience through their previous interactions and their accumulated information about a particular e-vendor so that the

information will be used to evaluate that e-vendor. As a result, customers trust is more likely to be built.

Customer experience has been the focus in the context of Internet banking (Ricard et al., 2001, Thornton and White, 2001, Nielsen, 2002, Rotchanakitummuai and Speece, 2003, Eriksson et al., 2005, Laforet and Li, 2005, Corrocher, 2006, Gan et al., 2006, Guriting and Ndubisi, 2006, Sayar and Wolfe, 2007, Grabner-Kräuter and Faullant, 2008, Johns and Perrott, 2008, Li and Lai, 2011). Tan and Teo (2000) found that prior experience with the Internet was one of the most influential factors that determined a person's intention to adopt Internet banking. Ricard et al. (2001) examined the influence of customers' use of banking self-services on their interest in a relationship approach and proposed that relationship duration, measured by the numbers of years the customer has been dealing with the bank and frequency of use measured by number of times per month the customers used credit cards, automated teller machines, point-of-sale terminals and home banking. They found that the more customers used self-services, the more their accumulated experience improved. This had significant influence on relationships with their banks. In Australia, Thornton and White (2001) examined whether customers' knowledge has any influence on their attitudes towards financial distribution channels, such as automated teller machines, point of sale, credit cards and Internet banking, and found that customers' attitude towards electronic services is positively and significantly influenced by customers' knowledge. Nielsen (2002) found a significant impact of users' IT knowledge on Internet banking adoption across Denmark, Finland, Norway and Sweden. In the B2B relationship, Rotchanakitummuai and Speece (2003) examined factors that influence corporate customers to use Internet banking, provided by Thai banks in Thailand, and found that lack of knowledge was the most significant factor influencing corporate customers to being non-Internet banking users. Eriksson et al. (2005) highlighted the relationship between internet banking usage and customers' experience, stating that customers' experience is an ambiguous concept because it refers to the experience of the services content and the delivery distribution channel. In addition, they claimed that the more customers who have experience of trial and error , the more their learning might be improved. Laforet and Li (2005) examined the demographic characteristics of electronic banking users and non-users. More specifically, they examined how users and non-users' attitudes are affected by prior computer/new technology experience and prior personal banking experience, finding that there was significant difference between users and non-users of Internet banking. The users tend to have more previous computer experience than non-

users. In Italia, Corrocher (2006) investigated the determinants of Internet banking adoption by Italian retail banks, and the relationship between experience and technology adoption was highlighted. Corrocher (2006) stated that the adoption of ICT-based innovations might be explained by the degree of information technology literacy and previous experience. Gan et al. (2006) developed a model to examine what factors influence customers' choices between electronic and non-electronic banking in New Zealand. They found that individuals' experience and knowledge had significant influence on Internet banking adoption between users and non-users of Internet banking. The Technology Acceptance Model was extended by Guriting and Ndubisi (2006) and it proposed that prior computing experiences and computer self-efficacy would contribute significantly on behavioural intention mediated by perceived usefulness and ease of use. They found that perceived ease of use and usefulness would not mediate the influence of customers' experience on behavioural intention, and no significant influences from prior computing experience on perceived usefulness and ease of use were found. McKechnie et al. (2006) examined whether customers' experiences with technology and purchases have any significant influence on perceived ease of use and usefulness. Empirically, the influence of experience with technology and purchase experience were supported.

The importance of users' prior Internet banking experience was stated by Sayar and Wolfe (2007) as an important construct determined customers' behaviour towards Internet banking. Grabner-Kräuter and Faullant (2008) found significant influence of Internet familiarity on Internet trust in the context on Internet banking in Austria. They used two observed variables to measure familiarity with the Internet: namely the length of time using the Internet and how often the Internet was used. Johns and Perrott (2008) developed a conceptual model to relationship marketing theory in the context of internet banking in the B2B relationship. They proposed that customers' experience would have a significant influence on relationship marketing. Li and Lai (2011) examined the influence of demographic differences on the acceptance of internet banking in Hong Kong, and found that users with high IT competence find internet banking easy to use, but no influence was found between IT competence and usefulness, attitude and behaviour intention.

The Technology Acceptance Model was applied to examine users' acceptance toward systems acceptance and usage across experienced and non-experienced users (Taylor and Todd, 1995a, Szajna, 1996, Jackson et al., 1997, Agarwal and Prasad, 1999, Dishaw and

Strong, 1999, Venkatesh and Morris, 2000, Gefen et al., 2003b, McKechnie et al., 2006, Hernandez et al., 2009). Taylor and Todd (1995a) developed a model based on TAM to predict experienced and inexperienced users. They found that the relationships from ease of use to usefulness, perceived usefulness to attitude, subjective norms and perceived behaviour control to behaviour intention, and between behaviour intention and actual behaviour were significant in both experienced and inexperienced users, while the relationships between ease of use to attitude and perceived behaviour control and actual behaviour were significant in the case of inexperienced users and not significant for experienced users. Szajna (1996) examined TAM, carrying out a longitudinal study to examine the TAM model, both pre-implementation and after 13 weeks (post-implementation). Szajna (1996) found that the relationship between perceived ease of use and usefulness was insignificant in pre-implementation version, while it was significant in the post-implementation version. In addition, the relationship between behavioural intention and actual usage was stronger in the post-implementation version. This might be because when users gain experience with the system, their intention to use the system in the future will be stronger and predicted their actual usage (Szajna, 1996). Jackson et al. (1997) found that when users had previous usage, where they gained information and knowledge or they developed their learning and experience, it significantly influenced their behavioral intention. However, they also found that there was no significant influence of prior usage on usefulness perception of the system. Agarwal and Prasad (1999) examined whether perceived ease of use and usefulness would be influenced by prior or similar experience, finding that similar experience associated had significant influence on ease of use beliefs. Dishaw and Strong (1999) integrated task technology fit and TAM, and found that system utilization was significantly associated with users experiences with IT. In addition, when task technology fit and TAM were integrated, they found that perceived ease of use was influenced by tool functionality and users' experiences, and tool experience was associated with perceived usefulness. Venkatesh and Morris (2000) found that users' experiences moderated the relationship between perceived usefulness and perceived ease of use on behavioural intention which indicated that, when users gain experience over time, they were more likely to improve the system usefulness and ease of use so that their behavioural intention to use the system will be stronger. However, they found that, with increased experience, perceived usefulness was not influenced by perceived ease of use. Venkatesh and Davis (2000) extended the Technology Acceptance Model and examined the moderating role of experience on the relationship between subjective norm on perceived usefulness and intention to use. They found that when users'

experience increased, the influence of subjective norm on perceived usefulness and intention to use decreased. Gefen et al. (2003b) examined the influence of knowledge-based familiarity with an e-vendor on customers' trust, arguing that customer trust would be developed when customers have greater contact with an e-vendor over time as more trust-relevant knowledge is accumulated. It was found that familiarity with an e-vendor affected trust only through perceived ease of use (Gefen et al., 2003b). Based on the Technology Acceptance Model, Venkatesh and Bala (2008) developed Technology Acceptance Model 3 and examined the moderating role of experience on the relationships between computer anxiety and perceived ease of use, and between perceived ease of use and perceived usefulness and behavioral intention. They found that the significance of experience was confirmed. Hernandez et al. (2009) examined a model in the context of online shopping across experienced and inexperienced customers. They found that with increase customers' experience, perceived ease of use loses its importance because, when customers do more online transactions, the more their experience is improved so their intention or actual behaviour will depend less on their perception of the ease of use.

A few studies that focused and examined customers' experiences from the culture perspective (Gefen and Heart, 2006, Al-Gahtani et al., 2007). For example, Gefen and Heart (2006) examined the relationship between customers' familiarity with an e-vendor, and predictability across US and Israel, finding that familiarity had a significant effect on trust beliefs through its influence on predictability and it has a significant influence on making inquiries and purchase intentions in the US. They also found that making inquiries and purchase intentions were affected by customers' familiarity through predictability. In Saudi Arabia, Al-Gahtani et al. (2007) applied and attempted to validate the Unified Theory of Acceptance and Use of Technology (UTAUT). They examined the moderating role of users' experience on the relationships between effort expectancy and subjective norm on behavioral intention, and between facilitating conditions and use behavior. They found that user experience has a significant and positive moderating role on the relationships between effort expectancy and subjective norm on behavioral intention, and positive interaction between facilitating conditions and use behavior.

3.4.3 Customers' Experience's Theoretical Gap

According to the above stated studies, it can be noted that individuals' experience is one of the most influential factors determining their behavior to accept or reject IT applications. It is

also important to help explain why some factors, such as subjective norm, lost their significant influence on users' acceptance of technology. It can also be noted that individuals' experience was studied and treated in different ways. For example, some studies examined it as a main construct that has a direct influence on others constructs in, for example, online experience context (Sun et al., (2010); customers' loyalty context (Shankar et al., 2003, Pizzutti and Fernandes, 2010); online customers' trust (Gefen, 2000, McKnight et al., 2002); Internet banking context (Ricard et al., 2001, Thornton and White, 2001, Nielsen, 2002, Corrocher, 2006, Gan et al., 2006, Guriting and Ndubisi, 2006, Grabner-Kräuter and Faullant, 2008, Johns and Perrott, 2008, Li and Lai, 2011); in the context of technology acceptance (Jackson et al., 1997, Agarwal and Prasad, 1999, Dishaw and Strong, 1999, Venkatesh et al., 2002, Gefen et al., 2003b, Lu et al., 2003, McKechnie et al., 2006), and finally from a cross culture context (Gefen and Heart, 2006).

Some studies examined their developed model on experienced and inexperienced users, such as Gefen et al. (2003a) and Harridge-March (2006) in the context of online trust; Rotchanakitummuai and Speece (2003), Laforet and Li (2005) in the context of Internet banking; and finally Taylor and Todd (1995a), Szajna (1996) in the context of technology acceptance. Another stream of research examined users' experience as a moderator that explained how direct relationships can be changed with changing users' experiences in different contexts, such as in the context of online shopping (Boyer and Hult,(2006) and technology acceptance (Venkatesh and Morris, 2000, Venkatesh and Davis, 2000, Venkatesh et al., 2003, Al-Gahtani et al., 2007, Venkatesh and Bala, 2008). A number of studies examined how customers' experiences influence their decision process (Puccinelli et al., 2009)

It can also be noted that the influence of customers' experience on their trust perception was examined and supported (Gefen et al., 2003a, Pizzutti and Fernandes, 2010, Gefen, 2000, McKnight et al., 2002, Grabner-Kräuter and Faullant, 2008, Gefen et al., 2003b, Gefen and Heart, 2006). Accordingly, it can be concluded that the idea that customers' experience would influence customers' perception of trust in a cross culture context in the Internet banking environment was not examined. Thus, the current study attempts to examine this relationship and determine whether it can be generalized across different cultures (in the current study, across the UK and KSA).

3.5. Corporate Reputation

Companies' reputation in the market becomes one of the most important assets that companies have to provide competitive advantages over other competitors. Similar products or services can be offered or copied by competitors, but companies' reputations cannot be offered. Reputation is difficult to be built and easy to lose. This might be because building reputation in the market needs long-term efforts that enable customers to contact and carry out business with companies so that their experiences can be improved and opinions of companies can be formed. Fombrun (1990) stated that corporate reputation is a wide concept that has a number of signals, such as how a firm's products, jobs, strategies and prospects compare to those of competing firms. This may indicate that the assessment of a firm's reputation includes more than one aspect of the firms. This might include the firm's past and recent general performance, financial capabilities, services and products quality, social responsibilities, and future strategies. In this section, the definitions of corporate reputation will be highlighted. Then, the section will provide an overview of the previous studies so that factors that contribute to corporate reputation can be identified. In addition, the consequences of corporate reputation will be understood.

3.5.1   Corporate Reputation Definition

Corporate reputation is a complex concept and hard to assess because many aspects of the firm participate in the concept. Reputation can be considered at different levels. Chernaton (1999) provides a clear explanation of the concepts of corporate brand. It was stated that there was a movement from individual line brand to corporate branding because of the cost that was associated with the individual line brand so that the emphasis is on the corporate brand (Chernaton, 1999). In addition, because markets are moving from an industrial age, where tangible assets are more important, to an information age, where ideas, knowledge and information are more important. Moreover, the corporate brand is more significant as it builds trust such that consumers are more likely to accept the firms' promises about other offerings (Chernaton, 1999). Fombrun (1996, p. 37) identified reputation that emphasized the affective nature of the construct, such as "the net affective of emotional reaction…to the company's name". This definition was also cited by Davies et al. (2004) to develop a measurement scale for organisation reputation and provide the definition of corporate character as "how stakeholders distinguishes an organization, expressed in terms of human characteristics" (Davies et al., 2004, p. 127). Bromley (2001, p. 317) carried out a conceptual study and identified reputation as a "distribution of opinions (the overt expression of a

collective image) about a person or other entity, in a stakeholder or interest group". Corporate reputation was also defined as a concept that "…combines everything that is knowable about a firm. As an empirical representation, it is a judgement of the firm made by a set of audiences on the basis of perceptions and assessment" (Schultz et al., 2001, p. 24). Silva and Alwi (2008) stated that different terminologies, such as company or store image, personality and identity, were used to indicate corporate brand or reputation. Sheehan and Stabell (2010, p. 199) defined corporate reputation as "the external stakeholders' consensual ranking of a firm's track record".

In the online context, corporate reputation was defined as "the extent to which customers in the industry believe that the firm is honest and concerned about them" (Lee and Turban, 2001, p. 78). According to Merriam-Webster's Collegiate Dictionary, Malaga (2001, p. 403) defined reputation as "overall quality or character as seen or judged by people in general". Malaga's definition of reputation was also cited by Mukherjee and Nath (2003), who carried out a study on the context of Internet banking. Based on Doney and Cannon (1997), Rotchanakitummuai and Speece (2003, p. 315) defined reputation in the context of Internet banking as "the extent to which customers believe a supplier or service provider is honest and concerned about its customers". Doney and Cannon's (1997) definition of reputation was also cited by Jin et al. (2008) Jarvenpaa et al. (1999) who developed and examined an Internet consumer trust model a cross-cultural.

In the current study, internet banking has been defined based on Malaga (2001). This is because this definition was applied to examine the firm's reputation in the online context. In addition, the definition was applied in the context of internet banking by Mukherjee and Nath (2003) to examine customers' perceptions towards internet banking. Based on Malaga (2001), the current study defined internet banking as "overall quality or character as seen and judged by people in general"(Malaga, 2001, p. 403). Applying this definition, the current study attempts to examine the people's general judgement about whether their current banks have bad or good reputations in the market.

The following will provide an overview of the corporate reputation's studies in both the offline and online context of marketing, which includes the internet banking context. It will also highlight the antecedents and consequences of corporate reputation.

3.5.2 Corporate Reputation (An Overview of the Previous Studies)

Offline Context

A number of studies were performed to examine a firm's reputation in the offline context (Fombrun, 1990, Chernaton, 1999, Davies et al., 2004, Walsh et al., 2006, Keh and Xie, 2009, Walsh et al., 2009, Dickinson-Delaporte et al., 2010, Sheehan and Stabell, 2010). Fombrun (1990) developed a model to assess corporate reputation in the USA market and found that prior accounting profitability, advertising intensity, size, institutional ownership, and market-book ratio had significant and positive influences on corporate reputation. Chernaton (1999) examined how the corporate brand can be managed successfully by evaluating internal issues within the organization, such as culture, staff alignment and brand identity, and external issues, such as reputation. Davies et al. (2004) developed a measurement scale to assess an organisation's reputation, from both employees' and customers' perspectives. In Germany, Walsh et al. (2006) examined whether customer switching intention from one provider to another would be affected by corporate reputation and customer satisfaction. They found that the more positive corporate reputation and customer satisfaction were in the energy market, the more the significant negative influence on switching behavior. Dickinson-Delaporte et al. (2010) examined how strategic ambiguity can manage corporate reputation against a background of competing interests and tensions, finding that corporate reputation can be influenced by the market itself, marketers, religion and society. Sheehan and Stabell (2010) investigated whether competitive advantage at activity level analysis in knowledge intensive firms can be driven by its reputation. They conceptually confirmed that the firm's reputation has a significant impact on its performance and value creation, and it is one of the key drivers of knowledge intensive firms because of its durability impact on value creation.

Online Context

Another stream of research examined corporate brand and corporate reputation from the online context (Silva and Alwi, 2008). Silva and Alwi (2008) developed a model to examine what brand attributes needed to be addressed by online companies to gain a positive representation of the firm's brand images in B2C relationships in the UK market. Gummerus et al. (2004) examined critical drivers of customer loyalty in the context of a healthcare web site and stated that trust perception is one of the key determinant of customer loyalty. They argued that reputation of the firm's site and information provided to the customers are

influential cues that form trust perception. Lam and Burton (2006) examined the drivers of business customers' loyalty in the banking context in Hong Kong. They proposed that business customer loyalty would be significantly influenced by the bank's image in the market. However, they found that the bank's image had no influence on customers' loyalty in terms of staying with a bank. The result might be attributed to small and non-noticeable differentiation between competing banks (Lam and Burton, 2006). Lee and Turban (2001) argued that a firm's reputation is one of the important factors that influence customers' perception of trust. In addition, Ruyter et al. (2001) stated that the effect of perceived risk and the trustworthiness of the organization can be impacted by the extent of its good reputation in a market. So and Sculli (2002) identified four basic components (trust, quality, value and risk) as important determinants in doing business and argued that a corporate reputation as one of the trustworthiness evaluation dimensions would have significant influence on customers' trust perception. Pavlou (2003) examined the influence of an online firm's reputation on customers' trust, perceived risk and intention to transact. The author found that trust and intention to transact are significantly and positively influenced by firm's reputation, and perceived risk is significantly and negatively associated with reputation. Conceptually, Dennis et al. (2009) argued that store e-image is a crucial factor encouraging people to shop online. It is important for online companies because it reflects the overall evaluation and assessment of each part of companies' activities.

Internet Banking Context

In the context of internet banking, Daniel (1999) examined the current situations of electronic banking that were provided by retail banks in the UK and the Republic of Ireland so that the factors affecting the development of electronic banking can be understood. It was found that it was easier for banks to provide new products and services, or develop existing, ones when they have a reputation for innovation (Daniel, 1999). In Kuwait, Aladwani (2001) found that introducing and improving internet banking services were the most critical factors that enhance a bank's image in the market. It was argued that protection of reputation, competition, cost savings, mass customisation, enhancement of marketing and communication activities, and retention and attraction of consumers are most critical drivers of internet banking adoption (Bradley and Stewart, 2003). Rotchanakitummuai and Speece (2003) argued that a banks reputation is one of the vital factors affecting customers to adopt new technology-based services delivery because it reflects the competence that banks have to protect customers' personal information. Shah and Siddiqui (2006) highlighted that brand

name is very important in the virtual environment and it is a significant strategy for banks to improve their website, as well as keep their high street branches, so that their names can be enhanced. It was stated that reputation is a critical factor for selecting a bank for internet banking (Sayar and Wolfe, 2007). Yap et al. (2010) developed a model to examine whether structural assurance cues (size and reputation of the bank, and quality of traditional services at the branch) influence customers' evaluation of the trustworthiness of e-banking in the market of Australia. The relationship between bank's reputation and trust was supported (Yap et al., 2010).

Across Culture Context

A number of studies examined the firm's reputation from the culture perspective. Jarvenpaa et al. (1999) examined the influence of corporate reputation on trust in store and perceived size across Australia, Israel and Finland. They found that perceived reputation is positively associated with customers' trust in stores in all countries. Jin et al. (2008) developed a model to test the impact of a firm's reputation on customers' satisfaction, trust and loyalty across two cultures, namely the USA and South Korea. They found that firm reputation had a higher influence on trust and satisfaction in Korea than in the USA. For the USA, firm reputation had no influence on satisfaction.

3.5.3 Theoretical Gap

According to the above literature, it can be noted that corporate reputation has been in focus for many years in the conventional market (Fombrun, 1990, Chernaton, 1999, Davies et al., 2004, Walsh et al., 2006, Walsh et al., 2009, Dickinson-Delaporte et al., 2010, Sheehan and Stabell, 2010). Different factors were examined as indicators of corporate reputation, such as prior accounting profitability, advertising intensity, size, institutional ownership and market book ratio, (Fombrun, 1990), the market itself, marketers, religion and society (Dickinson-Delaporte et al., 2010). Some studies found that corporate reputation has significant influence on customers' switching behavior (Walsh et al., 2006), firm performance and value creation (Sheehan and Stabell, 2010).

This focus of corporate reputation has been transferred in online marketing context and argued that corporate reputation is a significant factor influence customer's behaviour for a number of reasons. First, in online context customers may feel difficult to decide whether the company is honest and can meet their expectation. In this case, the company reputation may

play an important part in the indication of its abilities and competencies to meet customers' requirement. Second, when customers have no experience of the company, they may feel it is difficult to evaluate its products and services. In this situation, the company reputation may reduce customers' concerns about the quality of its products of services because the better the company's reputation in the market, the more likely it is to provide good quality services and products. A number of studies have examined corporate reputation in the online marketing context (Silva and Alwi, 2008, Lam and Burton, 2006, Lee and Turban, 2001, So and Sculli, 2002, Pavlou, 2003). It can be noted that researches offered some corporate reputation's consequences, such as customer loyalty and trust (Gummerus et al., 2004, Lam and Burton, 2006, Lee and Turban, 2001, Ruyter et al., 2001, So and Sculli, 2002, Pavlou, 2003); perceived risk (Ruyter et al., 2001, Pavlou, 2003); and intention to transact (Pavlou, 2003).

In the context of internet banking, a number of studies examined corporate reputation (Daniel, 1999, Aladwani, 2001, Bradley and Stewart, 2003, Rotchanakitummuai and Speece, 2003, Shah and Siddiqui, 2006, Sayar and Wolfe, 2007, Yap et al., 2010). In addition, corporate reputation was found to influence the future provision of products and services (Daniel, 1999); adoption of internet banking (Bradley and Stewart, 2003, Rotchanakitummuai and Speece, 2003); bank selection (Sayar and Wolfe, 2007); and trust (Yap et al., 2010). Some studies examined the factors that influence a banks' reputation, such as providing new products and services through the internet (Aladwani, 2001).

In the cross culture context, it was noted that few studies that examined corporate reputation have been done in the area (Jarvenpaa et al., 1999, Jin et al., 2008). They found that corporate reputation has significant influence on trust (Jarvenpaa et al., 1999, Jin et al., 2008), satisfaction and customers' loyalty (Jin et al., 2008).

The above studies confirmed the influence of corporate reputation on customer trust (Jin et al., 2008, Jarvenpaa et al., 1999, Yap et al., 2010, Gummerus et al., 2004, Lam and Burton, 2006, Lee and Turban, 2001, Ruyter et al., 2001, So and Sculli, 2002, Pavlou, 2003). The current study would argue that many companies moved partially or fully from offline based marketing to online based in order to increase their marketing share. They open their own website to offer their products and services to a diversity of customers who have different backgrounds and culture values so that their behaviour may be influenced by different factors. This means that when a factor influences a group of customers it may not influence

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others who have different culture backgrounds. A number of companies also extend their market by providing their products and services globally. The study would also argue that corporate reputation is a vital factor in the context of internet banking. This is because many banks offer their services online on a global base so that many customers who have no previous experience with those banks. Thus, they will play a significant role in influencing customers to accept and trust the services offered. The current study would contribute to the existing studies in the area of internet banking by examining the influence internet banking's reputation on customers trust across two different cultures (KSA and the UK) and find out whether the influence is statistically significant.

3.6. Loyalty in Relational Exchanges

Gaining customers' loyalty is a very difficult challenge that business in general, including the banking sector, might face. This may be because customers have many options in the marketplace from which they can choose their products and services. In order that customers can make decisions, they need to collate appropriate information on products, services and vendors. Having obtained the market information, customers can easily switch their current services providers to others. How companies express their offers and gain customers' attention to purchase their goods or services and, in the end, build loyalty are issues companies should take into consideration. This section will highlight the definitions of customers' loyalty (3.6.1). Then, details of customers' loyalty literature in the traditional and online context will be provided in section 3.6.2 and 3.6.3, respectively. The current study will close this part by illustrating the theoretical gap/s in the customers' loyalty literature review in section 3.6.4.

3.6.1   Loyalty Definitions

This section provides a definition to be used in the current study. Loyalty was examined and defined in different contexts, including the traditional context (Dick and Basu, 1994, Bloemer et al., 1998, Oliver, 1999) and the e-commerce context (Suh and Han, 2002, Cyr et al., 2005, Cyr, 2008, Jin et al., 2008). Table 3.2 shows loyalty's definitions. It can be noted that these definitions are show some similarities. In this section, these definitions will be compared and a loyalty definition in the current study will be stated.

In the traditional context, Dick and Basu (1994) suggested that when customer loyalty is defined, customer attitude and repeat patronage should be considered together. Customer

loyalty is a complex concept and in order to understand it, one might need to differentiate between four types of customer loyalty (Dick and Basu, 1994). The first type is the case where no customer loyalty exists; customers have low relative attitude and low repeat patronage. The second type is spurious loyalty; customers show low relative attitude and high repeat patronage. The third type is latent loyalty; customers have high relative attitude with low repeat patronage. Finally, loyalty where there is a combination of high relative attitude and high repeat patronage. According to this differentiation, of all types of loyalty, customer loyalty (the last type) is the preferred one, with most companies striving to reach this level of loyalty. In addition, it can be understood from the Dick and Basu's (1994) definition that customer loyalty should be composed of a psychology perspective (attitude) that can be translated into actual behaviour (repeat patronage).

Moreover, loyalty has been defined in traditional contexts by (Bloemer et al., 1998, Oliver, 1999). Emphasized that individuals have to be willing to re-buy and show commitment towards specific brands or services. Customers' behaviours towards some brands and services should continue in the future and switching behaviour should be minimal. In the banking sector, customers should have a preference towards a particular bank over others in the market. They should also have behavioural intentions to visit or re-visit, show commitment and build a long-term relationship with that bank. In terms of Internet banking, Suh and Han (2002) stated that customers should show their preferences and invest to build and maintain the existing relationships with their banks.

In the e-commerce context, Cyr et al. (2005), Cyr (2008), and Jin et al.(2008) mentioned three conditions that distinguish loyal and disloyal customers. The first condition is that customers should be willing to repeat their purchase intention to buy or use online services. The second condition is that customers should revisit a particular website and use it in the future. Finally, they should be driven towards a specific website and use a particular e-vendor as shown by both attitudinal and behavioural aspects.

According to the above definitions, the current study defined customers' loyalty towards Internet banking as willingness to visit and revisit a particular Internet banking service provider in the future over other providers in the market and over other financial distribution channels, and be willing to provide recommendations to use that site through positive word-of-mouth to other customers.

Table 3. 2: Loyalty Definitions

The author/s	Year	Loyalty Definition
Dick and Basu	1994	*"the relationship between relative attitude and repeat patronage"*. (p. 102)
Oliver	1999	*"A deeply held commitment to rebuy or repatronize a preferred product/service consistently in the future, thereby causing repetitive same-brand or same brand-set purchasing, despite situational influences and marketing efforts having the potential to cause switching behaviour"*. (p. 34)
Bloemer et al.	1998	*"The biased (non-random) behavioural response (revisit), expressed over time, by some decision-making unit with respect to one bank out of a set of banks, which is a function of psychological (decision-making and evaluative) processes resulting in brand commitment"*. (p. 277)
Moutinho and Smith	2000	*"Repeat purchase intention, attitudes or alternatively measures of actual behaviour, including repeat purchase, recommendation"*. (p. 125)
Suh and Han	2002	*"a customer's enduring desire to maintain a valued relationship with a store"*.
Srinivasan et al.	2002	*"A customer's favourable attitude toward the e-retailer that results in repeat buying behaviour"*. (p. 24)
Anderson and Srinivasan	2003	*"The customer's favourable attitude toward an electronic business resulting in repeat buying behaviour"*. (p. 125
Shankar et al.	2003	*"Deep commitment to the service provider"*.
Cyr et al.	2005	*"Repeat purchase intention or intended return visits to a website"*. (p. 29)
Cyr	2008	*"Perceived intention to visit or use a website in the future and to consider purchasing from it in the future"*. (p. 49)
Jin et al.	2008	*"The repeated purchase behaviour presented over a period of time driven by a favourable attitude toward the subject...including both attitudinal and behavioural aspects"*. (p. 324)

The following sections will provide some of the previous literature studied in both offline and online loyalty contexts. Particular focus will be on the latter as the context of the current study is Internet banking.

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3.6.2 Customers Loyalty in Traditional Context

Customer loyalty has been examined theoretically and empirically in pervious literature and different conceptual models have been provided to examine and identify factors influence customers' loyalty towards a particular brand, services and store (Sharp and Sharp, 1997, Macintosh and Lockshin, 1997, Oliver, 1999, Corstjens and Lal, 2000, Schultz and Bailey, 2000, Chaudhuri and Holbrook, 2001, Sun and Lin, 2010, Jambulingam et al., 2011). Different factors were provided to help to explain how and why customers have different loyalty levels. For example, Sharp and Sharp (1997) examined the effects of loyalty programs on repeat purchase loyalty behaviour in Australia. While Macintosh and Lockshin (1997) proposed a store loyalty model which includes relationships at the person-to-store and person-to-person levels, and how this model could be affected by customers' trust in a salesperson and customers' trust in the store. Oliver (1999) examined theoretically what aspects of customer satisfaction affect loyalty and what proportion of the loyalty is explained by the satisfaction component. Corstjens and Lal (2000) investigated the role of a store brand in building store loyalty and argued that store differentiation, store loyalty, and store profitability can be generated by the quality of store brands. Two aspects of brand loyalty, namely purchase loyalty and attitudinal loyalty were examined (Chaudhuri and Holbrook, 2001). These two aspects were proposed to be influenced positively by brand trust and brand effect and it was found that the effects supported. Sun and Lin (2010) examined empirically whether there is any significant influence of the seller's characteristics and the consumer's characteristics on the person-to-person and person-to-firm trust, and how customers' loyalty can be affected by trust in department stores and trust in salespersons. Sun and Lin (2010) found significant influences of trust in department stores and trust in salespersons on customers' loyalty. In the B2B context, Jambulingam et al. (2011) examined the mediating role of trust in the fairness-loyalty relationship between suppliers (wholesalers) and buyers (retailers), and they found that trust completely mediated the relationship.

In the context of the banking sector, customer retention and loyalty have been investigated (Bloemer et al., 1998, Farquhar, 2003, Jones and Farquhar, 2003, Farquhar, 2004, Panther and Farquhar, 2004, Farquhar, 2005, Leverin and Liljander, 2006, Farquhar and Panther, 2007, Jones and Farquhar, 2007, Farquhar and Panther, 2008, Farquhar et al., 2008). Bloemer et al. (1998) examined how image, perceived service quality and satisfaction influenced loyalty, and found that loyalty was significantly affected by service quality and customers'

satisfaction. Farquhar (2003) carried out a qualitative study with managers, who were responsible for retaining customers, to investigate organizational concerns towards retaining customers in the context of traditional retailing of financial services. Farquhar (2003) found that there were six matters that financial services providers were of concern with regard to managing retention customers; namely flux and evolution for change, managing sales and products, building relationships with customers, staff awareness of retention customers, different delivery options, and finally customer information. In the UK market, Jones and Farquhar (2003) examined how customer loyalty can be influenced by contact management and found that 74% of customers had no any problems and 25% had some financial problems. Those customers who did not have problems are likely to continue the relationship and recommend their services provider, whereas customers who did have problems their relationship with and recommendation to others of their services provider depends on how these problems have been solved and the satisfaction degree (satisfy, modify and dissatisfy) that customers experienced during the resolution of the problems. The more customers are satisfied with the problem solving, the more they will continue to recommend their services providers. Farquhar (2004) and Farquhar (2005) examined bank staff perceptions towards customer retention in the UK context and found that the direction and support that staff can get from top management was an critical issue for customer retention, as well as for the banks' structure, customers' selection and information system adoption. Panther and Farquhar (2004) investigated the relationship between customer dissatisfaction and loyalty in the context of financial services in the UK market. They found that customers who experienced dissatisfaction tend to be loyal with the services providers, even though they have an awareness of alternatives in the market. Those customers stated that it is difficult and time consuming to switch one provider to another. They stated that the risk for change, long term relationship, lack of time and no big differences between banks are the most cited reasons for staying.

Leverin and Liljander (2006) examined what factors affected customers' loyalty, investigating the influence of relationship marketing strategy on customer relationships, and consequently loyalty towards the bank, across two high and less profitable segments. They found that there was no significant difference between these two segments and satisfaction was less important in determining loyalty. Some studies have focused on how financial services providers manage multiple channels for both customers acquisition and retention (Farquhar and Panther, 2007, Farquhar et al., 2008). Both studies identified five themes that

linked offensive marketing strategies (where companies look to acquire new customers) and defence marketing strategies (where companies focus on existing customers by building switching barriers and increase customer satisfaction). These themes are customer groupings, interaction style that customer preferred, improving the relationships and loyalty by providing new communication channels that can create exit barrier, changing structure to serve customers better, and finally developing services and increasing customer satisfaction. Jones and Farquhar (2007) examined the influence of customer satisfaction with service recovery on their loyalty (intention to continue their custom and make recommendation). They found that customers who had experienced problems with the services tend to continue their relationships but are less likely to make any recommendation. Farquhar and Panther (2008) examined how banks can strike a balance between customer retention and customer acquisition, finding that customer value (segmentation), branding, creating loyalty, maximising information, managing channels, pricing and product offering, and customer satisfaction level were the significant issues for managing customer acquisition and retention.

Recently, customers' loyalty has been modelled in different ways in the context on banking sector (Foscht et al., 2009, Liang et al., 2009, Licata and Chakraborty, 2009, Baumann et al., 2011). For example, Foscht et al. (2009) examined the factors affecting the satisfaction, loyalty and behavioural intention, proposing that actual loyalty is influenced by overall satisfaction that includes satisfaction regarding employees, services, additional services and other aspect of services. They found that overall satisfaction has significant influence on actual loyalty. In Taiwan, Liang et al. (2009) developed a model to examine how financial performance of a merchant bank can be influenced by customer perceptions towards product attribute, benefits, customers' satisfaction, trust, commitment and customer behavioural. They found that customers' loyalty was significantly influenced by trust and commitment. Licata and Chakraborty (2009) developed a model to examine the influence of three drivers of loyalty (stake, satisfaction and value of switching service providers on the dimensions of loyalty (behavioural response, commitment to the people providing the service and commitment to the institution) in the USA market. Licata and Chakraborty (2009) found that the majority of the proposed relationships were supported. In the Australian market, Baumann et al. (2011) examined the direct influence of current behaviour (share of wallet) on future intention (customer loyalty) and found significant influence.

The following section will provide an overview about customers' loyalty in online settings and the factors that affect it from previous literature.

3.6.3   Customers Loyalty in Online Context

In the last two decades, a considerable body of research has focused on how customers' loyalty can be improved, what factors affect customers' loyalty and what, if any, sequences of customers' loyalty exist. Different models have been previously tested empirically and different factors and results were provided. These results indicate that customers' loyalty will be hard to achieve, because of the many options for customers in the market, and customers demands, needs and attitudes would change over time. This will bring more challenges in the market, and if online companies would like to compete they should cope with these market and customer changes and demands. As already stated, different models and factors have been provided. The following is an overview of these studies so that the factors affecting customers' loyalty can be identified.

Rowley (1999) stated that adopting IT is a significant strategy for companies, especially the ones that provide online services, because a large amount of customers' data can be collected based on their past transactions. Rowley stated that using loyalty cards and e-shopping were important tools used by online companies to achieve this strategy. Riel et al. (2001b) focused on how consumer evaluates e-services via the Internet or mobile phone and how these e-services develop e-loyalty. Riel et al (2001b) proposed a framework that explained the types of services (core services, supporting service), effects (positive and negative), processes and outcomes that customer can get. Srinivasan et al. (2002) investigated the antecedent and consequences of customers' loyalty and found that customization, contact interactivity, cultivation, care, community, choice and character had significant effects. In addition, Shankar et al. (2003) examined how customer satisfaction and loyalty for the same service provider were different when customers choose the service online and offline, and what factors cause this differentiation, if any. Shankar et al. (2003) found that the choice of online medium, overall satisfaction, ease of obtaining information and prior experience had significant influence on loyalty. Yen and Gwinner (2003) proposed a conceptual framework that explains the relationship between Internet-based services technology attributes and customers' loyalty, stating that technology attributes (perceived control, performance, convenience and efficiency) would affect customers' loyalty through relational benefits (confidence and special treatment benefits) and satisfaction. The perception of international

hotel managers on the adoption of technology has been examined by Lee et al. (2003a), who found that providing multiple telephone lines, voicemail systems, the Internet and loyalty programmes (points redeemable for prize and discounts) has a significant influence on customers' loyalty. In a healthcare website, Gummerus et al. (2004) examined the determinant of customer loyalty to a content-based service and proposed that user interface, responsiveness, need fulfilment and security would influence customers loyalty, via trust and satisfaction. Ribbink et al. (2004) carried out a study to investigate the customer evaluation of online services and e-trust in explaining customer loyalty towards online retailers in the European context and found significant relationships of e-trust and e-satisfaction on e-loyalty. Semeijn et al. (2005) examined whether customers responses can be affected by both online and offline service components and found that satisfaction and assurance had significant direct influence on customer loyalty. Olson and Boyer (2005) aimed to find out how the Internet has changed many organization strategies for doing and providing their services, proposing that e-loyalty would be affected by website functionality and patron factors (patron strategy and website interaction). Rafiq and Fulford (2005) examined the effectiveness of UK supermarkets in transferring store loyalty to online loyalty, finding that customers' positive attitudes towards bricks and mortar supermarkets affected their behaviour to shop online and provided a high level of loyalty towards the current supermarket providers. Shih and Fang (2005) provided a conceptual model to explain how a profitable, sustainable competitive advantage for Internet companies can be developed by customer behaviour and customer relationship management (CRM). In Italy, Donio et al. (2006) examined a framework of the links between customer loyalty attitude, customer loyalty behaviours and profitability in the agri-food sector and found that loyalty attitude was influenced significantly by customers' satisfaction. While Pitta et al. (2006) presented a strategic framework to manage online loyalty, and found that information and action approaches to consumer should be provided and the costs, benefits of some online customer loyalty practices should be outlined and online customer relationships should be enhanced. For example, several approaches that marketers can take to develop online loyalty are providing statements about security of customers' personal data and web site design (Pitta et al., 2006). In addition, online firms can develop their own customers' classification so that building successful marketing relationship can be possible, because firms will know their customers' requirements (Pitta et al., 2006). In Taiwan, the antecedents of customers' loyalty towards Internet portals was examined by Flavia´n and Guinalı´u (2006) and it was proposed that loyalty intention would be influenced directly by perceived opportunism, overall satisfaction and asset specificity and indirectly by

attributive service satisfaction. It was also found that perceived opportunism and overall satisfaction had significant influences on loyalty intention. Yun and Good (2007) developed a model to investigate how customers' positive perceptions can be affected by e-tail store image attributes, such as e-merchandise, e-service and e-shopping atmosphere, and how these attributes develop customer loyalty towards an e-tailer store and found that all relationships were supported. Cristobal et al. (2007) developed a multiple-item scale to measure e-service quality and determine whether customers' satisfaction and website loyalty would be impacted by perceived service quality. Cristobal et al. (2007) found that customers' loyalty was influenced by perceived service quality indirectly via customers' satisfaction. In the UK, Ha and Janda (2008) developed a model to examine how online customer satisfaction is influenced directly by perceived value, disconfirmation and attribution, and whether customer satisfaction has significant effects on customers loyalty and repurchase intentions, finding that satisfaction had significant influence on customers' loyalty.

A number of previous studies examined customers' loyalty in the context of Internet banking such as (Moutinho and Smith, 2000, Pedersen and Nysveen, 2001, Tomiuk and Pinsonneault, 2001, Singh, 2004, Lam and Burton, 2006, Ferguson and Hlavinka, 2007, Herington and Weaven, 2007, Casaló et al., 2008). Different models and factors were proposed to influence customers' loyalty. For example, Moutinho and Smith (2000) examined the relationship between service quality, customer satisfaction, customer loyalty and switching behaviour, and proposed that customers loyalty would be affected by bank customers switching behaviour and their perceived satisfaction. Moutinho and Smith (2000) found switching behaviour and satisfaction had significant influence on customers' loyalty. While Singh (2004) investigated what reasons negatively influenced individuals who do not use online banking in South Africa and found that unsafe transactions, customers' online banking knowledge, time consuming and greater cost were the most frequently cited reasons for failing to being online banking users. In Australia, Herington and Weaven (2007) developed a model to examine customer loyalty and proposed that e-loyalty would be affected directly by e-trust, customer delight, relationship strength, and e-service quality, finding that customer loyalty was affected just by service quality dimensions (personal needs and site organization). In Spain, Casaló et al. (2008) examined how a usable interface and satisfaction influenced customer loyalty and word-of-mouth behaviours towards Internet banking. They also found that customer loyalty significantly was influenced directly by satisfaction and indirectly by website usability elements.

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3.6.4 Loyalty Theoretical Gaps

According to the previous literature, research in both traditional and online studies examined what factors influenced customers to be loyal to a particular brand or company. In this section, these factors will be highlighted. For example, in the traditional market context, customers' loyalty was determined by loyalty programs (Sharp and Sharp, 1997), salesperson commitment, store satisfaction and store trust (Macintosh and Lockshin, 1997), satisfaction (Oliver, 1999), store brand (Corstjens and Lal, 2000), brand trust (Chaudhuri and Holbrook, 2001), trust in department stores and trust in salespersons (Sun and Lin, 2010), purchase volume, credibility trust and benevolence trust (Jambulingam et al., 2011). In the context of the banking section, loyalty was determined by image, perceived service quality and satisfaction (Bloemer et al., 1998) and customer relationship satisfaction and relationship improvement (Leverin and Liljander, 2006).

In the context of online services, customers' loyalty was determined by satisfaction and switching behaviour (Moutinho and Smith, 2000), satisfaction (Riel et al., 2001b), overall satisfaction, the online medium, ease of obtaining information, frequency of service use, prior experiences with service, membership in frequency program and income (Shankar et al., 2003), confidence benefits, special treatment benefits and satisfaction (Yen and Gwinner, 2003), providing additional services such as multiple telephone lines, voicemail system, Internet and loyalty programmes such as (points redeemable for prize and discounts) (Lee et al., 2003a), satisfaction (Gummerus et al., 2004), e-trust and e-satisfaction (Ribbink et al., 2004), overall satisfaction and perceived website assurance (Semeijn et al., 2005), patron strategy, website interaction and website functionality (Olson and Boyer, 2005), customers commitment and customers' satisfaction (Donio et al., 2006), information and action approaches availability, costs and benefits (Pitta et al., 2006), overall satisfaction, perceived opportunism and asset specificity (Chiou and Shen, 2006), e-patronage intentions (Yun and Good, 2007), perceived quality in web site services and web site service satisfaction (Cristobal et al., 2007), satisfaction (Casaló et al., 2008, Ha and Janda, 2008, Yen and Lu, 2008), website trust and parent-brand-level experiences (Horppu et al., 2008), satisfaction and online game addiction (Lu and Wang, 2008), members' trust in the platform provider and mutual trust among members (Chen et al., 2009), and customers trust in the online seller and trust in e-commerce (Pizzutti and Fernandes, 2010).

In the offline customer trust context (section 2.2.2), customers' loyalty was determined by trust (Sichtmann, 2007) and in technology acceptance across cultures (section 2.6.2). It was also determined by trust and satisfaction (Cyr, 2008, Jin et al., 2008) and firm reputation (Jin et al., 2008). In the context of Internet banking, it was also determined by satisfaction and switching cost (Beerli et al., 2004), e-trust, customer delight, relationship strength and e-service quality (Herington and Weaven, 2007).

In the current research, it would be argued whether users' behaviours intention has any direct influence on customers' loyalty. This has not been examined previously. In addition, TRA (section 2.4.3) stated that individuals' actual behaviours would be determined by their behavioural intentions. This means that the stronger individuals' intentions to perform such behaviours are, the more likely their actual behaviours are to be performed will be. Accordingly, the current study would investigate this relationship across countries (KSA and the UK) so that the study will be able to contribute to the existing literature in the area of information technology, marketing and cross culture research. Moreover, the study proposed that perceived usefulness and ease of use (the fundamental technology aspects and beliefs that are stated in TAM) should be linked indirectly via customers' attitude and intentions and then to customer loyalty. These two beliefs have been stated as significant dimensions of service quality (Yoo and Donthu, 2001, Madu and Madu, 2002, Parasuraman et al., 2005, Yang et al., 2005). These dimensions have not been linked directly or indirectly to customers' loyalty. The next chapter will provide the full explanation of these relationships in the proposed model.

3.7. Technology Acceptance Models and Theories

In this section, the most fundamental theories and models that examined individuals' behaviours towards innovations and what are the factors affecting those individuals to accept or reject such technologies will be reviewed. This section will give an overview about the concepts and assumptions underlying these theories and models. More specific, it will review Innovation Diffusion Theory (IDT) (Rogers, 1962, Rogers and Shoemaker, 1971, Rogers, 1983), the Theory of Reasoned Action (TRA) Fishbein and Ajzen (1975, , 1980), the Theory of Planned Behaviour (TPB) (Ajzen and Fishbein, 1980, Fishbein and Ajzen, 1975), Social Cognitive Theory (SCT) (Bandura, 1986), the Technology Acceptance Model (TAM) (Davis, 1986, , 1989, Davis et al., 1989), the Decomposed Theory of Planned Behaviour (TPB) Model (DTPB) (Taylor and Todd, 1995b), the Motivational Model (MM) (Vallerand, (1997),

the second Technology Acceptance Model (TAM2) (Venkatesh and Davis, (2000), the Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2003).

3.7.1 Innovations Diffusion Theory (IDT)

Innovation Diffusion Theory was based in the sociology domain (Rogers, 1962, Rogers and Shoemaker, 1971, Rogers, 1983). According to IDT, in order to implement an innovation an individual has to take a decision to adopt it. This will not be possible, if an individual does not have sufficient information about the innovation under investigation or he/she has a negative attitude towards its.

The five stages of the innovation-decision process described by (Rogers, 1983, p 164). The first stage is knowledge which occurs when an individual (or other decision-making unit) is exposed to an innovation's existence and gains some understanding of how it functions. The second stage is persuasion which occurs when an individual forms a favourable or unfavourable attitude towards the innovation. This is followed by the decision stage, where an individual engages in activities that lead to the adoption or rejection of the innovation. Next is the implementation stage, where an individual puts an innovation into use. Finally, the confirmation stage occurs when an individual seeks reinforcement for an innovation-decision already made. Rogers (1983) stated five attributes of innovations are: relative advantage, compatibility, complexity, trialability, and observability. Each of these attributes is interrelated with the others to some degree. The main use of these attributes is to predict an innovation's future rate of adoption. *Relative advantage* is defined as "the degree to which an innovation is perceived as being better than the idea it supersedes" (Rogers, 1983, p 213). While *compatibility* "is the degree to which an innovation is perceived as consistent with the existing values, past experiences, and needs of potential adopters" (Rogers, 1983, p 223). Complexity is defined as "the degree to which an innovation is perceived as relatively difficult to understand and use" (Rogers, 1983, p 223). A new idea can be easy to understand for potential adopters, while other individuals may feel it difficult and complex to understand the innovation. Rogers (1983, p 231) defined the *trialability* attribute as "the degree to which an innovation may be experimented with on a limited basis". The following figure shows IDT theory

Figure 3. 1: Innovation Diffusion Theory
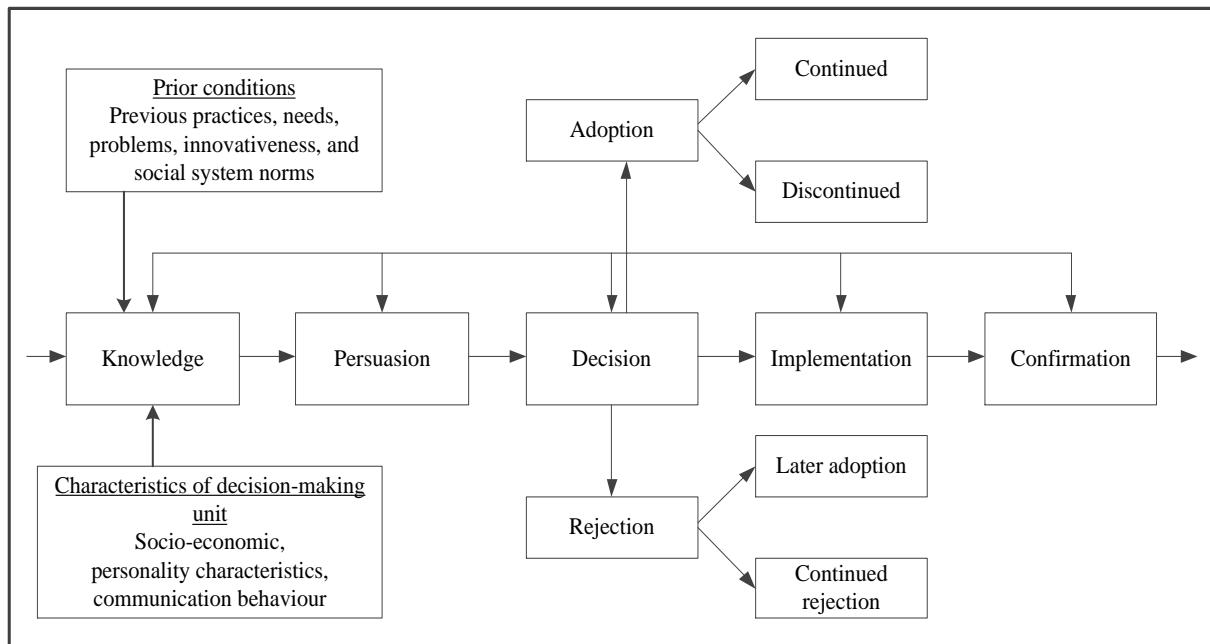
Source: Rogers (1995)

As any theory, IDT has some limitations. For instance, it does not show how individuals' attitude can be established by the innovation characteristics. Hence, the current study reviews theories that were established and concentrated on how individuals' attitude can be developed. The following theories and models were provided to overcome the IDT's limitations.

3.7.2   The Theory of Reasoned Action (TRA)

TRA was introduced by Fishbein and Ajzen (1975, , 1980). The foundation for their conceptual framework was the distinction between beliefs, attitudes, intentions and behaviours. They suggested that a person's attitude associated with her/his beliefs about an object and his/her attitude is not necessarily related to any specific belief. A person' attitude toward an object is related to his/her intention to perform a variety of behaviours. It states that two conditions have to be met in order that behaviour can be predicted by an individual's intentions. First, the intention's measurement that is available to an investigator must reflect the respondents' intention. Second, the behaviour must be under volitional control where individuals seen as rational organism, use information at their disposal to make judgments Fishbein and Ajzen (1975) so that the behaviours prediction will not be difficult (Ajzen and Fishbein, 1980). Two basic determinants of a person's intention were stated. The first factor

is personal in nature and is the individual's positive or negative evaluation (attitude) of performing the behaviour. The second factor is the person's perception of the social pressures put on him/her to perform or not to perform the behaviour. This factor is termed subjective norm. The relative importance of the attitudes toward the behaviour and subjective norm depends on the intention under investigation.

Attitudes are groups of beliefs such that when a person believes that positive outcomes will be achieved from performing behaviour, he or she will have a positive attitude toward the behaviour. In terms of subjective norm, a person believes that particular individuals or groups think that he should or should not perform the behaviour. These subjective norms are termed *normative beliefs*. The following figure shows the theory of reasoned action (TRA).

Figure 3. 2: Factors Determining a Person's Behaviour
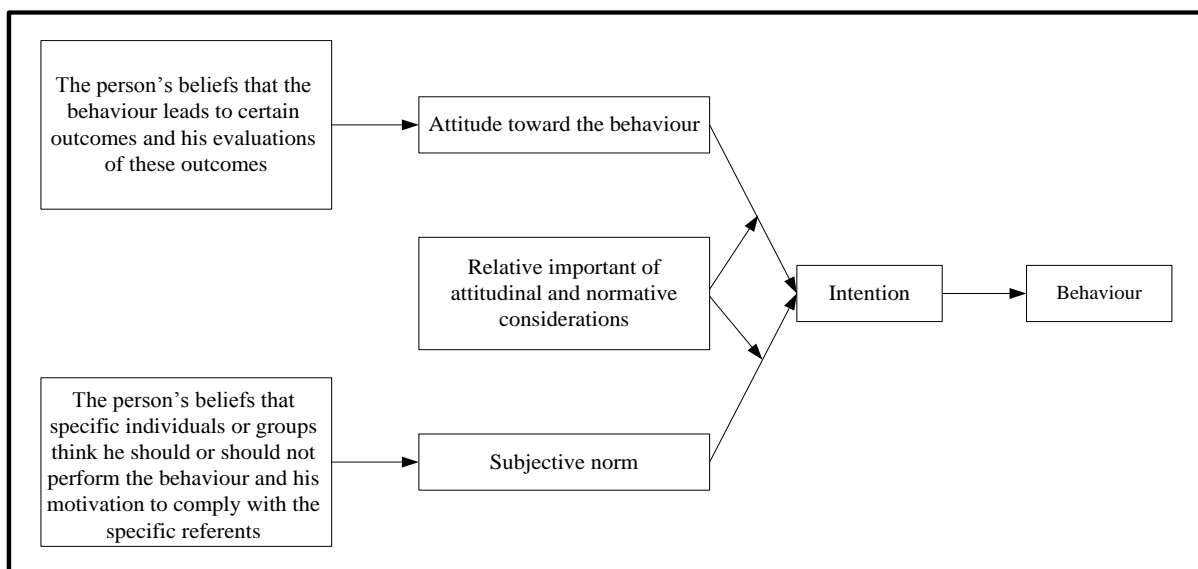
Source: Ajzen and Fishbein (1980, p 8)

However, TRA has several limitations. The theory assumed that behaviour must be under volitional control. This may limit the theory's range of applications. Its ability to predict and explain human behaviour will be affected because it is limited on volitional control, but behaviour under investigation can be affected by non-volitional factors that persuade individuals to change their intention or may stop successful execution of the behaviour (Ajzen, 1985). It was stated that these beliefs and their strength may differ from person to another according to their experiences or their culture Ajzen and Fishbein (1980) cited in Liu

et al. (2004). Hence, customers perception and attitudes towards privacy and trust should influence their behavioral intention in the context of electronic commerce (Liu et al., 2004)

TRA is a general theory and its generalisability is questioned (Ajzen and Fishbein, 1980). Lee and Green (1991) carried out a study to examine TRA across the United States and Korea in the context on marketing. They argued that TRA will not predict behavioral intentions for customers who are from different culture. In addition, they also stated that the action, the target of the action, the context which the action occurs and the time the time at which it takes place should be specified to avoid the TRA limitations. Accordingly, the current study attempt to apply TRA in particular context (Internet banking) and target (customer loyalty). Some of the TRA's limitation can be avoided.

3.7.3 Theory of Planned Behaviour (TPB)

The theory of planned behaviour is an extension of the theory of reasoned action (Ajzen and Fishbein, 1980, Fishbein and Ajzen, 1975). It is aimed at predicting and explaining human behaviour in specific contexts. It was assumed in TRA that the intention-behaviour relations will be under volitional control so that a person was expected to have control over his/her behaviour. This limits the theory's scope. TRA was extended to take into consideration non-volitional behaviour. This was because internal and external factors can influence successful performance of an intended behaviour. According to TPB, the individual's intention to perform a given behaviour is a central factor in the theory of planned behaviour. According to TPB, perceived behavioural control is relevant to people's perception of how easy or difficult it is to perform the behaviour of interest. It does, however, vary across different situations and actions so that perceived behavioural control is placed within a more general framework of relations among beliefs, attitudes, intentions and behaviour. In terms of predicting intentions to perform behaviour under investigation, three critical factors were considered: the individual's attitude towards the behaviour, the subjective norm, and the degree of perceived behavioural control. The following figure depicts the theory of Planned Behaviour.

Figure 3. 3: The Theory of Planned Behaviour
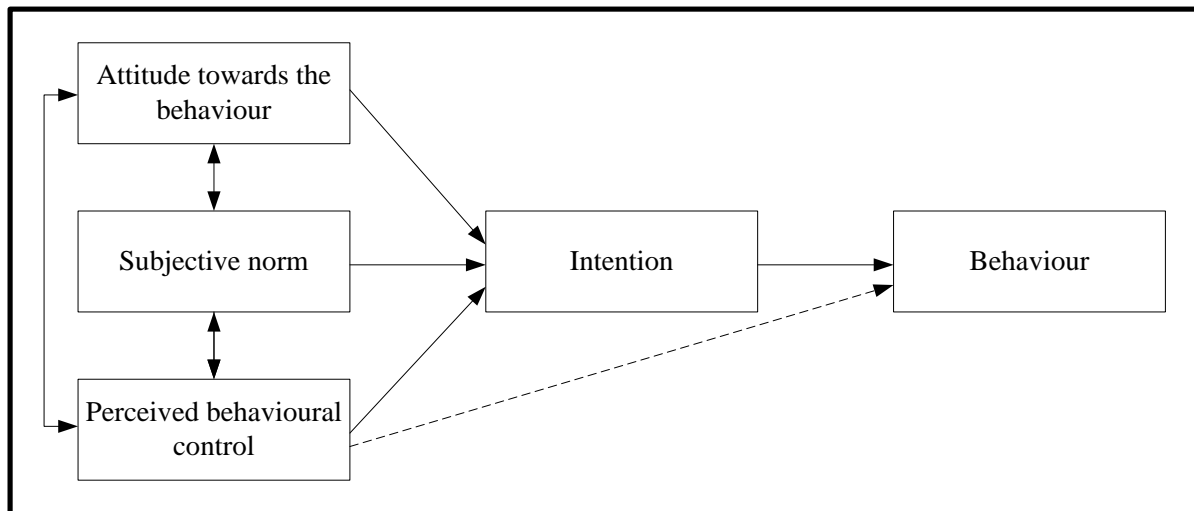
Source: Ajzen (1991, p 182)

In terms of TPB, Taylor and Todd (1995b) stated that these were not clear relationships between the belief structures and the intention's determinants (e.g attitude, subjective norm and perceived behavioural control). This attributed to two factors. Firstly, the combination of the belief structures into undiminensional constructs that may not related to attitude, subjective norm and perceived behavioral control. The second factor is the lack of attitude's belief, which make TPB difficult to be operationalized. Hence, these factors encourage the current study to concentrate on particular behavioural beliefs based on TAM (Perceived Usefulness and Ease of Use). In addition, TBP is more general and limited to specific constructs. The current study would contribute by examining additional constructs that may significant in the context of Internet banking.

3.7.4   Social Cognitive Theory (SCT)

SCT is a significant theory that explains human behaviours that was introduced by (Bandura, 1986). According to the theory, humane functions were determined interactively by behaviour, cognitive and personal factors such as self-efficacy and environmental influences. The following figure shows social cognitive theory (SCT).

Figure 3. 4: The Social Cognitive Theory (SCT)
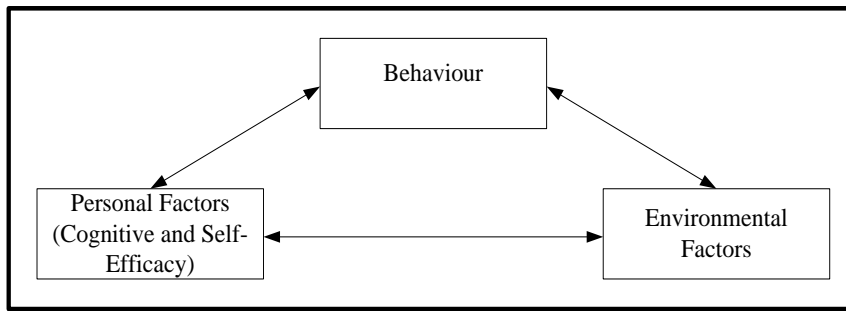
Source: Bandura (1986, p 24)

This theory assumes that the influence of these three sets of factors can vary according to different activities, individuals and circumstances. It was stated that the nature of persons is defined within a number of basic capabilities, namely symbolisism, forethought, vicarious, self-regulatory and self-reflective capabilities (Bandura, 1986). The work of Bandura (1986) has been developed by Bandura (1997) and focused on self-efficacy. Bandura (1997) argued that a personal sense of control is important for behavioural change so that individuals who believe that they can cause events might lead more active and self-determined lives. According to social cognitive theory (SCT), Bandura (2000) and Conner and Norman (2005) described the theory and stated that a number of crucial factors that impact behaviour are outlined in the theory, namely perceived self-efficacy, outcome expectancies (physical, social and self-evaluative), goals, perceived impediments and opportunity. The following figure illustrates the theory:

Figure 3. 5: Social Cognitive theory (SCT)
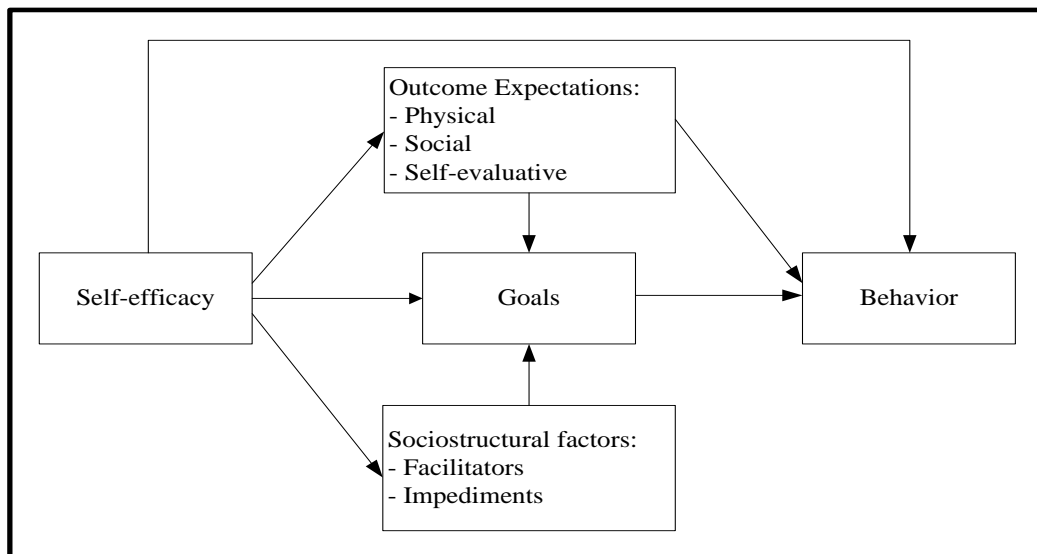
Source: Conner and Norman (2005, p. 129)

According to the SCT, the current study would argue that customers' self-efficacy is a significant construct, particularly in Internet banking. This might be because using Internet banking involves some risks and negative outcome expectations might be in place, especially for those who have low self-efficacy in using self-services. Even though the banks provide easy to use and useful online services (Internet banking), they should make sure the customers' expectation should be met. As stated by Conner and Norman (2005) that instrumental actions will be initiated, how much effort can be determined by the expectations of self-efficacy. In addition, individuals with low levels of self-efficacy are more likely to think that they may not be able to accomplish and develop their personal issues, such as skills or actions. Accordingly, the current study applied SCT to examine whether there are any significant influences of customers' self-efficacy on two outcome expectations (perceived usefulness and ease of use) in the Internet banking context. As stated by Agarwal et al. (2000) that SCT is general theory that can be difficult to be implemented by itself, but its concepts can be applied in the particular model and context.

3.7.5 Technology Acceptance Model (TAM)

The strongest model which can examine why a technology can be accepted or rejected is the Technology Acceptance Model (TAM) (Davis, 1986, , 1989, Davis et al., 1989). TAM is intended to provide an explanation of the determinants of computer acceptance and explain behaviour across a range of end-user computing technologies (Davis et al., 1989). The figure

below identifies the beliefs that may impact individuals' attitudes, intentions and actual use a system based on TAM:

Figure 3. 6: Technology Acceptance Model (TAM)
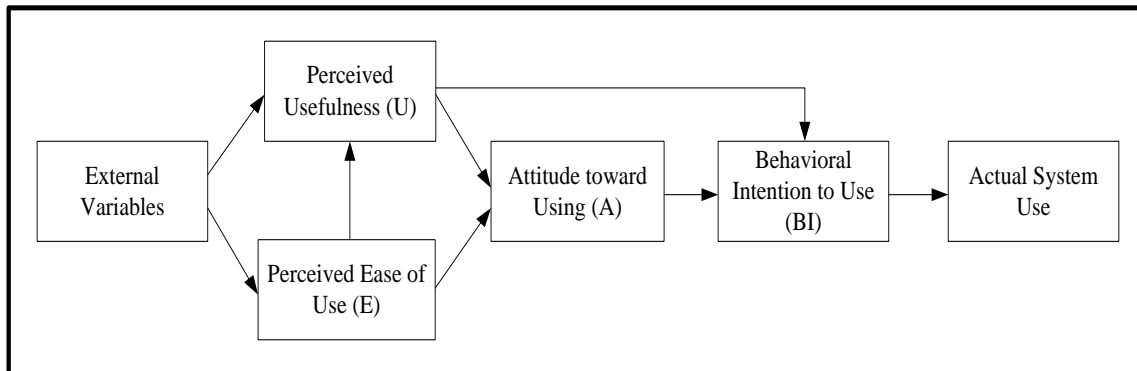
Source: Davis et al. (1989, p985)

Perceived Usefulness (U) and perceived Ease of Use (E) are considered critical beliefs which have considerable affects on actual system use through one's attitude and intention. These two beliefs are completely different, so perceived usefulness has been identified as *"the prospective user's subjective probability that using a specific application system will increase his of her job performance within an organizational context",* while perceived ease of use has been identified as *"the degree to which the prospective user expects the target system to be free of effort"* (Davis et al., 1989, p985).

3.7.6   The Decomposed Theory of Planned Behaviour (TPB) Model (DTPB)

The Technology Acceptance Model and two variations of the Theory of Planned Behaviour should be compared so that an assessment of which model is best to predict behaviour usage can be achieved (Taylor and Todd, 1995b). The following figure shows the decomposed TPB model:

Figure 3. 7: The Decomposed TPB Model
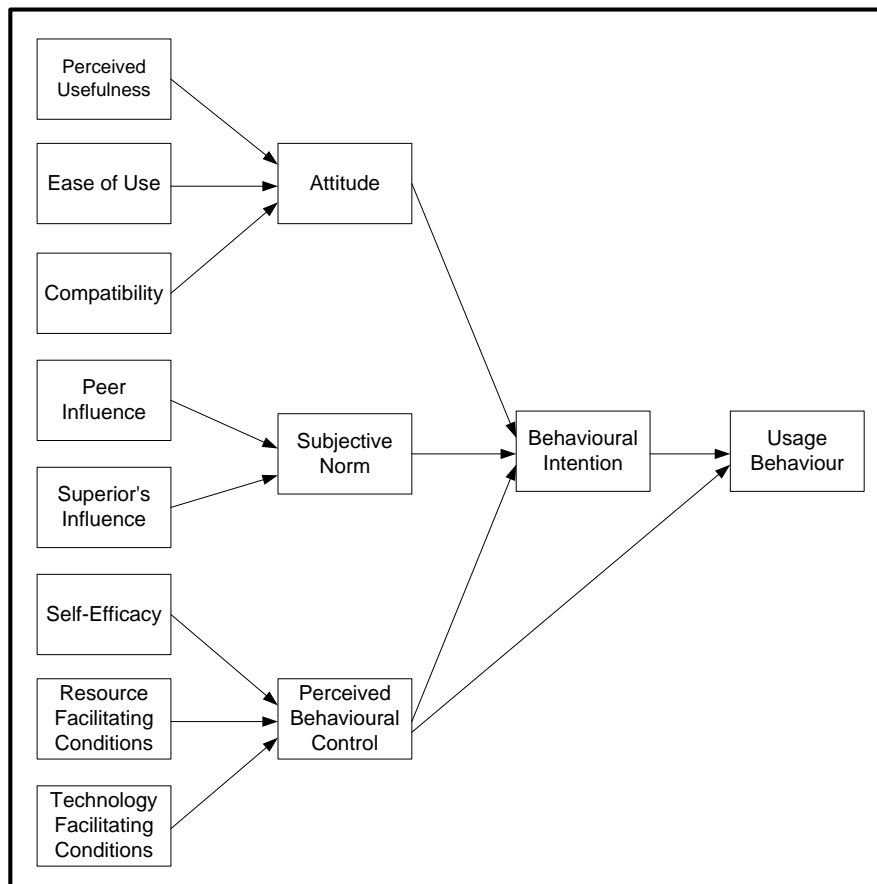
Source: Taylor and Todd (1995b, p163)

The decomposed TPB was found to be more predictive than the TAM and TPB models. There was a significant path from perceived usefulness to attitude, but the path from ease of use and compatibility to attitude was not significant. Subjective norm was affected significantly by peer and superior influence. Perceived behavioural control was determined significantly by self-efficacy and resource-based facilitation conditions. Behavioural intention was predicted significantly by attitude, subjective norm and perceived behavioural control. Usage behaviour was predicted significantly by intention.

The decomposed TPB model was more complex than the pure TPB and TAM. It was able to explain behavioural intention because it expressed specific beliefs which can be employed by designers or managers to influence system usage. Both the decomposed TPB and TAM provide a great deal of behavioural understanding. If the aim is to target information technology usage, TAM could be a better model to use, but if the target is to understand the

determinants of intention, then the decomposed TPB could be much better than TAM (Taylor and Todd, 1995b).

As it was stated in TBP, the current study would argue that DTPB might not completely applicable in the context of Internet banking. This can be attributed to two reasons. The first reason is that some other constructs such as customers' trust was not included in DTPB. This might be because of the context of the study that the theory was applied for [a computing resource center (CRC)]. Hence, trust might not importance in that context, but in the current study, it might be significant influencing individuals' behavioural towards Internet banking. Secondly, the ultimate goal of DTPB was usage behavioural, while in the current study is customers' loyalty as a consequence of their behavioural intention.

3.7.7   Technology Acceptance Model (TAM2)

Venkatesh and Davis (2000) proposed an extended technology acceptance model. Their model is called TAM2 and it adds the social influence process (subjective norm, voluntariness and image) and the cognitive instrumental process (job relevance, output quality, result demonstrability, and perceived ease of use). The following figure shows the Technology Acceptance Model (TAM2):

Figure 3. 8: Technology Acceptance Model (TAM2)
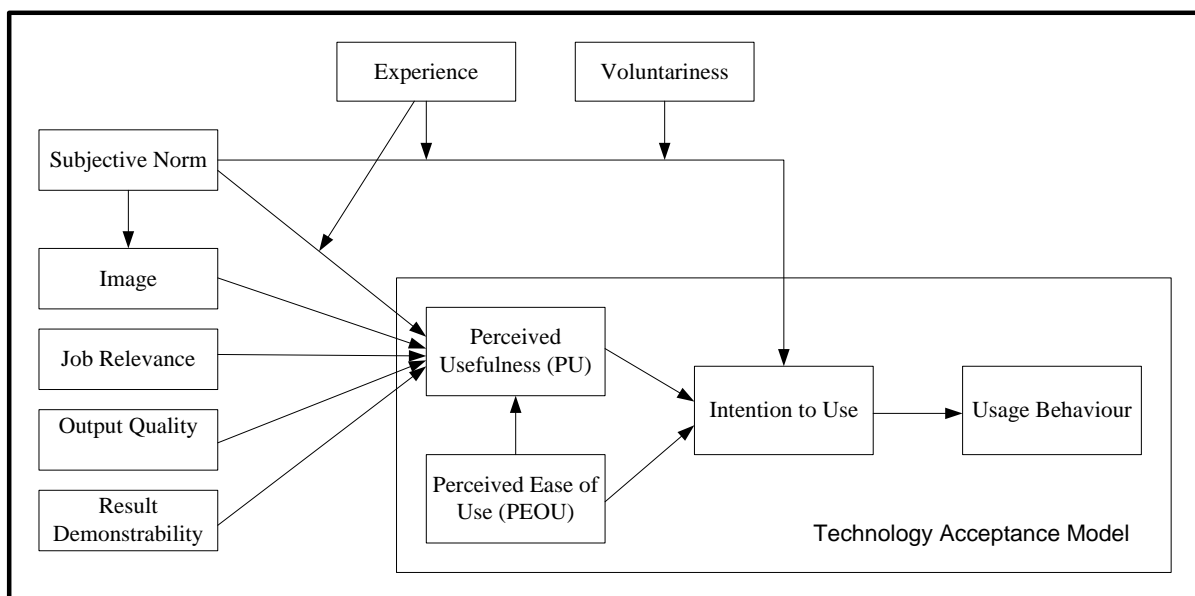
Source: Venkatesh and Davis (2000, p. 188)

Venkatesh and Davis (2000) proposed that perceived usefulness will be determined by subjective norm that is the influence of others to perform or not perform a behaviour, image that was "*the degree to which use of an innovation is perceived to enhance one's ... statues in one's social system*" Moore and Benbasat (1991, p. 195), job relevance that was defined as *" an individual's perception regarding the degree to which the target system is applicable to his or her job"* Venkatesh and Davis (2000, p. 191), output quality which refer to the users' perceptions of how well the system performs those task and results demonstrability as defined by Moore and Benbasat (1991, p. 203) that results demonstrability is the *"tangibility of the results of using the innovation"*. In addition, Venkatesh and Davis (2000) proposed that user experience will moderate the influence of subjective norm on perceived usefulness and argued that the more users increase their experience, the more the weak the influence of subjective norm of perceived usefulness will be. Moreover, they proposed that users' intention to use a system will be affected by subjective norm and the effect will be moderated by experience and voluntariness. They argued that there is no significant influence of subjective norm on intention when system us is perceived to be voluntary and users' experience is increased.

Study found that intention to use was determined strongly by perceived usefulness and ease of use. Subjective norms had a direct effect on intention when usage of the system is mandatory at two time periods (after one month after implementation and three months after implementation), but this effect was reduced after three months of implementation. This affect was significant and moderated by both experience and voluntariness.

When the usage was voluntary, subjective norms had no direct effect on intention. Intention to use was determined by perceived usefulness and ease of use. The results also show that there was a significant interaction between job relevance and output quality. The significant effect took place between subjective norms and perceived usefulness at time 1 and time 2, but not at time 3 which was moderated by experience. There was a significant effect from image on perceived usefulness and from subjective norms on image. The relation between result demonstrability and perceived ease of use was supported.

3.7.8 Unified Theory of Acceptance and Use of Technology (UTAUT)

Eight prominent models are the theory of reasoned action (TRA), the technology acceptance model (TAM), the motivational model (MM), the theory of planned behaviour (TPB), a model combining the technology acceptance model and the theory of planned behaviour (C-TAM-TPB), the model of PC utilization (MPCU), the innovation diffusion theory (ITD), and the social cognitive theory (SCT) have been reviewed and discussed in this chapter (Venkatesh et al., 2003). The UTAUT aims to explain user intentions to use information technology. This theory provides a useful tool for managers to evaluate and assess the success of new technology introduction and helps to understand the drivers of acceptance to proactively design; for example, training and marketing interventions. It was targeted at a population of users that may be less inclined to adopt and use new systems.

Consequently, Venkatesh et al. (2003) formulated their theory (UTAUT) to include four constructs: performance expectancy that defined as "*the degree to which and individuals believes that using the system will help him or her to attain gains in job performance*" Venkatesh et al. (2003, p. 447) , effort expectancy which was defined as "*the degree of easy associated with the use of the system*" Venkatesh et al. (2003, p. 450), social influence which defined as "*the degree to which an individual perceives that important others believe he or she should use the new system*" Venkatesh et al. (2003, p. 451), and facilitating conditions that were defined as "*the degree to which an individual believes that an organizational and technical infrastructure exists to support use of the system*" Venkatesh et al. (2003, p. 453) . These constructs were assumed to have a direct significant upon user acceptance and usage behaviour. Four key moderators (gender, age, experience and voluntaries) were identified and assumed to have critical role to moderate effects from constructs to behavioural intentions and use behaviour. The following figure described UTAUT components:

Figure 3. 9: Unified Theory of Acceptance and Use of Technology (UTAUT)
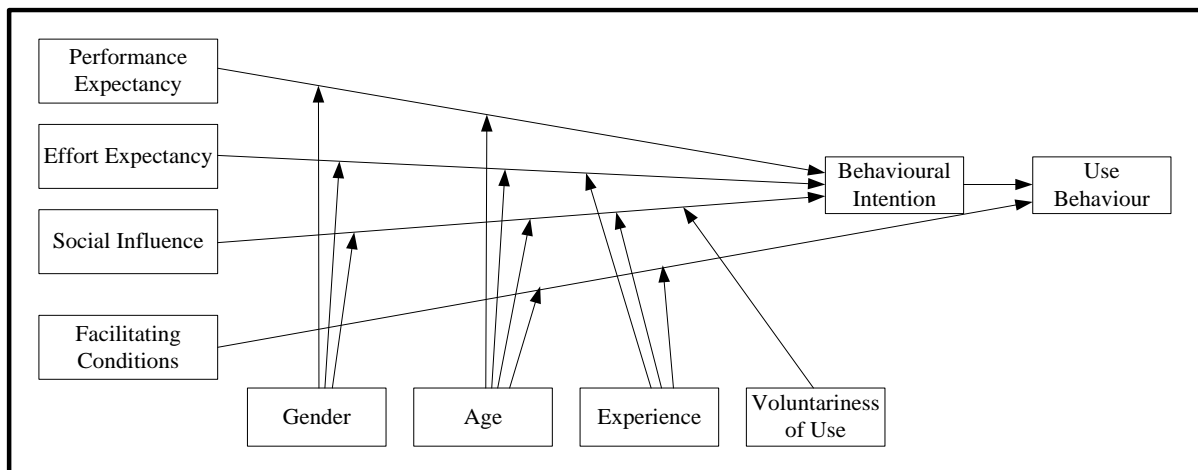
Source: Venkatesh et al. (2003, p 447)

Performance expectancy was defined as *"the degree to which an individual believes that using the system will help him or her to attain gains in job performance" (Venkatesh et al., 2003, p 447),* while effort expectancy was defined as *"the degree of ease associated with the use of the system" (Venkatesh et al., 2003, p 450).* Social influence was defined as *"the degree to which an individual perceives that important others believe he or she should use the new system" (Venkatesh et al., 2003, p 451).* The term 'facilitating conditions' was defined as *"the degree to which an individual believes that an organizational and technical infrastructure exists to support use of the system"* (Venkatesh et al., 2003, p 453).

Three constructs were stated as indirect determinants of intention in UTAUT: self-efficacy (SE), anxiety (ENX), and attitude toward using technology (ATUT). These factors were assumed to have indirect effects on intention to use a technology. The study found that intention to use was directly significantly affected by performance expectancy. This effect was moderated by gender and age, particularly among younger male workers. Effort expectancy was found to be moderated by age and gender and it was more salient to older women. Its effect on intention was direct and significant. However, this effect was reduced by an increase in experience. Intention to use was affected by social influence (SI). This effect was significant and direct, particularly amongst older women, but it reduced with increased experiences. The effect from facilitating conditions on intention was non-significant. Self-efficacy, anxiety and attitude toward using a technology had no direct effects on intention.

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In terms of predicting usage behaviour, the findings indicated that this was affected significantly by behavioural intention and facilitating conditions. The effect of facilitating conditions was moderated by age (older workers). Both effects of intention and facilitating conditions were increased with increasing experience with the technology. The results indicated that UTAUT was able to explain 70 percent of the variance (adjusted R^2) in usage intention.

3.7.9   Technology Acceptance Model 3

In 2008, Venkatesh and Bala developed Technology acceptance Model 3. They integrated two well developed models namely TAM 2 (Venkatesh and Davis, 2000) and the perceived ease of use determinants' model (Venkatesh, 2000). TAM 3 is shown in the following figure:

Figure 3. 10: Technology Acceptance Model 3
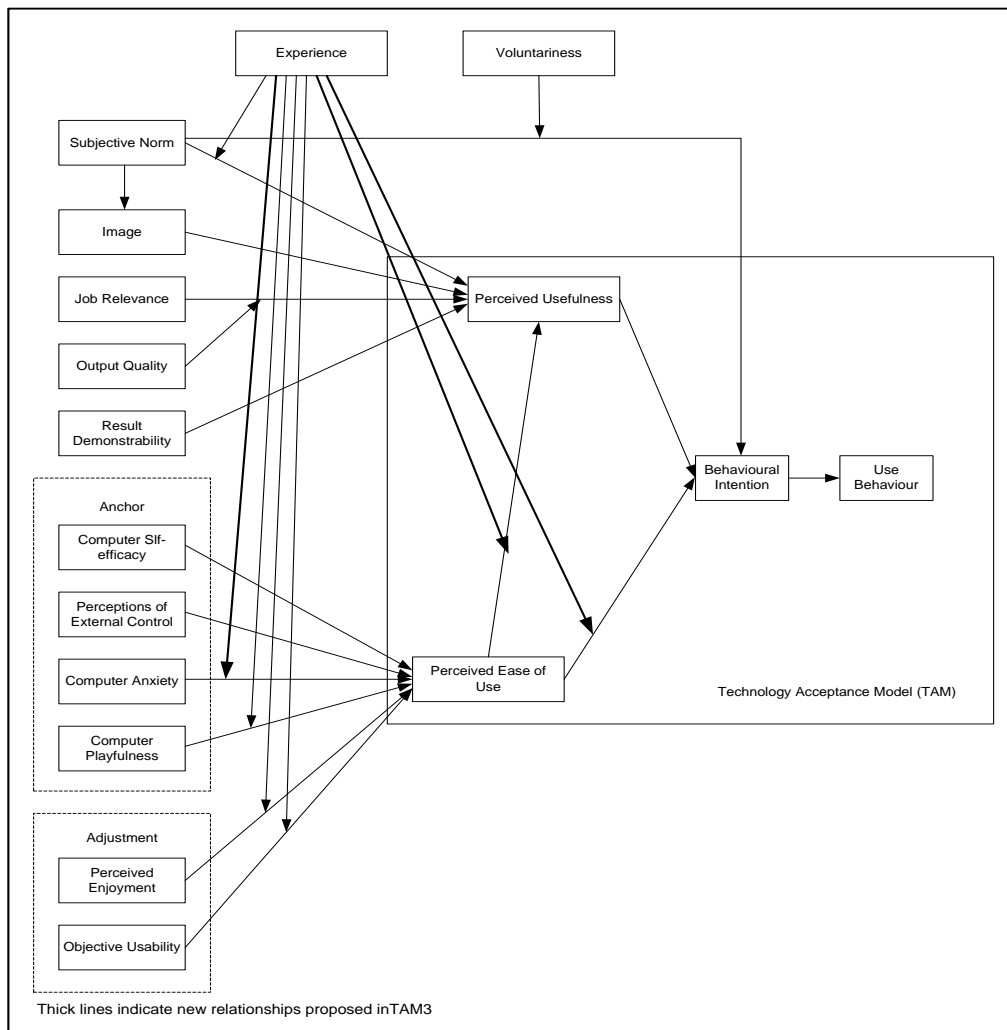
Source: Venkatesh and Bala (2008, p. 280)

Venkatesh and Bala (2008) argued that perceived usefulness will not be affected by the determinants of perceived ease of use and the later will not be influenced by perceived usefulness's determinants. In order to developed the previous models (Venkatesh and Davis, 2000, Venkatesh, 2000), they suggested new three relationships as indicated by the thick lines in the above figure 3.10. The first relationship is the moderating role of user' experience on the relationship between perceived ease of use to perceived usefulness, between computer anxiety to perceived ease of use, while the last relationship between perceived ease of use to behavioural intention. Carried out longitudinal field studies across four different organizations, 156 users were participated in these studies in four periods of times (after initial training (T1), 1 month after implementation (T2), 3 months after implementation (T3) and 5 months after implementation (T4) to measure self-reported usage. Venkatesh and Bala (2008) found that the model explained 0.32, 0.31, and 0.36 in time 2, time 3 and time 4 respectively. In general all the relationships were supported with some variation across different times. In addition all the moderation roles of experience were confirmed.

3.8. The Theory/s Applied in the Current Study

The objective of the current study is to find out whether the customers' loyalty towards Internet banking will be affected by the level of customers' intention behaviour. Accordingly, behavioural theories will play a significant role in achieving this objective so that the TRA can be applied to find out the relationship between behavioural intentions and customers' loyalty, and between subjective norms and intention towards Internet banking. In addition, because the context in this study is Internet banking, it is an important issue to investigate what aspects of Internet banking will have significant effect on customers' attitude towards Internet banking. Therefore, TAM will be applied to examine the relationships between perceived usefulness and attitude, between perceived ease of use and attitude, and between perceived ease of use and usefulness. Individuals' self-efficacy from SCT will be applied to investigate whether it influences perceived ease of use and usefulness. Accordingly, two theories (TRA and SCT) and one model (TAM) will be combined to investigate Internet banking users' behaviour across different markets (KSA and the UK). The next chapter will provide more details about the current research model with all the hypotheses, relationships and constructs. Because TAM originally was developed from TRA, the current study will give an overview of the studies that applied TAM so that the factors that were investigated and linked to TAM can be identified. Before giving the overview of the TAM's studies, some

of the important limitations will be highlighted in order to avoid them as much as possible in the current study.

Igbaria et al. (1997) stated that TAM concentrated just on how system usage is determined by a system's attributes (perceived usefulness and ease of use) rather than focusing on the external factors that may influence these two beliefs. In addition, Dishaw and Strong (1999) and Suh and Han (2002) stated that TAM has a weakness in terms of the task focus. Dishaw and Strong (1999) mentioned that TAM focused on perceived usefulness which can be directly linked to the tasks' attributes; the task technology fit perspective highlights this issue and alter user acceptance (Suh and Han, 2002). Attitude was dropped from the original TAM and many of the further TAM extensions did not examine users' attitude. In the current research's point of view, attitude might be an important construct that determines behavioural intention toward a system and should be investigated in different contexts, systems and samples. Moreover, social or subjective norm was excluded from TAM. Much of the previous literature admitted that subjective norm is a significant construct that influences individuals' behaviours and should be added to TAM and investigated empirically. The following table highlights the important limitations that have been cited:

Table 3. 3: Summary of Limitations in TAM Studies

Limitations	No. of Papers	Explanation	Examples
Self-reported Usage	36	Did not measure the actual usage	(Venkatesh and Davis, 2000)
Single IS	18	Uses only a single information system for the research	(Venkatesh, 1999)
Student Samples (or University Environment)	15	Inappropriate to reflect the real working environment	(Agarwal and Karahanna, 2000)
Single Subject (or Restricted Subjects)	13	Only one organization, one department, MBA students	(Karahanna and Straub, 1999)
One Time Cross Sectional Study	13	Mainly performed based on cross-sectional study	(Karahanna et al., 1999)
Measurement Problems	12	Low validity of newly developed measure, use single item scales	(Agarwal and Prasad, 1998)
Single Task	9	Did not granulize the tasks, and test them with the target IS	(Mathieson, 1991)
Low Variance Scores	6	Did not adequately explain the causation of the model	(Igbaria et al., 1997)

Limitations	No. of Papers	Explanation	Examples
Mandatory Situations	3	Did not classify mandatory and voluntary situation, or assume voluntary situation	(Jackson et al., 1997)
Others	15	Small sample size, short exposure time to the new IS, few considerations of cultural difference, self-selection bias	(Gefen and Straub, 1997)

Adopted from (Lee et al., 2003b)

TAM, as any research, has its strengths and limitations. Some of these limitations cannot be avoided but others can. For example, system usage will not be included in the current framework so that self-report usage will be avoided. The study used the structure equation modelling technique to avoid any analysis problem and therefore, the results will be more accurate. The behaviour investigation in the current study is based on a voluntary situation where users have full control on their behaviour and decisions towards the system (Internet banking). The current research takes into consideration the sample size; two samples from two different cultures where the sample size is adequate (KSA and the UK). Some of the TAM's limitations cannot be avoided, including using university students, single system and one time. These limitations will be stated in the current research limitations in the conclusion chapter. Even with these limitations, TAM was examined in different context and systems across different studies and supported. In addition, it was the most powerful model to explain why individuals accept or reject such a system. The following section (3.9) will provide an overview of the important TAM's studies

3.9. Technology Acceptance Model (TAM) (Previous Studies)

TAM has been examined and tested on different contexts, samples and technologies. A wide range of these studies were reviewed and can be classified into three groups. The first group focused on how individuals (users) accept or reject such systems and what determines their behaviours. The second group applied TAM to examine customers' behaviours towards e-vendors, why customers accept or reject online shopping and what factors affect their behaviours. The last group will provide an overview for the studies that adopt TAM in the Internet banking context, and will be discussed in the Internet banking studies section (3.11).

In terms of technology system acceptance, a large body of literature examines TAM to investigate users' behaviour (Adams et al., 1992, Davis, 1993, Subramanian, 1994, Keil et al., 1995, Taylor and Todd, 1995a, Taylor and Todd, 1995b, Chau, 1996, Szajna, 1996, Igbaria et al., 1997, Jackson et al., 1997, Gefen and Keil, 1998, Agarwal and Prasad, 1999, Dishaw and Strong, 1999, Lucas and Spitler, 1999, Lederer et al., 2000, Venkatesh and Morris, 2000, Venkatesh, 2000, Chau and Hu, 2001, Venkatesh et al., 2002, Lu et al., 2003). Across these studies, different models were provided to examine individuals' behaviours, and different factors were proposed and supported that influence users' behaviours. Different factor relationships were proposed which will be highlighted in this section.

Adams et al. (1992) examined the psychometric properties of the usefulness and ease of use scales and proposed that perceived ease of use and usefulness were the main determinant of users' behaviours towards electronic mail, voicemail, word processing, spreadsheets and graphics systems in Canada, finding that system usage was significantly influenced by perceived ease of use and usefulness. Davis (1993) examined why users accept or reject information systems by integrating system design features as external factors influencing perceived ease of use and usefulness directly and indirectly influence users' attitude and actual system usage across two systems (electronic mail and text editor) and found that all the relationships were supported. Subramanian (1994) applied TAM to examine users' usage future behaviours across two systems (voice mail and customer dial-up systems) in USA, finding that perceived usefulness had significant influence on future usage, while ease of use did not. In USA also, Keil et al. (1995) proposed a Usefulness/Ease of Use Grid that would help managers and system designers to understand different scenarios under different conditions of ease of use or usefulness. Taylor and Todd (1995a) combined TAM and TPB to investigate individuals' behaviour for inexperienced and experienced users in a computing resource centre in Canada and found some variation in the regression weights across the groups, such as the relationship between ease of use and attitude, and perceived behavioural control and behaviour. In Canada also, Taylor and Todd (1995b) examined and compared TAM, TPB and DTPB to assess and evaluate which model best helps to understand usage behaviour in a computing resource centre and found that TAM was preferable in usage prediction, while DTPB provided a full understanding of usage behaviour and intention for managers and researchers. In Hong Kong, Chau (1996) examined the factors that influence Computer-Aided Software Engineering (CASE) and proposed that the implementation gap between the old and new system and transitional support would influence system acceptance

through ease of use, near-term usefulness and long-term consequences and found that the implementation gap had a negative influence on ease of use and near-term usefulness, and transitional support had insignificant effect on near- and long-term usefulness but had significant influence on ease of use. In the USA, Szajna (1996) carried out a longitudinal study to examine and confirm empirically the revised TAM model on the electronic mail system and found that usefulness had significant influence on intention behaviour in pre-implementation and post-implementation of TAM, while ease of use did not have any significant influences in both cases. Igbaria et al. (1997) developed a model based on TAM to examine personal computing acceptance determinants in small firms in New Zealand. Igbaria et al (1997) proposed that inter-organizational (internal computing support, training and management support) and extra-organisational (external computing support and training) factors would influence personal computing acceptance via perceived ease of use and usefulness. Meanwhile Jackson et al.(1997) integrated user involvement constructs (prior use, argument for change, intrinsic involvement and situational involvement) with TAM constructs (ease of use, usefulness, attitude and behavioural intention) to examine user behaviour towards PC and network systems. Gefen and Keil (1998) investigated the influence of perceived developer responsiveness on perceived ease of use and usefulness, and from perceived ease of use and usefulness on self-reported use in the expert (CONFIG) system. They found that all the relationships were supported with the exception of the relationship between perceived ease of use and self-reported use. Agarwal and Prasad (1999) in USA, extended TAM to examine the role of individual differences (role with regard to technology, tenure in workforce, level of education, prior, similar experience and participation in training) in influencing users' behaviour with the old system (operating system utilized a command-line interface) and new system (a standard GUI environment), finding variations in the results from one construct to another. In USA also, Dishaw and Strong (1999) integrated the Task Technology Fit Model (TTF) and TAM, comparing all the three models (TAM, TTF and TAM/TTF) on IBM 3090 mainframes and found that TAM explained user behaviour more that TTF or TTF/TAM. Lucas and Spitler (1999) carried out a study to investigate the user behaviours towards a workstation that was designed for private-client brokers and proposed that perceived system quality will have an indirect influence on use or intent to use and on jobs' performance via perceived usefulness, ease of use and norms. Lucas and Spitler (1999) found that the original TAM's variables were not supported, while social norms were supported and had significant influence on use or intent to use. Lederer et al.(2000) applied TAM to examine the antecedents of World Wide Web's ease of use and usefulness in the

USA so that website developers and mangers could be helped to improve websites' usability and usefulness, the results of which supported TAM. Venkatesh and Morris (2000) conducted a longitudinal study to develop a research model by integrating subjective norm, gender and experience with TAM, and found the difference between men and women did not change over time. Venkatesh (2000) attempted to identify the perceived ease of use determinants and whether their importance can be changed by increasing users' experiences by adopting a longitudinal study across three time points and three samples, proposing that perceived ease of use would be determined by internal control (computer self-efficacy) and external control (facilitating condition), intrinsic motivation (computer playfulness), and emotion (computer anxiety) and over time; perceived ease of use would be influenced by system usability and enjoyment. Venkatesh's (2000) model was supported. Venkatesh and Davis (2000) conducted four longitudinal field studies to develop a model (TAM2) that was an extension of the original TAM by integrating key determinates of perceived usefulness (subjective norm, image, job relevance, output quality and result demonstrability) and find out how the influence of subjective norm on perceived usefulness and intention can be changed with improved experiences and voluntariness. They found that the theoretical extension was supported across all four studies. In Hong Kong, Chau and Hu (2001) carried out a study in the context of telemedicine technology in order to compare three models (TAM, TPB and DTPB) and found several limitations of TAM and TPB in predicting technology acceptance by professionals. Venkatesh et al. (2002) developed a model to examine how users' perceptions were impacted by pre-training and training environment (user acceptance enablers). They found that the integrated model was better in explaining users' perceptions than previous studies (Venkatesh and Speier, 1999, Venkatesh, 1999). In USA, Lu et al. (2003) developed a conceptual technology acceptance model for wireless Internet, via mobile devices, and proposed that technology complexity, individual differences, facilitating conditions, social influences and wireless trust environment would be the important determinates of long-and-near term usefulness and ease of use, resulting in attitude and behavioural intention.

Most of the above studies applied and tested TAM in which system usage in the organizational context. The following studies will give an overview about the studies that applied TAM in the e-commerce context. Gefen and Straub (2000) applied TAM to explain the influence of perceived ease of use on IT adoption across different tasks (intrinsic and extrinsic tasks) in the context of e-commerce (online bookstores) in the USA and found that

perceived ease of use influenced intention to use when a website was used for an inquiry task but not for purchasing task, while perceived usefulness affected intention to use in both inquiry and purchasing tasks and the results confirmed that extrinsic motivation is more important than intrinsic motivation in IT acceptance. In the USA also, Bhattacherjee (2001) developed a model that investigated the drivers of consumers' intention to continue using B2C services, proposing that continuance intention would be determined directly by satisfaction, perceived usefulness and loyalty incentives and indirectly by confirmation. Bhattacherjee (2001) found that all the proposed hypotheses were supported. The trust antecedents of Gefen et al. (2003b) and the technological attributes found in TAM were integrated into a theoretical model to examine customers' behaviours towards online book or online CD vendors in the USA and found that intention to use online vendor websites was determined by trust, perceived ease of use and perceived usefulness directly and indirectly by calculative based trust, institution-based structural assurances, institution-based situational normality, and knowledge-based familiarity. In USA, Pavlou (2003) developed a theoretical model that integrated TAM with trust and risk perceptions to examine the key drivers of consumers in online transactions. Pavlou (2003) proposed that intention to transact will be directly and indirectly influenced by perceived ease of use, perceived usefulness, and perceived risk, and three control variables (reputation, satisfaction with past transactions and frequency) were proposed to influence trust, perceived risk and intention to transact, finding that the proposed model was supported. Lee et al. (2006) carried out research to examine the influence of Image Interactivity Technology (IIT) on customer behavioural intention in the USA by applying TAM and proposed that behavioural intention will be affected directly by customers' attitude towards online retailers and indirectly by their perceived ease of use, usefulness and enjoyment. Lee et al. (2006) also proposed utilitarian shopping orientation, hedonic shopping orientation and level of IIT would influence perceived ease of use, usefulness, and enjoyment directly and found that the proposed model was supported. In the UK, Dennis et al. (2009) developed a conceptual framework to examine concepts of e-consumer behaviour by integrating both the consumer and technology viewpoints, proposing that behavioural intention will be determined by consumers' attitude, trust, past experiences and learning. In Spain, Hernandez et al. (2009) conducted a study and developed a model to examine the differences between the adoption of e-commerce by potential purchasers, and experienced e-customers who have carried out at least one purchase, by applying TAM. They proposed that perceived self-efficacy would influence customers' intention to purchase via perceived ease of use, usefulness and attitude and found that the influence of self-efficacy

and usefulness on behavioural intentions increased when customers gain experiences, while the influence of perceived ease of use decreased with increasing experiences. In USA, Kim and Forsythe (2009) examined online shoppers' adoption of three visual Sensory Enabling Technologies (SET) (2D larger view and alternative views, 3D rotation views, and virtual try-on). Kim and Forsythe (2009) proposed that attitude would be influenced by perceived usefulness, ease of use, and entertainment value of SET and actual will be determined by attitude, innovativeness and technology anxiety. They found that perceived ease of use and usefulness were strong predictors for customers' attitude in all three SET technologies, while perceived ease of use was the strong predictor for attitude in the 3D rotation views technology. In the following section, this study will provide an overview of research that explains how technology be accepted across cultures.

3.10. Technology Acceptance Across Cultures

A large number of cross-culture studies were reviewed and it has been noted that these studies have been performed to examine individuals' behaviours in different culture and contexts, such as organisation system usage (Straub, 1994, Gefen and Straub, 1997, Straub et al., 1997), the marketing context (Lee and Green, 1991, Liu et al., 2001 , Reimann et al., 2008), online shopping (Jarvenpaa et al., 1999, Luna et al., 2002, Y.K et al., 2002, Cyr and Trevor-Smith, 2004, Liu et al., 2004, Cyr et al., 2005, Singh et al., 2005, Gefen and Heart, 2006, Cyr, 2008, Jin et al., 2008, Kim, 2008, Vance et al., 2008, Schoefer, 2010) and the banking context (Furrer et al., 2000, Tsikriktsis, 2002, Singer et al., 2008, Alsajjan and Dennis, 2010). The following will give an overview of these studies and how the theories and models changes across cultures.

Some previous studies across cultures examined how individuals from different cultures perceived systems differently (Straub, 1994, Gefen and Straub, 1997, Straub et al., 1997). For example, Straub (1994) carried out a study to determine whether culture differences between USA and Japanese knowledge workers influenced technological innovation, in terms of utilizing E-mail and Fax, and proposed that media use is influenced by perceived ease of use and usefulness, and usefulness is influenced by Social Presence Information Richness of the medium. Straub (1994) found that e-mail was rated by American workers more highly than Japanese workers, while Fax was perceived as an important medium by the Japanese workers because of the social presence and information richness of the medium. Straub's (1994) ideas and TAM were extended by Gefen and Straub (1997), who examined how gender influences

the IT diffusion model across three countries (Japan, Switzerland and USA). They proposed that gender directly influences the Social Presence Information Richness of the medium, perceived usefulness, ease of use and use behaviour, and found that e-mail was perceived as being a social presence more highly by women than men. They also perceived a higher value for PU than men, while men perceived ease of use more important than females did. The study also found that the effect of gender on e-mail usage was not confirmed. Straub et al. (1997) re-examined TAM across Japan, Switzerland and USA in the context of e-mail usage, finding that system use was influenced significantly by perceived usefulness in the case of USA and Switzerland but not in the Japanese case, yet in all three cases perceived ease of use had no influence on system use. In general, Straub et al. (1997) confirmed that TAM showed a close fit with the USA culture but differed significantly from Swiss and Japanese TAM models.

In the traditional marketing context, Lee and Green (1991) carried out research to examine TRA across USA and Korea. They found that subjective norms were perceived an important construct affecting behavioural intention in the Korean sample, but not in the case of American sample, while attitude was more important in the case of the American study, but not in the Korean sample, to influence individuals' behaviours intentions so that TRA can be applied to explain consumers' behaviours intention in a Confucian culture. Liu et al. (2001) examined how behavioural intention towards marketing services can be influenced by culture differences among students who arrived in a large USA university from different cultures. They found that in lower individualism and higher uncertainty avoidance, customers tend to have a higher intention to praise superior service, tend not to switch, not give negative word of mouth and not complain with poor service quality. On the other hand, customers from high individualism and low uncertainty avoidance tend to switch, willing to give negative word of mouth and complain about poor service quality. In B2B relationships, Reimann et al. (2008) carried out a study to examine how uncertainty avoidance has a major impact on how customer satisfaction would be affected by service quality across 303 Spanish, German and Swedish business to business customers and found that high degree uncertainty avoidance customers were less satisfied than low uncertainty avoidant customers, because their service quality expectations were contrary to expectations.

In the online marketing context, Jarvenpaa et al. (1999) developed a model to examine the antecedents and consequences of customers' trust in a business web across three cultures

(Australia, Israel and Finland), proposing that trust would be determined by perceived size and reputation, and trust will directly influence attitude and risk perception, but indirectly influence willingness to buy online books (Amazon.com) and found that Israelis showed higher trust and lower risk perception than the Australians, while Finns shown lower level of trust than the Australians, while the key relationships in the model held across all consumers in all countries. Luna et al. (2002) developed a model to investigate the effect of culture on a customers' attitude and site flow in the context of Spain and USA culture by examining site content characteristics, such as site cultural congruity, language, graphics, interactions of language, cultural congruity and graphics, finding that the relationships were supported across the cultures. Y.K et al. (2002) examined the reactions of online consumers in the USA and Hong Kong to websites of several global automobile manufacturers and found that the American group tended to use the Internet for information searching purposes, while the Hong Kong group tended to use the Internet for social communication purposes. Cyr and Trevor-Smith (2004) investigated the eight local site preferences elements, such as use of symbols, graphics, colour preferences, site feature (links, maps, search functions and page layout), language and content among users from Germany, Japan and United States and found significant differences across those users in most of the elements. Liu et al.(2004) developed a privacy-trust-behavioural intention model to compare American and Taiwanese online privacy perceptions of how the level of trust of the electronic business website would be affected by online privacy perceptions. Liu et al.(2004) proposed that trust would be influenced by privacy dimensions (notice, access, choice and security) and trust would influence behavioural intentions (purchase again, visit again, recommend to others and positive remarks). They found that all the relationships were supported, with no significant differences between American and Taiwanese. Cyr et al. (2005) carried out research among customers from Canada, USA, Germany and Japan to find out whether there was any difference in design preferences between local and foreign business websites, and any culture differences regarding the design elements. In general, Cyr et al (2005) found that Americans, Canadians, and Germans shown similar preferences on the website design element, while Japanese exhibited different design preferences. Singh et al. (2005) examined the cultural values on the local websites across China, India, Japan and the USA and found that the local websites reflected the cultural values of the country but significant differences between these local websites in terms of the cultures dimensions were found as well. Gefen and Heart (2006) carried out a study in the e-commerce (online book) to examine whether the trust beliefs that were conceptualized in the context of the USA could be applied in Israel and

found that trust beliefs were supported across cultures and the unvarying aspect of e-commerce and trust beliefs were affected by predictability and familiarity, and the effects may differ across national cultures.

Cyr (2008) developed a model to investigate customers trusting and satisfaction behaviours and whether they are related to their loyalty across Canada, Germany and China. Cyr (2008) proposed that customers' trust and satisfaction would be determined directly by website design elements such as navigation, visual and information design, and trust and satisfaction would influence e-loyalty directly. Cyr (2008) confirmed that all relationships were supported with some differences relating website design features to trust and satisfaction when each country was tested separately. Jin et al.(2008) examined and compared the influence of firm reputation on consumer assessment of e-tailers' satisfaction, trust and loyalty in the context of USA and South Korea, found that customers' loyalty contributed to a firm's reputation by increasing customers' satisfaction in Korea more than in the USA. There were no culture differences between the two samples in terms of the relationship between reputation-trust and trust-loyalty. Kim (2008) developed a theoretical model that examines the antecedents of e-vendor trust and distinguish between self-perception based trust determinants (security protection, privacy concern and system reliability) and transference-based consumers trust determinants (third party seal and referral) in an e-commerce context across USA and Korea. The results show that customers from culture Type II (i.e., collectivist–strong uncertainty avoidance–high long-term orientation–high context) based their trust on the transference-based more than Type I culture (i.e., individualistic–weak uncertainty avoidance–low long-term orientation–low context), while both cultures exhibited similar perceptions regarding self-perception based trust with negative and insignificant influence of privacy concerns on trusting behaviour. Vance et al. (2008) carried out research to examine customers' trust in IT artefact antecedents in two different cultures (USA and France) and proposed that trusting beliefs in IT artefacts would be influenced by perceived ease of use, system quality perception (navigational structure and visual appeal), institution-based trust and uncertainty avoidance (UA) dimensions of culture, finding that all the proposed relationships were supported and UA moderated the relationship between navigational structure and trusting beliefs.

Other bodies of research focused on examining customers' behaviours across cultures in the context of banking sector (Furrer et al., 2000, Tsikriktsis, 2002, Singer et al., 2008, Alsajjan

and Dennis, 2010). Furrer et al. (2000) carried out a study to find out the relationships between all five cultural dimensions that were developed by Hofstede (1980), as well as all five service quality dimensions that were developed by (Parasuraman et al., 1985, Parasuraman et al., 1988, Parasuraman et al., 1991, Parasuraman et al., 1993). Furrer et al. (2000) examined the relationship between the five services quality dimensions namely reliability that is "the ability to perform the promised services dependably and accurately", responsiveness that is "the willingness to help customers and provide prompt services", assurance that is "the knowledge and courtesy of employees and their ability to convey trust and confidence", empathy that is "the caring, individualized attention provided to the customer" and tangibles what are "the appearance of physical facilities, equipment, and communication materials" Furrer et al. (2000, p. 357) and culture dimensions namely power distance, individualism, masculinity, uncertainty avoidance and long-term orientation that stated by (Hofstede, 1980). Furrer et al. (2000) examined the relationship on groups of international students in the context of retail banking services and found that culture with a large power distance tended towards negative relationships with empathy responsiveness and reliability, but positive relationships with assurance and tangibles, while individualism culture tended to have positive relationships with reliability, responsiveness and tangibles, but negative relationship with assurance and empathy. Furrer et al (2000) also found that masculinity culture tended to have negative relationships with reliability, responsiveness and assurance, but positive relationships with empathy and tangibles, while uncertainty avoidance culture had positive relationships with reliability, responsiveness, assurance and empathy, but not with tangibles. Long-term orientation had significant relationships with reliability, responsiveness and empathy, but negative relationships with assurance and tangibles. Tsikriktsis (2002) examined the relationships between cultural dimensions Hofstede (1980) and website quality expectations in the context of the web banking context on the sample of international students and, in general, the study found that higher website quality expectations were linked significantly with masculinity and long-term orientation culture. Singer et al. (2008) examined whether Citibank reflected the cultural diversity by applying TAM and Hofstede's culture dimensions to a group of managers and identified how perceived ease of use can be influenced by cultural proclivities. Singer et al. (2008) found that international online banking websites and their contents were influenced by culture dimensions. Alsajjan and Dennis (2010) revised TAM to examine consumers' acceptance of Internet banking across KSA and the UK and proposed that attitudinal intentions would be determined directly by perceived usefulness and trust, but indirectly by perceived manageability and subjective

norms. They found that the proposed model was supported and all the proposed relationships were supported with significant differences between the groups (KSA and the UK) in the relationships of perceived usefulness and trusting behaviour to attitudinal intentions.

The next section will focus on the previous studies of Internet banking that have been carried out.

3.11.   Internet Banking Previous Studies (An Overview)

A considerable body of literature investigated customers' behaviours and perceptions towards Internet banking as a system, as well as an e-commerce application. Some of the previous studies focused on investigating what factors caused customers to adopt and use Internet banking such as (Sathye, 1999, Polatoglu and Ekin, 2001, Howcroft et al., 2002, Devlin and Yeung, 2003, Eriksson et al., 2005, Ndubisi and Sinti, 2006, Hernandez and Mazzon, 2007, Gounaris and Koritos, 2008, Chong et al., 2010). Some studies, for example, examined the impact of customers' use of self-service technologies on the relationship approach (Ricard et al., 2001) while others investigated factors that drive the development of services from organizational perspectives (Daniel, 1999, Aladwani, 2001, Kardaras and Papathanassiou, 2001, Nielsen, 2002, Bradley and Stewart, 2003b, Corrocher, 2006, Shah and Siddiqui, 2006, Sayar and Wolfe, 2007). In Canada, Zuccaro and Savard (2010) carried out a research to develop a transaction-based model to segment internet banking users. In the B2B context, Internet banking adoption was examined (Rotchanakitummuai and Speece, 2003, Johns and Perrott, 2008). In the following, an overview about these studied mentioned above and more will be highlighted below.

Mols (1998) compared PC-based home banking systems users with non-users in Denmark in order to find out what the behavioural consequences of PC-based banking are, and whether customers' satisfaction and higher switching barriers would be affected by the system. Mols (1998) found that the users of PC-based banking had more satisfaction and were less price sensitive, had higher intention to repurchase and provided more positive word-of-mouth than non-users. In Australia, Sathye (1999) developed a model to examine the factors that affect the adoption of Internet banking among Australian customers and proposed that the adoption of Internet banking would be determined by degree of security concern, ease of use, awareness of services and their benefits, reasonable price, no resistance to change and availability of infrastructure. Sathye (1999) found that security concerns and lack of

awareness of services and their benefits were the most significant factors encouraging customers to use Internet banking. In Kuwait, Aladwani (2001) carried out a study to find out what were the banks' executive, IT managers and customers' online banking perceptions in terms of drivers, development challenges and expectations. The study found that providing faster, easier, more reliable services to customers, improving the competitive position and the bank's image, meeting customer demand, creating new markets, reducing operational and administrative costs and reducing workforce were the most importance drivers of adoption of online banking from IT managers and senior management perspectives, while the study found that Internet security, customers' trust, the speed of service delivery, customers' information privacy, customers awareness, continuity of the service, spread of computer and Internet use, difficulty of using online banking, pricing of Internet service, Internet infrastructure in the country, and cost of maintaining the site were the most significant future challenges from both banks and potential customers perspectives. In Turkey, Polatoglu and Ekin (2001) explored customer-related and organizational factors that may influence the adoption of Internet banking services, finding that relative advantage, observability, trialability, complexity, perceived risk, type of customers and decision, and marketing efforts, such as radio and TV advertisements, were the significant drivers of Internet banking among Turkish customers. In Australia also, Thornton and White (2001) examined financial customers' usage, attitudes towards different financial distribution channels (including human tellers, automated teller machines, electronic funds transfer at the point of sale, credit cards, cheques, telephone banking and Internet banking) and found that customers had more positive attitudes towards convenience, services, technology, change, knowledge, computer and confidence to adopt electronic banking distribution channels.

In the UK, Howcroft et al. (2002) carried out a study to examine the consumers' financial service behaviours in terms of their attitudes towards home-based telephone and Internet banking. They found that lower fees, improved service quality, time saved, 24 hours service, recommendation by family and friends, and recommendation by newspapers were the significant factors affecting customers to adopt Internet banking, while security concerns, errors, complexity, access to delivery channel and lack of face-to-face contact were the most frequently cited factors that discouraged customers from utilizing Internet banking. In Korea, Suh and Han (2002) developed TAM model to examine customers' acceptance of Internet banking, proposing that trust, perceived ease of use and usefulness would influence customers' attitudes towards Internet banking, and trust and perceived usefulness would

directly affect behavioural intentions. They found that all the relationships proposed were supported and they indicated that trust had significant influence on Internet banking acceptance. Devlin and Yeung (2003) explored factors that encouraged customers to switch from traditional banking to Internet banking, and found that customers' propensity to use Internet banking was not influenced by their satisfaction with bank charges and overdraft interest rate, while bank efficiency and responsiveness influenced a customers' propensity to use Internet banking. In USA, Joseph and Stone (2003) developed a grid that may be useful for bank managers when deciding to use such technology to deliver different services. Four scenarios (namely concentrate her, keep up the good work, low priority, and possible overkill) that are limited to two conditions (the importance of the specific attributes of the services and the performance of delivering these services) should be considered by bank managers. These scenarios will help banks to identify the services that should be developed, changing or eliminated. Mukherjee and Nath (2003) applied commitment-trust theory to examine customers' perceptions of the key antecedents and consequences of trust in India, proposing that trust would be determined by shared values, communication and opportunistic behaviour, while trust would influence relationship commitment, and found that the model and the proposed relationships were supported. In Korea, Suh and Han (2003) developed a framework to examine the impact of customers' perceptions of security control (authentication, non-repudiation, confidentiality, privacy protection and data integrity) on trust perception. The study found that non-repudiation, privacy protection and data integrity were significantly related to customers' trust and indirectly to customers' attitude and behavioural intention, and finally to actual Internet banking usage. Wang et al. (2003) extended TAM to investigate Internet banking acceptance in Taiwan, proposing that behavioural intentions would be determined by perceived usefulness, ease of use and perceived credibility, and indirectly by computer self-efficacy, founding that the model and the proposed relationships were supported. Beerli et al. (2004) developed a model to examine customers loyalty toward their banks and proposed directly that customers' satisfaction and personal switching costs, and indirectly perceived service quality, would be the significant factors that impact customers loyalty. They found that all the proposed factors were supported with the greatest impact of satisfaction.

In Estonia, Eriksson et al. (2005) developed a model based on TAM to examine Internet banking acceptance and proposed that trust will affect perceived usefulness and ease of use directly and usage behaviour indirectly. They found that the proposed model and

relationships were supported. In the UK, Joseph et al.(2005) carried out research to explore the dissatisfaction areas associated with the banking experience of e-banking in the UK by using the importance-performance technique. They found that banks' performance, time efficiency, security, overall efficiency, confidence in the bank, convenience, ability to handle complaints, accessibility, personalized needs and visual appearance were the most importance factors affecting customers' perceptions towards online banking. Laforet and Li (2005) investigated the market status for online and mobile banking in China in order to understand the demographic characteristics of users and non-users of electronic banking, and found that experience had no influence on electronic banking adoption, and experience, awareness, possession of credit/debit cards, confidential and security perceptions were statistically different among users and non-users on electronic banking. In Hong Kong, Wan et al. (2005) investigated what factors influenced customers to adopt branch banking, ATM, telephone banking and Internet banking, finding that demographic backgrounds were associated with the adoption of all banking channels expect ATM, which was the most popular channel, followed by Internet banking. Wan et al. (2005) confirmed that convenience was the most importance belief influencing customers to adopt Internet banking followed by user-friendliness, assurance and informativeness.

Gan et al. (2006) applied consumer decision-making processes to find out what factors affecting customers' choice between electronic banking and non-electronic banking in New Zealand. They found that service quality dimension (reliability, assurance and responsiveness), perceived risk factors (financial, performance, physical, social and psychological risks), user input factors (control, enjoyment and intention to use), employment, and education were the most significant influential factors. In Finland, Mäenpää (2006) explored Internet banking services, consumers using the services and the possibilities of the services' development by clustering the customers on the basis of their perceptions, finding that there were four customers clusters: three of them did not value the services' dimensions containing experiential features, while the last one comprised youngsters who perceived those services' dimension as very appealing. Ndubisi and Sinti (2006) developed a model to examine the adoption of Internet banking in Malaysia and proposed that its adoption would be determined by Internet banking site features (utilitarian and hedonic orientation) and attitude (the importance of banking needs, compatibility, complexity, trialability and risk). They found that attitude factors and utilitarian orientation had significant impacts on Internet banking adoption. In Australia, Walker and Johnson (2006) developed a framework

to examine why customers' use or don't use three types of technology-enabled services (Internet banking, telephone bill-paying and Internet shopping services). They found those individuals' perceptions of their capacity or capability to utilize the services, risks perceptions, relative advantages that associated with their use and their preference of personal contact were the importance factors influencing their behaviours.

Herington and Weaven (2007) developed a model to examine customers' perceptions towards telephone, Internet banking and ATMs, and how e-service quality affects e-loyalty directly and indirectly through e-trust, customer delight and relationship strength in Australia, finding that e-trust, customer delight and relationship strength were not affected by e-service quality, but e-service quality had direct influence on e-loyalty and some of e-services dimensions, such as efficiency, had direct impact on e-trust and indirect impact on relationship strength. In addition, personal need and site organization had direct significant impacts on e-loyalty. In Brazil, Hernandez and Mazzon (2007) developed a framework to examine factors affecting Internet banking adoption and usage. They proposed that innovation intentions to use or continue to use and actual adoption of Internet banking would be determined by innovation characteristics such as relative advantage (convenience, economic benefits, security and privacy, control), visibility, results demonstrability, compatibility with lifestyle, ease of use, trialability and image. Hernandez and Mazzon (2007) also proposed that innovation intentions to use or continue to use and actual adoption of Internet banking would also be determined by subjective norm, perceived behavioural control (self-efficacy, technological support, government support) and individual characteristics (access to a home PC, education, age, male, income) and found that relative advantage of control, compatibility with lifestyle, image, subjective norm, self-efficacy, relative advantage of security and privacy, results demonstrability, and trialability had significant influence on intention to use or continuance to use Internet banking, while individuals characteristics had significant influence on actual adoption of Internet banking. In Finland, Kuisma et al. (2007) carried out a qualitative study to investigate the reasons why customers resist adopting Internet banking and found that lack of computer and Internet connection, newness of the channel and routine use of ATM, lack of information, lack of an official receipt, Internet surroundings, absence of a bar code reader, changeable passwords and unclear proceeding at monitor and other more were the most cited reasons than affecting Internet banking adoption.

Çelik (2008) extended TAM by adding contextual factors, such as perceived risk, playfulness and behavioural control, that would determine perceived usefulness and ease of use directly and indirectly on attitude and behavioural intentions in Turkey, founding that perceived usefulness and risk and attitude had the largest influence on behavioural intentions; perceived playfulness had only positive influence of perceived ease of use; while perceived behavioural control on both perceived ease of use and usefulness had an indirect influence on attitude. In Greece, Gounaris and Koritos (2008) carried out a study to compare two widely adopted models, namely TAM and diffusion of innovation (DOI), to examine which one can predict consumer adoption of Internet banking more effectively. They also examined a new one, namely perceived characteristics of the innovation (PCI), and found that PCI performed better than TAM and DOI for predicting consumer adoption of Internet banking and the predictive ability of the overall mode was improved by consumer demographics and psychographics factors. Grabner-Kräuter and Faullant (2008) developed a model to examine the role of Internet trust on customers' behaviours towards Internet banking in Austria and proposed that customers attitude would be determined by Internet trust and risk Internet banking directly, and Internet trust would be determined by propensity to trust and Internet familiarity, finding that all the proposed relationships were supported.

In 2009, several modes were developed to examine the factors influence the adoption of Internet banking such as (Alda´s-Manzano et al., 2009, Berger, 2009, Polasik and Wisniewski, 2009). Alda´s-Manzano et al. (2009) proposed a model to examine the adoption of Internet banking in Spain. They proposed that consumer innovativeness and perceived risk were the main constructs that influence Internet banking directly. Further, they conceptualized and dimensionalized perceived risk into different dimensions namely (performance risk, security risk, social risk, time risk and privacy risk). These dimensions proposed to have indirect influence on the adoption of Internet banking. Alda´s-Manzano et al. (2009) found that all the relationships were significant. In Australia, Herington and Weaven (2009) explored the measurement of e-service quality in the context of e-retail banking and the relationship between e-service quality and customers' satisfaction, founding that e-service quality (personal needs, site organisation, user-friendliness and efficiency) had significant influence on overall customers' satisfaction with banking performance, while efficiency (dimension of service quality) had no influence on satisfaction. In Germany, Berger (2009) develop a model to examine how perceived usefulness, perceived ease of use and attitude toward using self-services technology impact users' intention to use those

services. In addition they investigate the moderating role of technology readiness dimension (optrism and innovativeness), customer relationship characteristics (scope and scale) and social need characteristic (need for interaction) on the relationship between perceived usefulness and attitude and between the relationship of perceived ease of use to attitude. The study confirmed all the proposed relationships. Polasik and Wisniewski (2009) developed a model to examine that factors influence Internet banking adoption in Poland. They proposed that six factors will have significant influence on the adoption of Internet banking namely Demographic Characteristics (years of schooling, gender, area of residence, employment status, income level and occupation), type of Internet connection used, use of other banking products (model banking, debit card, credit card and virtual card), marketing exposure, and internet experience (years of internet use, internet use at work, experience with online purchases and prior use of e-finance). Other studies such as Salmones et al. (2009) examine some factors that may influence customers' loyalty such as philanthropic and ethical responsibilities, relational outcomes, commercial performance indirectly through relationship satisfaction, trust and identification. They proposed that customer's loyalty will be affected directly by relationship satisfaction, trust and identification. Salmones et al. (2009) found that all the relationships were supported except the relationship between ethical responsibility to relationship satisfaction.

In Vietnam, Chong et al. (2010) developed a model based on TAM to examined factors that influence customers to accept Internet banking and proposed that Internet banking adoption will be influenced by perceived usefulness, ease of use, government support and trust, founding that intentions to adopt Internet banking were influenced by perceived usefulness, government support and trust, while perceived ease of use had no influence. Yap et al.(2010) developed a framework to examine the role of situational normality, structural assurance and bricks-and-mortar in developing e-banking trust in Australia. Yap et al.(2010) proposed that Internet banking adoption would be determined by e-banking trust directly and indirectly by traditional bank attributes (size and reputation) and e-banking website attributes (perceived security, privacy, usefulness and ease of use) via e-banking trust. In addition, traditional service quality (reliability, assurance, responsiveness, tangibles and empathy) would moderate the relationship between traditional bank attributes and trust in e-banking. Yap et al.(2010) found that traditional banking attributes had influence on e-banking trust as long as traditional service quality expectations are met and e-banking website attributes were significantly related to trust in e-banking. In China, Zhao et al. (2010) developed a model to

examine the impact of trust and perceived risk on consumers of Internet banking services and proposed that behavioural intention to use Internet banking services would be determined directly by perceived risk and competence of Internet banking services, and indirectly by trust perceptions, founding that the model and proposed relationships were supported.

3.12.   Summary

The current chapter provided an overview about the areas that the study's proposed model is based on. It covered the area of customers' trust from the traditional and online context. Trust definitions were provided and the definition of customers' trust in the current study was stated and theoretical gaps were identified.

Moreover, this chapter highlighted the customers' loyalty from the traditional and online contexts and its different definitions were provided. It also stated the definition of customers' loyalty in the current study and identified the theoretical gap.

In addition, an overview about technology theories and models was provided and the theories and models that applied as a fundamental theoretical foundation of the proposed model were identified. Finally, this chapter provided an overview of the technology acceptance studies and technology acceptance across cultures and Internet banking literature review. The current chapter concluded that the first objective was achieved.

In terms of the following chapter, the proposed model will be stated, the constructs that are proposed to have significant influences on students' behaviour towards Internet banking loyalty will be identified and different hypotheses relationships will be stated.

Chapter Four: The Conceptual Framework and Hypotheses

4.1 Introduction

The banking business is a most sensitive market in which banks may require to improve their relationships with customers to meet local and global competition. González et al. (2004, p 317) state that more than 11,250 e-banking sites have been established across the world, with 170 online banking sites available in Spain alone. An enormous number of banks offering online services are based in the USA, while the largest number of e-banking websites in Europe is in Spain, Germany, the UK, Italy and France according to the 2004 data. Online banking is on the increase and available to customers through the implementation of advanced technology, such as cryptographic techniques, communication security or encrypted customer information to protect customer transactions from external and internal attacks, malicious codes and denial of service.

As stated in the first chapter, the purpose of the current research is the development of a cross-cultural universal framework, which is moderated by the culture dimension (uncertainty avoidance) and examines the factors influencing the individuals' attitudes and behaviour and, ultimately, the individuals' loyalty towards Internet banking across different countries (KSA and the UK). Different predictors that have been proposed and supported in different models and theories are integrated. According to the literature review (Chapter 3), there are different models have been proposed and supported empirically in the marketing to examine customers' loyalty in the traditional and online contexts, however there is still a theoretical gaps that is stated in Chapter 3. It was also noted that there are a few studies that have examined and modelled customers' loyalty in the domain of Internet banking. In order to fill this gap, customers' loyalty is considered as the important construct in the study's proposed model because it has been proved as a main indicator for business success. The following sections will illustrate how customers' loyalty will be conceptually linked to other constructs, both directly and indirectly.

Theoretically, the current proposed model is based on different models and theories, such as the theory of reasoned action (TRA), technology acceptance model (TAM) and social cognitive theory (SCT) that were provided in section 3.7 in Chapter 3. Accordingly, thirteen constructs will be stated and linked together in different ways in the proposed model

(customers' loyalty, attitude, intention, perceived ease of use, perceived usefulness, trust, privacy, security, reputation, communication, experiences, subjective norms and self-efficacy).

This chapter is designed as follows. The following section (4.2) will highlight and illustrate the proposed model in general. Then, the relationships between the proposed constructs and the hypotheses will be stated (section 4.3). Then, the mediator role will be explained in section 4.4, followed by highlighting the moderator (Uncertainty Avoidance) impact on the direct relationships in section 4.5. The last section (4.6) illustrates the influence of Gender and experience on the current study's framework for across validation. Finally, section 4.7 summarises the whole chapter and highlights the most important points in the current proposed model. In addition, it introduces the Methodology Chapter.

4.2 Research Framework Description

The current research model will help to fill out several significant gaps that were stated in sections 3.2.4, 3.3.3, 3.4.3, 3.5.3 and 3.7.5 in the literature review chapter. These would be investigated and examined empirically so that significant contributions to the literature can be added. According to the previous literature, there are several constructs that have been identified and supported to have significant impacts on technology acceptance from customers' perspectives. Unlike previous studies, the current study went further and beyond the technology acceptance to investigate whether the customers' behavioural intentions have significant effect on their loyalty with that system.

Accordingly, in the current research's model, there are twelve constructs proposed to have certain influences on customers' loyalty, either directly or indirectly. The following figure shows the proposed model and suggests that customers' loyalty would be affected directly by their behavioural intentions to adopt and use Internet banking, while their behavioural intention is proposed to be influenced by their personal attitude based on what has been proposed in TRA and supported in a more specific technology context in TAM. Based on TAM, the current conceptual framework proposed that users' attitudes would be influenced by perceived ease of use and usefulness, which are the fundamental technology aspects that determine users' behaviour to accept or reject such technology.

Based on the previous marketing literature in both traditional and online contexts in section, trust was proved to be one of the significant constructs that determined customers' behaviour in different relationships, such as B2C or B2B. Accordingly and because the current research will be conducted at the level of B2C in the context of Internet banking, trust would be an important construct to be examined as it determines customers' behaviours because in the Internet banking context, significant information and data will be used to perform financial transactions. In addition, all the financial transactions will be performed in the open environment (the Internet) where many uncertainty and risks issues might be involved in the transactions, such as unauthorised parties might have access to the customers' personal information and that information can be misused, or security numbers might be stolen and used. Accordingly, trust might be a more important construct in the online context than in the traditional context, and have greater importance in Internet banking context than in other contexts. Because of these reasons, amongst others, the current proposed model integrates trust as the main construct that influence customers' behaviours and proposes that it would have direct influence on perceived ease of use and usefulness.

According to the SCT, self-efficacy as a main personal factor is included in the framework in order to examine whether there is any such influence of this construct on perceived ease of use and usefulness, because in the literature review it was proved that this construct has significant influence on both perceived ease of use and usefulness. The current proposed model considers whether this construct still has significant influences on both perceived ease of use and usefulness, and whether any effect would be held across distinct markets, countries or culture.

According to TRA and TPB, the influence of social pressure on users or customers' decisions or their positive or negative attitude to accept or reject such technology or on their intentions to adopt that technology was proved. A considerable amount of literature also examined these influences in many different contexts, either in the voluntary or mandatory setting. In the current study, social pressure (subjective norm) would be integrated and added in the proposed model because of several reasons. For example, the current research suggested that subjective norm would be more important in the context of Internet banking than other contexts, such as the influence of this construct on the technology acceptance in the organisation context, or adopting such online activities as information searching and social contact. Using Internet banking would involve such online transactions such as accessing the

online account using personal information or transferring funds and making investments via an open environment where the risk level might be high so that users or customers might want help from other members in the society to reduce the risk perceptions. Accordingly, investigating subjective norm in the context of Internet banking, and whether its significant influence (if any) would be held across different cultures and marketing are the main objectives in the current proposed model.

Unlike the previous studies, the proposed model attempts to examine some important constructs that were supported to determine customers' trust perception. These constructs would be integrated in the current proposed model to fill out the gaps that were identified in Chapter 3. The model proposed that security, privacy, communication, reputation and experiences are significant constructs and have been supported in the literature review to have significant effects on customers' trust perceptions. The current study attempts to examine their influences and whether their influences (if any) would be held similarly across countries, or would be significant on one country and insignificant on another. In addition, the current study will examine the influence of the culture dimension (Uncertainty Avoidance) as a moderator on the direct relationships on the conceptual framework.

Accordingly, from the literature review and the proposed model, several different hypotheses are developed to fill the identified gaps and contribute to the previous literature in the following sections.

Figure 4.1: The proposed Conceptual Framework of Students' Perception of Internet Banking Loyalty
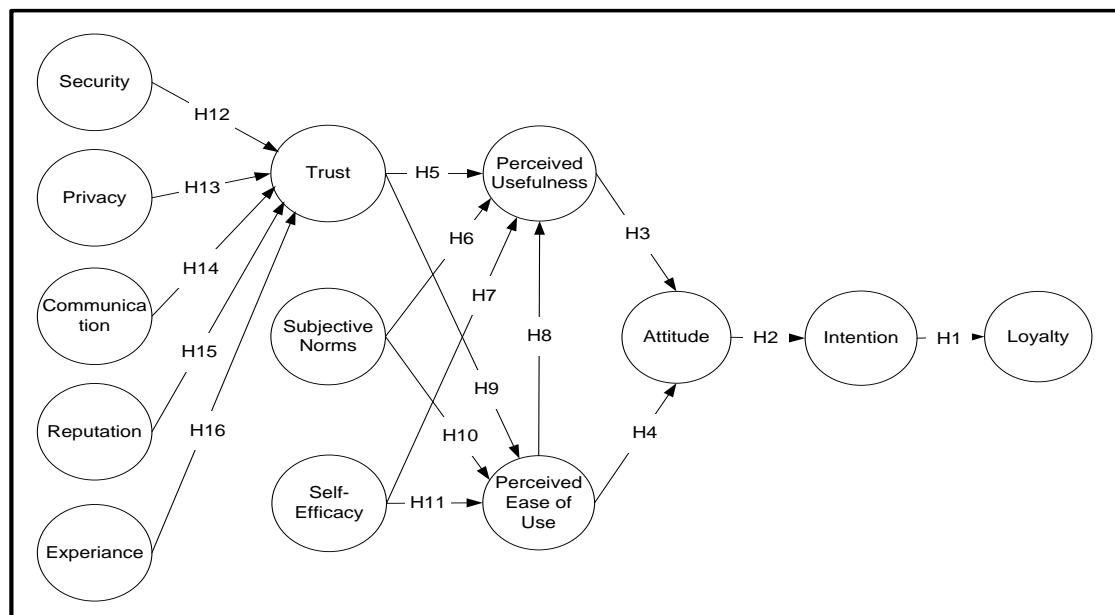
4.3 Key Constructs and Hypothesized Relations

In this section, the key constructs in the proposed model (customers' loyalty, customers' behavioural intentions, customers' attitude, perceived ease of use, perceived usefulness and customers' trust) and their antecedents will be highlighted and discussed in separate subsections. Customers' loyalty will be discussed in the first section, followed by a section that illustrates customers' behavioural intention and what construct/s would influence it, and so on.

4.3.1. Behavioral Intention and Customers' Loyalty towards Internet Banking

Customer loyalty is an important factor for most companies. A large body of research has examined and measured customer loyalty in different contexts with different models. For example, considerable research has examined customer loyalty in the context of Internet banking (Moutinho and Smith, 2000, Beerli et al., 2004, Lam and Burton, 2006, Ferguson and Hlavinka, 2007, Casaló et al., 2008), while other research has examined customer loyalty across different cultures (Cyr, (2008), Jin et al., (2008). These studies all found that customer loyalty is an important indication of business success. Therefore, this study proposes that customers' behavioural intentions to use Internet banking are important factors affecting customer loyalty. In this research, the relationship between customers' behavioral intention

and their loyalty will be examined across two distinct cultures to provide deeper insight into customer loyalty and to enhance previous research findings.

In terms of the relationship between behavioral intention and customer loyalty, the study adopts the basic notion of the TRA (Fishbein and Ajzen, 1975, Ajzen and Fishbein, 1980) - namely, that people's behaviours are influenced by the strength of their behavioural intentions towards a situation. In other words, the stronger a person's behavioural intentions, the more likely he/she perform behaviour. Fishbein and Ajzen (1975, p. 288) define behavioural intention as "a measure of the strength of one's intentions to perform a specified behaviour". Davis et al. (1989) applied a similar definition for TAM. Thus, in this research, the same definition will be applied to indicate the strength of a person's intention to perform a specific behaviour (i.e. loyalty). Prior research has tested the relationship between intention and behaviour from an information technology perspective, such as the link between intentions to use a system and actual usage behaviour (Davis et al., 1989, Davis, 1989, Davis, 1993, Taylor and Todd, 1995a, Szajna, 1996, Dishaw and Strong, 1999, Suh and Han, 2002, Pavlou, 2003, Dennis et al., 2009). In addition, the relationship between intention and use has been examined from a cultural perspective (Al-Gahtani et al., 2007, Luna et al., 2002). Other studies have examined the relationship between behavioural intentions and use in the Internet banking context (Suh and Han, 2002, Suh and Han, 2003, Walker and Johnson, 2006). Suh and Han (2002) noted that purchase, purchase intention, and attitude are significant constructs affecting store loyalty.

From the offline marketing context, Dick and Basu (1994) developed a conceptual model that helps to show how customer loyalty might be affected by cognitive, affective and Conative antecedents, and examined the customer loyalty consequences. They conceptualized loyalty relationship as a component of customers' relative attitude and repeated patronage, proposing that affective antecedents (emotion, feeling states/mood, primary affect and satisfaction) will have significant influence on customer loyalty. Dick and Basu (1994) stated that when customers have strong positive emotions, they are more likely to focus their attention on specific targets. It can be noted that the concept of emotions that indicated that customer will have attention to a specific behavioral might be similar of the behavioural intention that customers' willingness to perform a specific behavioral. In the current study, the specific target is Internet banking acceptance. According to Dick and Basu (1994), it can be stated that the more customers have high emotion and focus in their attention to Internet banking,

the more they show a high and positive relative attitude and repeat patronage. In Australia, Macintosh and Lockshin (1997) developed a framework to examine empirically the relationship between trust in a salesperson, trust in a store and repeat purchase. They proposed that store loyalty consist of three components; namely, store attitude, purchase intention and the percentage of business between the store and its customers). Macintosh and Lockshin (1997) found a significant relationship between purchase intention and purchase' proportion.

Foscht et al. (2009) developed a model to examine what factors impact customers' satisfaction, loyalty and behavioral intention regarding their banking needs in Austria. They examined the relationship between customers' loyalty and their behavioral intention among young people at university level, proposing that as there is a relationship between customer satisfaction and customer loyalty, the influence of customer loyalty on behavioral intention is evident. They found that loyalty has a positive and significant relationship with behavioral intention

The current study also conceptualizes customer loyalty intention as a component of both attitude and actual behaviour, as stated in its definition and reflected by its measurement variables. It includes five measures of customer loyalty intention: (1) providing positive word-of-mouth of customers' willingness to make positive recommendation to others; (2) customers choose a specific Internet banking provider in preference to other providers; (3) their willingness to continue the relationship; (4) their general attitude and feeling regarding Internet banking; and (5) the likelihood that they will continue the relationship for a long-term. According to Jones and Farquhar (2003), who examined the influence of contact management on customer loyalty, customer loyalty can be measured by two dimensions: continued custom and the likelihood of recommendation. They argued that these two dimensions address both behavioural and attitudinal components of loyalty.

Based on the above studies (Dick and Basu, (1994), Macintosh and Lockshin, (1997), Foscht et al., (2009) and according to the Theory of Reasoned Action (Fishbein and Ajzen, 1975, Ajzen and Fishbein, 1980), the current study proposed a relationship between behavioural intention and customers' loyalty intention towards internet banking. Moreover, in reviewing other researches from a customer loyalty perspective, none have examined whether customers' behavioural intentions to use internet banking affect their loyalty intention

towards that system. Accordingly, the current study attempts to fill this gap, in turn providing a significant contribution to the literature. Thus, this study hypothesizes the following:

H1: Students' behavioral intentions significantly influence their loyalty towards Internet banking in both KSA and the UK.

4.3.2. Customers' Attitude and Customers Behavioral' Intentions towards Internet Banking

According to the proposed framework, people's behavioural intentions are determined by their attitudes towards Internet banking and subjective norms. As mentioned previously, different definitions of attitude have been provided depending on the context of the study (Fishbein and Ajzen, 1975, Lederer et al., 2000, Chau and Hu, 2001). The current study apply Fishbein and Ajzen's (1975) definition . They defined attitude as "an individual's positive or negative feelings (evaluative effect) about performing the target behaviour" (1975, p. 216). Other studies have also applied this definition (Davis, 1989, Davis et al., 1989, Jackson et al., 1997). For the current study, this definition indicates that the greater the users' positive (negative) feelings, the greater (lesser) is their intention to use Internet banking.

Prior studies have investigated the effect of people's attitudes on their intentions to use a system (Davis, 1989, Davis et al., 1989, Davis, 1993, Taylor and Todd, 1995a, Taylor and Todd, 1995b, Jackson et al., 1997, Agarwal and Prasad, 1999, Dishaw and Strong, 1999, Chau and Hu, 2001, Suh and Han, 2002, Lu et al., 2003, Lee et al., 2006, McKechnie et al., 2006, Hernandez et al., 2009). In the context of Internet banking, (Suh and Han, 2002, Suh and Han, 2003, Çelik, 2008) examined this relationship, but only (Jarvenpaa et al., 1999) examined the relationship across Australia, Israel, and Finland. Accordingly, in the current study, it attempts to fill this gap by investigating the relationship between users' attitude and their intentions to use Internet banking across KSA and the UK. The study hypothesized the following:

H2: Students' attitudes towards Internet banking significantly influence their intentions to use Internet banking in both KSA and the UK.

4.3.3. Customers' Attitude antecedents (perceived Usefulness and Ease of Use) towards Internet Banking

According to TAM, the current study's model proposed that customers' attitude towards Internet banking would be determined by two constructs: perceived usefulness and ease of use. In the following subsections, two hypotheses were developed to examine the influence of perceived usefulness and perceived ease of use on customers' attitude.

4.3.3.1. Perceived Usefulness

The current proposed model suggested that users' attitudes would be determined by perceived usefulness and ease of use of Internet banking. The easier a system is to use and the more it enhances a person's ability and performance to achieve the targeted outcomes, the more positive his or her attitude towards the system should be.

Davis (1989) and Davis et al. (1989) originally examined and found support for the relationship between perceived usefulness and attitude in TAM. Perceived usefulness is "the degree to which a person believes that using a particular system would enhance his or her job performance" (Davis, 1989, p. 320). Davis et al. (1989, p. 985) defined perceived usefulness as "the prospective user's subjective probability that using a specific application system will increase his or her job performance within an organizational context". This study applies this latter definition of perceived usefulness to indicate a user's belief that Internet banking will enhance his or her ability to use online financial services. Thus, it can be hypothesized that

H3: Perceived usefulness significantly influences students' attitude towards Internet banking in KSA and the UK.

4.3.3.2. Perceived Ease of Use

As mentioned, Davis (1989, p.320) defined perceived ease of use as "the degree to which a person believes that using a particular system would be free of effort". According to this definition, the less effort put forth to use a particular system, the more positive attitudes towards the system will be and, thus, the more the system will be accepted. This definition will be applied in the current study to indicate the degree to which a user believes that using Internet banking will be free of effort. These two definitions have been cited and applied in different studies (Gefen and Keil, 1998, Agarwal and Prasad, 1999, Gefen and Straub, 2000, Lederer et al., 2000, Gefen et al., 2003b, Lu et al., 2003, Pikkarainen et al., 2004, McKechnie

et al., 2006, Hernandez et al., 2009, Alsajjan and Dennis, 2010). Thus, it can be hypothesized the following:

H4: Perceived ease of use significantly influences a students' attitude towards Internet banking in KSA and the UK.

4.3.4. Customers' Perceived Usefulness Antecedents (Trust, Subjective Norms, Self-Efficacy)

According to the proposed model, perceived usefulness will be influenced by four constructs: trust, self-efficacy, subjective norm and perceived ease of use. The following subsections will discuss and highlight these relationships.

4.3.4.1. Customers' Trust Perceptions and Perceived Usefulness towards Internet Banking

The current study proposes that the more students trust a system, the more they will use it, thus improving their performance and efficacy. Trust has been conceptualized in a variety of ways in an organization context (Mayer et al., 1995, McKnight et al., 1998), an e-commerce context (Jarvenpaa et al., 1999, McKnight and Chervany, 2002, Cyr et al., 2005) and in an Internet banking context (Suh and Han, 2002, Mukherjee and Nath, 2003, Rotchanakitummuai and Speece, 2003, Suh and Han, 2003, Herington and Weaven, 2007, Grabner-Kräuter and Faullant, 2008, Johns and Perrott, 2008, Chong et al., 2010, Zhao et al., 2010).

According to Gefen et al. (2003b) in the context of online shopping, customers' trust should enhance the perceived usefulness of a website, and such usefulness depends on the effectiveness of the technological properties. That is, customers will interact with a website if they consider the e-vendor trustworthy and if the site offers the desired benefits. Accordingly, the more students trust Internet banking in terms of the security and privacy protection, the more they will adopt and use it, and consequently the more benefits they will obtain. From this argument, the current study hypothesizes the following:

H5: Students' ' trust significantly influences perceived usefulness towards Internet banking in KSA and the UK.

4.3.4.2. Subjective Norms Influence and Perceived Usefulness

In the current study, it is expected that subjective norms influence perceived usefulness. As mentioned previously, using the TRA, prior research has suggested that subjective norms affect people's behaviours in different situations (Fishbein and Ajzen, 1975, Ajzen and Fishbein, 1980). In the current study, it refers to subjective norms as the Internet banking students' perceptions that most people who are important to them (e.g., family and friends) believe they should or should not use Internet banking to perform financial activities. Although the relationship between subjective norms and perceived usefulness has been examined in different contexts, it has not been examined across KSA and the UK. Thus, the current study attempts to fill this gap by examining this relationship. In addition, prior research has found that people's decisions to use a system are influenced more by others' beliefs than by their own (Davis et al., 1989). Venkatesh and Davis (2000) found that people can be influenced by the suggestions of others, such as superiors and co-workers. Because this construct was developed in western culture and proved to have significant influence on individuals' behaviours, the questions that remains an important issue is whether the relationship between subjective norms and perceived usefulness might differ across culture (in the current study between KSA and the UK) or might be held significant in both countries. Accordingly, the current study hypothesized the following:

H6: Subjective norms significantly influence perceived usefulness of Internet banking in both KSA and the UK.

4.3.4.3. Self-Efficacy Perceptions to Utilized Self-Services and Perceived Usefulness

The conceptual model proposes that students' self-efficacy influences perceived usefulness. The greater students' self-efficacy and self-confidence in a system, the more they can take advantage of that system's benefits. Bandura (1982, p. 122) defines self-efficacy as "judgment of how well one can execute courses of action required to deal with a prospective situation", a definition that (Davis, 1989) also uses. Prior research also identified self-efficacy as a person's belief that he or she is self-confident and capable of behaving in a certain way (Bandura, 1977, Lee et al., 2003b, Hernandez et al., 2009). For example, Venkatesh (2000) examined self-efficacy in the context of people's intentions to use a system. Lu et al. (2003) linked self-efficacy to the relationship between perceived usefulness and a person's behaviour towards wireless mobile devices. Prior research has also tested the relationship between self-efficacy and perceived usefulness in online shopping (Hernandez et al., 2009)

and Internet banking (Wang et al., 2003, Guriting and Ndubisi, 2006). Finally, Walker and Johnson (2006) suggested that personal capacity, capability, and self-efficacy can be similarly employed to reflect users' abilities to use technology-enabled services effectively.

Following Walker and Johnson (2006), the current study operationalized self-efficacy to reflect a person's ability to use, and self-confidence in using technology-enabled services, such as Internet banking. Accordingly, it can be hypothesized the following:

H7: Self-efficacy significantly influences perceived usefulness towards Internet banking in KSA and the UK.

4.3.4.4. Customers Perceptions towards Internet Banking's Ease of Use and Perceived Usefulness

As mentioned previously, prior research has addressed and examined perceived ease of use through TAM (Davis, 1989, Davis et al., 1989). In addition, Davis et al. (1989, p. 985) identified perceived ease of use as "the degree to which the prospective user expects the target system to be free of effort". Previous research has examined the effect of perceived ease of use on perceived usefulness (Subramanian, 1994, Taylor and Todd, 1995a, Taylor and Todd, 1995b, Chau, 1996, Dishaw and Strong, 1999, Gefen and Straub, 2000, Venkatesh et al., 2002, McKechnie et al., 2006, Kim and Forsythe, 2009), as well as in the context of Internet banking (Suh and Han, 2002, Wang et al., 2003, Eriksson et al., 2005, Çelik, 2008). However, this relationship has not been investigated across cultures; thus, examining whether students from KSA and the UK perceive the relationship equally and whether the relationship is significant across these countries are the main objectives in the current study.

Davis et al. (1989) suggested that the easier a system is to use, the greater is its users' efficiency when working with the system. Venkatesh et al. (2002) noted that when new systems are easier to use than older systems, tasks are accomplished faster and with better efficiency. Accordingly, the study hypothesized the following:

H8: Perceived ease of use significantly influences perceived usefulness towards Internet banking in KSA and the UK.

4.3.5. Students' Perceived Ease of Use's Antecedents

Three constructs are proposed to have significant influence on perceived ease of use: trust, subjective norms and self-efficacy perception. The following subsections will illustrate these relationships.

4.3.5.1. Customers' Trust Perceptions towards Internet Banking and Perceived Ease of Use

Because trust affects perceived usefulness, it might also affect perceived ease of use. Prior research has found that trust determines purchase intentions in e-commerce settings (Gefen, 2000, Gefen and Straub, 2003, Gefen et al., 2003b, Liu et al., 2004, Gefen and Heart, 2006), e-loyalty (Cyr, 2008, Jin et al., 2008), intentions to use (Kim, 2008, Vance et al., 2008), and attitude and risk perceptions (Jarvenpaa et al., 1999). In addition, trust is an outcome of Internet shopping (Lee and Turban, 2001) and trusting behaviours (McKnight et al., 2002, Corritore et al., 2003). In an Internet banking context, trust also enhances customers' attitudes towards and intentions to use Internet banking (Suh and Han, 2002, Chong et al., 2010, Yap et al., 2010); commitment (Mukherjee and Nath, 2003); attitudes, risk perceptions, and overall behavioural intentions (Suh and Han, 2003, Grabner-Kräuter and Faullant, 2008, Zhao et al., 2010); and e-loyalty (Herington and Weaven, 2007).

Prior research has examined and found support for the effect of trust on perceived ease of use in the context of e-commerce (Pavlou, 2003) and Internet banking (Eriksson et al., 2005). Because trust is a social phenomenon, Gefen and Keil (1998) suggested that trust should be included in TAM to determine perceived usefulness and ease of use (Eriksson et al., 2005). Trust is a significant construct in Internet banking when the bank lacks a physical presence and personal interaction (Mukherjee and Nath, 2003). From these arguments, the current study includes customer trust in the proposed model to determine students' behaviour towards Internet banking indirectly through perceived ease of use and usefulness. Pavlou (2003) argued that the need for consumers to understand, monitor, and control the situation can be reduced with trust so that Internet transactions can be effortless. When customers trust Internet banking providers, they should have less need to control and monitor the providers' actions and behaviours, and thus Internet banking transactions will be easier. Accordingly, it can be hypothesized the following:

H9: Students' trust significantly influences perceived ease of use towards Internet banking in KSA and the UK.

4.3.5.2. Subjective Norm Influence and Perceived Ease of Use

The proposed model also includes the relationship between subjective norms and perceived ease of use. The current study proposes that the social influence of students' friends, family, and important others will influence their' decisions to perform financial activities through the Internet. Prior research has examined the relationship between subjective norms and behavioural intentions (Taylor and Todd, 1995a, Taylor and Todd, 1995b, Lucas and Spitler, 1999, Venkatesh and Morris, 2000, Chau and Hu, 2001, Al-Gahtani et al., 2007), perceived usefulness (Lu et al., 2003, Gefen and Straub, 2003), trust (Kim, 2008), and attitudes (Dennis et al., 2009). Research has also examined Internet banking acceptance (Mols, 1998, Daniel, 1999, Sathye, 1999, Kardaras and Papathanassiou, 2001, Polatoglu and Ekin, 2001, Thornton and White, 2001, Devlin and Yeung, 2003, Eriksson et al., 2005, Guriting and Ndubisi, 2006, Kuisma et al., 2007, Yap et al., 2010). However, only one study has examined the relationship between subjective norms and intentions to use or continue to use Internet banking (Hernandez and Mazzon, 2007).

In addition, prior research has not examined whether subjective norms significantly affect perceived ease of use, and whether this relationship can be generalized across different cultures. Thus, the current study attempts to fill this gap by investigating this relationship across KSA and the UK in the context of Internet banking. As it can be noted previously, service providers might have a significant effect on users' perceptions of how easy or difficult a system is. That is, according to subjective norms, service providers might serve as important actors in the personal relationship and, thus, have an influence on users' decision to adopt a system. Prior research has suggested that inter-organizational factors (such as internal computing support, training and management support) and extra-organizational factors (such as external computing support and training) both affect perceived ease of use and usefulness (Igbaria et al., 1997). In addition, Gefen and Keil (1998) examined the effect of perceived developer responsiveness on perceived ease of use and usefulness. Accordingly, through communication with existing customers (who are also family and friends), Internet banking providers might influence students' perceptions of how easy or difficult Internet banking is. From these arguments, the current study hypothesizes the following:

H10: Subjective norms significantly influence perceived ease of use towards Internet banking in KSA more than in the UK.

4.3.5.3. Customers' Self-Efficacy Perception and Perceived Ease of Use

Customers' self-efficacy can be conceptualized in this study to reflect "students capacity or capability represents a belief in one's ability to engage with, and use, technology-enabled services confidently and effectively" (Walker and Johnson, 2006, p 126).

In this study, it proposed that students' self-efficacy would significantly affect perceived ease of use. When students have self-confidence to adopt and use online services, they are more likely to perceive websites or online services as easy to use. Agarwal and Prasad (1999) examined people's behaviours towards an old and a new system in an organisational context and found that prior experiences with similar technologies had a significant and positive effect on perceived ease of use. Thus, a past positive experience enables people to be more confident in using new and modern self-services, such as Internet banking.

Walker and Johnson (2006) examined the effects of people's capacity (self-confidence, capabilities, and self-efficacy) on their intentions to use Internet banking in Australia. The relationship between self-efficacy and ease of use has also been examined in the context of Internet banking in Brazil (Hernandez and Mazzon, 2007) and on different systems, including IBM PC-based graphics systems (Venkatesh and Davis, 1996), a new interactive online help desk system, a new multimedia system (Venkatesh, 2000), an online shopping system (Hernandez et al., 2009), and an Internet banking system (Wang et al., 2003, Guriting and Ndubisi, 2006).

However, few studies have examined general self-efficacy towards self-technology and its affect on perceived ease of use. Thus, in this study investigates the effect of self-efficacy on perceived ease of use across cultures (KSA and the UK). Accordingly, it can be hypothesized the following:

H11: General self-efficacy significantly influences perceived ease of use towards Internet banking in KSA and the UK.

4.3.6. Customers' Trust Perceptions Antecedents

According to the proposed model, there are five constructs that expect to have significant influence on customers' trust towards Internet banking. The proposed model suggested that security and privacy perceptions, communication, reputation and customers' experiences would have significant relationships with customers' trust. The following subsections illustrate the developing hypotheses.

4.3.6.1. Customers' Security Perceptions towards Internet Banking

Risk concerns may dissuade customers from purchasing online. Transaction can be seen as being outside the control of customers, because trading partners are anonymous and there is consequently the potential for opportunism. Customers may think that they could be taken advantage of and, therefore, may not engage in online transactions at all (Harridge-March, 2006). 'Security refers to the protection of information or systems from unsanctioned intrusions or outflows' (Wang et al., 2003, p 508). Trust and risk can be linked. If a person has a disposition to trust, he/she is less likely to see the potential for risk, and implicit trust between people can lead to long-term personal relationships, but if the relationship is broken, this will affect the organization in which the individual has placed trust (Harridge-March, 2006). However, it was found that there was no significant relations between perceived risk and perceived customers' trust, which indicated that perceived risk and trust were not linked in the B2C context so that users of the Internet can have a certain level of trust in e-commerce, even if they perceive significant risk, and can contribute in e-commerce even though they think it is risky (Corbitt et al., 2003). Security was found to be the most important determinant of consumer trust in the online retailer context (Mukherjee and Nath, 2007).

Risk is considered to be one of the most important factors deriving from lack of adequate security (Gerrard et al., 2006). Security systems have a significant impact on Internet banking adoption (Howcroft et al., 2002). Mäenpää (2006) states that security is one of dimensions Internet Banking Services. Security systems have various dimensions, such as reliability, safety and privacy (Mäenpää, 2006). Security management has been stated by Goi (2005) to be a significant asset to banks in order that they increase the level of confidence between themselves and their customers. When customers perceive high risk in conducting their buying activities via the Internet, the trustworthiness of the companies providing the services

becomes an uncertainty (So and Sculli, 2002). Trust was reflected by security in the online system (Lightner, 2003).

In the context of Internet shopping, risk was considered as uncertainty about the outcome of Internet shopping transactions. The outcomes depend on the behaviour of the Internet vendors, which may not be within the consumer's purview and control, and the harm of an undesirable outcomes may be greater than the benefits of a successful outcomes (Lee and Turban, 2001).

Consumer perception of the security of online shopping can be directly affected by the consumer's ability to control the actions of a Web vendor so that consumers may fear to type their credit card information to any commercial Web provider. On the other hand, a commercial Web provider may be concerned by the efforts of a hacker intent on stealing credit card numbers (Hoffman et al., 1999). Singh (2004) conducted a study to determine why customers are not using online banking services and found that the greatest obstacle for those not banking online was security. Casaló et al. (2008) suggested that in order to increase costumers loyalty in online banking, banks should take into consideration online security systems. Accordingly, it can be hypothesized that

H12: Security perception significantly influences customers' trust towards Internet banking in both KSA and the UK.

4.3.6.2. Customers' Privacy Perceptions towards Internet Banking

Perceived privacy has been found to be the significant variable to shared value (Mukherjee and Nath, 2003). Protecting individuals' identifiable information on the Internet is the most significant privacy issue to be addressed. In addition, privacy is the critical factor influencing the trustworthiness of an online retailer (Mukherjee and Nath, 2007). Revealing and selling consumer information for commercial purposes were found to be the crucial determinants of trust (Mukherjee and Nath, 2007). Privacy is a crucial issue for retail websites in which customer information, particularly financial information, is required (Mukherjee and Nath, 2007).

Confidential information sharing is one of the relationship characteristics where suppliers share private information with their customers. Therefore, a calculative process and a process

of intentionality can be predictors of the characteristic (Doney and Cannon, 1997). A supplier's willingness to share confidential information and length of relationship are unrelated to buying firm trust (Doney and Cannon, 1997). Lack of privacy causes consumers to fail to become Internet banking users (Gerrard et al., 2006).

Privacy concerns were found to be one of the limitations of e-commerce (Turban et al., 2006). It is considered as an assurance component with significant influence on customers' decisions (Chen and Chang, 2003). However, privacy has a relatively weak relationship with the acceptance of Internet banking (Pikkarainen et al., 2004). Customers might be reluctant to provide their personal information on unidentified communication channels, such as the Internet, and particularly financial information because customers may be concerned about those who receive the information exploiting it or other authorities accessing information (So and Sculli, 2002).

The lack of trust is noticeable in consumers' anxiety that Web providers will sell their personal information to third parties without their knowledge or permission (Hoffman et al., 1999). Nearly 63% of consumers who object to giving personal information to Websites reported that they do not trust those who are collecting the data, and 69% of Web users who do not provide data state that sites do not provide information on how the data will be used (Hoffman et al., 1999). Privacy protection as one of security-control requirements guarantee that users private information in transmissions are not created, intercepted, modified, or illicitly (Suh and Han, 2003). It was found that trust was significantly impacted by perceived strength of privacy protection. This meant that the risks resulting from privacy violation was recognized by e-commerce users (Suh and Han, 2003). Customers' privacy has been seen as a significant issue that should be concentrated on by online banks so that they can increase and improve the level of customer loyalty (Casaló et al., 2008). Wang et al. (2003) mentioned that in the Internet banking context, the lack of perceived credibility is noticeable in individuals' concerns that Internet banking organisations may use their personal information for their own purpose without obtaining their permission. Accordingly, the current research hypothesized that:

H13: Privacy perceptions would significantly influence students trust perception towards Internet banking in both KSA and the UK.

4.3.6.3. Customers' Communication Perceptions with Banks via Internet Banking

Communication was defined as "the formal as well as informal sharing of meaningful and timely information" (Anderson and Narus, 1990, p. 44). In the current study, customers' communication with their banks can be conceptualized, based on Anderson and Narus's definition in which communication, both formal and informal, should be meaningful and timely. It was stressed that this definition concentrates on the efficacy and the quality of information provided rather than on the quantity or amount of information (Anderson and Narus, 1990). Thus, in the current study, communication between banks and their customers is dimensioned to cover three areas of information: to facilitate quality of communication including quality of information, quality of response, and environment openness. Bank/customer communication can be assessed by focusing on these dimensions. Morgan and Hunt (1994) in commitment-trust theory introduced this factor and found that indirect effects occur in communication and relationship commitment. There are direct effects from communication on trust (Morgan and Hunt, 1994). Openness, speed of response and quality of information are considered as variables in communication (Mukherjee and Nath, 2003). Communication has a significant positive influence on trust, and speed of response is the most critical to communication (Mukherjee and Nath, 2003). It is considered that quality of response is a significant component of communication between customers and online retailers (Mukherjee and Nath, 2007). Quality of response was found to be the most critical in communication (Mukherjee and Nath, 2007). Personalized and customized customer dialogues that are helpful, positive, timely, useful, easy and pleasant can strengthen a trust-based customer relationship (Mukherjee and Nath, 2007).

Operating time and speed in delivery of services have significant impact on Internet banking adoption (Wan et al., 2005). Effective communication with customers was found to be related positively with customer trust, which indicates that it may have an important role in developing banking relationships (Adamson et al., 2003). Some customers do not use Internet banking because of the lack of human contact. Discussing issues with staff face-to-face might be more comfortable than using self-service functions (Gerrard et al., 2006). Howcroft et al. (2002) found that lack of face-to-face contact can discourage customers from using Internet banking.

Customer feedback is also significant, as well as a tool for communication, helping to meet customers' needs. Customer feedback can be in different forms, such as an address/e-mail

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area for return reply, flexible length message area, e-mail address/phone number only, specific information click-boxes, on-line site evaluation feedback/surveys, specific department/location e-mail links and bank service quality surveys (Wisner and Corney, 2001).

It is believed that general web page information provided by banks, such as contact information, customer service, loan rate, personal banking, checking/saving account rate, general banking information (bank history, size, etc), investment information (ticker symbol, current stock price, dividend information, etc), new account applications, small business or commercial banking information, branch/ATMs locations/phone numbers, job information, product/service information, insurance information, providing credit card application, FAQs, links to other sites, international services information, and newsletters, provide important factors that might help differentiate banks (Wisner and Corney, 2001). Merchandise as an aspect of the web environment subsystem consists of Information Quality, Information Quantity, Comparison and Price. Information Quality was defined as the perception of whether the information contained in the site was true, corresponding to the reliability characteristic. It comprises completeness and comparability. While Information Quantity was defined as the amount of information provided regarding the product concerned (Lightner, 2003). It was found that information quality and information quantity ranked highest in overall preference for e-commerce shoppers (Lightner, 2003).

H14: Students' perceptions of communication significantly influence their level of trust towards Internet banking in both KSA and the UK

4.3.6.4. Customers Perceptions towards Banks' Reputation

Banks' reputation can be conceptualized to reflect "the overall quality of character as seen or judged by people in general" (Malaga, 2001, p. 403). This definition of reputation can be applied in the context on Internet banking to reflect students' opinions of whether their Internet banking has a good or bad reputation in the marketplace.

Reputation can be discussed in terms of the honesty and concern that customers feel that a supplier or service provider gives to its customers (Doney and Cannon, 1997). It may derive from policy and promises made to customers, including those about privacy. Customers are afraid of their personal information being revealed in an inappropriate manner or misused

over the Internet (Turban et al., 2002). Businesses have an image and a name associated with quality of products (Kuisma et al., 2007).

Risk for online activities can be reduced and customers can be reassured of a brand's ability to satisfy their needs (Harridge-March, 2006). A strong brand and seals of approval can increase the level of trust and the propensity to purchase from a certain site (Harridge-March, 2006). Reputation is a critical component of trust and is most affected by shared value, communication and opportunistic behaviour (Mukherjee and Nath, 2003). Adamson et al. (2003) attempted to explore how Hong Kong's small financial institutions in the corporate business might use relationship marketing as an innovative strategic planning tool to gain competitive advantage amongst the large players in terms of behavioural dimension (social bonding, trust and culture). They found that poor reputation of banks can be negatively correlated with customer trust (Adamson et al., 2003).

Doney and Cannon (1997) claimed that, in order to be trusted, supplier firms have to have a good reputation, which means that they have to be honest and concerned about their customers. A positive relationship between supplier reputation and trust can be predicted according to a process of transference, as well as by a calculative process to estimate the cost of a supplier acting in an untrustworthy manner.

A firm's reputation becomes a very important matter in the relationship building process when there is no previous transaction history (Crotts and Turner, 1999). Reputation is considered as a dimensions of trustworthiness (Crotts and Turner, 1999). A firm's image and reputation can be a source of available information when the decision maker has no direct experience (Crotts and Turner, 1999). It was stressed that companies should build customers' trust by building good reputation (So and Sculli, 2002).

It was mentioned that trust is a critical factor in e-commerce and is influenced by three sources: e-commerce reputation in general, the consumers, and the specific e-commerce website. On the other hand, e-commerce reputation is reflected by technology trustworthiness and perceived risk (Corbitt et al., 2003). In addition, the perception of trustworthiness can be enhanced by partnership with a well-known company, so that it make the customers worry less about potential risk, and money back warranty (Corbitt et al., 2003).

It was recommended that vendor reputation seems important, once buyers discover a vendor that suits their needs, they tend to buy from them over and over again (Lightner, 2003). It was mentioned that reputation reflects trust in the specific trust (Lightner, 2003). It was suggested that perceive reputation is a significant factor to create consumers' trust in an online store, particularly for companies that don't wish to be large in their fields (Jarvenpaa et al., 2000). Jarvenpaa et al. (2000) found that the effect of reputation on trust was considered stronger than the effect of perceived size on trust. Online companies will suffer from loss of valuable information so that bad public image and legal penalties imposed by regulatory agencies can be accrued (Suh and Han, 2003). Perceived reputation has been suggested an important factor to increase the level of loyalty in the e-banking context (Casaló et al., 2008). Therefore, the proposed model hypothesized that:

H15: Banks' reputation significantly influences students' trust towards Internet banking in both KSA and the UK.

4.3.6.5. Customers' Experience towards Internet Banking

Customers' experience may affect trust when it comes to purchasing products or services online. Harridge-March (2006) take the view that trust may be built incrementally following experience online, and customers may build trust by starting with small purchases and building up to bigger ones. It was stated that, in an on-line setting, customers could be exposed due to a lack of understanding and knowledge or expertise, or lack of ability to obtain goods or services without the support of others (Corritore et al., 2003). It is important that customers feel satisfactory trust about their product supplier (Harridge-March, 2006).

Trust is recognized as being related to satisfaction regarding services or products offered (So and Sculli, 2002). A customer will probably make repeat purchases from the same supplier on the condition that the previous purchase was satisfactory. The customer becomes familiar with the supplier and gains trust, so that in future contact the customer will be willing to buy new products from the same provider because the customer would have confidence built from the supplier's past products (So and Sculli, 2002). Singh (2004) found that 33 percent of 254 respondents who were not online banking customers stated that they did not have the knowledge to bank online.

It has been stressed that continuous satisfaction plays an important part in the process of building trust (So and Sculli, 2002). Expertise also shows a strong correlation with satisfaction, as does trust (Bejou et al., 1998). Gerrard et al. (2006) found that customers who have never bought over the Internet were more likely to continue to use traditional ways of sourcing their banking services. Customers who lack knowledge about services were less likely to become Internet banking users. It was found that the higher the users' Internet experience, the more they were likely to have a high level of trust in technology, however the more users have Internet experience, the more they are concerned over security and privacy (Corbitt et al., 2003).

In the context of e-commerce, Gefen (2000) attempted to answer how important trust is and whether its relative importance varies with different tasks. Gefen found that familiarity with e-vendors is a significant factor which affecting customers' trust. It was stated that familiarity in the e-commerce context is based on previous activities and experiences or learning of how to use the particular interface (Gefen, 2000). So that it can be said that the more customers' familiar and experienced with the e-vendors, the more their trust will be. Accordingly, it can be hypothesized that:

H16: students Experience significantly influences their trust towards Internet banking in both KSA and the UK.

4.4 The Mediator/s Role in the Conceptual Model

According to the conceptual model in the current study, perceived ease of use and usefulness will act as mediators that facilitate the influence of independent constructs (trust, subjective norm and self-efficacy on students' attitude towards using Internet banking. According to TAM, Davis et al. (1989) stated that the basic notion of TAM is to provide evidence that the external factors have impacts on internal beliefs (attitudes and intention) via perceived usefulness and ease of use. This will be also applied in the current study as one of the main objectives.

Many of the previous studies, which were carried out in the online context to examine customers' loyalty, proposed that trust will have a significant and direct influence on loyalty (McKnight et al., 2002, Ribbink et al., 2004, Donio et al., 2006). The current study, also dealing with Internet banking, involved not just the relationships between the services

providers and end users of the system but the technology itself. Accordingly, the current study argued that trust, self-efficacy and subjective norm are not enough to influence students' attitudes towards Internet banking and that students' perception of Internet banking usefulness and ease of use should be included in the conceptual model. The situation might be that, even if students trust Internet banking, their attitudes and their intention to use Internet banking will not be influenced unless it is useful and ease to use. Large bodies of research have included perceived usefulness and ease of use as fundamental beliefs that facilitate the influence of external factors on users' attitudes towards systems. For example, Lu et al. (2003) developed a model for wireless Internet via mobile devices based on TAM and proposed that technology complexity, individual differences, facilitating condition, social influence and trust will influence users' attitudes to use WIMT via perceived ease of use and usefulness. Pavlou (2003) proposed a model in the electronic commerce context to investigate customer intention to make transactions online and stated that trust will influence customer intention directly and indirectly through perceived usefulness and ease of use. Hernandez et al. (2009) proposed that the influence of perceived self-efficacy on users' attitudes will be mediated by perceived ease of use and usefulness.

4.5 The Moderation (Low and High Uncertainty Avoidance) Influence Individuals' Behavior

Uncertainty avoidance is one of the culture dimension that were originally stated by (Hofstede, 1980, Hofstede, 1994). This dimension was defined as *"the degree to which people in a country prefer structured over unstructured situations"* (Hofstede, 1993, p. 90). Gefen and Heart (2006) stated that individuals who have low uncertainty avoidance level tend to be ready to adopt innovations which are believed to contribute to an individuals' performance. Uncertain situations will be avoided by a society that has a high level of risk perception so that individuals are more likely to adopt a situation with formal rules that have already been established and believe in striving for expertise (Reimann et al., 2008). According to Hofstede (1980), different behavioural responses can be generated significantly according to the culture differences. A number of previous studies that developed a model for examining existing theories across culture did not measure the culture dimensions to confirm their conclusions (Straub, 1994, Straub et al., 1997, Jarvenpaa et al., 1999, Cyr and Trevor-Smith, 2004, Jin et al., 2008). It was stated that the preference for and use of communication media can depend on how individuals in a society view low or high uncertainty avoidance (Straub, 1994) . Individuals who have a high degree of uncertainty avoidance tend to accept

the communication tools that reduce risks, such as face-to-face communication, while individuals who have low uncertainty avoidance tend to adopt communication that help them to improve their performance and reduced time, such as using e-mails or online services. In general, it can be expected that high uncertainty avoidance group tend to see the traditional communication as easier and more useful, while individuals from low uncertainty avoidance culture tend to see modern communication tools, such as online services or using e-mails, easier and more useful. Straub (1994) confirmed that cultural effects can moderate theoretical relationships in the IT diffusion process.

Shore and Venkatachalam (1996) stated that introducing new technology will increase the end users' anxiety level. Individuals with high uncertainty avoidance may be more likely to be resistant and will be concerned over the uncertainty of new methods and procedures that are associated with the new technology so that they may not feel secure compared with individuals that have a low level of uncertainty avoidance. Those individuals may accept some level of risks that are associated with new applications. However, Jarvenpaa et al. (1999) found no cultural effect on the relationships of perceived company size and perceived reputation on trust in online store. While Furrer et al. (2000) argued that there will be differences between individuals from low or high uncertainty in terms of perceived services quality. They differentiate between frequent situations where are used by users, such as buying food, and infrequent situations which are rarely performed by the users. In infrequent situations, high uncertainty individuals tend to reduce risk by close relation with service providers, while in the frequent situation, the guarantee of a quick problem solution might be more important so that all service quality dimensions are important. In contrast, in both cases (frequent and infrequent), the relative importance of service quality dimensions does not significantly influence customers with a low uncertainty avoidance level. Accordingly, it can be expected that there will be differences in students' perceptions in both groups (low and high uncertainty) in terms of relative importance of the constructs that are examined in the conceptual model, especially the constructs that are related to the services quality, such as trust, perceived ease of use and usefulness.

The relationship between culture and behavioural intention (loyalty to the company, positive word of mouth and propensity to switch) have been examined (Liu et al., 2001) and it is found that a significant relationship exists between positive word of mouth and uncertainty avoidance, negative and significant relationship from propensity to switch, and negative word

of mouth and uncertainty avoidance. Luna et al. (2002) address the influence of culture on customers' attitudes towards a site and argued that the site's visitors tend to have negative attitudes when the site has low culture congruity. Tsikriktsis (2002) investigated the relationships between all the culture dimensions and web service quality expectations and found that uncertainty avoidance has no impact on web responsiveness, trust (security and privacy) and flow emotional appeal and negatively with interactivity, design appeal and visual appeal. Y.K et al. (2002) supported the view that culture differences moderated the relationship between the purpose of using the Internet and consumers' attitude. Website content was found to be different across culture (Cyr and Trevor-Smith, 2004, Singer et al., 2008). The significant culture differences have been supported in many other studies (Jin et al., 2008, Kim, 2008, Reimann et al., 2008, Vance et al., 2008, Schoefer, 2010). According to the above arguments, the current study would like to investigate whether the current research model is moderated by the culture dimension (Uncertainty Avoidance); if not, the research will examine each single relationship in order to discover which direct relationship is influenced by the moderator so that contributions to the existing literature can be added.

4.6 The Generalizability of the Conceptual Model

The current study attempts to test whether the conceptual model can be generalized across different samples. Previously, the conceptual model proposed that the hypothesized relationships can be generalized across KSA and the UK. In the current section, the study would like to discover whether the conceptual model can be generalized across low and high uncertainty avoidance samples, male and female samples, and low and high experience samples. Examining the moderators influence, the current study would know which relationships can be generalized. The following subsections will illustrate these moderators.

4.6.1 Gender

The conceptual model will be examined across male and female groups for several reasons. First, the study would like to test whether the conceptual model can be generalized across gender. Second, if the model cannot be generalized across gender, then the study will attempt to investigate what relationship can be generalized and which cannot. As a result, the study will be able to provide contributions for both theoretical and managerial perspectives. According to the existing research, few studies have examined gender as a moderator so that the current study also would like to fill this gap. Previous research has been examined gender as a focal construct (Harrison and R. Kelly Rainer, 1992, Gefen and Straub, 1997). Gefen and

Straub (1997) extended TAM by adding gender to examine individuals' behaviour toward system's usage. They proposed that women will have a significant and greater influence on social presence, perceived ease of use, usefulness and usage of e-mail systems than men do. The proposed relationships were confirmed and the results indicated that gender indeed has significant influence on IT diffusion. Lu et al. (2003) stated that gender is an important individual variable that may have significant influence on technology usage. Venkatesh and Morris (2000) extended TAM by adding subjective norm and gender. They proposed that the relationships between perceived ease of use and usefulness, and perceived usefulness and behavioural intention will be a strong influence for men, more so than for women, while the relationships between perceived ease of use and behavioural intention and subjective norm and behavioural intention will be stronger for women than for men. In 2003, Venkatesh and his colleagues formulated a unified theory of acceptance and use of technology (UTAUT). They also stated that gender will moderate the relationships in the theory. For example, gender will moderate the relationships between performance expectancy and behavioural intention, effort expectancy and behavioural intention and social influence and behavioural intention. In both studies, Venkatesh and Morris (2000) and Venkatesh et al. (2003), gender was supported as a significant moderator of the hypothesized relationships.

In the context of Internet banking, Wan et al. (2005) investigated factors that impacted on Hong Kong banking customers' adoption of four banking distribution channels (branch banking, ATM, telephone banking and internet banking), finding that internet banking was affected by gender significantly and the result indicated that males were more likely to adopt internet banking than females. Gan et al. (2006) applied decision-making processes to examine customers' choices between electronic banking and non-electronic banking in New Zealand, arguing that males tend to use electronic banking more than females. However, Gan et al. (2006) found that customers' decision to use electronic banking was not influenced by gender. However, Hernandez and Mazzon (2007) argued that males are more likely to adopt Internet banking than females, but the result showed that males did not have any significant influence on Internet banking adoption or continuance to use it. Gounaris and Koritos (2008) found that males and more innovative consumers were more likely to be Internet banking users than females. In the current study, the conceptual model will be examined across male and female groups in order to examine its generalizability, and how and which relationships can be generalized.

4.6.2 Low and High Experience

Users' experiences have been stated as a significant construct that influence their technologies usage. The more users have experiences of using a system, the more they will use a system or intend to use a new one. Experiences have been treated in different ways. Several existing studies examined users' experiences as a moderator that controls a specific relationship (Venkatesh and Morris, 2000). Venkatesh and Morris (2000) stated that the level of users' experience will moderate the influence of subjective norm on behavioural intention. They argued that in the short term, subjective norm may have significant influence on behavioural intention, but in the long term, and when the users have experience with the system, this significant influence will be reduced or become insignificant because users will be more experienced, familiar with the systems and know what should be done in practice so that others' opinions may not be important at this stage. This assumption was supported. Venkatesh and Morris (2000) argued that the relationship of perceived usefulness and behavioural intention will not be influenced by direct experience with the system and users will still value the influence of the system's usefulness, while the influence of perceived ease of use on behavioural intention will be reduced as experience increases.

In UTAUT theory, Venkatesh and his colleagues (2003) proposed that the influence from effort expectancy and social influence on behavioural intention, and the relationship of facilitating conditions on usage behaviour will be moderated by the level of experience that users have. They argued that the relationship between effort expectancy and behavioural intention will be stronger for women than men. In addition, they stated that the relationship of social influence to behavioural intention will be stronger for those with low experiences. The role of experience as a moderator was supported in UTAUT. Al-Gahtani et al. (2007) examined UTAUT in the context of Saudi Arabia (a non-Western cultural context) and the experience as a moderator was supported. A large body of research also examined how individuals' experience affects acceptance and IT usage (Taylor and Todd, 1995a, Szajna, 1996, Jackson et al., 1997, Agarwal and Prasad, 1999, Dishaw and Strong, 1999, Gefen et al., 2003b, Venkatesh et al., 2002, Lu et al., 2003, Pavlou, 2003, McKechnie et al., 2006, Dennis et al., 2009). Taylor and Todd (1995a) developed a framework to determine IT usage behaviour for experienced and inexperienced users of a system, founding that the relationships of behavioural intention to actual behaviour, and ease of use to attitude were significantly different across the groups. In addition, the relationships of attitude to

behavioural intention, perceived usefulness to attitude, and subjective norm to behavioural intention were not significant for either group.

In the context of Internet banking, a number of studies confirmed that users' experience is an important factor that influences Internet banking adoption (Aladwani, 2001, Polatoglu and Ekin, 2001, Thornton and White, 2001, Howcroft et al., 2002, Nielsen, 2002, Devlin and Yeung, 2003, Laforet and Li, 2005, Corrocher, 2006, Gan et al., 2006, Guriting and Ndubisi, 2006, Kuisma et al., 2007, Grabner-Kräuter and Faullant, 2008). Individuals' knowledge was found to have a significant influence on credit card usage, tele-banking and ATM usage (Thornton and White, 2001). Howcroft et al. (2002) found that making errors was one of the extremely important factors that discourage Internet banking adoption. The direct relationship between IT knowledge and Internet banking adoption was examined (Nielsen, 2002) and it was found that there was a significant relationship between IT knowledge and Internet banking adoption by banks' managers, indicating that the more managers have IT knowledge, the more Internet banking is adopted. However, Laforet and Li (2005) found that the adoption of online and mobile banking in China was not influenced by previous positive banking experience, but there was significant difference between online banking users and non-users in terms of their prior experience with computers and new technology.

It was argued that the adoption of ICT-based innovations will be largely explained by the degree of information technology literacy and previous experience in using an advanced technology (Corrocher, 2006). Gan et al. (2006) confirmed that consumers' knowledge effected their decisions to choose between electronic and non-electronic banking. Guriting and Ndubisi (2006) examined the direct influence of prior computing experience on perceived usefulness and ease of use in the Internet banking context in Malaysia Borneo and, statistically speaking, the influence of prior computing experience was supported. Kuisma et al. (2007) found that the lack of channel usage knowledge was one cited reason that prevented consumers from using Internet banking in Finland. Familiarity with the internet is an important factor that affects the level of customers' trust towards Internet banking adoption (Grabner-Kräuter and Faullant, 2008). Grabner-Kräuter and Faullant (2008) argued that familiarity reflects the direct and indirect knowledge of specific products or objects that available to individuals and found there is a significant influence.

According to the above arguments, it can be noted that there is a level of disagreement in results in terms of how, in what cases and relationships between customers who have a high level of Internet banking experience and those with a low level of Internet banking experience. In the current study, the invariance analysis will be performed to examine whether the study's conceptual model can be generalized across low and high Internet banking experience users and, if this is not the case, the question is what constructs and relationships differ significantly across those customers.

4.7 Summary

This section explained the proposed model and highlighted the significant constructs that may have direct or indirect influence on customers' loyalty towards Internet banking. According to the existing theories and models, from different perspectives such as psychology (TRA and SCT) and technology (TAM), thirteen constructs were considered in the proposed model. Accordingly, sixteen hypotheses were developed in order to examine customers' behaviour towards Internet banking.

This section highlighted the importance of customers' loyalty and whether it can be impacted by customers' behavioural intentions towards Internet banking. Unlike the some recent studies that neglected the importance of individuals' attitude to formulate behavioural intention, the current research investigates the relationship between customers' attitude and their behavioural intentions and development based on TRA and TAM. Based on TAM, the proposed model illustrated how and whether customers' attitude will be influenced by perceived ease of use and usefulness. In this chapter, some of the significant antecedents of perceived usefulness and ease of use were identified, namely trust, subjective norm and self-efficacy. In order to fill out the gaps that were identified in section 3.2.4 in Chapter Three, the proposed model identified in section 4.2 in this chapter some significant factors that may have direct and significant influences on customers' trust towards Internet banking, namely security and privacy perceptions, communication, banks' reputation and customers' experience.

The following chapter (Methodology Chapter) will attempt to clarify and illustrate how this proposed model, developed for this study (section 4.2), will be conducted, including the research philosophy, strategy and approach. The following chapter also will illustrate the

appropriate method for the current study to collect the data. It will also explain the sampling strategy and how the data can be analyzed.

Chapter Five: The Methodology

5.1 Introduction

In the above chapter, the proposed model and the constructs were highlighted and described. In addition, several hypothesized relationships were identified. In the current chapter, the proposed model will be examined. The aim of the current chapter is to meet the third objective that is to select an appropriate methodology. For example, it will illustrate what research philosophy in section 5.2, what research approach in section 5.3, the study's design in section 5.4 and what research strategy in section 5.5 will be applied.

In addition, in section 5.6, it will provide how data can be collected. Several areas will be considered, such as defining the research population, sampling technique, sample size, and the instrument that will be used for data collection. While section 5.7 describes the measurement items (observed variables), such as what Internet experience the students have. Internet banking experience is also considered. It illustrates the sources of the constructs' measurement items. In addition, the demographic information will be collected.

Because the current study will be carried out in the KSA, where all of the students are familiar with the Arabic Language, section 5.8 in this chapter illustrates how the instrument for the data collection will translate from English to the Arabic language. Moreover, details of the pilot study, with its results such as reliability, will be provided in the section 5.9. The final section 5.10 illustrates the main data analysis stages and process, including data screening, exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). Then, the measurement and structural model will be examined. Finally, the proposed model examined across different groups (low and high uncertainty avoidance, gender, and low and high Internet banking experience groups) (invariance analysis) will be explained.

5.2 Research Philosophy

Choosing what type of research philosophy is a significant stage, and researchers have to decide whether they are going to develop and apply existing theory and models or create new theories. It is an important matter to decide what philosophical approaches should be applied because each philosophy has its own way of conducting methods and targets so that, in the methodology literature, several philosophical approaches are stated. For the current study, the

most appropriate philosophy paradigm is positivism because the phenomenon of the context was established and most of the constructs that were identified in the conceptual model were examined. In addition, the current research developed the conceptual model and integrated different constructs in order to examine Internet banking users' behaviours across different cultures, and whether this phenomenon can be generalized across cultures.

According to Alexander et al. (2008) in the social research, positivism and interpretivism paradigms can be distinguished, depending on the assumptions underpinning them. The assumptions that differentiate researchers are ontology and epistemology. In terms of the ontology assumption, researchers would focus on the nature of reality, so that positivism researchers believe that the phenomena exists and can be measured and are looking for facts, while the interpretivism researchers believe that the world is socially constructed and it can be interpreted according to what researchers see. In contrast, epistemology assumptions believe that researchers should concentrate on what they should or can do with the social research so that positivism researchers believe that developing abstract and general theories is the main purpose of social research, as well as defining causality, predictability and test hypotheses. The interpretivism researchers believe that explanation and understanding are the main aims of the social research (Alexander et al., 2008). Accordingly, the quantitative data naturally is realist and depends on the small numbers of cases, while the qualitative data can be either realist or constructivist and an understanding of the world can be obtained (Alexander et al., 2008).

Black (1999) stated that in the qualitative social science research, theories are the foundation of studies and can be thought of as formal statements of social events. Social science theories allow researchers for carry out their investigation, confirmation and verification and are dynamic so that theories are expected to change and improve because they have been developed through an induction process. The current study is based on existing theories (theory of reasoned action and social cognitive theory) and the Technology Acceptance Model which explains how specific relationships, direction and outcomes were established. The study attempts to improve and examine the external validity of these theories on the sample population of western culture so that applicability and validity of these theories can be confirmed.

Arndt (1985) highlighted three typology research orientations; namely, empiricism, criticism and constructivism. He stated that the comparison between the data sentences with theory sentences is one of the empiricism orientation research's objective. Arndt (1985) claims that empiricism orientation is the most dominant orientation in marketing and an ideal approach for the natural sciences and behavioral sciences because it regulates the relationship between the researcher, the research process and the aspect studies. It was mentioned that human behavior phenomena is governed by invariant laws so that it should be invariant of variation in time, space and consciousness of the subject and object (Arndt, 1985). In addition, the subjective world was introduced and human behavior was examined through rigorous causal models, consisting of independent and dependent variables (Arndt, 1985).

Hunt (1994) highlighted the background, practice and methods in the context of marketing and stated that the positivism (logical positivism or logical empiricism) is the dominant paradigm in marketing, for which quantitative methods, the adoption or realism, the search for causality and the assumption of determinism are used. Holden and Lynch (2004) introduced different philosophical perspectives and their major research implications. They claim that according to the nature of science dimension, there are two philosophical positions: namely, objectivist and subjectivism approaches. In terms of the objectivist approach, the research can be performed independently of what is being observed and researchers' interests, values and beliefs will have no influence on what study and methods are applied. According to Hunt (1993), the objectivism approach require that the theories under study, laws and explanations be empirically testable. In marketing, Hanson and Grimmer (2007) highlighted two main research philosophies; namely, positivist end and constructionist end. In terms of the positivist end, they stated that quantitative research is the main dominant and generalization can be defended by performing reliability and validity.

Holden and Lynch (2004) stated that in the objectivism approach, identifying causal explanations and fundamental laws in human social behaviour is the major goal (Easterby-Smith et al., 1991). In order to identify causal explanations in human social behaviour, it is necessary to utilise a hypothetico-deductive process and choose a convenient sample size so that the generalization of the results can be possible (Holden and Lynch, 2004). This process required the formulation of hypotheses that were developed from the researchers' conceptualization of a particular phenomenon (Holden and Lynch, 2004). David and Sutton (2011) stated that whether a variable can be defined and operationalized in advance, and in

addition whether it is internally homogenous and externally discrete from another variable are the fundamental issues that should be taken into consideration in deductive forms of quantitative research (hypothetico-deductive research). However, if the boundaries between variables cannot be defined, then inductive and qualitative exploration should be designed (David and Sutton, 2011). According to the current study, the boundaries between the chosen constructs under investigation are distinguishable, based on the existing theories that are adopted as a foundation for the current study's conceptual framework. For example, perceived usefulness, ease of use, attitude, behaviour intention, trust, self-efficacy, subjective norm and loyalty were examined and supported as distinct constructs in the existing studies. Accordingly, different hypotheses were formulated in the current study and can be examined statistically. David and Sutton (2011, P.216) summarized the hypothetico-deductive research process as shown in the following figure:

Figure 5. 1: The Research Process in a Hypothetico-deductive Research Model
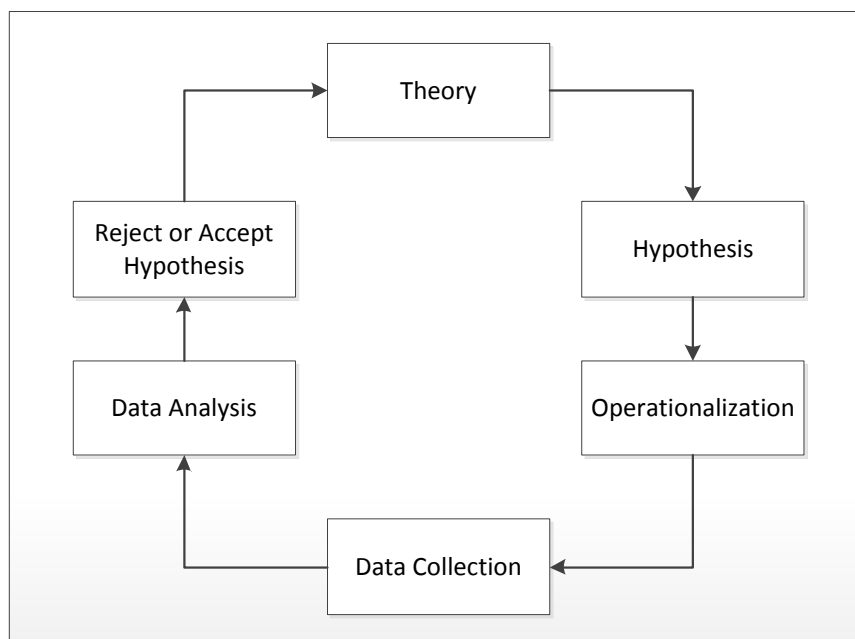
Saunders et al. (2003) identified three research philosophies; namely, positivism, interpretivism, and realism. These depend on the way researchers think and decide about the development of knowledge. Hussey and Hussey (1997) and Easterby-Smith et al. (1991) stated that positivism and phenomenology were two main research paradigms. Easterby-Smith et al. (2002) suggested three criteria that researchers have to consider in order to choose the right approach. First, researchers should decide how their research data can be

collected and analyzed, and the types of evidence collected and whether they can be interpreted so that they can provide good answers to the research questions are critical issues. These may help researchers to choose the right approach. Second, researchers should think which approaches would work better than others. Finally, researchers should take into consideration such issues as the limitation of access to the data required, the lack of prior knowledge of the topic under investigation, and insufficient understanding of the topic.

In terms of the positivism approach, the adoption of the philosophical stance of the natural scientist means that researchers work with an observable social reality, and findings can be generalized (Saunders et al., 2003). Hussey and Hussey (1997) stated that applying particular theories, factors and developing hypotheses were the main concerns and objectives of the positivism research.

Table 5.1 shows the differences between the positivism and phenomenological paradigms. In the following sections, why this paradigm is applicable for the current study over others will be illustrated.

Table 5. 1: Contrasting Implication of Positivism and Social Constructionism

Classical features	Positivism	Social Constructionism
The observer	must be independent	is part of what is being observed
Human interests	should be irrelevant	are the main drivers of science
Explanations	must demonstrate causality	aim to increase general understanding of the situation
Research progresses through	hypotheses and deductions	gathering rich data from which ideas are induced
Concepts	need to be operationalized so that they can be measured	should incorporate stakeholder perspectives
Units of analysis	should be reduced to simplest terms	may include the complexity of whole situations
Generalization through	statistical probability	theoretical abstraction
Sampling requires	large numbers selected randomly	small numbers of cases chosen for specific reasons

Source: Easterby-Smith et al. (2002, p. 30)

In addition, Creswell (1994) stated that choosing either a quantitative or qualitative methodology may depend on the problem investigated. For example, the hypothetico-

deductive process requires the verification or falsification of the hypotheses that have been developed from a theory-driven conceptualisation (Creswell, 1994). This means that when the problem can be conceptually identified and operationally testable, then the quantative methodology might be the right option to solve that problem.

5.3 Research Approach

According to methodology's literature that researchers can be controlled by two approaches: deduction and induction. They should decide which of these two approaches is appropriate. The decision of what approach/s might be appropriate for the current research is controlled by the types of philosophy decided in section 5.2. Before adoption for the current study, this section will review the research approaches accordingly.

According to Saunders et al. (2003), a deductive approach involves the development of a theory. They provide several significant characteristics of the deductive approach, such as different causal relationships between variables can be explained and hypotheses can be developed and tested. Different controls can be set to allow the testing of hypotheses and prevent them from any external influences. The concept and the factors under investigation can be operationalized and measured quantitatively. Finally, selecting samples of sufficient numerical size can be done and the findings can be generalized.

Creswell (1994) provided a number of critical and practical criteria that can help researchers to choose the appropriate methods. When a subject has a wealth of literature and information that can help researchers to define a theoretical framework and hypothesis, the deductive approach should be chosen and applied. On the other hand, when a topic is new and little existing literature can be found with much debate stated, then the inductive approach may be appropriate. The second criteria can be the time available for researchers. They can conduct deductive research faster than inductive research. In addition, it can be easy in deductive research to predict the time schedules accurately, while inductive research may take a long time and the ideas often need to emerge gradually. In terms of the risks associated with both approaches, deductive approach can be low-risk, but with inductive research, serious risks can be accrued if no useful data and theory emerge. Gilbert (2008) stated that in constructing theories, researchers should differentiate between induction and deduction. Once a theory was formulated and be able to explain a particular observation, then the deduction approach can be followed to explain the observation under investigation.

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Based on Easterby-Smith et al. (2002) and Creswell (1994), deductive research is chosen in the current research because the research under investigation is a wealth of literature enabling the ability to define a clear framework and hypothesis correctly.

Because the current study will be carried out across cultures, some cross-culture approaches should be illustrated. Emic and Etic are two cross-culture approaches that should be considered (Berry, 1969, Brislin et al., 1973). These approaches were also addressed by (Lee and Green, 1991). According to Brislin et al. (1973, p. 164), Berry (1969) characterizes Emic and Etic as follow:

Table 5. 2: Cross-culture Approaches

Emic approach	Etic approach
Studies behaviour from within the system	Studies behaviour from a position outside the system
Examines only one culture	Examines many cultures, comparing them
Structure discovered by the analyst	Structure created by the analyst
Criteria are relative to internal characteristics	Criteria are considered absolute or universal

Source: Brislin et al. (1973, p. 164)

According to the Emic approach, the instrument in one culture to member of another culture, while Etic incorporates aspects of many cultures into a general hypothesis or theory (Brislin et al., 1973). Emic and Etic approaches were criticized and it was recommended to combined both approaches (Triandis et al., 1971) so that Etic concepts can be used across cultures and the comparisons can be made, while the Emic approach should be applied to the operationalisation of these Etic concepts. In terms of the current study, both approaches will be considered important because the Etic concepts were developed originally in western culture (the UK) and will be applied in the current study in the eastern culture (KSA). In order to operational the Etic concept, the Emic approach will be applied because the instrument that originally developed in western culture will be also applied to examine customers' behaviour in another culture (KSA in the current case). In summary, both approaches (Etic and Emic) cannot be ignored in the current study. The combination of both approaches has been done in previous literature such as (Lee and Green, 1991).

5.4 The Current Study's Design

Internet banking acceptance is the current context in this study and investigating factors affecting customers' loyalty and how they perceived Internet banking were the important aim. The proposed model (chapter four) is a combination of very well-known theories and models, such as TRA (Fishbein and Ajzen, 1975, Ajzen and Fishbein, 1980) and TAM (Davis, 1989, Davis et al., 1989). The current study followed Hypothetico-deductive research approach. A deductive approach can help for researchers to control and manage the research time. The time for conducting the study and collecting and analyzing the data is limited. As was stated by Easterby-Smith et al. (2002), the deductive approach can be achieved quicker than the inductive approach, and the time schedules can be predicted more accurately. This approach can help the researcher to predict how much time the study can take compared with the time available. In addition, this approach has low risks so that it encourages researchers. It was stated that the deductive approach is less risky than the inductive one. In the current study, the phenomenon of the context was established and most of the constructs that were identified in the conceptual model were examined. In addition, the current research developed the conceptual model and integrated different constructs in order to examine Internet banking users' behaviours across different cultures, and whether this phenomenon can be generalized across cultures. Accordingly, the most appropriate philosophy paradigm is positivism.

For the current research, step by step process have been developed and followed for the current research design. Research design helps to identify and draw the research boundaries such as defining the study setting, type of investigation that needs to be carried out, the unit of analysis and other related issues. In order to identify these steps, the current study design is based on the hypothetico-deductive approach. According to David and Sutton (2011), the approach starts from a literature review, developing conceptual framework, formulating hypotheses, constructs operationalisation, data collection and analysis and hypotheses rejection or acceptance. Sekaran (2006) hypothetico-deductive starts from a literature review, theoretical framework, formulating hypotheses and making logical deduction from the results of the study.

Accordingly, the current study starts with extensive literature review that may help the researcher to understand and have an awareness of the research domain. After understanding the existing literature, theoretical needs and gap/s is identified. According to the theoretical gap, a conceptual model was developed to represent the intended empirical research. The

conceptual model consists of several factors that validated in the existing literature. These factors must be operationalized and be valid for the current study's context so that their measurement models are identified based on the existing literature and the pilot study with experts and academics is carried out for the factors' validation. After the operationalized stage, the main field work is carried out. The data will be gathered and analysed. Based on the data results, the discussion stage will be followed. The data will be discussed based on the literature review and the conceptual model and the hypotheses can be confirmed and supported or rejected. The final stage is to conclude the study by highlighting the research finding, theoretical contributions, limitations and further studies. The following figure shows the current research design:

Figure 5. 2: Current Research Design

Phase 1 Literature Review: - To identify the research theoretical gaps. - To identify the research's factors.	**Chapter Three:** Literature Review
Phase 2 Developing conceptual model: - The conceptual model is formulated. - Several hypotheses are developed.	**Chapter Four:** Conceptual model development
Phase 3 Operationalisation, Data Collection and Analysis: - Research philosophical approach is defined. - Sampling population, technique and size are identified. - Instrument development, the measurement items and their resources, constructs definitions are provided.	**Chapter Five:** Methodology
Phase 4 The Data results: - The samples descriptive data. - Measurement model validity. - Constructs' convergent and discriminant validities. - Structural model validity. - Hypotheses accept or rejected results. - Moderation results - Across validation results	**Chapter Six:** Data Results and analysis
Phase 5 The Results Discussion: - Linked to the previous literature in Chapters Three and Four. - Provide results' justifications.	**Chapter Seven:** Discussion of the Results
Phase 6 Conclusion	**Chapter Eight:** Conclusion

5.5 Research Strategy

Researchers should identify the strategy that they are going to adopt for conducting the research. Saunders et al. (2003) emphasized that the research strategy is a general plan showing how researchers are going to answer the research questions. The research strategy cannot identify research questions, but it can identify research objectives that arise from the questions. In addition, it can identify how and from where researchers are going to collect the data so that they will be able to assess how difficult it will be to access the data and how much it can cost. In addition it can identify the ethical issues of which they should be aware. Different research strategies that researchers should choose from include experiment, survey, case study, grounded theory, ethnography, action research, cross-sectional and longitudinal studies, exploratory, descriptive and explanatory studies (Saunders et al., 2003).

It is decided in the current research to take survey as a strategy for a number of reasons. According to Saunders et al. (2003), the survey strategy is associated with the deductive approach. For this reason, the current research chooses the survey strategy. In addition, it is common in business and management studies, and a large amount of data from a sizeable population can be collected. Verschuren and Doorewaard (1999) stated that finding out what a selected group of individuals' think and feels are examples of the survey's aim. Accordingly, the current research aims to examine Internet banking users' behaviours in terms of their trust, privacy, security, banks' reputation and communication perceptions, in addition to examining how subjective norm and self-efficacy influence their perceptions of the usefulness and ease of use of Internet banking. The study also attempts to examine the users' behavioural intention and their attitudes towards Internet banking, in addition to how their behavioural intention will influence their loyalty towards Internet banking. The survey strategy seems more applicable for investigating these issues and relationships. The questionnaire can be used for data collection because it is easy of be understood and can be used for comparison (Saunders et al., 2003). The research process can be controlled by using this strategy.

5.6 Data Collection Methods

This section covers such important issues as the research population, sampling technique, sampling size and data collection instrument. The following sub-sections highlight these issues.

5.6.1 Defining the Research Population

The research population has to be identified clearly so that choosing an appropriate sample will be possible as searching the whole population would be difficult in many cases in terms of cost and time. Population was defined as "the universe units from which the sample is to be selected" (Bryman and Bell, 2007, p. 182). In the current study, the population will be undergraduate students who study at Brunel University in London and King Khalid University in Kingdom of Saudi Arabia at the city of Abha.

In the current study, the population will be undergraduate students who study at Brunel University in United Kingdom at the city of London and King Khalid University in Kingdom of Saudi Arabia at the city of Abha. A brief introduction about these universities is provided in the Appendix 2 including their histories, courses and the number of students.

It can be noted from the previous literature that the choosing students as a research population was very common in the area of technology acceptance studies such as (Davis, 1989, Davis et al., 1989, Adams et al., 1992, Taylor and Todd, 1995a, Taylor and Todd, 1995b, Szajna, 1996, Gefen and Straub, 2000, Gefen et al., 2003b, Pikkarainen et al., 2004, Lee et al., 2006). In cross-cultural research, several studies used students as a population, for example Lee and Green (1991) (who examined students' perceptions in two distinct cultures in Korea and United States) and Jarvenpaa et al. (1999) (who examined first year undergraduate students in Australian and Finland). Furrer et al. (2000) investigated students' perceptions from different cultures, such as USA, Singapore and Swiss, towards retail banking services. Liu et al. (2001) examined MBA students' behavioural intention towards marketing services across several cultures, such as USA, China, Taiwan, Korea, India, Saudi Arabia and Thailand. There are also more cross-culture researches that applied and used students as a population (Tsikriktsis, 2002, Y.K et al., 2002, Liu et al., 2004, Gefen and Heart, 2006, Cyr, 2008, Jin et al., 2008, Kim, 2008, Vance et al., 2008, Alsajjan and Dennis, 2010, Schoefer, 2010). In the context of Internet banking, some studies carried out their research on student populations, (Ricard et al., 2001, Mukherjee and Nath, 2003, Pikkarainen et al., 2004, Chong et al., 2010, Zhao et al., 2010). In terms of the context of online trust towards online services, several studies used student population, (Gefen, 2000, Lee and Turban, 2001, McKnight et al., 2002, Gefen and Straub, 2003). In addition, Ribbink et al. (2004) investigated the role of customers' assessments of electronic services and e-trust to explain customer loyalty to online retailers on the student population.

Gefen and Straub (2000) stated that students are a part of online book buyers and can be good surrogates for real world managers in decision making contexts (Remus, 1986). It was noted that students are more appropriate to evaluate websites because they are computer literate and more comfortable with new technology (Hindi et al., 2002, Lee et al., 2006). Choosing a comparable and equivalent population may be a more important issue in the cross-culture research than that taken from a population of a single country as non-comparable samples or populations might lead to alternative explanations for any differences in results across the two culture (Brislin and Baumgardner, 1971, Lee and Green, 1991). Furrer et al. (2000) also used student populations to examine the relationship between all five culture dimensions that were developed by (Hofstede, 1980) and all five service quality dimensions developed by (Parasuraman et al., 1985, Parasuraman et al., 1988, Parasuraman et al., 1991) in the financial services and stated that students were used because they constitute a homogeneous group from an occupational stage of life cycle, they are supposed to have frequent relationships with banks, and they used banking services for a limited range of services such as checking accounts, saving accounts and ATMs services. Using student population allows researchers to control the demographic characteristics, such as education level and age, that might have significant influences on customers' expectation of website quality (Tsikriktsis, 2002). Liu et al. (2004) mentioned that although the use of students is criticized in academic research, this may be appropriate when studying certain pattern of relationships. Vance et al. (2008) stated that graduate students might be appropriate particularly in both online marketing m-commerce technologies. Zhao et al. (2010) examined the roles of trust and perceived risk on consumers' Internet banking services among Chinese university students, stating that students have great potential to adopt technological or innovative products, such as Internet banking services, because they are young and familiar with computers and Internet technology. It was also stated that university students are suitable for concept development (Dholakia, 2001, Featherman and Pavlou, 2003, Laroche et al., 2003, Zhao et al., 2010).

5.6.2 Sampling Technique

Choosing a sampling method is one of the most significant issues that researchers have to consider when designing their research. A researcher has to choose whether he/she will choose a complete coverage of the population (saturation survey) or choose just a small part of the target population.

In the current study, the researcher chose a sample of the target population because in many cases a complete coverage of the population is not possible. Hussey and Hussey (1997) stated that in an empirical study, sampling is an important issue for studies that apply a positivism approach. Sampling provides a better option in a short period of time and produces comparable and equally valid results. Finally, samples offer more detailed information and a high degree of accuracy because they deal with a relatively small number of units (Sarantakos, 2005). Saunders et al. (2003, p. 151) provided four reasons that sampling can be a better and more valid alternative to a census: it would be impracticable for researchers to survey the entire population; researchers' budgets can prevent them from surveying the entire population; limits on research time prevent surveying the entire population; and it would be an appropriate way to obtain the results quickly. The following figure shows the sampling techniques as stated by:

Figure 5. 3: Sampling Techniques
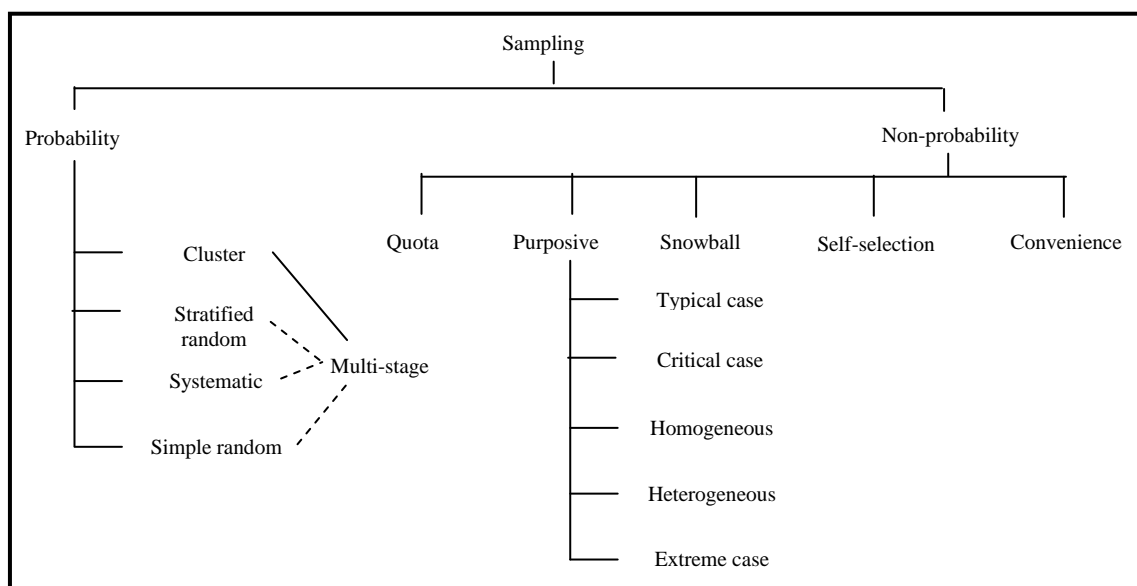
Source: Saunders et al. (2007, p 207)

Two sampling techniques, namely probability or representative sampling and non-probability or judgmental sampling, are identified (Saunders et al., 2003). Probability techniques, in each case, can be selected from the entire population and will involve answering research questions, in order to achieve its objectives which are required statistical estimations. It is associated with survey-based research. Bryman and Bell (2007, p. 182) defined a probability sample as *"a sample that has been selected using random selection so that each unit in the population has a known chance of being selected"*. Minimizing the sampling error (the

differences between a sample and the population from which it is selected) is one aim of the probability techniques (Bryman and Bell, 2007). As it was shown in Figure 5.1, there are different probability techniques: cluster, stratified random, systemic and sample random. In terms of non-probability techniques, the chance of selecting any case is unknown so that answering research questions and achieving its own objection cannot be possible (Saunders et al., 2003). Bryman and Bell (2007) stated that this type of sampling technique assumed that a sample will not be selected using a random selection method and implies that some units in the population are more likely to be selected than others. Figure 5.1 shows that there are five non-probability techniques that can be applied for sampling selection; convenience sampling, snowball sampling, quota sampling (Saunders et al., 2003, Bryman and Bell, 2007), self-selection and purposive (Saunders et al., 2003). Bryman and Bell (2007) stated that in the social survey research the probability sampling is an important technique because it can be possible to make inferences from the data and information that has been collected at random to the population, while non-probability sampling for generalizing the results is questionable and be difficult.

A convenience sample technique will be applied in the current study. From the previous literature, it can be seen that this technique was applied to examine customers' behaviours and perceptions in the context of Internet banking (Lee and Turban, 2001, Herington and Weaven, 2007, Casaló et al., 2008, Herington and Weaven, 2009, Yap et al., 2010, Zhao et al., 2010).

In the current research, the questionnaires were distributed among students who were Internet banking users and covered a wide range of student backgrounds from different areas in order to minimize the potential bias of non-probability sampling. Zhao et al. (2010) stated that choosing the sample of a wide range of students will help avoid the potential bias of applying non-probability sampling and achieves a balance between the difficulty of defining a representative sample and the use of a convenience sample. Choosing a convenient sample of actual Internet banking users, not from non-users or services providers, might help obtain accurate information about Internet banking services and customers' intention. Attitudes are best assessed through information from the users themselves (Cao and Mokhtarian, 2005). AlSajjan (2008) provided four reasons to choose Internet users or Internet banking users rather that the non-users. AlSajjan (2008) stated that such users are more likely to be aware of electronic transaction Internet banking; are more likely to represent potential near-term future

banking users; and have a complete chose control to use Internet banking. It would be inconvenient to include customers who do not use and have no desire to use Internet banking, and it is more likely to collect and capture an adequate number of Internet banking observation when non-users are excluded. Finally, banks usually target Internet users rather that non-users of the whole population.

5.6.3 Sample Size

Sample size is a crucial element in many fields of research, especially in the social sciences, because it controls sampling error, cost, time and data accuracy. Lewin (2005) states that the size of the population has a direct impact on the way researchers can analyze the data. Sample size depends on a number of considerations, such as absolute and relative sample size, time and cost, non-response, heterogeneity of the population and the kind of analysis. Because the current study develops a conceptual model, it is most important to test the model robustly. In the methodology, literature confirmed that the sample size is one of the important issues that research should consider when building or developing a model. The sample size can be controlled by the number of observed variables (indicators) and the number of latent factors (constructs). Harris and Schaubroeck (1990) recommended that when researchers aim to develop a model that is robust by using a structural equation modelling analysis approach, the minimum sample size should be 200 cases. There are some issues that will influence the sample size decision, including the model complexity, expected rate of missing data, estimation procedures used and multivariate distribution of the data (Hair et al., 2006). According to Hair et al. (2006), the estimation technique in the structural equation modelling is maximum likelihood estimation (MLE), the sample size should be 200 because MLE becomes sensitive and model fit becomes poor. Appendix 3 illustrates the instrument of data collection (the questionnaire). It shows there are 72 observed variables that would be included in the framework to examine the 13 latent constructs (figure 4.1 in chapter four). Accordingly it can be judged that the model is complex and may need a large sample size. Thus it was decided to collect 300 cases from each country to meet the model complexity.

According to the existing previous empirical studies, Pikkarainen et al. (2004) conducted research in the online banking context and the sample size was 268 some of them were students. In the online retailing, Internet and online shopping, the sample size was 651 students (Mukherjee and Nath, 2007), 405 students (Cheung and Lee, 2001), 213 students (Gefen et al., 2003b), 193 students (George, 2004), 184 students (Jarvenpaa et al., 2000), 161

students (Gefen and Straub, 2003), 217 students (Gefen, 2000), and 184 students (Ribbink et al., 2004). Some of previous research in Internet and technology usage used 786 (Taylor and Todd, 1995b), 247 (Cheung et al., 2000), 80 (Corbitt et al., 2003), and 186 students (Agarwal et al., 2000). Therefore, in the current study 600 students will be chosen (300 from King Khalid University, Saudi Arabia and 300 from Brunel University, the UK).

In the current study, 500 questionnaires were distributed at King Khalid University in the KSA, between September 2009 and October 2009, and 500 questionnaires at Brunel University in the UK from November 2009 to December 2009. Both students groups were approached independently in the university libraries to avoid any influence from their tutors to participate in the study. A total of 532 (53%) usable questionnaires from both countries were received and used for the study.

In terms of the KSA sample, a number of questionnaires were distributed each day at the university's library and students were asked to answer and return them to the researcher or to the librarian or leave them on their disks so that they could be collected by the researcher on the same day. Accordingly 248 usable cases (49.6%) were collected from the KSA, as shown in Table 5.3.

The same technique was also applied in the UK. The sample was approached at the university's library and students were asked to answer them during the day at their convenience. When students had filled out the questionnaires, they were asked to leave the questionnaire on their desks and the researcher collected them on the same day. Some students could not fill out the questionnaires on the distribution day. They were given pre-paid envelopes so that they could take the questionnaires with them and post them back to the researcher's home address. The following table shows that 284 students (56.8%) participated in the current study and 11 cases (3.9%) of 284 were returned by post.

Table 5. 3: Questionnaire Distribution Information

	Total Questionnaires	Unusable Questionnaires	Not Return Questionnaires	Total Usable Questionnaires	Return Percentage Rate %
KSA	500	68	184	248	49.6
UK	500	56	160	284	56.8
Total	1000	124	344	532	53.2

The following data analysis and findings chapter (Chapter 6) will provide more description details about the samples based on the information that was collected by the questionnaire that is shown in the Appendix 3. The following section illustrates the data collection instrument.

5.6.4   The Instrument for Data Collection

The *questionnaire* is an important quantitative instrument that can reduce the bias caused during interactions between researchers and respondents (Oliver and Mcloughlin, 2001). With a questionnaire method, face to face meetings between researchers and respondents are often not necessary; thereby respondents' opinions are not affected by what the researcher says. The method enables researchers to make different measurements of the population so that they can distinguish between groups, and be able to understand underlying factors. Bryman (2001) stated three main reasons for measurement through quantitative research. First, researchers are able to describe individuals in terms of certain characteristics. Second, they will have a consistent device for making distinctions. Third, there will be a basis for more precise estimates of the extent of relationships among the population.

The questionnaire enables researchers to collect information from a large population. It was stated that the questionnaire is one of the most common and widely used methods to collect data because each respondent is asked the same set of questions, and collecting responses from a large sample can be achieved efficiently (Saunders et al., 2003). Clough and Nutbrown (2002) pointed out that a good consequence of being large-scale is the creation of generalizability from study data and findings. In addition, questionnaires allow the sampled individual time to think and respond. They may not be costly and will not take as long as qualitative research.

As a result of the advantages of using a questionnaire, a large number of customers can be reached and they can fill questionnaires in their own time without any influences from the researcher. The researcher's contact information also will be provided so that customers are able to contact the researcher when they find any difficulties. Saunders et al. (2003) state that the questionnaire technique can be used for explanatory research to explain relationships between variables.

The design of a questionnaire differs according to how it can be administered so that it can be noted that there are two main types of questionnaires: self-administered questionnaires (online questionnaire, postal questionnaire, and delivery and collection questionnaire) and interviewer-administered questionnaires (telephone questionnaire and structured interview) (Saunders et al., 2003). The self-completion questionnaire in the current study will be used for closed questions in order to obtain specific answers. These questions will be easy for the population to answer. Some of the population may not have experience or useful opinions on the topic, and they may not know about the topic's dimension. Possible answers in the closed questions are, therefore, set out in the questionnaire and the respondents may tick the category that best describes their feelings (Kumar, 1996). Some principles that researchers should consider were stated by Lewin (2005), such as the statement of questionnaire aims and objectives, and logical structure. The questions need to be clear and understandable. Closed questions can obtain quick responses, such as yes/no and multiple choice questions. The construction of the questions should be made within the frame of analysis and the claim to significance (Oliver and Mcloughlin, 2001). Appendix 3 shows a copy of the final questionnaire used for data collection after the pilot study (all the changes of the first draft of the questionnaire are shown in the pilot study section, 5.9). Section 5.7 will illustrate the items (observed variables) that will contribute to measure the latent constructs.

5.7 The Instrument and Measurement Items (Observed Variables) Development

This section will illustrate the questionnaire that is used for the data collection. Particularly, it explains what information will be collected and what sources are adopted. According to the conceptual model in the current study (Figure 4.1), there are 13 latent constructs that will be measured by multiple indicators (observed variables). More details about the latent constructs and measurement items will be explained in detail later on in this chapter when structural equation modelling is explained. This section will provide details about these latent constructs and how they can be operationally measured. The instrument shown in Appendix 3 contains four parts. The following subsections will illustrate these parts one by one, with details of what type of information will be collected.

5.7.1   Part One: Personal Computing, Internet Knowledge and Experiences

This part contains four questions. All these questions belong to the users themselves rather than their evaluation of Internet banking. For example, the first question deals with whether users of Internet banking have their own personal equipment (personal computer). Because

some of the Internet users or Internet banking users have no personal computer, they use their friend's computers or computer centres at universities or public libraries. Having a personal computer, users may feel that they have full control on their behaviours, for example they can access to their account whenever they want. In addition, when users have their own equipments, such as personal computer and Internet connection, they are more likely to reduce risks.

The second question investigates to what extent users rate their computer knowledge in general and their familiarity with the Internet. Investigating these questions will help to understand users' behaviours and their personal abilities to use computers and the Internet so that they are more likely to assess and evaluate effectively Internet banking services. Finally, questions three and four take the time scale into consideration. For example, question number three investigates how long users have been using the Internet, while question four asks about how much users use the Internet on a daily basis.

5.7.2   Part Two: Internet Banking Background

This section focuses on the context of Internet banking particularly on the general information about how Internet banking is used. There are six questions designed to collect some specific data (Appendix 3, Part Two). Question number five asks whether the participants actually use Internet banking services. Asking this question, it will be easy to exclude non-Internet banking users from the sample because the aim of the study is to examine Internet banking users' behaviours as stated in the above section (5.6.1). Those users will be more able and likely to evaluate Internet banking services such as how easy and useful the services are. The participants would be asked how often they use Internet banking, based on daily, weekly, monthly and yearly usage in question number six. The aim of asking this question is to understand how frequent Internet banking usage is and how experienced users are, because regular users may be more experienced than those who use Internet banking on, for example, a monthly basis. Question number seven asked the participants where they usually use the Internet banking services, that is whether they use Internet banking from their home, work, university, public library and friends' places or others places that have not been mentioned in the questionnaire.

The participants are asked to indicate how many financial transactions are carried out in each session in question number eight. In more detail, in question number nine, the participants'

will be asked what financial transactions they usually performed, for example checking accounts, obtaining transaction history, bills payment, transferring funds, managing investment and stock trading, and searching for information.

5.7.3   Part Three: Measurement Items (Observed Variables) Development

This part of the instrument is asking the participants about their assessment and evaluation of Internet banking services based on the proposed constructs in the conceptual model (figure 4.1 in chapter four). Different statements are used and the participants are asked to evaluate these statements based on the five points Likert scale, ranging from strongly disagree to strongly agree. Sarantakos (2005) states that Likert scale questions give numerical answers that enable statistical analysis in social science research. The following Table 5.4 shows the Likert scale and its weights.

Table 5. 4: The Likert Scale

Weight	Response
1	Strongly Disagree
2	Disagree
3	Neutral
4	Agree
5	Strongly Agree

Likert-style rating scale is the most common approach in which researchers can ask respondents about their agreements or disagreement with statements provided and opinion data can be collected by using rating questions (Saunders et al., 2003). Miller and Brewer (2003) stated that a Likert scale is commonly used to measure attitudes in survey questionnaires. In addition, Oppenheim (1992) stated that the Likert scale is popular for social research because of its good reliability and the greater range of answers for respondents.

All the measurement items used in the current instrument are based on the existing items in the previous literature such as (Pikkarainen et al., 2004, Eriksson et al., 2005, Mukherjee and Nath, 2007). These items have been tested, supported in many different contexts and samples, and proved to measure the constructs that tend to measure. Gilbert (2008) mentioned that

social research can be never conducted without reference to other studies so that researchers can call on other researchers' works rather than having to justify every measurement theory and every indicator. The current measurement items were chosen carefully and make necessary adjustments to fit in the context of Internet banking. In this section, the measurement items and their sources will be highlighted. Then later on in this chapter, the pilot study and some results, such as the items and constructs reliability will be stated. According to the proposed model (figure 4.1), thirteen constructs will be examined in the questionnaire. Each construct will be measured by multiple items. The following will illustrate these constructs in turn, along with their measurement items. Appendix 3 in part three illustrates the measurement items ranging from questions 11 to question 83.

Security Perception Measurement Items

Customers' perceptions concerning security' items are ranged from Q11 to Q15. Security systems have been the main concern in many existing studies, particularly in the online context. Many studies attempted to measure this factor, such as Eriksson et al. (2005), Wan et al.(2005), Pikkarainen et al. (2004), and Walker and Johnson (2006), in the Internet banking context. In addition, security systems have been focused in Internet usage (Corbitt et al., (2003), in the online shopping (Gefen et al.(2003b), Cheung and Lee ((2001), and Mukherjee and Nath (2007). Five items will be used and adopted in the current study and were taken from previous studies. Three items were taken from Pikkarainen et al. (2004). The sample will be asked about whether using online banking is financially secure. They will be required to indicate their feelings regarding online bank security. The third item will focus on whether the online security has any influence on their decision to use an online banking. One item was taken from Eriksson et al. (2005). It concerns whether customers think that their personal data is kept securely by banks. The last item was adopted from Cheung and Lee (2001) and used by Mukherjee and Nath (2007), concentrating on whether the customers' credit card information is prone to leakage.

Privacy Perception Measurement Items

From question 16 to 20, the participants will be asked about privacy concerns. Based on the previous existing measurements that focus on measuring the customers' views about their personal information privacy, such as Pikkarainen et al. (2004), who investigated customers privacy in online banking context in Finland, and Cheung and Lee (2001), who examined customers' privacy in the Internet shopping context, the current study will use these existing

measurements concerning online customers' privacy. Cheung and Lee's (2001) customers' privacy measurement was used in the online retailing context (Mukherjee and Nath, 2007). In the current study, five questions about customers' privacy will be asked. One item was taken from Pikkarainen et al. (2004). Customers will be asked whether they trust their banks' abilities to protect their privacy. Four items were taken from Cheung and Lee (2001). Customers will be required to indicate their concern about whether their banks will sell to third parties without their permission. The customers will be required to indicate to what extent their banks are concerned about customers' privacy in general, and that their banks will not disclose customers' personal data to other parties. Finally, customers will be asked to indicate their safety feelings about the banks' privacy control.

Communication Measurement Items

Nigh items are applied to measure customers' perceptions towards their communication with their banks via Internet banking services. Based on items that were created by Morgan and Hunt (1994) and Moorman et al. (1993), Mukherjee and Nath (2007) measure electronic trust, including the communication between customers and their e-vendors. The current study used these existing items. These questions were grouped into three groups. First group includes four questions that concern the quality of information and range from Q21 to Q23. The samples will be required to decide the level of information quality that is provided by their banks, and whether their banks provide and mention all costs before transactions are approved. They also required details of how they satisfy in terms of the minimum numbers of clicks they have to do in order to reach the relevant information. The samples will be asked whether banks provide proof to support their claims, such as mentioning the result of a poll or study, The second group contains four questions, which range from Q24 to Q27, regarding the quality of response. The samples will be asked to indicate whether their banks keep customers informed about latest developments. How fast the response of the bank is to a customer query is a fundamental question that will be asked to the sample. The samples also are required to indicate whether their banks regularly seek feedback from customers. Finally, customers are required to indicate whether they are able to provide an online rating for services offered on the website. Questions 28 and 29 represent the last group and focus on online banks' openness. For example, customers will be asked about whether their online banks mention their rules, regulations, policies and practices. In addition, they are also required to indicate whether their banks create an open environment where customers can freely interact with other customers and communicate on the services of the bank.

Experience Perception Measurement Items

The questions from 34 to 39 illustrate customers' experience measurement items. Six questions regarding customers' experiences will be asked. Questions 34 and 35 were taken from Cheung and Lee (2001). Customers are required to indicate whether using Internet banking has been a good experience for them personally.

They will be asked whether they have positive experiences of using the Internet banking. The following two questions (Q36 and Q37) are based on Jarvenpaa et al. (2000). Customers are asked to indicate whether they are using and reviewing online services via the Internet banking frequently. The last two questions (Q38 and Q39) were taken from Gefen (2000), asking customers to indicate their familiarities with Internet banking searching and processes.

Internet Banking Reputation Measurement Items

The importance of a firm's reputation has been addressed and examined by previous studies (Jarvenpaa et al., 1999, Gefen et al., 2003b, Pavlou, 2003, Cyr et al., 2005, Jin et al., 2008). These studies demonstrated that a firm's reputation is an important factor influencing and building trust among different business relationships. In terms of reputation measurement, the current study employed four items that have already validated (Doney and Cannon, 1997, Jarvenpaa et al., 2000). The first two items (Q30 and Q31) were applied from (Doney and Cannon, 1997). These first two items concern customers' perceptions in terms of how they perceive their Internet banking as honest, because some e-vendors might remain true to what they have already agreed with the customers. This question is very important to indicate customers' perceptions about the honesty of Internet banking. The second item concerns whether Internet banking is known to take care of its customers, and meets the customers' expectations and requirements. The last two questions (Q32 and Q33) were taken from Jarvenpaa et al. (2000), who adopted and validated the measurement items that were originally stated by Doney and Cannon (1997), in order to examine the antecedents and consequences of consumer trust across cultures in the context of online shopping. These last two questions are concern with whether Internet banking is well known in the community (Q32), and in general whether Internet banking has a good reputation (Q33).

Trust Perception Measurement Items

In terms of customers' trust, Jarvenpaa et al. (2000) used the existing store's trustworthiness measures which were stated by Doney and Cannon (1997). The current study will adopt these items, which have been used by Jarvenpaa et al. (2000), to investigate banks' trustworthiness. Six items will be used and asked to customers, ranging from Q40 to Q45. Customers will be required to state whether their banks are trustworthy and have a reputation for keeping promises and commitments. They also require an indication of whether the banks keep their best interests in mind. In addition, customers are asked to indicate whether they find it necessary to be cautious with banks that they are dealing with. They are required to indicate whether their banks have more to lose than to gain. Whether banks meet their customers' expectations is a critical question to be asked to customers.

Self-Efficacy Perception Measurement Items

The questions that range from Q46 to Q50 illustrate the self-efficacy's measurement items. These questions were taken from Walker and Johnson (2006) who investigated customers' self-efficacy on using electronic services including Internet banking. Customers will be asked five questions regarding their technological ability development and whether they had any problem adopting new technology-enabled service systems. They also will be required to state whether they believe that they have the ability to make use of technology-enabled services. Finally, the customers will be asked whether they are comfortable with using technology-enable services or whether they find technology-enables services complicated to use.

Perceived Ease of Use Perception Measurement Items

Perceived ease of use has been stated as one of the fundamental factors affecting individuals' decision to use a technology. This variable was stated and measured by (Davis, 1986, Davis, 1989, Davis et al., 1989) to investigate computer technology acceptance. It has been used in different studies. Subramanian (1994) used perceived ease of use as the main factor and examined users acceptance toward using voicemail and customer dial up. Keil et al. (1995) adopted items which was stated by (Davis, 1989) to study users acceptance of CONFG software. In general, perceived ease of use items were used in many studies (Venkatesh and Davis, 1996, Lederer et al., 2000, Chau and Hu, 2001, Venkatesh and Davis, 2000, Taylor and Todd, 1995b, Chau, 1996, Gefen and Straub, 2003, Gefen et al., 2003b, Pikkarainen et al., 2004, Igbaria and Iivari, 1995). In the current study, the items which will be used to

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measure individuals' perceived ease of use were taken from Pikkarainen et al. (2004) and originally stated by Davis (1989). This is because they conducted their research in an online banking context. They stated six questions in order to investigate customers' perceived ease of use. These six questions will be used in the current study. Perceived ease of use's measurement items are ranged from Q51 to Q56. Customers will be asked whether learning to use an online banking is easy for them and whether they find it easy to do what they want to do in online banking. They also will be required to indicate whether their interaction with online banking is clear and understandable, and whether they find it to be flexible to interact with. Customers will be asked whether it is easy for them to become skilful at using online banking. Finally, customers will be asked about their overall opinions concerning whether they find online banking is easy to use.

Perceived Usefulness Measurement Items

Individuals' perceived usefulness has been measured in different studies for different proposes to investigate how and why individuals accept or reject certain technologies. Perceived usefulness was originally measured by Davis (1989) to examine how it affects users to accept computer technology such as the CHART-MASTER package. Perceived usefulness items, stated by Davis, were used and adopted from many authors (Keil et al., 1995, Venkatesh and Davis, 1996, Lederer et al., 2000, Chau and Hu, 2001, Venkatesh and Davis, 2000, Taylor and Todd, 1995b, Chau, 1996, Gefen et al., 2003b, Gefen and Straub, 2003, Pikkarainen et al., 2004, Igbaria and Iivari, 1995). In the current study, items to measure individuals' perceived usefulness were taken from Pikkarainen et al. (2004), because these items were used in the online banking context. Six items will be used to measure perceived usefulness. The questions ranging from Q57 to Q62 represent perceived usefulness measurement items. Customers will be asked whether using online banking enables them to utilize services more quickly and whether customers' performance of utilizing banking services can be improved by using online banking. They will be asked whether using online banking increases their productivity and enhances customers' effectiveness of utilizing banking services. Customer will be required to indicate if using online banking makes it easier for them to utilize banking activities. Finally, they will be asked about the overall opinion that online banking is useful for them to utilize banking services.

Customers' Attitude Measurement Items

Customers' attitude can be conceptualized to reflect *"an individual's positive or negative feelings (evaluative affect) about performing the target behaviour"* (Fishbein and Ajzen, 1975. p 216). Based on this definition, the current study seeks to find out customers attitudes toward Internet banking adoption by asking them some questions to investigate whether they have positive or negative attitudes. For instance, the study attempts to find how much customers like using Internet banking, and whether it is a good or bad idea. Customers' attitude towards a technology has been stated as an important factor that can indicate how individuals are likely to use technologies. Different studies used customers' attitudes as the main variable to examine how individuals are likely to use a system. For example, Agarwal and Prasad (1998) used items which were originally stated by Ajzen and Fishbein (1980) to measure individuals' awareness of a technology (CONFIGUREATOR SYSTEM). Agarwal and Prasad (1999) used items that were stated by Fishbein and Ajzen (1975). Chau and Hu (2001) investigated users' attitudes towards telemedicine technology in public tertiary hospitals in Hong Kong. They measured users' attitudes by items that were taken from (Taylor and Todd, 1995a). Taylor and Todd (1995b) used items that were taken from Ajzen and Fishbein (1980), Ajzen (1985), and Ajzen (1991). They attempted to examine students' attitudes towards using a computer resource centre. Customers' attitudes towards online shopping and online services, including electronic banking, have been examined (Jarvenpaa et al., 2000, George, 2004, Moutinho and Smith, 2000). In the current study, the samples will be asked five questions, ranging from Q63 to Q67. Three items used in the current study were taken from Jarvenpaa et al.(2000). They based their items to measure customers' attitudes toward an online store on Fishbein and Ajzen (1975). The first question focuses on whether customers believe that the idea of using Internet banking is appealing. The second one is whether customers like the idea of using Internet banking. Finally, they are asked whether using Internet banking is a good idea. Two questions were taken from Agarwal and Prasad (1998). These two items originally were taken from Ajzen and Fishbein (1980). Their first question concentrates on whether customers believe that Internet banking represents an important innovation. They also are required to indicate whether they believe that Internet banking is critical for their banks to achieve a competitive edge.

Customers' behavioral Intentions Measurement Items

Customers' intentions can be conceptualized to reflect *"the strength of one's intention to perform a specified behaviour"* (Fishbein and Ajzen, 1975. p. 288). Based on this definition

of customers' intention, the current study aimed to understand whether customers have intentions to use Internet banking and how much they are willing to adopt it. Customers' intention was stated as a significant factor to predict how a system, technology and an innovation are likely to be used and adopted (Subramanian, 1994, Agarwal and Prasad, 1999, Chau and Hu, 2001, Venkatesh and Davis, 2000, Taylor and Todd, 1995b, Chau, 1996, Venkatesh and Davis, 1996, Agarwal and Prasad, 1998). Customers' intention was measured in e-commerce or in online setting (Bhattacherjee, 2001, Gefen et al., 2003b, Jarvenpaa et al., 2000, McKnight et al., 2002, Gefen and Straub, 2003, Mukherjee and Nath, 2007). While Garbarino and Johnson (1999) measured customers' intention in the traditional context. In the current study, five questions will be asked of the sample, ranging from Q68 to Q72. Two questions based on (Jarvenpaa et al., 2000). They have taken these items from (Fishbein and Ajzen, 1975). Customers will be asked whether they would consider using Internet banking in the next 3 months. They also will be required to indicate whether they intend to use Internet banking in the next year. The aim of these first two questions is to find out whether customers' intentions will be stable during changing times. The results of these questions can indicate whether the intentions to use Internet banking can be increased or reduced. The last two questions were taken from Venkatesh and Davis (1996) but were originally stated by Davis (1989). Customers' intentions items stated by Davis, to measure customers intentions towards a particular systems or technology, were used for different proposes, such as Agarwal and Prasad (1999), to investigate users' intentions to use a Graphical User Interface, and Chau and Hu (2001), to examine physicians' intentions towards telemedicine technology acceptance in public tertiary hospitals in Hong Kong. Chau (1996) used customers' intentions items which were stated by Davis (1989) to examine information technology (IT) staff's intentions to adopt computer-aided software engineering. In the first question, customers are required to assume that they had access to Internet banking and how likely they intend to use it. While in the second one, customers would be asked to indicate whether they would use Internet banking.

Customers' Loyalty Measurement Items

Customers' loyalty was identified as *"repeat purchase intention, attitudes or alternatively measures of actual behaviours, including repeat purchase, recommendation"* (Moutinho and Smith, 2000, p 125). Based on this definition, customers' loyalty can be conceptualized in the current study to reflect customers' loyalty toward their banks and whether they are going to confirm their relations in the future, whether they are going to switch to other banks and

whether they are going to recommend their Internet banking to other customers. Section 3.6.1 in chapter three provided the loyalty definition applied in the current study. Customers' loyalty was addressed as an important factor in building marketing relationships. It was also stated as a critical element in the online context where customers can easily switch their current online vendors (Bhattacherjee, 2001, Ribbink et al., 2004). Customers loyalty was stated as a significant factor in the online banking context (Casaló et al., 2008, Moutinho and Smith, 2000). In the current study, five items will be used to measure Internet bank loyalty (Q73 to Q77). Two items were taken from Ribbink et al. (2004). The first question attempts to find out whether customers will recommend using Internet banking to other people. The more customers strongly recommend Internet banking usage, the more they may remain loyal to that Internet banking. The second one aimed to find out whether customers prefer their current Internet banking above other Internet banking websites. The more customers prefer a particular website, they more they may have high level of loyalty towards that site. The last three questions for measuring customers' loyalty were taken from Casaló et al. (2008). These two questions attempt to find out customers' loyalty by measuring their relationship continuation with their current Internet banking. Customers will be asked whether they have the intentions to continue their relationship with their Internet banking. The second question, customers are required to answer is based on their experiences and whether they are very likely to continue their relationship with Internet banking.

Subjective Norm Measurement Items

According to the proposed model, subjective norm was stated as one of the significant construct influencing customers' loyalty. It was examined in different contexts and proved to affect customers and users usage of a system. Originally subjective norm was identified by Fishbein and Ajzen (1975, p. 302) when they introduced theory of reasoned action (TRA) and stated that subjective norm refers to "the person's perception that most people who are important to him think he should or should not perform the behaviour in question". This definition also was addressed by (Davis et al., 1989, Venkatesh and Morris, 2000). In addition, Chau and Hu (2001, p. 702) defined subjective norm as "an individual's perception of relevant others' opinions of whether or not he/she should perform a particular behaviour". Based on the Fishbein and Ajzen's definition, subjective norm in the current study is identified as students' perception that most people who are important to him think he should or should not perform and use Internet banking. In terms of its measurement items, six questions will be applied from different sources. These questions are ranged from Q77 to

Q82. The first four questions were adopted from (Taylor and Todd, 1995b). The students will be asked to indicate whether they have been recommended by their friends to use Internet banking and how likely they will follow their friends' recommendations. They also will be asked to indicate whether there is any significant influence from their families on their decision to adopt and use Internet banking. The last two questions were adopted from (George, 2004).

Uncertainty Avoidance Measurement Items

The current study also measures uncertainty avoidance in order to examine whether the proposed model can be generalized across high and low uncertainty avoidance. As stated in section 2.5.3, uncertainty avoidance was defined as *"the degree to which people in a country prefer structured over unstructured situation"* (Hofstede, 1993, p. 90). In the current study, uncertainty avoidance indicates the degree to which people in a country prefer structure in Internet banking where all the instructions are spelled out in detail and rules and regulations are placed clearly over unstructured situations. Five questions will be applied to measure uncertainty avoidance. These questions were adopted from (Clugston et al., 2000). They are ranged from Q83 to Q87. This construct will be applied in the current study as a moderator because the study would like to explore what relationships can be moderated by uncertainty avoidance. The section on invariance analysis in the next chapter will provide more details.

All the constructs, their corresponding measurement items and sources are shown in the following Table

Table 5. 5: The Study's Measurement Items

The Theory	Hypothesis	The Construct	Acronyms	The Actual measurement items	source
			Loy.73	I would recommend Internet banking to other people.	Ribbink et al. (2004)
			Loy.74	I prefer a particular Internet banking above others.	
	H1: Intention →Loyalty	Loyalty	Loy.75	I have the intention to continue my relationship with Internet banking.	Casaló et al. (2008)
			Loy.76	There is a positive effect of new banking technology on my bank loyalty.	
			Loy.77	It is likely that I will continue my loyalty to Internet banking.	
The Theory of Reasoned Action (TRA) (Fishbein and Ajzen, 1975)	H1: Intention →Loyalty	Customers' Intentions	Int.68	I would consider using Internet banking in the next 3 months.	(Jarvenpaa et al., 2000) and originally developed by (Fishbein and Ajzen, 1975)
			Int.69	I would consider using Internet banking in the next year.	
			Int.70	Given available access to Internet banking, I would use it.	Venkatesh and Davis (1996) originally stated by Davis (1989)
			Int.71	I would use my bank cards to access to Internet banking account.	
			Int.72	I am very likely to provide my bank the information it needs to better serve my needs.	
Technology Acceptance Model (TAM) Davis (1989)	H2: Attitude → Intention	Customers' Attitudes	Att.63	The idea of using Internet banking to access to online services is appealing.	Jarvenpaa et al.(2000) and originally developed by Fishbein and Ajzen (1975)
			Att.64	I like the idea of using Internet banking.	
			Att.65	Using the Internet banking to access to online services is a good idea.	
			Att.66	I believe that Internet banking represents an important innovation.	Agarwal and Prasad (1998) and

The Theory	Hypothesis	The Construct	Acronyms	The Actual measurement items	source
			Att.67	I believe that Internet banking is critical for banks to get a competitive edge.	originally developed by Ajzen and Fishbein (1980)
Technology Acceptance Model (TAM) Davis (1989)	H3: Perceived Usefulness → Attitude	Perceived Usefulness	PU.57	Using Internet banking enables me to utilize services more quickly.	Pikkarainen et al. (2004) and originally stated by Davis (1989)
			PU.58	Using Internet banking improves my performance of utilizing banking services.	
			PU.59	Using Internet banking for my banking services increases my productivity.	
			PU.60	Using Internet banking enhances my effectiveness of utilizing banking services.	
			PU.61	The use of the Internet banking system makes it easy to get more benefits from banking services.	
			PU.62	Overall, Internet banking is useful to me.	
Technology Acceptance Model (TAM) Davis (1989)	H.4: Perceived Ease of Use → Attitude H.8: Perceived Ease of Use → Perceived Usefulness	Perceived Ease of Use	PE.51	Learning to use Internet banking is easy for me.	Pikkarainen et al. (2004) and originally stated by Davis (1989)
			PE.52	I find it easy to do what I want to do when using Internet banking	
			PE.53	My interaction with the Internet banking is clear and understandable.	
			PE.54	Internet banking is flexible to interact with.	
			PE.55	It is easy for me to become skilful in the use of Internet banking.	
			PE.56	Overall, I find Internet banking easy to use.	
	H.5: Trust → Perceived Usefulness H.9: Trust → Perceived Ease of Use	Trust Internet Banking	T.40	Internet banking is trustworthy.	Jarvenpaa et al. (2000)
			T.41	Internet banking wants to be known as one which keeps promises and commitments.	
			T.42	I trust Internet banking, because it keeps my best interests from its priorities. Check this is correct	
			T.43	I find it necessary to be not cautious with Internet banking.	

The Theory	Hypothesis	The Construct	Acronyms	The Actual measurement items	source
			T.44	Internet banking has more to lose than to gain by not delivering on their promise.	
			T.45	Internet banking behaviour meets my expectations.	
The Theory of Reasoned Action (TRA) (Fishbein and Ajzen, 1975)	H.6: Subjective Norm → Perceived Usefulness H.10: Subjective Norm → Perceived Ease of Use	Subjective Norms	SN.78	My friends think that I should use Internet banking.	Taylor and Todd (1995b)
			SN.79	Generally speaking, I want to do what my friends think I should use Internet banking.	
			SN.80	My family thinks that I should use Internet banking.	
			SN.81	Generally speaking, I want to do what my family thinks I should do.	
			SN.82	People who are important to me think that I should use Internet banking.	George (2004)
			SN.83	People who influence my behaviour would think that I should use Internet banking.	
	H.7: Self-efficacy → Perceived Usefulness H.11: Self-efficacy → Perceived Ease of Use	Self-efficacy	SE.46	I have well-developed technological abilities.	Walker and Johnson (2006)
			SE.47	I have no problem adapting to new technology-enabled service systems.	
			SE.48	I believe I have the ability to make use of technology-enabled services.	
			SE.49	I feel comfortable with technology-enabled services.	
			SE.50	I find technology-enabled services not complicated to use	
The Commitment-Trust Theory (CTT) By Mukherjee and Nath (2007)	H.12: Security → Trust	Security	S.11	Using Internet bank is financially secure.	Pikkarainen et al. (2004)
			S.12	I am not worried about the security of the Internet banking.	
			S.13	Matters of security have no influence on my using the Internet banking.	
			S.14	I think customer data is kept securely by Internet banking.	Eriksson et al. (2005)
			S.15	Bank cards information is not at risk of leakage theft.	Cheung and Lee (2001) and Mukherjee and Nath (2007)

The Theory	Hypothesis	The Construct	Acronyms	The Actual measurement items	source
The Commitment-Trust Theory (CTT) By Mukherjee and Nath (2007)	H.13: Privacy → Trust	Privacy	P.16	I trust in the ability of Internet bank to protect my privacy.	Pikkarainen et al. (2004)
			P.17	Internet banking will not sell my personal information to third parties without my permission.	Cheung and Lee (2001)
			P.18	Internet banking is concerned about consumer privacy.	
			P.19	Internet banking will not divulge consumers' personal data to other parties.	
			P.20	Internet banking system is able to control customer privacy in general.	
The Commitment-Trust Theory (CTT) By Mukherjee and Nath (2007)	H.14: Communication → Trust	Communication: Quality of Information	Com.21	Internet banking provides high quality information.	Mukherjee and Nath (2007)
			Com.22	Internet banking clearly mentions all costs to the customer before transactions are approved.	
			Com.23	I can access to appropriate banking information with minimal effort.	
		Communication: Quality of Response	Com.24	Internet banking keeps its customers informed about the latest developments.	
			Com.25	Internet banking response to customer queries is immediate.	
			Com.26	Internet banking regularly seeks feedback from its customers.	
			Com.27	Internet banking system allows customers to evaluate banking services.	
		Communication: Openness	Com.28	Internet banking clearly mentions its rules, regulations, policies and practices to the customers.	
			Com.29	Internet banking creates an open environment where customers can freely interact with other customers and communicate about the services of the bank	
	H.15: Reputation → Trust	Internet Banking Reputations	Rep.30	Internet banking has a reputation for being honest.	(Doney and Cannon, 1997)
			Rep.31	Internet banking is known to be concerned about customers.	
			Rep.32	Internet banking is well known in my society.	(Jarvenpaa et al., 2000)
			Rep.33	Internet banking has a good reputation.	
	H. 16: Experience → Trust	Customers' Experiences	Exp.34	Using Internet banking has been a good experience for me personally.	Cheung and Lee (2001)

The Theory	Hypothesis	The Construct	Acronyms	The Actual measurement items	source
			Exp.35	I have positive experiences of using Internet banking.	
			Exp.36	I frequently use Internet banking services.	Jarvenpaa et al. (2000)
			Exp.37	I frequently check for new or improved online Internet banking services.	
			Exp.38	I am familiar with the processes of Internet banking.	Gefen (2000)
			Exp.39	I am familiar with searching for products and services on the Internet banking	
Hofstede (1993)		Low and High Uncertainty Avoidance	UA.84	It is important to have online banking requirements and instructions spelled out in detail so that I always know what I am expected to do.	Clugston et al. (2000)
			UA.85	Internet bank managers expect me to closely follow instructions and procedures.	
			UA.86	Rules and regulations are important because they inform me what Internet banking expects of me.	
			UA.87	Standard operating procedures are helpful to me when performing financial activities.	
			UA.88	Instructions for operations are important for me when performing financial activities.	

Part Four: Demographic Information

This part helps to collect the participants' personal demographic data. Seven questions should be answers, ranging from Q89 to Q95. More specifically, the participant is required to identify his/her gender, marital status, age, education, income per year, occupation and his/her culture background. This information will help to understand customers' behaviours towards technology acceptance and Internet banking in specific. Some of this information, such as gender, will be used in the current study as a moderator. The study attempts to find out whether gender will moderate some of the relationships in the proposed model. Most of the existing literature collected demographic data for users or individuals so that the phenomena can be understood.

It can be noted from the above constructs and measurement items that they are developed in the context of western culture and a few studies has examined these constructs and the measurement items outside the western culture, for example Arabic culture such as Saudi Arabia. It is a significant issue to translate these constructs and measurement items into the Arabic language to create an equivalent Arabic copy of the questionnaire as shown in Appendix 6. The following section highlights the importance of translation for the questionnaire. It shows what roles and processes should be taken into consideration for creating an equivalent questionnaire.

5.8 Questionnaire Translation across Cultures

Many factors can encourage researchers to carry out cross-cultural research such as global or international marketing, technology innovation, and culture movement. Technology developments cause many different markets to compete globally across different cultures. Accordingly, banks should understand how their customers behave, how they can be attracted, and what factors can affect them. A cross-culture research provides a number of advantages. Based on Strodtbeck (1964), Brislin et al. (1973) mentioned four advantages of a cross-culture research; a researcher can gather data in another culture and obtain or investigate his independent variables which may be unavailable in his/her own culture; a certain differential incident trait can be documented from culture to culture; behaviour patterns which may not present in the researchers' own culture can be indicated by cross-cultural research; and, finally, hypothesise with existing sets of data or files of already collected information can be tested in different cultures by a cross-cultural research.

Translation is an important step before conducting or carrying out the main study, especially when the research will be conducted across different cultures. A researcher has to take into consideration serious steps for translating the instrument (questionnaire) in order to make sure a research's sample understand each single question, because each culture may have its own interpretation. If a word has a meaning in western culture, this meaning may have a different meaning in non-western culture. This point may indicate that research has to make sure the cross-cultural sample understands the exact meaning for each single item in the questionnaire. Brislin et al.(1973, p 12) state that "the meaning of every aspect of any investigation is important, and it is especially important for cross-cultural work since the researcher does not know the meaning that people of other cultures attach to our research process". Usunier (1998) cited by Saunders et al. (2003), suggests that a great deal of attention should be paid when the source questionnaire is being translated to lexical meaning, which refers to the individuals words meaning, idiomatic meaning which refers to the meanings of a group of words that are natural to a native speaker and not deduced from those of the individual words, grammar and syntax. This is related to the correct use of language and includes the ordering of words and phrases to create well-formed sentences, and experiential meaning that refers to the equivalence of meaning of words and sentences.

A researcher has to make sure that the different-language versions of the same questionnaire are equivalent. Brislin et al. (1973) suggested useful rules for writing a good English version. They suggested that researchers should use short and simple sentences of less than 16 words. Researchers should employ the active tense rather than passive tense. They should repeat nouns instead of using pronouns and avoid phrases which are less likely to have equivalents in the target language. Researchers should avoid the subjunctive mode, adverbs, prepositions telling "where" or "when", and possessive forms where possible. They should use specific rather than general terms.

Choosing suitable words which are equivalent for both the sources language and the target language is an important step in an excellent translation. In many cases, some words and concepts in one language can be changed because they may not have equivalents in another target language (Brislin et al., 1973). This process is known as a translation decentring procedure. Brislin et al.(1973, p 37) state that "decentring refers to a translation process in which the source and the target language versions are equally important and open to modification during the translation procedure". As it was stated, decentring can be based on

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the back-translation method (Brislin et al., 1973). Brislin et al. (1973) provided four translations methods; back-translation, the use of bilinguals, pretest techniques, and committee approach. The back-translation method will be used in the current study.

Back-translation is one of the most commonly used methods in the context of cross-cultural research. It can provide some advantages over other methods. For example, a researcher will be able to ensure the quality of the questionnaire and the translators. He/she will be able to judge the translators' competences and their translations' abilities (Brislin et al., 1973). By comparing the original version of English with back-translation, researchers will be able to recognize and have knowledge of the errors which can indicate the competence of the translators (Brislin, 1970). The more translators have errors, especially those that can affect the original meaning, the less competence translators have. Brislin (1970) suggested a seven-step procedure to provide adequate translation from English to other languages. Those steps are shown in Appendix 5.

In the current research, the researcher will do as much as he can to adopt these seven steps so that an adequate back-translation can be achieved. First, all the questions which were addressed in the current study were taken from previous studies. These questions were stated as reliable and valid to measure constructs of the phenomenon that they intend to investigate. They were taken from the previous literature which shared and measured the similar context of the current research. This may provide more validity of the items used in this study.

Second, the researcher will secure two competent bilingual translators who are professionally certified. This may increase the researcher's confidence that translators have competences and abilities such that the translator errors can be reduced and the questions' meaning in the Arabic version will be similar to the original English version. One will translate the English version to Arabic version, and the second will translate blindly from Arabic version to English version (back-translation). Adequate time will be considered in this step. Several professionals, who speak both Arabic and English languages, will then be requested to examine the original target version and the back-translated version for errors that may lead to differences in meaning. Several PhD students from the business school at Brunel University, who have marketing backgrounds, and two academic staff from King Khalid University business school, who speak both English and Arabic languages, will be asked to rate the three versions of the questionnaire (original English, target Arabic and the back-translated English

versions) so that any meaning errors can be discovered and changed. When errors are cleared, the questionnaire will be ready for the next step - the pilot study, described in the next section.

5.9 Pilot Study and Reliability Analysis

The pilot study is a critical stage in social research. It can help a researcher avoid many research problems. For example, some individuals who may participate in the research may not understand the questions. The pilot study can give an indication as to whether the questions can be understood or if they need to be rewritten. Hall and Hall (1996) state that the aim of a pilot study is to reveal any further unanticipated problems with the questionnaire before time and effort is properly committed to the fieldwork. In addition, piloting the questions is an opportunity to check carefully to make sure that the researcher feels that all the necessary questions have been asked, all the unnecessary questions omitted, and that the layout and design is straightforward and consistent (Hall and Hall, 1996). Saunders et al. (2003) pointed out that the propose of piloting a questionnaire is to reduce the possibility of getting problems in answering the questions and make sure that no problems in recording the data can be happened. In addition, the pilot study can enable researchers to obtain assessments of the questions' validity and reliability.

Two wording issues should be concentrated by Researchers. In the first place, simple vocabulary and grammar is required to minimize confusion. The second issue is to consider the effects of specific words or phrases (Neuman, 2007). Four issues of doing a pilot study were listed by Converse and Presser (1986) cited in Williams (Williams, 2003). The first is variation in the way that questions are interpreted, the second is the way in which responses are interpreted, and the third is that respondents might understand the meaning, but answering the question may be quite hard. The final consideration is the respondents' interests and attention span.

In this stage, the current study attempts to examine the applicability of the proposed model in the context of the Internet banking and whether it can be tested in the cultures of KSA and the UK. To achieve this aim, a triangulation approach is applied. Different data from different sources can be combined, such as qualitative and quantitative data, so that the situation of Internet banking loyalty and its antecedents can be supported from different perspectives. Patton (2002) stated four different types of triangulations: the first one is the method

triangulation that compares data generated by different methods, such as qualitative and quantitative methods; the second type is source triangulation that compares data from different qualitative and quantitative sources, such as observations, interviews and questionnaires; the third triangulation type is analysis triangulation, using different analysis techniques. Finally, the theory triangulation looks at data from different theoretical perspectives. Denzin (1970) stated that the reliability of a study's results will be increased when different methods are used rather than using just one single method.

Ten interviews were carried out to examine the proposed model and the questionnaire's measurement items. Five interviews were carried out in each country. In terms of KSA, two assistant professors from the Business School at King Khalid University and three undergraduate students participated in this stage of analysis and were asked to evaluate each construct, determining whether these constructs are applicable in the Saudi context and whether they are applicable to examine students' behaviour towards Internet banking. In the UK, five interviews were carried out, with three PhD students from marketing department in Business Schools at Brunel University participating in these interviews. According to the results, the proposed model was supported and the measurement items were slightly modified. All the constructs were supported as having a significant contribution and influencing customers' behaviour, especially at the students' stage.

A few suggestions were provided by the participants to make the survey questionnaire clearer. Participants suggested deleting any negative statements. Accordingly, one statement that measured Internet banking reputation was deleted ('*My Internet banking has a bad reputation in the market*'). Some other participants advised that the phrase "*my profile*", in the statement (P.19), which measures customers' perception towards their privacy protection via the Internet banking, and in the statement (S.14), which measures customers' perception about the Internet banking security, should be changed to "*customers' personal data*". Participants also suggested writing the term "*feedback*" instead of "*view*" in the statement that is coded Com.26. Finally, the statement that is coded T.43 was changed from "*I must be cautious in dealing with...*" to "*I find it necessary to be not cautious with...*" In terms of the demographic data, one participant noticed that one of the age categories (46 – 63 years old) was missing, thus the category was added to the main survey questionnaire.

Moreover, during the current study two pilot studies were conducting on each country (KSA and the UK). The aims of these pilot studies are to calculate the constructs' reliability and clear out any misunderstanding. The participants also are asked to provide any comments in terms of identifying any question that was not understood clearly. The aim also is to make any necessarily adjustments on the instruments before the main data collection is carried out. The pilot studies were conducted and the questionnaires distributed on 1st of July 2009 for two weeks. One hundred questionnaires were distributed among undergraduate students who were Internet banking users at Brunel University in the UK and at King Khalid University in KSA. Fifty questionnaires were distributed in each country. Students were approached at the main library and sufficient time was given to students to answer the questionnaires. Convenience samples were chosen from both countries. Only students who are using Internet banking participated in the pilot study.

During the data collection, some ethical issues were considered. For example, participants were informed that their participation was voluntary and that they could withdraw at any time they wanted without any commitment or legal obligation. They were also told not to write their names on the questionnaires so that anonymity and confidentiality throughout the research process could be ensured.

In KSA, a copy of the questionnaire was emailed to the contact person who was informed about the nature of the research and its aim and objectives at King Khalid University. That person is educated and has sufficient analysis and SPSS knowledge. He was required to print out 50 questionnaires, distributing, collecting and entering the data into a pre-coded SPSS file that was prepared by the researcher for the target study. From 50 distributed questionnaires, 31 were returned with 62% respond rate.

In the UK, 50 questionnaires were distributed among undergraduate students in the main library at Brunel University. The questionnaires were distributed by the researcher. Students were asked to fill out the questionnaires and provide their feedback and comments, if any. When participants filled out the questionnaires, they were required to leave the questionnaires on the disks. These questionnaires will be collected by the researcher later on in the day. From 50 distributed questionnaires, 21 were returned with 42% respond rate.

The data was coded by SPSS, and the Cronbach's alpha was calculated on each construct to measure the constructs' reliability. Reliability refers to whether the measures yield the same results on other research and is concerned with the consistence of responses to questions (Saunders et al., 2003). Several approaches can be used to assess the questionnaire reliability, such as test re-test, internal consistency, and alternative form (Saunders et al., 2003). In order to assess the reliability of the current research, internal consistency will be used because it involves correlating the responses to each question with those to other questions in the questionnaire (Saunders et al., 2003). The most common and frequently used method to assess and calculate internal consistence is Cronbach's alpha (α) (Saunders et al., 2003). It was stated that reliability "means that a scale should consistently reflect the construct it is measuring" (Field, 2005, P 606). There are different ways to check the scale reliability, such as test-retest reliability, split-half reliability, and Cronbach's alpha α (Field, 2005).

The value of the Cronbach's alpha has been stated by authors (Field, 2005, Cortina, 1993, Kline, 1999). According to Field (2005) and should be between .70-.80, which indicates the acceptable value, while Kline (1999) reported that values below or equal to .70 can be expected because of the diversity of the factors being measured. In addition, Cortina (1993) states that the value of α depends of the number of items on the scale so that α will increase when a number of items on the scale increases. According to Field (2005), Cronbach (1951) suggested that when several factors are present, then the test should be performed separately to items that are related to different factors. According to the above discussion related to measuring scale reliability, Cronbach's alpha will be applied in the current study to test the scale reliability separately. The following table (Table 5.6) shows the reliability results based on the two levels. First level tests the constructs' reliability on both samples (KSA and the UK), while the second level tests the constructs' reliability on each country separately. It can be noted that all the constructs provided were within the acceptable reliability values ranging from 0.62 to 0.91. Internet banking reputation provided the lowest reliability value with 0.62, however it can be considered acceptable because of the diversity of the factors under investigation.

Table 5. 6: Reliability Results

The Constructs	No of Items	KSA and the UK (No: 52)	KSA (No: 31)	UK (No: 21)
Security	5	0.75	0.76	0.71
Privacy Protection	5	0.85	0.78	0.73
Communication	9	0.85	0.87	0.68
Reputation	5	0.62	0.63	0.70
Experience	5	0.90	0.88	0.88
Trust	6	0.79	0.75	0.76
Self-Efficacy	5	0.77	0.71	0.87
Perceived Ease of Use	6	0.91	0.90	0.91
Perceived Usefulness	6	0.88	0.91	0.75
Customers' Attitudes	5	0.86	0.85	0.90
Customers' Intention	5	0.87	0.88	0.77
Customers' Loyalty	5	0.88	0.87	0.85
Subjective Norms	6	0.85	0.90	0.65

According to the above reliability results, the main data collection will be performed with more confidence. The following section will provide a guideline regarding how the main data to be analyzed.

5.10   Analysis Stages for the Main Study

There are several steps that the current study will follow in order to ensure valid and reliable results. These steps can be grouped into five main stages. The first stage is data screening and data exploration, including different steps that are important before performing any analysis techniques such as multiple regression analysis or structural equation modelling. These steps will include testing the missing data analysis, detection of outliers, normality test and homogeneity of variance testing. The second stage is performing the exploratory factor analysis (EFA). Hair et al. (2006) stated that it is important to test the structural model using two sections. The first section is examining the measurement model (measurement items), whilst the second section is to examine the structural model (the proposed model in the current study). According to Hair et al., for the current study, the third stage will examine the measurement model. The "confirmatory factor analysis (CFA)" will include examining how the model fits evaluation and constructs validity (convergent validity and discriminant validity). It was stated that, in order to test the research's theory by applying SEM, the first stage will focus on testing the measurement model (stage three in the current study), while

the second stage will examine the structural model (stage four in the current study). It was stated that, when the measurement model fits well, this will provide a basis for assessing the validity of the structural theory because structural theory validation testing cannot be conducted with bad measurers. Accordingly, the current study in the fourth stage will test the structural equation modelling (SEM) in the proposed model, which includes examining the model fit and hypotheses results. The final stage is conducting the invariance analysis to test whether the conceptual model can be generalized across different groups of samples. The following figure shows these analysis steps.

Figure 5. 4: Data Analysis Steps
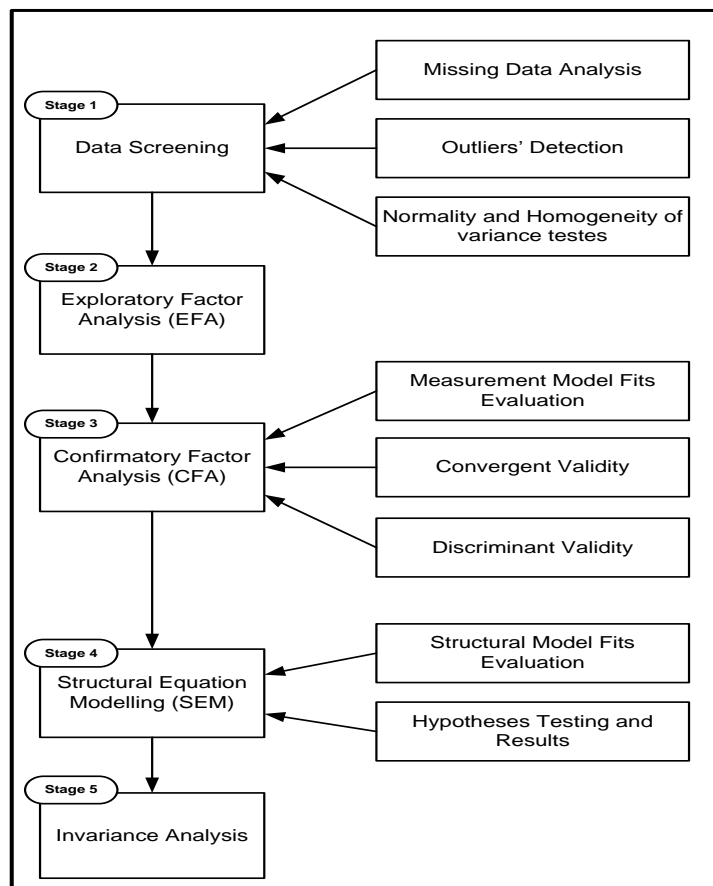
The following sections will illustrate the theoretical background of the above five stages that are shown in figure 5.4, while the following chapter attempts to adopt these stages and provide the actual results.

5.10.1 First Stage: Data Screening

Some different analysis will be performed in this stage, such as missing data analysis, outliers' detection and normality testing. According to Tabachnick and Fidell (2001), four procedures should be followed for data screening: missing data analysis, descriptive statistics for all variables under investigation, normality of data distribution, and outliers detection. The current study followed these steps and procedures. In order to carry out these analyses, SPSS 0.15 is used. The following subsections will provide a brief description about these steps of analysis.

5.10.1.1 Missing Data Analysis

Missing data is an important stage in the data exploratory technique because the research's results might be affected by the level of missing data and choosing some analysis techniques that depend on completely valid cases. Missing data can affect an analysis from two perspectives, as stated by Hair et al. (2006). These are practical and substantive perspectives. From the practical perspective, missing data can reduce a sample size because any observation that has missing data will be excluded from an analysis so that some multivariate analysis cannot be performed correctly. In terms of the substantive perspective, any statistical results could be biased. In order to test and analyse missing data in the current research, determining the type of missing data is an significant step (Hair et al., 2006). It has to be decided whether missing data is part of the research design (Ignorable Missing Data) or if the causes of missing data are unknown. As a rule of thumb, any case of observation can generally be ignored when it is missing less than 10% of data and any of the imputation methods can be applied (Hair et al., 2006).

5.10.1.2 Outliers Detection

Examining whether the data is within a normal range is a significant stage that should be considered because the result can be affected by certain data. It is stated that outliers are scores that are very different to the rest of the data (Field, 2005). In addition, the mean can be biased and the standard deviation can be inflated by these outliers. Moreover, outliers are identified as "observation with a unique combination of characteristics identifiable as distinctly different from the other observations" (Hair et al., 2006, P73). There are two impacts of these outliers: they can influence any type of empirical analysis and they should be assessed to see whether they are representative of the entire population (Hair et al., 2006). Once it is decided that the outliers represent the population, they should be retained. There

are three methods of outliers detection: univariate detection, bivariate detection and multivariate detection (Hair et al., 2006). In the current study, it was aimed to perform as many of these as possible to identify these outliers and the following subsections deal with these detecting methods.

In terms of the detection of univariate outliers, the distribution of observations for each variable is studied and those outliers falling outside the normal distribution (high or low) will be examined. The threshold value should be identified so that any case that has higher or lower value than the threshold value can be judged as an outlier and should be retained or excluded from the analysis according to its impact on the results. A rule of thumb is provided for examining outliers based on the univariate method. Hair et al. (2006) stated that for small samples (80 or fewer observation), outliers can be defined as observations that have standard scores of ±2.5, while for large sample size, the threshold value of standard scores is 4.

In terms of multivariate detection, the aim is to examine the multidimensional position of each observation that is relative to some common point. Mahalanobi's D^2 measure can be applied to assess each observation across a set of variables (Hair et al., 2006). The higher the D^2 values, the more the observations are likely to be removed because of their distance from the mean centre of all observation. The advantage of using Mahalanobi's D^2 measure to detect the outliers is that its own statistical properties allow significance testing. Conservative levels of significance of .005 or .001 are suggested. These significance levels can be used as the threshold values to determine outliers. Threshold levels for D^2/df should be conservative (.005 or .001), resulting in values of 2.5 at small samples versus 3 or 4 in large samples. This provides a useful rule of thumb (Hair et al., 2006). Mahalanobi's D^2 measure is also used to detect the outliers so that Mahalanobi's D^2 measure is computed by regression. New two variables are created in the data editor: a variable that represent D^2 values, and one that calculates the probabilities for the D^2 values.

5.10.1.3 Normality Assumption Testing

As it was stated, this assumption is the most important one (Field, 2005). It is the most fundamental assumption in many multivariate analyses (Hair et al., 2006). All resulting statistical tests are incorrect, when the variation from the normal distribution is sufficiently large, because normality distribution is required to use the F and t statistics (Hair et al., 2006).

In order to test whether the data is normally distributed, four tests should be performed: the shape of the distribution, calculating z scores, and specific statistical tests should be applied such as Kolmogorov-Smirnov and Shapiro-Wilk. In terms of examining the shape of distribution, kurtosis and skewness are the important measures that should be looked at. Kurtosis refers to the peakedness or flatness of the distribution compared with normal distribution, whereas kurtosis is used to describe distribution that is unbalanced and shifted to one side (right or left). In addition z scores can be calculated as a statistical test of normality. If values of z scores exceed the critical value, then the distribution can be judged to be non-normal according to that characteristic. The most common critical values used to assess the degree to which the skewness and kurtosis of the distribution vary from the normal distribution are ±2.58 at a significance level of .01 and ±1.96 at a significance level of .05. In terms of the current study, z values are not calculated because the sample size is large and small standard errors that are associated with skewness and kurtosis values are increased. As a result, significant values can be noticed as even small deviations from normality. It is stated that in a large sample, that is 200 or more, no criterion should be applied and it is important to examine the shape of the distribution visually and the value of the skewness and kurtosis statistics rather than calculate their significance (Field, 2005). According to Hair et al. (2006), results can be impacted substantially by significant departures from normality in small simple size, However, this impact might be insignificant on the results in a large sample size because the detrimental effects of non-normality can be reduced so that non-normal variables should be of less concern. Based on the above discussion, the statistical values of skewness and kurtosis can be used to assess the normality distribution of the data.

5.10.1.4   Homogeneity of Variance Testing

The homogeneity of variance means that when the levels of one variable change, the levels of the other should not change, so that when the data is collected from different groups of samples, the variance of each variable should be the same in each of these groups (Field, 2005). Levene's test will be used to examine the homogeneity of variance on all constructs in the current study across the samples of KSA and the UK. If Levene's test is significant at $P \leq 0.05$ then it can be concluded that the assumption of homogeneity of variance has been violated, while if the test is insignificant at $P \geq 0.05$ then the homogeneity of variance is supported. It must be noted that this test might provide a significant result when the sample size is large so that any small differences in group variance can produce a Levene's test result

that is significant (Field, 2005). SPSS will be used to do the Levene's test. The next chapter will provide the result.

5.10.1.5   Multicollinearity Testing

This test is important in order to examine the correlation between the predictors because, when there is a high multicollinearity level, it will be difficult to assess which predictor is affecting the dependent construct. Field (2005, p. 174) stated that "multicollinearity exists when there is a strong correlation between two or more predictors in a regression model. Several concerns can be found with a high level of collinearity. First, it can increase the standard error of the b-coefficients, which in turn affects whether these coefficient are found to be statistically significant. Second, it limits the size of regression. Third, the assessment of the importance of each predictor will be difficult. Different ways can be applied to check whether the multicollinearity exists in the data. First, the correlation matrix can be used so that any correlation > 0.80 can be a source of collinearity. Second, a variance inflation factor (VIF) can be calculated by SPSS. VIF indicates whether a predictor has a strong linear relationship with other predictors and should be ≤ 10 (Mayers, 1990). In addition, the tolerance statistic associated with VIF should not be below 0.1, but if below 0.2 should be a concern (Menard, 1995).

5.10.2 Second Stage: Exploratory Factor Analysis (EFA) and Reliability Analysis

An essential part of the data exploratory technique is to examine whether the data collected can be grouped under a specific dimension so that it can be used and interpreted easily to serve different purposes. Factor analysis as an independent technique can be applied to achieve this objective. According to Hair et al. (2006) analysing the structure of the interrelationships between a large number of variables (items) can be provided by applying a factor analysis technique so that sets of variables (factors) that are highly interrelated can be defined.

Specifying the unit of analysis (factors) and data summarization and reduction are the most significant objectives of applying factor analysis technique (Hair et al., 2006, Field, 2005). When the objective is to specify the unit of analysis, factor analysis can be used to summarize the characteristics of the variables. However, if the objective is to summarize the data, factor analysis can be used to define a small number of factors that represent the original set of variables. In order to identify which variables can be grouped, factor loading can be used to

judge whether a variable is related to a particular factor. With a large number of variables, factor analysis can be used to reduce the number and identify ones that represent the original set of variables (Hair et al., 2006).

The current study attempts to follow Hair's (2006) stages of factor analysis. The first stage is to identify the objective of the factor analysis. In terms of this stage, the first objective is to understand whether the users of Internet Banking's perceptions on 88 attributes can be grouped so that the users' perceptions regarding Internet Banking can be easily understood. As these attributes will be grouped into small numbers of attributes, each one has its unique characteristics and examines a specific attribute, instead of examining all 88 attributes which would be extremely difficult, time consuming and may give not a clear picture. The second objective is to reduce the 88 variables into a small number of variables to be used for other multivariate techniques as it is assumed that a unique relationship exists in the data being analyzed.

The second stage is to design a factor analysis. According to Hair et al. (2006), three basic issues should be considered: whether the correlation will be among variables or respondents, variables' selection and measurement issue, and sample size. In terms of the first issue, the correlation will be among 74 variables so that R-type factor analysis will be used as a traditional correlation matrix in this study. This means that the correlation among individual respondents (Q-factor analysis), based on the respondents' characteristics, will be excluded from the current study. The second issue that should be considered is what type of variables can be used and how many they are. As it was stated, the primary requirement for variable selection is their correlation value and should be metric. In addition, five or more variables per factor should be maintained (Hair et al., 2006). All variables in the current study are metric. The last issue that should be considered is the sample size. The minimum sample size is five times as many respondents as the number of variables to be analysed (Hair et al., 2006). The sample size in the current study is 532 (248 participants from KSA and 284 participants from the UK) and ratio of observations to variables is 6:1, which falls within acceptable limits. Therefore, the sample size of 532 provides a sufficient basis for the calculation of the correlations between variables.

The third stage is to examine the underlying statistical assumptions which may influence factor analysis because departure from normality, homoscedasticity can affectively diminish

correlations between variables. In the current study, these statistical assumptions are discussed in the previous sections (5.10.1.3 and 5.10.1.4). Assessment of the factorability of the correlation matrix must be carried out from both overall and individual variable perspectives (Hair et al., 2006). A correlation matrix can be examined by the Bartlett test of sphericity and Measure of Sampling Adequacy (MSA). The Bartlett test of sphericity can be used to examine the presence of correlations among the variable and provides the statistical confirmation that the matrix has significance correlation among at least some of the variables (Hair et al., 2006). This test can also be sensitive to detect correlation among the variables by increasing the sample size. In terms of MSA, it can be used to examine the factorability of the overall set of variables and individual variables (Hair et al., 2006). It was stated that the overall MSA value should be .50 or above (Hair et al., 2006). According to F. Kaiser (1970, 1974), cited in Hair, Black et al. (2006), the MSA value of .80 or above is meritorious, .70 or above is middling, .60 or above is mediocre, .50 or above is poor, and below .50 is unacceptable value of MSA.

The fourth stage is deriving factors and assessing overall fit. It was noted that before performing the factor analysis, the method of extracting the factors (common factor analysis versus component analysis) and the number of factors selected to represent the underlying structure in the data must be considered (Hair et al., 2006). Common factor analysis can be performed to identify underlying dimensions that represent what the variables share in common and considers only the common or shared variance. It is used when the objective is to summarize the original data in a small number of factors for prediction purposes and considers the total variance. It derives factors that contain small of unique variance and error variance (Hair et al., 2006). The component factor analysis, also known as principal components analysis, will be applied in the current study because of the above objectives. It can be used to summarize most of the original data in a minimum number of factors and considers the total variance and derives factors that contain small proportions of unique variance and error variance. In addition, both component analysis and common factor analysis provide essential and identical results if the number of variables exceeds 30 (Gorsuch, 1983). The number of variables in the current study exceeds 30. From the above discussion, principal component factor analysis seems appropriate as a method of extracting the factors. In terms of how many factors should be extracted to represent the underlying structure in the data, a number of criteria can be applied to specify the number of factors that should be retained. These include latent root (eigenvalues) criterion, a prior criterion,

percentage of variance criterion, scree test criterion, and heterogeneity of the respondents (Hair et al., 2006). Latent root criterion (eigenvalues) will be applied in the current study because this criterion can be applied to both components and common factor analysis, and factors having eigenvalues greater than 1 will be considered significant and will be extracted in the factor analysis (Hair et al., 2006). Assessing the importance of each component can be done by applying latent root (eigenvalues) criterion. In the current study, SPSS is used to perform the principal components factor analysis and calculate the latent root (eigenvalues) criterion. By default, it applies Kaiser's criterion to extract and retain factors with eigenvalues greater than 1.

Two type of factor rotation can be applied (orthogonal and oblique factor rotation) (Hair et al., 2006, Field, 2005). The ultimate goals of applying these rotation methods are to improve the interpretation, obtaining some theoretical meaningful factors and the simplest factor structure (Hair et al., 2006). In terms of the orthogonal rotation method, factors will be rotated while keeping them independent to each other (Field, 2005). There are three orthogonal factor rotation approaches: Quartimax, Varimax, Equimax (Hair et al., 2006, Field, 2005). According to Field (2005), Varimax's aims are maximizing the loading's dispersion within factors, and it loads a smaller number of variables that are high onto each factor (Field, 2005). The varimax rotation approach maximizes the sum of variances of required loadings of the factor matrix so that the factor loading can be close to ±1 or near 0. Values close to ±1 indicates a clear positive or negative association between the variable and the factor, while close to 0 indicates a lack of association between the variable and the factor under investigation (Hair et al., 2006). In terms of the other rotation approaches, Quartimax looks to maximize the spread of factor loadings for a variable across all factors. The third and last approach is Equimax which is a composite of varimax and Quartimax approaches (Field, 2005). In terms of the oblique factor rotation method, there are two approaches: Direct Oblimin and Promax (Field, 2005). The direct Oblimin approach is the degree to which factors are allowed to correlate and is determined by the value of a constant call (Delta), while Promax is a faster procedure that is designed for very large data sets.

According to Hair et al. (2006) orthogonal factor rotation approaches are more widely used and no rules have been developed to direct researchers to select a particular orthogonal or oblique rotational technique. There is no compelling analytical reason to favour one rotational method over another. As a result, orthogonal (varimax) rotation is applied in the

current study in order to have a simplified structure and detect any problems remaining, such as non-significant loadings for one or more variables, cross-loadings, or unacceptable communalities. The orthogonal (varimax) rotation is run several times until the factor matrix is cleared from any problem with the cut-off point, which for interpretation purposes in this study is all loadings ±.40. According to Hair et al. (2006), factor loading can be ranged ±.30 to ±.40 to be considered to meet the minimal level of interpretation of factor structure, but factor loadings of ±.50 or above are considered practically significant. Loadings of ±.70 are considered as an indication of well-defined structure. Field (2005) states that a loading of an absolute value of >.30 to be significant. The significant level depends on the sample size (Field, 2005). These directions and guidelines are applicable when the sample size is 100 or larger (Hair et al., 2006). It was recommended that a loading of .72 can be considered significant on a sample size of 50; a loading should be greater than .51 on a sample size of 100; a loading should be greater than .36 on a sample size of 200; a loading should be greater than .29 on a sample size of 300; a loading greater than .21 should be considered significant on a sample size of 600; and finally a loading greater than .16 can be considered significant on a sample size of 1000 observations. However, it was recommended that the factor loading with an absolute value greater than .40 should be used for factor loading interpretation (Stevens, 1992). The fifth stage is naming the factors

5.10.3 Third Stage: Confirmatory Factor Analysis (CFA)

Structural Equation Modelling (SEM) techniques will be used in the current study to order to validate the measurement and structural theory under investigation. This stage also validates the items and their related factors that have resulted from the stage of exploratory factor analysis (EFA). There are some reasons that encourage SEM to be chosen over other multivariate techniques, such as multiple regression equations. For example, a series of separate and interdependent relationships can be estimated simultaneously by SEM through specifying the structural model. In addition, the relationships among independent and dependent variables can be examined, even where a dependent variable becomes an independent variable in other relationships (Hair et al., 2006). On the other hand, other techniques, such as multiple regression, factor analysis, multivariate analysis of variance, and discriminant analysis, enable only a single relationship between dependent and independent variables be estimated, while the aim of SEM is to examine a set of relationships representing multiple equations and measure of fit, and predictive accuracy which reflects the overall model not a single relationship (Hair et al., 2006). The covariance among factors can be

analyzed by SEM but most other multivariate techniques decompose variance statistically (Hair et al., 2006).

5.10.3.1 Measurement Model Fit Evaluation

At this stage, the measurement theory will be examined. The overall model fit and the criteria for construct validity will be examined so that the key fit statistics and the parameter estimates will be reviewed. This stage will start with measuring the overall model fit. Examining construct validity will be next.

The key goodness-of-fit (GOF) values will be assessed. GOF indicates how well the specified model reproduces the covariance matrix among the indicator items so that if the values of the estimated covariance matrix and the actual observed covariance matrix are close, it can be judged that the model has a good fit (Hair et al., 2006).

GOF measures are grouped into three general indices: absolute fit index, incremental fit indices, and parsimony fit indices (Hair et al., 2006). The following subsections will provide brief information about these indices. In terms of absolute fit indices, the most basic evaluation of how well a theory fits the sample data can be provided by testing and reviewing these indices values (Hair et al., 2006). According to Kenny and McCoach (2003), absolute fit indices can be used as a direct measure of how well the model under investigation reproduces the observed data. There are four fundamental absolute fit indices: χ^2 statistics, Goodness-of-Fit Index (GFI), Root Means Square Residual (RMSR) and Standardized Root Mean Residual (SRMR), Root Mean Square Error of Approximation (RMSEA). In addition, there are other absolute fit indices, such as Normed χ^2, the expected cross-validation index (ECVI), the actual cross-validation index (CVI) and Gamma Hat. A brief explanation of each of these fit indices and their acceptable values are provided in Appendix 6.

Goodness-of-Fit Index Applied in the Current Research

Because each of these goodness-of-fit indices has its own advantages and disadvantages, choosing a combination of two or more fit indices will be the best solution to measure the model fit and can give more confidence to decide that the specified model fits well. Hair et al. (2006) provide four general guidelines that can help to determine the acceptability of fit. First, multiple indices of differing types can be used so that three to four fit indices can be used because they provide sufficient evidence for model fit. At least one incremental index,

one absolute index, and the χ^2 value and the associated degrees of freedom can be reported. One of them should be the indices of a badness-of-fit. The χ^2 value and degrees of freedom, the CFI, and the RMSEA will provide sufficient unique information to evaluate a model. Second, adjusting the index cut-off values, based on model characteristics such as the sample size, the number of observed variables can be used to assess model fit. Third, indices to compare models can be used. Using this guide, it will be easier to determine whether the model fits well or not by comparing it with another model. The last point is that the pursuit of better fit at the expense of testing a true model is not a good trade-off.

According to the above discussion, the current research will apply χ^2 values and degrees of freedom and goodness-of-fit index (GFI) as the absolute fit index, in addition to the root mean square effort of approximation (RMSEA) as one of the badness-of-fit index, and the comparative fit index (CFI) will be assessed as one of the incremental fit indices. The following will highlight these indices

χ^2 is the basic absolute fit index. According to this test, there should be low values to support the model as representative of the data. It gives the differences between two matrices (observed covariance matrix and estimated covariance matrix). The lower the χ^2 values, the more the model can be fit. However, there are some drawbacks that can affect the use of χ^2 values. First, this test can be affected by the sample size and the number of observed variables. When the sample size and the number of observed variables increase, the χ^2 values will increase to a point where the differences between observed and estimated covariance matrix are identical (Hair et al., 2006). Consequently, χ^2 can be difficult to be used as an indicator of SEM fit so that many alternative measures of fit are improved to correct for the bias of large samples and increased model complexity. The resulting p-value that is associated with χ^2 values, and shows the statistical significance, will be less meaningful as sample size becomes large or the number of observed variables becomes large (Hair et al., 2006).

Another absolute fit index is the goodness-of-fit index (GFI). This test is used to provide a fit statistic that is less sensitive to sample size. GFI's acceptable value range is from 0 to 1, with higher values indicating the model fits well.

Root mean square error of approximation (RMSEA) is another measure that tries to correct the tendency of the χ² test statistic to reject models with a large sample (more than 500) or a large number of observed variables (Hair et al., 2006). Lower values of RMSEA indicate better fit. Values are below .10 are considered acceptable values of better model fit. Confidence intervals can be constructed by using this index.

There are other absolute indices such as normed χ², which is the ratio of χ² to the degrees of freedom for a model, and its acceptable value is 3:1 or less which indicates better model fit.

In terms of comparative fit index (CFI), which is an improved version of NFI, its values range from 0 and 1. The closer the value is to 1, the more the model fits well. CFI is the most widely used index. Any values less than .90 are considered as undesirable and indicate poor model fit.

5.10.3.2   Constructs Convergent and Discriminant Validity

In terms of the construct validity, it can be stressed that validation of the constructs is an important matter that should be taken into consideration. Construct validity is defined as "the extent to which a set of measured items actually reflects the theoretical latent construct those items are designed to measure" (Hair et al., 2006, p776). According to this definition, it can be said that the variables measured are obtained from the sample and represent the actual true scores that exist in the population. Four important validities should be examined: convergent validity, discriminant validity, nomological validity and face validity. The first two will be discussed in this section, but the last one (nomological validity) will be discussed later as it is related to the correlation between the constructs under study but not in this stage.

Convergent Validity

Convergent validity is defined as the extent to which items (observed variables) of a specific construct converge or share a high proportion of variance in common (Hair et al., 2006). Factor loading, average variance extracted (AVE) and reliability are three significant measures that can be used to assess the convergent validity. In terms of factor loading, as a rule of thumb, standardized loadings estimates should be at least .5, but ideally .7 or above. A high items loading on a factor would indicate that they converge on some common point. The acceptable values of average variance extracted (AVE) should be .5 or higher to indicate adequate convergent validity. Values less than .5 indicate that there are more errors evident in

the items than variance has explained by the latent factor structure. The last indication of convergent validity is to calculate the factor reliability. This indicates the internal consistency of the observed indicator variables (Hair et al., 2006). As a rule of thumb, the value of .7 or higher indicates good reliability, whilst between .6 and .7 indicates acceptable reliability values (Hair et al., 2006).

Using AMOS v16, factor loading, AVE and construct reliability were assessed. The factor loadings were taken directly from the AMOS output, but the AVE and construct reliability were calculated by following the procedures and equations using Excel sheet programme

Discriminant Validity

Measuring discriminant validity is an important stage of CFA. All the constructs under investigation in the proposed model should be distinct. (Davis, 1989) and (Bagozzi et al., 1991) stated that discriminant validity is the degree to which measures of two constructs are empirically distinct. In order to examine discriminant validity, the current study applied Chin's techniques. Fornell and Larcker (1981) stated that the square root of the average variance extracted can be applied to examine the discriminant validity so that the discriminant validity is supported when the square root of the average variance extracted exceeds the correlation between the two constructs. In addition, Chin (1998) suggestion that discriminant validity can be supported when (1) each indicator loads higher on its assigned construct than on other constructs and (2) the square root of each construct's AVE is larger than its correlations with other constructs, (Venkatesh, 2000, Gefen and Straub, 2003, Pavlou, 2003, Venkatesh et al., 2003, Gefen and Heart, 2006, Al-Gahtani et al., 2007, Çelik, 2008, Cyr, 2008, Herington and Weaven, 2009). In the current study, the average variance extracted for each construct will be squared and the results will be compared with the correlation between two constructs. The square root of variance extracted for each construct must be greater than each correlation between that construct and another construct so that it can be said that the discriminant validity for each construct in the proposed model is supported.

5.10.4 Fourth Stage: Structural Equation Modelling (SEM)

In the stage of confirmatory factor analysis (section 5.10.3), the relationships between the constructs were not specified, while in this section several relationships between the constructs will be identified and empirically examined. These relationships were already stated in the fourth chapter in section 4.2. A considerable number of previous studies have

applied this technique, (Nielsen, 2002, Suh and Han, 2002, Suh and Han, 2003, Beerli et al., 2004, Eriksson et al., 2005, Kim, 2008, Zhao et al., 2010).

According to the proposed model, several antecedents of customer loyalty towards Internet banking are identified in both direct and indirect relationships so that the structural equation modelling technique (SEM) will be applied and seen as an appropriate way to validate the structural model (the proposed model). This is because that SEM enables researchers to estimate the multiple and crossed relationships that exist between dependent and independent variables and is able to represent constructs not observed in these relationships, taking into account the measurement errors in the estimation process (Beerli et al., 2004). Suh and Han (2002) stated that SEM has an ability to test the causal relationships between constructs and their multiple measurement items. Hair et al. (2006, p. 22) stated that structural equation modelling is appropriate for a series of separate multiple regressions estimated simultaneously.

5.10.4.1 Structural Model Fits Evaluation

One of the advantages that researchers can get from applying SEM is the model fit indices. The structural model fits results are important to validate the proposed model and examine the hypothesized relationships. The hypothesized relationships cannot be examined on the poor model fits. Because of this, several fits indices will be applied to examine and validate the structural model. All the fits indices were provided in the section 5.10.3.1 in this chapter. The same model fits indices that will be applied to examine the measurement model will also be applied to examine the structure model. AMOS software will be used to run the analysis and calculate the fits indices.

5.10.4.2 Hypotheses Testing

Once the structural model fits values are supported, the study will start examining the hypothesized relationships that were stated in the section 4.3 in the Conceptual Model Chapter. Based on the structural model, standardised estimations and t values (critical ratio in AMOS) will be used to test the research hypotheses. Also, the AMOS v16 is employed to validate the hypotheses.

5.10.4.3 Mediation Testing

The current conceptual model proposed that trust, subjective norm and self-efficacy will influence students' attitudes towards Internet banking loyalty through perceived usefulness and ease of use. This means that the influence of trust, subjective norm and self-efficacy on students' attitudes will be mediated by perceived usefulness and ease of use. One of the study's objectives is to examine whether this mediation is supported partially or in full.

Hair et al. (2006, p. 866) stated that "a mediating effect is created when a third variable/construct intervenes between two other related constructs". This concept will be applied on the current study to indicate that even students trust Internet banking, influencing other opinions in their community and having self-confidence to use self-services. Their attitude to use Internet banking will not be influenced by trust, subjective norm and self-efficacy unless the Internet banking is useful and ease of use. According to Cohen and Cohen (1983), cited in Hair et al. (2006), several steps can be taken to test the mediation effect. The first step is to examine the relationship between independent and dependent constructs directly without any intervention of a mediator. The second step is to include the mediator in the equation so that the influence of the mediator on the relationship between the independent and dependent constructs can be examined. The result of the direct relationship between the independent and dependent constructs at the second step will be compared with the first step's result. As stated by Cohen and Cohen (1983), three situations can arise. The first situation is that the relationship between the independent and dependent constructs remains significant and unchanged once the mediator is included in the model; mediation is not supported. The second situation is that the significant result of the independent and dependent constructs is reduced but remains significant when the mediator is included; the conclusion is that the partial mediation is supported. The final situation is that the result of relationship between independent and dependent constructs is reduced to a point where it is not significant after the mediator is included; full mediation is supported.

The current study will follow the steps stated above for mediation testing. The analysis will examine the mediation effect of each country separately because the mediation effect can be supported in one country but not in another. The current study would like to discover this situation. The current study will create two models. The first model examines the relationships between the independent constructs (trust, subjective norm and self-efficacy) on the dependent construct (students' attitude) directly without any intervention of the mediators

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(perceived usefulness and ease of use) and one by one. The second model examines these relationships with the intervention of the mediator (perceived usefulness) and the results will be compared to the first model to examine whether the results of the first model are changed or not. Similar procedure will be applied for the second mediator (perceived ease of use) so that two models will be examined. The first will examined the direct relationships from the independent constructs to the dependent construct, while the second model will examine whether the direct relationships results were changed after the intervention of the mediator. These two models would be performed on the KSA and the UK samples separately.

5.10.5 Fifth Stage: Invariance Analysis

CFA can be applied to test or analyse groups of respondents who can be divided on a logical meaningful characteristic, such as respondents' gender or respondents who are from different cultures Hair et al. (2006), which is the case of the current study. Two significant issues should be considered: cross-validation and comparing groups. Cross-validation "is an attempt to reproduce the results found in one sample using data from a different sample" (Hair et al., 2006. p 819). The most basic application of using cross-validation is to provide a second confirmation of a measurement theory and to enable researchers to thoroughly understand the extent to which the results are the same in both groups (Hair et al., 2006). However, a yes or no response as to how well results are reproduced in an independent sample cannot be provided by cross-validation but a series of progressively more rigorous tests across samples can be applied to determine the degree of cross-validation (Bentler, 1980, MacCallum et al., 1994, cited in Hair et al., 2006). This can lead to the second multiple group analysis issue, comparing groups of respondents.

According to Hair et al. (2006), there are six series of tests that can be applied across samples, ranging from less rigorous to more rigorous. These six series tests are loose cross-validation, covariance matrices equivalenance, factor structure equivalence, factor loading equivalence, factor loading and interfactor covariance equivalence, factor loading, interfactor covariance, and error variance equivalence. Appendix 8 explains these six tests. The following subsections illustrate the equivalence tests that will be performed for the current study.

Loose cross-validation

The first test is loose cross-validation, where the same CFA model used with the original sample is imposed on the validation sample. In this test, the same factor structure is used so that the same number of degrees of freedom must be equal and no comparison of fit is made between samples, but the model fit must be acceptable in both groups separately in order to proceed with confidence (Hair et al., 2006). The second test is equivalent covariance matrices, which can be applied to determine whether the covariance matrices are equal across the two groups. However, this test is redundant with others tests that will be mentioned next and it can proceed to the next tests no matter what is the outcome of this test (Hair et al., 2006).

Factor structure equivalence

The third test is factor structure equivalence, where the CFA model using data from both samples can be tested simultaneously and factor structure is constrained between samples. This model is referred to as the totally free multiple group model (TF) because all parameters (factor loading, covariance, and errors) are freely estimated in each sample. The χ^2 value and corresponding fit statistics can be applied to test how well the model fits both covariance matrices. If the fit indices for the two samples are sufficient, then cross-validation can be presented and evidenced (Hair et al., 2006).

Factor loading equivalence

The fourth test is factor loading equivalence, where the factor loading estimates may be equal in each sample so that $\Delta\chi^2$ (change in chi-square) can be computed between this model and the TF model. If the $\Delta\chi^2$ is significant, the added constraints have significantly worsened the fit, but if it is not significant, then constraining the loading estimates has not worsened fit and cross-validation is presented and evidenced (Hair et al., 2006).

Hair et al. (2006) stated that partial cross-validation based on the test of factor loading equivalence should provide adequate evidence of cross-validation. In addition, the computation of $\Delta\chi^2$ is a useful way for significance testing of the comparisons between models and establishing the degree of cross-validation. Based on this argument, the first test (loose cross-validation), the third test (factor structure equivalence), and the fourth test (factor loading equivalence), structural weights equivalence and latent mean equivalence will be

applied in the current study to test whether the structural model shows cross-validation between the two groups of respondents (KSA and the UK).

5.11   Summary

Several critical points were stated in this chapter which will provide guidelines for the study, especially for data analysis. This chapter covers the philosophy and approaches that were adopted in the current study. It stated that a deductive with positivism approach was the philosophy that the current research was designed on. This chapter also highlighted and identified the population of the current study, sampling technique, sample size and the data collection instrument. It also explained and described the measurement items and their sources, reporting the pilot study results. The five main stages of the data analysis include data screening stage, exploratory factor analysis (EFA), confirmatory factor analysis (CFA), structural equation modelling (SEM) and invariance analysis. The instrument will be administered to two groups of students in two universities in KSA and the UK. For the data analysis, two software applications will be applied: SPSS and AMOS. In the first stage (data screening) and second stage (exploratory factor analysis (EFA), SPSS will be used, while AMOS will be applied to perform the third stage (confirmatory factor analysis (CFA), fourth stage (structural equation modelling (SEM)) and fifth stage (invariance analysis). All the five stages will be performed and the analysis will be provided in the following chapter. This chapter would conclude that the their objective of the current study was achieved.

Chapter Six: Data Analysis and Results

6.1 Introduction

This section will outline the content of this chapter, using all the theoretical background and steps of the main analysis covered in the previous chapter. The current chapter will report the results of the five stages stated in the previous chapter (Figure 5.4). This chapter is divided into eight sections. Section 6.1 gives this chapter's introduction and is followed by descriptive analysis of the samples from both countries (KSA and the UK) in the second section (6.2). Section 6.2 will cover and illustrate the samples' computer background and experience of using the Internet, in general. It also provides data about the students' experience of using Internet banking. Finally, it will provide the samples' demographic data such as their gender, age and income, etc.

This chapter also provides the results of the five stages, in sections 6.3 to 6.7. Screening the data, including missing data diagnosis, outliers' detection, normality test, homogeneity of variance test and multicollinearity diagnosis, will be illustrated and the results provided in section 6.3. Section 6.4 provides the exploratory factor analysis (EFA). The third stage of analysis is confirmatory factor analysis (CFA), which will be illustrated in section 6.5. This chapter will also provide the result from the fourth stage (examining structural model) in section 6.6. This later section will examine and provide the hypotheses results and will show whether some or all hypotheses are supported. Section 6.7 shows stage five (invariance analysis) results that show the influence of the moderator (Uncertainty Avoidance) influence on the conceptual model. In addition, section 6.7 shows the invariance results across Gender and Experiences. Finally, this chapter will summarise and give an overview of the results in this chapter.

6.2 Descriptive Analysis

Descriptive analysis is divided into three sections. The first section (6.2.1) will focus on Kingdom of Saudi Arabia (KSA) and United Kingdom (UK) in terms of the participants' computer background, including computer ownership, computer knowledge, Internet familiarity, how long the participants have been using the Internet, and how much the participants use the Internet daily. The second section (6.2.2) illustrates Internet banking usage in both countries, including how often the participants use Internet banking, the

location where participants access Internet banking, the average number of financial transactions carried out in each session, the type of financial operations performed, and how many and with which banks participants deal. The last section (6.2.3) focuses on participants' demographic data, including gender, marital status, age, education, income, occupation and background classification.

6.2.1 Section One: Computer Background (KSA and the UK)

In terms of KSA, 222 participants (89.5%) out of 248 own a personal computer according to the following table but 26 participants (10.5%) do not. On the other hand, from 284 UK participants, there are 281 participants (98.9%) own a personal computer; while there are 3 participants do not.

The results indicate that 105 Saudi participants (42.3%), representing almost half of the Saudi sample, have a moderate computer knowledge, followed by 81 participants (32.7%) who have a good computer knowledge. Fifty one participants (20%) out of 248 participants have an advance level of general computer knowledge. In terms of the UK sample, almost half of the sample (127 participants or 44%) judge themselves as having a good general computer knowledge, with 77 participants (27%) out of 284 participants and 72 participants (25%) have moderate and very good computer knowledge respectively.

There are 110 (44%) Saudi participants out of 248 are familiar with using the Internet, followed by 66 participants (26%) who have a good level of Internet familiarity, while 58 participants (23%) have only a moderate level. In contrast, in the UK sample most of the participants have a good or very good level of Internet familiarity. It can be noted that there are 135 (47%) participants with a good level of Internet familiarity and 122 participants (43%) who have a very good level of Internet familiarity, while 23 participants (8%) have a moderate level.

In terms of experience of using the Internet, it can be noted 174 (70%) of the Saudi participants have used the Internet for more than two years, while 51 participants (20%) have used the Internet from one to two years ago and 20 participants (8%) have less than one year's experience of using the Internet. In contrast, the UK sample with just one missing data. Most of the participants have used the Internet for more than 2 years. Two hundred and seventy eight participants (97%) out of 283 have used the Internet for more than 2 years,

while there are just 4 participants (1%) and one participant who started using the Internet from one to two years ago and less than one year ago, respectively.

In terms of the daily use of the Internet, the Saudi sample with 2 missing data shows that almost half of the sample 117 participants (47%) out of 246 are using the Internet from one to three hours every day, while 68 (27%) and 61 (24%) use the Internet less than one hour and more than three hours per day, respectively. In contrast, half of the UK participants use the Internet more than three hours daily. One hundred and forty four participants (50%) out of 284 use the Internet more than three hours every day, followed by 130 (45%) participants using the Internet from one to two hours daily, while there are just 10 participants (3%) using the Internet less than one hour daily. Appendix 8 shows the computer background's results that are provided above.

6.2.2   Section Two: Internet Banking Background (KSA & the UK)

The results that shown in Appendix 9 show that more than half of the Saudi participants use Internet banking monthly. There are 145 Saudi participants (58%) use Internet banking on a monthly basis, while 50 participants (20%) use it twice a year, and 49 participants (19%) just weekly. There are four participants (1%) who use Internet banking daily. Compared with UK sample, most of the participants use Internet banking on a monthly or weekly basis. It can be noted that almost half of the sample (137 participants, 48%) use Internet Banking on weekly, followed by 96 participants (33%) use it monthly. While there are 29 participants (10%) who use Internet Banking daily and 22 participants (7%) only twice a year.

A large number of Saudi participants have access to the Internet banking from their homes. It can be noted that 225 participants (90%) out of 248 access Internet banking from their homes, while 31 participants (12%) from their friends' homes, 19 participants (7%) from the banks, 11 participants (7%) at University, and 7 participants from the local library.

In addition, some Saudi participants provide another location where Internet Banking can be accessed. The results show that 12 participants (4%) access Internet Banking from an Internet café, which is commonplace in KSA. In contrast, the UK sample shows similar findings but with some slight differences. It can be noted that 274 UK participants (96%) access Internet banking from their homes, while just 38 participants access (13%) from university, 15 (5%) from a bank, 14 (4%) from their places of work, 17 (6%) from the local library, and 13 (4%)

from their friends' homes. In addition, some different places are specified by the participants, such as Internet café, iphone or other mobile platforms, and in general public places.

The findings show the number of financial transactions that are performed by the Saudi participants. It shows that more than half of the sample conducts just one transaction each session. More specifically, 135 participants (54%) conduct one transaction, followed by participants who perform two transactions (88 participants or 35%), while there are just 22 participants (9%) who conduct three transactions or more, and one participant does not perform any financial transactions. In terms of the UK sample, the results indicate that 192 participants (67%) usually perform one transaction a session, while 29 participants (10%) do not conduct any financial transactions. There are 46 participants (16%) who perform two transactions, while there are just 17 participants (6%) out of 284 perform three transactions and more.

For this question, the participants were giving an option of choosing more than one type of financial operation. According to the Saudi sample, it can be noted that checking accounts and transaction history are the most common financial operation activities performed by the sample. There are 171 participants (69%) check their accounts and transaction financial statements, followed by 168 participants (67%) perform bill payments, while transferring funds is the third most common financial activity, with 137 participants (55%). The last common financial operations performed are managing investment and stock trading, and searching for information. The results also show that 68 participants (27%) search for information and 47 participants (19%) manage investment and stock trading.

Different financial activities are provided by Saudi participants, such as making payments for other companies, including government or private organisations. In addition, payment for shopping is provided but, it can be noted that these activities are provided by just two participants. In contrast, the UK sample and it can be noted that most of the UK participants spend their time checking their accounts and transaction history. The results show that 247 participants (87%) check their accounts and transaction history, while 184 (64%) transfer funds and 130 (45%) perform bill payments. While the management of investment and stock trading, and searching for information are less common financial activities.

Moreover, UK participants provide some other information about financial activities that are not provided or listed on the questionnaire. For example, some participants perform online payment, paying their rent or setting up direct debits.

6.2.3   Section Three: Demographic Data (KSA & the UK)

This section will be divided into subsections. Each subsection will focus on a specific result, such as the participants' gender, age, education or income. Appendix 10 shows these results.

In terms of the gender differences across the two samples, it can be noted that there are 21.8% more Saudi male participants than in the UK sample: there are 171 male participants from KSA (69%) out of 248, while 134 male participants form UK (47%). On the other hand, there are more female participants from UK than from KSA. The difference between females in UK and KSA is 21.8%. There are 150 females from UK (52%), while there is just 77 females from KSA out of 248 participants.

According to the results, it can be noted that the difference between the two samples is low. The UK participants who are single are 262 (92%), while there are 220 (88.7%) singles from KSA. There are 27 married participants from KSA (10%) and 17 from UK (6%).

Most of participants in both countries are less than 25 years old. There are 222 participants form KSA (89%), while there are 236 participants from UK (83%). Participants who aged ranged from 25 to 35 number 43 (15%) in the UK and 24 (9%) in KSA.

It can be noted that all Saudi participants were doing a bachelor degree, except for just one missing data, and there are no master degree nor PhD participants. The findings show that 247 (99.6%) Saudi participants are at their bachelor degree level. In contrast, there are 284 (100%) participants from the UK were doing a bachelor degree

In terms of the income differences, most participants in both countries received low level of incomes. In terms of participants from KSA, 155 (62%) participants received under SR1000 monthly, while 170 (60%) participants received under £3000 per year from the UK. the results also show that at the second level of income (SR1000-SR3000, £3001- £5000), 75

participants from KSA received monthly income between SR1000 and SR3000, and in contrast there are 61 participants from the UK receiving an annual income of £3001- £5000.

All participants from KSA are Saudi. In contrast, the UK is a multicultural country. The results indicate that there are 106 participants out of 280 who are white, either white British or Irish. A further 94 participants (33%) belong to the culture of Asian or Asian British, including Indian, Pakistani, and Bangladeshi or other any south-western Asian culture. 36 participants are Black or black British (12%).

6.3   First Stage: Exploring Data

This stage of the data analysis is a critical, because it will help to examine the data and whether it meets certain assumptions. If the data does not meet these assumptions, the results cannot be true (Field, 2005). Four basic assumptions must be met for most parametric tests based on the normal distribution. They are normally distributed data, homogeneity of variance, interval data, and independence (Field, 2005). Before starting tests, these assumptions and any missing data have to be analyzed and outliers have to be detected in order to clean the data in readiness for most multivariate analysis and techniques. The next subsection deals with missing data analysis and outliers detection, followed by testing whether the data is distributed normally, homogeneity of variance, and independence.

6.3.1   Missing Data Diagnosis

The missing data in the current study is judged to be not ignorable, because it is not related to the research design and its cause is unknown. The data is not provided by some respondents. In addition, it is important to determine the extent of missing data. In the current research, missing data detection was analysed separately (248 participants from KSA and 284 from the UK) so that more information about missing data can be obtained; for example, the percentage of missing data in each country can be examined. The results indicate that there are no variables with 5% or more missing values in both countries. As a rule of thumb, any observation can be generally ignored if its missing data level is under 10%, and any of the imputation methods can be applied (Hair et al., 2006). According to the results provided, the missing data can be ignored if it is less than 10%, or it can be computed by using any imputation methods.

It is decided to use the method of Mean Substitution, because the missing data will be replaced by values that are based on a set of observations with valid data in the sample (Hair et al., 2006). The missing values will be replaced by the mean value that is calculated from all valid observations. It is stated that the best single replacement value is the mean (Hair et al., 2006).

6.3.2 Outliers Detection

In the current study, univariate and multivariate outlier detection methods are performed and the following sections provide the final results. All the theoretical backgrounds were provided in the previous chapter (methodology chapter).

Univariate Detection

In terms of the current research, the sample size is 532 observations (284 from the UK and 248 from KSA) so that any cases falling below or above the threshold value of 4 can be judged as outliers. By using the SPSS, z-scores is determined to detect the outliers. In doing this, all of the observation values are converted to the standard scores. The mean of all scores will be subtracted and then divided by the standard deviation of all values. New variables will be created with new values (z-scores). Each single variable is examined to determine whether certain values fall outside the range of ±4. The results indicate that there are no cases judged as outliers, because all the values are within the acceptable value and within the ±4, across all attempts.

Multivariate Detection

Mahalanobi's D^2 measure is also performed to detect the outliers so that it is computed by regression. Two new variables are created in the data editor: the first variable represents D^2 values, and the second one calculates the probabilities for the D^2 values. The result indicates that there are no outliers that founded larger than the threshold value of 4.

According to the above results, it is decided to retain all the observations even if they detected as outliers, because no observations are considered unrepresentative of the population. It is stated that outliers should be retained unless demonstrable confirmation indicates that they are aberrations and not representative of any observation in the population, as well as ensuring generalizability for the entire population.

Certain assumptions have to be met for most of the multivariate analysis. The need to test certain assumptions is increased because of two characteristics of multivariate analysis. The complexity of the relationships because of the typical use of a large number of variables makes the potential distortions and biases when the assumption are violated, and because of the complexity of the analyses and results, the indicators of assumption violation apparent in the simpler univariate analyses may be masked (Hair et al., 2006). This analysis will include normality testing, homogeneity of variance and multicollinearity diagnosis. The following will perform these analyses and the results are provided.

6.3.3 Normality Test

In the previous chapter, it was stated that the statistics values of skewness and kurtosis will be used to assess the normality distribution of the data. It can be noted that all variables in the sample of KSA have the values of skewness and kurtosis less than ±1.96 at a significance level of $P<.05$ which indicates that these variables are normally distributed (Appendix 11). However, there are some variables PU.61 and Att.63 which have values of skewness and kurtosis less than ±2.58 at a significance level of $P<.01$, indicating that these variables are in the acceptable range of the normal distribution. The results also show that there is just one variable (PU.57) which has a positive value of kurtosis at the value of 2.69, indicating that this variable is normally distribution as its value is less than the value of the threshold (3.29) which can be used in a large sample size.

In terms of the UK sample, the results (Appendix 12) show the data distribution by using the statistic values of skewness and kurtosis for each variable. The results indicate that the skewness and kurtosis values show that all variables are in the normal range of distribution, because all variables have values less than ±1.96 at a significance level of .05. In addition, the results show that there is just one variable (Int.69) which has a positive value (2.24) of kurtosis. This value is at the normal level of distribution, because it is less than ±2.58 at a significance level of $P<.01$.

6.3.4 Testing For Homogeneity of Variance

As stated in the previous chapter in section (5.10.1.4), Levene's test will be applied to examine the homogeneity of variance on all constructs across KSA and the UK samples. The results in Appendix 13 indicate that some constructs' homogeneity of variance are supported,

such as trust, intention, loyalty, perceived usefulness and privacy, while for others the homogeneity of other constructs, such as subjective norms, perceived ease of use, attitude, self-efficacy and security perception, have not been supported. The significant results might be attributed to the large sample size that is 532 cases in the current study. The analysis also runs separately for each country to examine the variance of metric variable equally across a nonmetric variable such as gender. The results indicate that the Levene's test is non-significant p > 0.05. As a result of this, the analysis will proceed for further analysis.

6.3.5 Multicollinearity Diagnosis

In this study, both the correlation matrix and variance inflation factor (VIF) were examined to assess whether there is a high level of multicollinearity. According to the results, there was no correlation between the constructs greater than 0.80. Appendix 14 illustrates the correlation matrix. In terms of the VIF, the results indicate that all VIF values were < 10, which is within the recommended value, and there was no tolerance below 0.1. According to the results, there is confidence that there is no concern over the multicollinearity in the current study.

6.4 Second Stage: Exploratory Factor Analysis (EFA) and Reliability Results

In the current study, Bartlett's test of sphericity and Measure of Sampling Adequacy (MSA) are performed to assess the presence of correlation among the variables and examines the factorability of the overall set of variables. The factor analysis in the current study is run four times in order to delete any variable that does not contribute significantly to the factors. The following table shows that MSA values fall within acceptable limits across the four factor analysis: .924, .922, .922, and .922 on the first, second, third, and fourth run, respectively. In addition, the Bartlett's test indicates that the correlations are significant at the level of .0001, indicating that non-zero correlations exist. All these findings show that the analysis can proceed to the next stage.

Table 6. 1: The Factorability of The Correlation Matrix Assessment Results

		1st run	2nd run	3rd run	4th run
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.924	.922	.922	.922
Bartlett's Test of Sphericity	Approx. Chi-Square	22113.304	18665.106	18091.516	17888.205
	Df	3003	2278	2145	2080
	Sig.	.000	.000	.000	.000

In terms of the extracting factor methods, principal component factor analysis seems appropriate in the current study, based on the discussion in the previous chapter in section 5.10.2.

The criteria of how many factors should be extracted to represent the underlying structure in the data, namely latent root (eigenvalues) criterion, a prior criterion, percentage of variance criterion, screen test criterion, and heterogeneity of the respondents (Hair et al., 2006), were stated in the previous chapter. The latent root criterion (eigenvalues) is applied in the current study because it can be applied on both components and common factor analyses, and factors have eigenvalues greater than 1 will be considered significant and will be extracted in the factor analysis (Hair et al., 2006). Assessing the importance of each component can be carried out by applying the latent root (eigenvalues) criterion. In the current study, SPSS is used to perform the principal components factor analysis and to calculate the latent root (eigenvalues) criterion. By default, Kaiser's criterion is applied to extract and retain factors with eigenvalues greater than 1.

Appendix 15 shows the final results of the EFA. The results show the number of factors extracted and their cumulative importance. They show also the eigenvalues associated with each linear component (factor) before extraction, after extraction and after rotation. The results shows that there are fourteen factors were extracted. These factors explained 63.923 of the students' behaviour towards Internet banking in both countries.

It is an important part of this stage to assess the communality values of the variables in the unrotated factor matrix. Communality values show the amount of variance in a variable that is accounted for by the two factors taken together (Hair et al., 2006). A large amount of the variance in a variable that has been extracted by the factor solution can be indicated by high communality values, while a small communality value indicates that a substantial portion of the variable's variance is not accounted for by the factors. According to Hair et al. (2006), a lower level of .50 for communality should be considered. The result indicates that there are some variables that have values less than .50. The results shows that all observed variables have > 0.50 communality

The current research obtained the reproduced correlation matrix. The point is to have many values < 0.05 which indicate that the model perfectly fits with the data, but when more than

50% of the values > 0.05, it may be a concern (Field, 2005). The results indicate that there are 290 residuals (9%) in the first run of the factor analysis, 239 (10%) in the second run, 223 (10%) in the third run, and 215 (10) in the fourth run.

According to the results above, it is decided to proceed to rotate the factor matrix in order to redistribute the variance from the earlier factors to the later factors, and thus improve the interpretation.

The orthogonal (varimax) rotation is run four times, each time assessing each variable and examining any problems detected. Thirteen variables were deleted from the factor analysis because of, for example, their low loading (<.40) as recommended by Hair et al. (2006) or they have cross-loading or they contain just two variables. Table 6.2 shows the variables that are excluded from the factor analysis and their related reasons

Table 6. 2 : The Exclusion Variables from the Analysis (EFA)

	NO	Item/s	Reasons
1st run	1	Learning to use Internet banking is easy for me (PE.51)	Cross-loading
	2	It is easy for me to become skilful in the use of Internet banking (PE.55)	Cross-loading
	3	Using Internet bank is financially secure (S.11)	Cross-loading
	4	I can access to appropriate banking information with minimal effort (Com.23)	Cross-loading
	5	Internet banking provides high quality information (Com.21)	Loading <.40
	6	Internet banking clearly mentions all costs to the customer before transactions are approved (Com.22)	Loading <.40
	7	Using Internet banking has been a good experience for me personally (Exp.34)	Loading on one factor
	8	I have positive experiences of using Internet banking (Exp.35)	Loading on one factor
	9	Internet banking has more to lose than to gain by not delivering on their promise (T.44)	Loading on one factor
	10	I find it necessary to be not cautious with Internet banking (T.43)	Loading on one factor
2nd run	11	Internet banking clearly mentions its rules, regulations, policies and practices to the customers (Com.28)	Low loading <.40
	12	Internet banking is known to be concerned about customers (Rep.31)	Low loading <.40
3rd run	13	Internet banking keeps its customers informed about the latest developments (Com.24)	Low loading <.40

After the last run of the factor analysis and the 13 variables that are stated in the above table are excluded, the results come up with the following rotated factor matrix with 65 variables (items) on 14 factors with all communalities above 50 percent. The amount of explained variance increases to 63.923 percent of variance. The following table shows the fourth rotated factor matrix:

Table 6. 3 : Rotated Factor Matrix

Number of Factors	The measurement items	Factor Loadings
Subjective Norm	People who influence my behaviour would think that I should use Internet banking. (SN.83)	0.82
	People who are important to me think that I should use Internet banking. (SN.82)	0.82
	Generally speaking, I want to do what my family thinks I should do. (SN.81)	0.79
	Generally speaking, I want to do what my friends thinks I should do. (SN.79)	0.78
	My family thinks that I should use Internet banking. (SN.80)	0.72
	My friends think that I should use Internet banking. (SN.78)	0.52
Self-Efficacy	I have no problem adapting to new technology-enabled service systems. (SE.47)	0.86
	I feel comfortable with technology-enabled services. (SE.48)	0.80
	I find technology-enabled services not complicated to use (SE.50)	0.77
	I have well-developed technological abilities. (SE.46)	0.72
	I feel comfortable with technology-enabled services. (SE.49)	0.72
Privacy	Internet banking will not divulge consumers' personal data to other parties. (P.19)	0.81
	Internet banking will not sell my personal information to third parties without my permission. (P.17)	0.77
	Internet banking is concerned about consumer privacy. (P.18)	0.77
	The Internet banking system is able to control customer privacy in general. (P.20)	0.63
	I trust in the ability of Internet banking to protect my privacy. (P.16)	0.60
Perceived usefulness	Using Internet banking enhances my effectiveness of utilizing banking services. (PU.60)	0.74
	Using Internet banking for my banking services increases my productivity. (PU.59)	0.69
	Using Internet banking improves my performance of utilizing banking services. (PU.58)	0.60
	Overall, Internet banking is useful to me. (PU.62)	0.57
	The use of the Internet banking system makes it easy to get more benefits from banking services. (PU.61)	0.57
	Using Internet banking enables me to utilize services more quickly. (PU.57)	0.52

Number of Factors	The measurement items	Factor Loadings
Behaviour Intention	I would consider using Internet banking in the next year. (Int.69)	0.75
	I would consider using Internet banking in the next 3 months. (Int.68)	0.75
	Given available access to Internet banking, I would use it. (Int.70)	0.68
	I would use my bank cards to access an Internet banking account. (Int.71)	0.55
	I am very likely to provide my bank with the information it needs to better serve my needs. (Int.72)	0.43
Attitude	Using Internet banking to access online services is a good idea. (Att.65)	0.76
	I like the idea of using Internet banking. (Att.64)	0.70
	I believe that Internet banking represents an important innovation. (Att.66)	0.69
	The idea of using Internet banking to access online services is appealing. (Att.63)	0.55
	I believe that Internet banking is critical for banks to get a competitive edge. (Att.67)	0.51
Loyalty	I have the intention to continue my relationship with Internet banking. (Loy.75)	0.67
	It is likely that I will continue my loyalty to Internet banking. (Loy.77)	0.65
	I would recommend Internet banking to other people. (Loy.73)	0.61
	There is a positive effect of new banking technology on my bank loyalty. (Loy.76)	0.60
	I prefer a particular Internet bank above others. (Loy.74)	0.60
Perceived Ease of Use	Internet banking is flexible to interact with. (PE.54)	0.70
	My interaction with Internet banking is clear and understandable. (PE.53)	0.68
	Overall, I find Internet banking easy to use. (PE.56)	0.59
	I find it easy to do what I want to do when using Internet banking (PE.52)	0.54
Communication	The Internet banking system allows customers to evaluate banking services. (Com.27)	0.82
	Internet banking regularly seeks feedback from its customers. (Com.26)	0.81
	Internet banking creates an open environment where customers can freely interact with other customers and communicate about the services of the bank. (Com.29)	0.65
	The Internet banking response to customer queries is immediate. (Com.25)	0.53
Experience	I am familiar with searching for products and services in Internet banking. (Exp.39)	0.70
	I am familiar with the processes of Internet banking. (Exp.38)	0.69
	I frequently check for new or improved online Internet banking services. (Exp.37)	0.64
	I frequently use Internet banking services. (Exp.36)	0.50
Security	Matters of security have no influence on my use of Internet banking. (S.13)	0.80
	Bank card information is not at risk of leakage theft. (S.15)	0.64
	I am not worried about the security of Internet banking. (S.12)	0.56

Number of Factors	The measurement items	Factor Loadings
	I think customer data is kept securely by Internet banking. (S.14)	0.46
Trust	Internet banking behaviour meets my expectations. (T.45)	0.56
	Internet banking wants to be known as one which keeps promises and commitments. (T.41)	0.54
	Internet banking is trustworthy. (T.40)	0.47
	I trust Internet banking, because it keeps my best interests from its priorities. (T.42)	0.45
Reputation	Internet banking is well known in my society. (Rep.32)	0.72
	Internet banking has a good reputation. (Rep.33)	0.67
	Internet banking has a reputation for being honest. (Rep.30)	0.51

The fifth stage is naming the factors. In the current study, all the constructs and the proposed model are developed based on the previous theories and models in the literature so that they have already named. The conceptual framework chapter provided all information about the constructs in the current study. The outcome form the factor analysis shows that 60 observed variables are retained for further analysis out of 73 and 13 were removed. Table 6.4 shows the constructs that will be used for further analysis, how many numbers per construct and the observed variables (indicators) per construct.

Table 6.4 : Factors' names

Factor number	Factor name	Variables Number	The Variables
1	Subjective Norms	6	(SN.83, SN.82, SN.81, SN.79, SN.80, and SN.78)
2	Self-Efficacy	5	(SE.47, SE.48, SE.50, SE.46, and SE.49)
3	Perceived Privacy	5	(P.19, .P.17, P.18, P.20, and P.16)
4	Perceived usefulness	6	(PU.60, PU.59, PU.58, PU.62, PU.61, PU.57)
5	Customers' Intention	5	(Int.69, Int.68, Int.70, Int.71, and Int.72)
6	Customers' attitudes	5	(Att.65, Att.64, Att.66, Att.63, and Att.67)
7	Customers loyalty toward Internet Banking	5	(Loy.75, Loy.77, Loy.73, Loy.76, and Loy.74)
8	Perceived Ease of Use	4	(PE.54, PE.53, PE.56, and PE.52)
9	Customer-Internet Banking Communication	4	4 variables (Com.27, Com.26, Com.29, and Com.25)
10	Customers' Internet Banking Experience	4	(Exp.39, Exp.38, Exp.37, and Exp.36)
11	Perceived security system	4	(S.13, S.15, S.12, and S.14)
12	Perceived Internet Banking Trust	4	(T.45, T.41,T.40, and T.42)
13	Perceived Internet Banking Reputation	3	(Rep.32, Rep.33. and Rep.30)
Total	13 constructs	60 observed variables	

The sixth stage is to validate the factor analysis result, which is an essential part of the factor analysis. In order to validate the factor analysis results, a confirmatory factor analysis, such as structural equation modelling, will be used for this purpose. Before proceeding to perform a confirmatory factor analysis (CFA), it is an important step to check the reliability of the scale.

According to the methodology chapter, Cronbach's alpha is applied in the current study to test the scale reliability separately so that each subscale which resulted from the factor analysis will be tested separately. SPSS software version 15 is used to perform the test. In the current study, there are thirteen subscales (factors), as mentioned in Table 6.4 with their related names and items. The following subsections show the 13 factors' reliability in both countries (KSA and the UK).

Table 6.5 indicates that all factors have reliability values between 0.70 and 0.93, which is within the acceptable level of reliability. This means that the scale is reliable and tends to measure what is expected to be measured. However, the last factor (Internet Banking Reputation) has a low reliability value at .58 which can be put under focus and, according to this result, the factor should be deleted.

Table 6. 5 : Reliability Examination (KSA & the UK)

The factors	No. of Items	Cronbach's alpha		
		KSA & the UK	KSA	the UK
Subjective Norms	6	0.87	0.80	0.87
Self-Efficacy	5	0.89	0.85	0.93
Perceived Privacy	5	0.85	0.83	0.88
Perceived Usefulness	6	0.85	0.83	0.87
Customers' Intention	5	0.82	0.84	0.81
Customers' Attitudes	5	0.86	0.85	0.87
Customers Loyalty	5	0.81	0.81	0.82
Perceived Ease of Use	4	0.84	0.8	0.87
Customer-Internet Banking Communication	4	0.70	0.71	0.71
Customers' Experience	4	0.72	0.81	0.69
Perceived Security System	4	0.71	0.72	0.68
Internet Banking Trust	4	0.70	0.64	0.76
Internet Banking Reputation	3	0.58	0.58	0.66

According to the above reliability results, either on both countries or on each country, it is decided to proceed to the Confirmatory Factor Analysis (CFA) so that the decision to delete or maintain some items or factors can be taken and confirmed.

6.5 Stage Three: Confirmatory Factor Analysis (CFA)

Structural Equation modelling (SEM) techniques will be used in the current study to order to validate the measurement and structural theory under investigation. At this stage, all constructs are correlated with all other constructs. All measured items are enabled to load on only one construct each so that the error terms are not allowed to relate to any other measured variable. The measurement model is congeneric. In terms of the current research measurement model, thirteen constructs with their items number have been stated in Table 6.4 will be examined, All main constructs are identified because they are indicated by four or more measured items, but the last construct is just-identify because it is only by three measured items.

The model has more degrees of freedom than paths to be estimated. Therefore, this is consistent with the rule of thumb recommending a minimum of three indicators per construct (Hair et al., 2006). In terms of the natural of the constructs (reflective versus formative), the overall measurement model indicates that all of the measures are reflective as the direction of causality is from the latent construct to the measured items. It can be noted that each construct also has a number of indicators that share a similar conceptual basis so that they would tend to move together.

In this stage, some important issues should be considered (such as sample size), and model specification (such as establishing the identification of the model) (Hair et al., 2006). The sample size in the current study is 532 students (248 from KSA and 284 from the UK). It was stated that when the model is over-identified, it is expected the communalities will exceed 0.50, and might exceed 0.60, so that the sample size should be adequate (Hair et al., 2006). According to the EFA, all communalities exceed 0.50. This indicates that the sample size is adequate. It is also sufficient to enable maximum likelihood estimation. All issue that relate to the missing data were discussed in the data screening section earlier. In terms of the measurement model identification, the findings indicate that the model is identified.

Number of distinct sample moments:	1830
Number of distinct parameters to be estimated:	198
Degrees of freedom (1830 - 198):	1632

6.5.1 Assessing Measurement Model Validity

According to the methodology chapter, the current research will apply χ^2 values and degrees of freedom and goodness-of-fit index (GFI) as an absolute fit index, in addition to the root mean square effort of approximation (RMSEA) as one of the badness-of-fit index, and comparative fit index (CFI) will be assessed as one of the incremental fit indices. Some of the cut-off values based on the model characteristics will be applied. According to the current model in this study, the sample size is 532 observations and there are 60 measured items. Based on this information, it was suggested that when the sample size >250 and the observed variables ≥30, the χ^2 value and p-value can be expected to be significant, CFI should be above .90, and RMSEA should be <.07 (Hair et al., 2006, p753).

In the current study, the measurement model is run several times in order to obtain good fit and adequate construct validity. This section will be divided into three subsections. The first subsection will provide the measurement model for both countries (KSA and the UK). When the results are within the acceptable values, this section will be followed by testing the measurement model on KSA only. Once the model results are acceptable, the analysis will proceed to test the measurement model on the UK sample in the last subsection. Each subsection will provide results regarding the goodness-of-fit and construct validity (convergent and discriminate validity), and the decision about whether some items or constructs have to be deleted in order to improve the model fit or solve any problems that are associated with convergent or discriminate validity will be made.

6.5.2 Measurement Model Fit Evaluation on both samples (KSA and the UK)

In order to identify any misfit problems, the measurement model was run eight times (1.1 to 1.8). On each run, the model fit, factor loading, and modification index are examined. Appendix 16 provides more details about the analysis and findings. In this section, the final results will be provided. According to the analysis, three constructs (reputation, experience and communication) were eliminated and three emerged (trust, privacy and security) to represent Trust, because their validities have not been supported. Eighteen measurement

items (observed variables) were removed according to their low or cross-factor loadings. (More details are shown in the Appendix 16, Tables 8.10 to 8.12.)

The analysis proceeds with forty two measurement items and eight constructs, and examines the constructs validity (convergent and discriminant) in order to ensure that the measured variables are determining what they tend to measure and to what they are related. As it was stated in the methodology chapter, factor loading, average variance extracted (AVE) and reliability are three significant measures that can be used to assess the convergent validity. Using AMOS v16, factor loading, AVE and construct reliability were assessed. The factor loadings are taken directly from the AMOS output, but the AVE and construct reliability are calculated by following the procedures and equations using the Excel spreadsheet programme.

According to the results, the measurement model provides acceptable model fit results. χ^2 is 1588.714, and GFI and CFI are 0.86 and 0.91 respectively. RMSEA is 0.050 with 90% confidence between 0.047 and 0.053. Based on these results, the analysis will proceed to test the constructs validity.

It should be noted that GFI should be > 0.90, as stated by (Hair et al., 2006), however the value of > 0.80 can be acceptable (Joreskog and Sorbom, 1993, Etezadi-Amoli and Farhoomand, 1996). GFI was reported in existing studies below 0.90, such as (Chau, 1996) with 0.83, (Jackson et al., 1997) with 0.82, (Suh and Han, 2002) with 0.85, (Venkatesh et al., 2002) with 0.88 for TAM model and 0.84 for Motivational model, (Gefen et al., 2003b) with 0.88, (Suh and Han, 2003) with 0.86, (Herington and Weaven, 2007) with 0.89, and (Gounaris and Koritos, 2008) with 0.87 According to some of the literature reviewed in this study, some researchers reported < 0.80, such as (Adams et al., 1992). On the other hand, some researchers did not report GFI's results (Taylor and Todd, 1995a, Taylor and Todd, 1995b, McKechnie et al., 2006, Alda´s-Manzano et al., 2009, Ganguli and Roy, 2011). Accordingly, the current study will accept the value of > 0.80 for GFI. However, the value should be taken with caution and further study is needed.

All factor loadings and constructs, AVE and reliability will be examined first. If they are supported, the analysis will move to test the discriminate validity. According to the results, it can be noted that all items are within the recommended values, except one item (T.49) which

has slightly low factor loading at 0.49. This item will be under focus at a further stage. In terms of the AVE, Table 6.6 shows that all constructs provide acceptable values > 0.50, except one construct (Trust) which has a value < 0.50. All constructs show acceptable reliability values, ranging from 0.83 to 0.88. The following table shows all the factor loadings, AVE and reliability results.

Table 6. 6 : Convergent Validity Results (KSA and the UK)

The Constructs	The Measurement Items	Factor Loadings	Variance Extracted	Construct Reliability	SQRT (AVE)
Trust	S.14	0.66	0.50	0.86	0.70
	S.12	0.53			
	P.19	0.71			
	P.18	0.69			
	P.17	0.76			
	P.16	0.76			
	T.40	0.63			
	T.42	0.49			
Subjective Norm	SN.81	0.73	0.62	0.87	0.79
	SN.79	0.70			
	SN.82	0.85			
	SN.83	0.86			
Perceived Ease of Use	PE.52	0.72	0.56	0.84	0.75
	PE.53	0.81			
	PE.54	0.75			
	PE.56	0.71			
Attitude	Att.64	0.85	0.58	0.87	0.76
	Att.65	0.82			
	Att.66	0.75			
	Att.67	0.65			
	Att.63	0.71			
Intention	Int.69	0.77	0.56	0.83	0.75
	Int.70	0.80			
	Int.71	0.58			
	Int.68	0.83			
Loyalty	Loy.75	0.76	0.50	0.80	0.70
	Loy.74	0.64			
	Loy.73	0.72			
	Loy.77	0.69			
Self-Efficacy	SE.47	0.93	0.66	0.88	0.81
	SE.48	0.82			

The Constructs	The Measurement Items	Factor Loadings	Variance Extracted	Construct Reliability	SQRT (AVE)
	SE.50	0.79			
	SE.46	0.69			
Perceived Usefulness	PU.60	0.70	0.51	0.84	0.72
	PU.59	0.69			
	PU.58	0.80			
	PU.57	0.74			
	PU.62	0.65			

The analysis proceeds to examine the constructs' discriminate validity and find out whether there are any indiscriminate constructs. Table 6.7 provides the constructs' discriminate validity results. It shows that all constructs' square root of variance value (highlighted in black) is larger than any correlation with any other constructs. Based on the results provided on both Convergent and Discriminate validity, it can be concluded with more confidence that all eight constructs are valid on both countries (KSA and the UK).

Table 6. 7 : Discriminate Validity Results (KSA and the UK)

	T	PU	SE	Loy	Int	Att	PE	SN
T	**0.70**							
PU	0.526	**0.72**						
SE	0.263	0.457	**0.81**					
Loy	0.469	0.622	0.389	**0.70**				
Int	0.384	0.629	0.394	0.682	**0.75**			
Att	0.537	0.713	0.348	0.693	0.678	**0.76**		
PE	0.386	0.667	0.653	0.575	0.524	0.495	**0.75**	
SN	0.272	0.245	0.071	0.322	0.207	0.338	0.105	**0.79**
Note: T = Trust, PU = Perceived Usefulness, SE = Self-Efficacy, Loy = Loyalty, Int = Intention, Att = Attitude, PE = Perceived Ease of Use, SN = Subjective Norm								

The measurement model will be now examined for each country separately so that the comparison between the countries will be applicable. First, the analysis will examine the measurement model for KSA. Once the results are satisfactory and the measurement model fits well in the sample of KSA, the same model will be examined on the sample of the UK.

6.5.3 Measurement Model Examination on (KSA)

The measurement model based on the KSA sample was run two times because the model provided bad fits results. Appendix 17 provides more details about what measurement items

were deleted. According to the results, the measurement model that will be tested on KSA consisted of eight constructs and 30 items. The analysis will start by examining the model fit indices. Once the model provides satisfactory results, the analysis will test all the constructs' validity (convergent and discriminate), the modification indices will then be reviewed to find out any misfits in order to improve the model fit. The analysis will start to examine the model fit including χ^2, GFI, CFI and RMSEA.

According to the results, the measurement model provides acceptable fit results. In terms of χ^2, its value is 695.951 with 377 degrees of freedom and significant p value at 0.000. GFI is 0.84 and CFI is 0.91. RAMSEA is 0.059 with 90% confidence that the value is between 0.052 and 0.065. Based on these results, it can be concluded that the measurement model fits well for the sample of KSA and provides more confidence to analyse the constructs' validity.

Table 6.8 shows the convergent validity results in the case of KSA, including the factors loadings, AVE and reliability values. According to the results, it can be noted that all factor loadings are within the acceptable value > 0.50. In terms of the AVE, the results show that all constructs are > 0.50. The analysis will proceed to examine the discriminate validity and the conclusion regarding the overall constructs' validity will follow.

Table 6. 8 : Convergent Validity Results (KSA)

The Constructs	The Measurement Items	Factor Loadings	Variance Extracted	Construct Reliability	SQRT (AVE)
Trust	S.12	0.53	0.51	0.55	0.72
	P.19	0.69			
	P.18	0.75			
	P.17	0.77			
Subjective Norm	SN.81	0.62	0.50	0.75	0.66
	SN.79	0.58			
	SN.82	0.75			
	SN.83	0.67			
Perceived Ease of Use	PE.52	0.63	0.51	0.81	0.72
	PE.53	0.80			
	PE.54	0.75			
	PE.56	0.67			
Attitude	Att.64	0.91	0.65	0.65	0.81
	Att.65	0.76			
	Att.63	0.73			

The Constructs	The Measurement Items	Factor Loadings	Variance Extracted	Construct Reliability	SQRT (AVE)
Intention	Int.69	0.70	0.56	0.84	0.75
	Int.70	0.79			
	Int.71	0.76			
	Int.68	0.75			
Loyalty	Loy.75	0.78	0.51	0.80	0.71
	Loy.74	0.77			
	Loy.73	0.68			
	Loy.77	0.61			
Self-Efficacy	SE.47	0.92	0.64	0.73	0.80
	SE.48	0.79			
	SE.46	0.67			
Perceived Usefulness	PU.60	0.64	0.52	0.74	0.72
	PU.59	0.69			
	PU.58	0.83			
	PU.57	0.72			

In terms of the discriminate validity, the square root of variance was calculated for each construct and the results were provided in Table 6.8. These values will be compared with each correlation value. Table 6.9 shows all square root of variance (highlighted in black) and correlation between all constructs in the measurement model. If each construct's square root of variance is larger than correlation with any other constructs, it can be concluded that the constructs discriminate validity is supported. According to the current study, the results show that all constructs' square root of variance values are larger than any correlation. Based on these results, it can be concluded that the constructs' validity and the measurement model's fit are both supported on the sample of KSA.

Table 6. 9 : Discriminate Validity Results (KSA)

	T	SN	PE	Att	Int	Loy	PU	SE
T	**0.69**							
SN	0.30	**0.66**						
PE	0.22	0.35	**0.72**					
Att	0.36	0.45	0.39	**0.81**				
Int	0.34	0.54	0.43	0.64	**0.75**			
Loy	0.26	0.57	0.43	0.48	0.55	**0.71**		
PU	0.42	0.45	0.52	0.57	0.55	0.51	**0.72**	
SE	0.24	0.23	0.50	0.33	0.33	0.33	0.36	**0.80**
Note: T = Trust, PU = Perceived Usefulness, SE = Self-Efficacy, Loy = Loyalty, Int = Intention, Att = Attitude, PE = Perceived Ease of Use, SN = Subjective Norm								

In order to do a valid comparison between KSA and the UK, the measurement model has to fit the sample of the UK and the constructs' validity has to be supported. The analysis now examines the measurement model in the case of the UK.

6.5.4 Measurement Model Examination on (UK)

The measurement model contains eight constructs and 30 items. According to the results, the measurement model provides adequate fit indices values. In general, the measurement model based on the UK case fits better than in the case of KSA, χ^2 is 594.653 with 377 degrees of freedom and significant probability value < 0.001. In the case of KSA, χ^2 is 843.528. GFI in the UK sample is 0.88, while it is 0.84 in KSA. CFI also is larger in the UK. The results indicate that CFI in the UK is 0.96, while it is 0.91 in KSA. RAMSEA is small in the UK at 0.045 with 90% confidence between 0.038 and 0.052. While in the case of KSA, RAMSEA value is 0.059. According to the above results, it can be concluded that the measurement model shows a good fit for both countries. The analysis will now move to examine the constructs validity on the case of the UK.

In terms of the convergent validity, the results show that all factor loadings fall within the acceptable values. All constructs provide sufficient AVE values as all are above 0.50. They range from 0.50 to 0.74. The results also show that all constructs provide adequate reliability values. They range from 0.58 to 0.87. The following Table 6.10 shows the convergent validity results in the case of the UK:

Table 6. 10 : Convergent Validity Results (UK)

The Constructs	The Measurement Items	Factor Loadings	Variance Extracted	Construct Reliability	SQRT (AVE)
Trust	S.12	0.50	0.54	0.58	0.73
	P.19	0.84			
	P.18	0.73			
	P.17	0.87			
Subjective Norm	SN.81	0.69	0.62	0.86	0.79
	SN.79	0.67			
	SN.82	0.85			
	SN.83	0.91			
Perceived Ease of Use	PE.52	0.82	0.62	0.87	0.79
	PE.53	0.83			
	PE.54	0.76			
	PE.56	0.76			
Attitude	Att.64	0.88	0.68	0.67	0.82
	Att.65	0.85			
	Att.63	0.74			
Intention	Int.69	0.83	0.59	0.85	0.77
	Int.70	0.79			
	Int.71	0.46			
	Int.68	0.92			
Loyalty	L.75	0.73	0.53	0.81	0.72
	L.74	0.53			
	L.73	0.83			
	L.77	0.77			
Self-Efficacy	SE.47	0.91	0.74	0.79	0.86
	SE.48	0.89			
	SE.46	0.77			
Perceived Usefulness	PU.60	0.76	0.58	0.78	0.76
	PU.59	0.73			
	PU.58	0.79			
	PU.57	0.76			

In terms of discriminate validity, the constructs' square root of variance values was calculated and the results are provided in Table 6.11. The square root of variance values for each construct was compared with each correlation values so that it can be decided whether the discriminate is supported. According to the results, all square root values (highlighted in

black) are larger than the correlation values between the constructs. Table 6.11 shows the square root of variance values and the correlation values for all constructs in the measurement model:

Table 6. 11 : Discriminate Validity Results (the UK)

	T	SN	PE	Att	Int	Loy	PU	SE
T	**0.73**							
SN	0.14	**0.79**						
PE	0.34	0.05	**0.79**					
Att	0.39	0.12	0.54	**0.82**				
Int	0.27	0.10	0.43	0.55	**0.77**			
Loy	0.36	0.26	0.50	0.66	0.59	**0.72**		
PU	0.27	0.03	0.61	0.54	0.49	0.51	**0.76**	
SE	0.22	0.08	0.55	0.38	0.32	0.28	0.38	**0.86**

Note: T = Trust, PU = Perceived Usefulness, SE = Self-Efficacy, Loy = Loyalty, Int = Intention, Att = Attitude, PE = Perceived Ease of Use, SN = Subjective Norm

6.6 Stage Four: Testing a Structural Theory

This part will start by describing the structural theory under investigation, including how many observed variables and latent constructs are used. These variables and constructs result from analysis and testing the measurement theory in the third stage. The hypotheses will be highlighted. This section will be followed by an assessment of the structural model fit indices, residuals values and modification indices for any further improvement.

6.6.1   Structural Model, Hypotheses Description and Nomological Validity

In this stage, the current study attempts to understand customers' perceptions towards Internet banking in KSA and the UK, and whether there are any differences in their views and perceptions. In the last two stages (second and third stages), constructs were indentified but the specific relationships between the constructs were not specified. In this stage (stage four), specific relationships between constructs are defined and the path diagram will be visually provided by using AMOS v16. It should be noted that the proposed model, which was identified and stated in the conceptual framework and hypotheses chapter (chapter four), is changed significantly according to the measurement model results (data driven) (Appendix 16 and 17 show more details) and structural model in section (6.6.3). Three constructs were removed from the proposed model (Communication, Reputation and Experience) because their validities were not supported. In addition, three constructs were emerged (Trust,

Security and Privacy) under Trust. Accordingly, five hypotheses were removed (H12, H13, H14, H15 and H16), leaving eleven hypotheses (H1 to H11). Table 6.12 shows the hypotheses that are remaining for the analysis.

A total of eight constructs are specified in the structural model: Trust (T), Self-efficacy (SE), Subjective Norms (SN), Perceived Usefulness (PU), Perceived Ease of Use (PEOU), Attitude (Att), Intention (Int), and Loyalty (Loy). In the structural model, it is expected that all these constructs are related to Loyalty in different ways (paths). In the current research, some hypotheses are stated to identify the relationships in the structural model. The following table provides the 11 hypotheses in the study.

Table 6. 12 : The Hypotheses Relationships

NO	The hypotheses
H1	Students' behavioural intentions significantly influence their loyalty towards Internet banking in both KSA and the UK.
H2	Students' attitudes towards Internet banking significantly influence their intentions to use Internet banking in both KSA and UK.
H3	Perceived usefulness significantly influences students' attitude towards Internet banking in KSA and the UK.
H4	Perceived ease of use significantly influences students' attitude towards Internet banking in KSA and the UK.
H5	Students' trust significantly influences perceived usefulness towards Internet banking in KSA and the UK.
H6	Subjective norms significantly influence perceived usefulness of Internet banking in both KSA and the UK.
H7	Self-efficacy significantly influences perceived usefulness towards Internet banking in KSA and the UK.
H8	Perceived ease of use significantly influences perceived usefulness towards Internet banking in KSA and the UK.
H9	Students' trust significantly influences perceived ease of use towards Internet banking in KSA and the UK.
H10	Subjective norms significantly influence perceived ease of use towards Internet banking in KSA more than in the UK.
H11	General self-efficacy significantly influences perceived ease of use towards Internet banking in KSA and the UK.

The structural model will be described visually in the following figure:

Figure 6.1: Structure Model
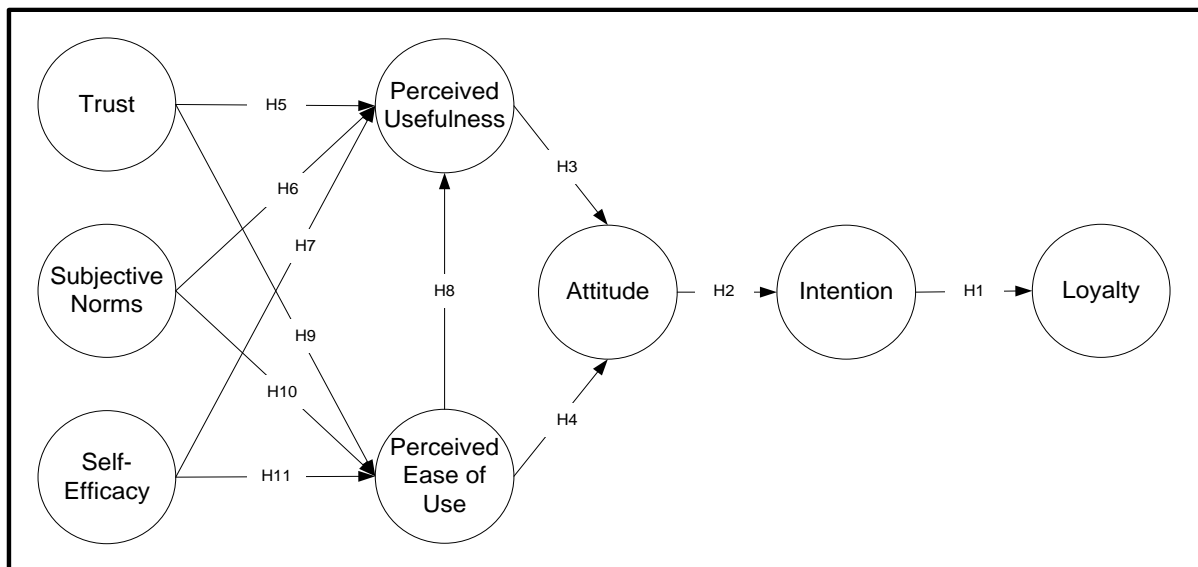
Figure 6.1 describes the theory that the current study is investigating. It can be noted that the main concern is how customers' loyalty is influenced by other constructs in the model, directly by behavioural intention or indirectly by Attitude, Perceived Usefulness and Perceived Ease of Use, Trust, Subjective norms and Self-efficacy. The structural model was explained in full in the conceptual model description, section (4.2) in chapter four. The structural model was based on three main theories (Technology Acceptance Model, Social Cognitive Theory and Theory of Reasoned Action) in addition to other constructs, such as Loyalty and Trust. The aim of this theoretical combination is to examine customers' behaviour from different areas, such as marketing, technology and psychology in the context of Internet banking, so that areas that contribute to an explanation of customers' behaviour can be identified.

In terms of the nomological validity, Hair et al. (2010, p. 710) stated that nomological validity is "... whether the correlations among the constructs in a measurement theory make sense". In addition, AL-Qeisi (2009, P. 252) stated that nomological validity refers to "the degree that the summated scale makes accurate predictions". In the current study, nomological validity was assessed by calculating the correlations between the constructs under investigation and the validity of the structure model. Table 8.13-15 in appendix 18 represent three correlation matrixes. The first one correlation matrix based on the sample of KSA, the second one based on the UK sample, while the last matrix based on the whole

samples (KSA and the UK). The result in the correlation matrixes and the structural model indicated that the nomological validity was supported.

In order to test the above structural model, the study follows what has been done in the previous stage. Accordingly, the analysis will be performed three times. The first time, the study will examine the structural model's fit on both KSA and the UK. Once the model fit is supported, the study will examine the validity of the structural model on the case of KSA. The model fit indices will then be examined and modification indices will be reviewed for any improvement to resolve any misfit problems if any. Lastly, once the structural model is valid in the case of KSA, it will be applied and validated in the case of the UK sample. The analysis will start by examining the structural model on both countries (KSA and the UK) in the following section.

6.6.2   Structural Model Examination on KSA and the UK

The structural model stated in Figure 6.1 was examined and the results indicate that the model is valid on both counties: χ^2 is 1060.07 with 394 degrees of freedom and a significant probability value $p < 0.001$, GFI is .88 and CFI is .92. In terms of the badness of fit indices (RMSEA), the results show that its value is 0.056 with 90% confidence, with the value between 0.052 and 0.061. Accordingly, the analysis will proceed to examine the structural model in the case of KSA, followed by the UK case.

6.6.3   Structural Model Examination on KSA

In the case of KSA, the structural model fits are reduced below the acceptable values. The results show that χ^2 is 838.188 with 394 degrees of freedom and significant probability value $p < 0.001$. GFI is also reduced from 0.88 in the combined model (KSA and the UK) to 0.81 in the model tested on KSA sample. CFI is also reduced from 0.92 to 0.87. RMSEA value is increased from 0.056 to 0.068 with 90% confidence between 0.061 and 0.074. It is still within the acceptable value < 0.10. According to these results, it can be concluded that the structural model tested on the KSA sample provides poor fits indices so that it has to be improved.

In order to improve the structural model, the factor loadings, modification indices and standardized residual covariances were reviewed. According to this investigation, all factor loadings are within the acceptable values > 0.50. Standardized residual covariances are also within the recommended values ± 4. In terms of the modification indices, two items have

cross-loadings namely L.73 and SN.79. L.73 has cross-loading with Perceived Usefulness (9.983), while SN.79 has cross-loadings with three constructs, Trust, Intention, and Loyalty, with modification indices (MI) of 15.119, 7.649, and 14.109, respectively. Moreover, the MI shows some suggestions that can be applied to improve the model fit. They suggest adding three new paths to the model. The first path is from Subjective Norms to users' Intention, with MI value of 22.014. The second path from Perceived Ease of Use to Loyalty, while the last path from Perceived Usefulness to Loyalty with MIs of 15.704 and 9.846, respectively. According to these findings, it is decided to add these three paths (SN → Int, PE → Loy, and PU → Loy) and exclude the two items (L.73 and SN.79). All the theoretical support for the added relationships will be provided in the following chapter (Discussion Chapter).

The structural model was re-estimated and the results show that the model is improved. They show that χ^2 is reduced from 838.188 to 670.284 with 336 degrees of freedom and significant probability value < 0.001. GFI is also improved from 0.81 to 0.84. CFI is increased from 0.87 to 0.90. RMSEA is decreased slightly from 0.068 to 0.063 with 90% confidence between 0.056 and 0.07. According to these results, the analysis can proceed with more confidence to test the same structural model on the case of the UK sample. The following figure 6.3 shows the regression weights between the constructs, t values and squared multiple correlations (R^2):

Figure 6.2: Structure Model Results (KSA)
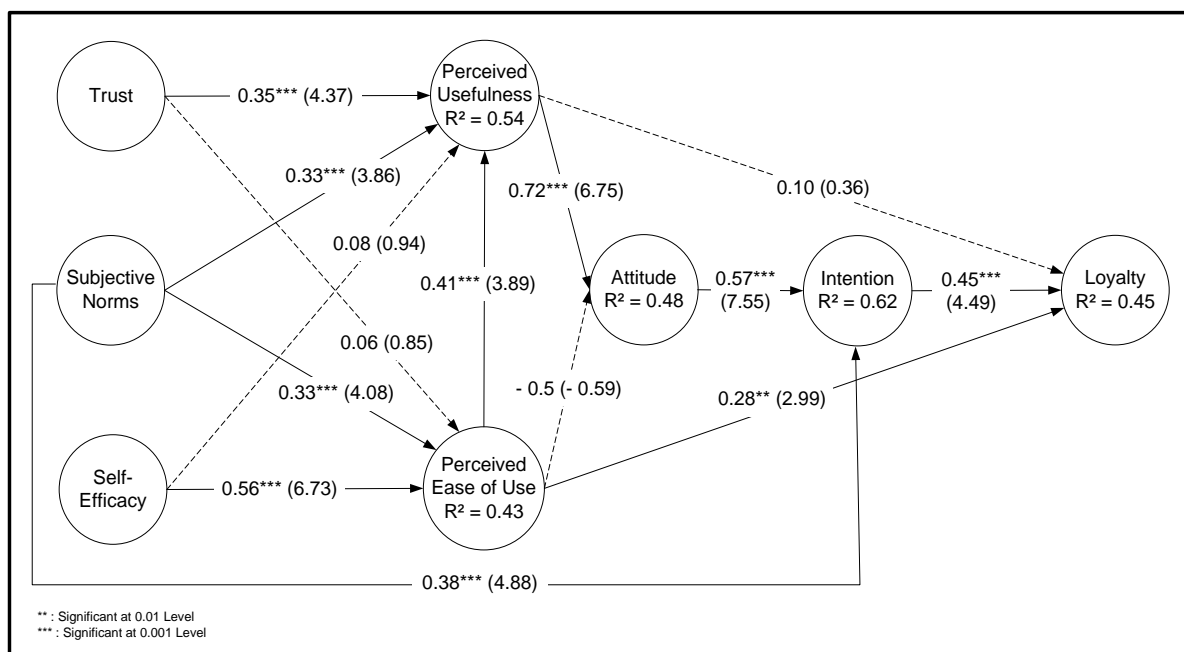
According to Figure 6.2, there are 14 regression weights (10 significant and 4 insignificant). The results for the relationships from Trust, Subjective Norms and Self-Efficacy on Perceived Ease of Use show that there are significant and positive effects from Subjective Norms and Self-Efficacy on Perceived Ease of Use with 0.33 (t = 4.083, p < 0.001) and 0.56 (t = 6.73. p < 0.001), respectively. However, for the relationship between Trust and Perceived Ease of Use, the findings show that there is insignificant positive relationship: .06 (t = .86, p = 0.40). Perceived Ease of Use accounted for .43 of the variance by Trust, Subjective Norms, and Self-Efficacy. In terms of the relationship from Self-Efficacy, Trust, Subjective Norms, and Perceived Ease of Use on Perceived Usefulness, the findings show that there are significant and positive effects from Trust, Subjective Norms, and Perceived Ease of Use on Perceived Usefulness with .35 (t = 4.37, p < 0.001), .33 (t = 3.86, p < 0.001), and .41 (t = 3.89, p < 0.001), respectively. Perceived Usefulness was explained by .54 of variance by Self-Efficacy, Trust, Subjective Norms, and Perceived Ease of Use. The results also show that the relationships from both Perceived Ease of Use and Perceived Usefulness on students' Attitude towards Internet banking are different. The relationship between Perceived Ease of Use and students' Attitude is insignificant and negative with regression weight -.05 (t = - .59, p = .56), while there is a positive and significant relationship between Perceived Usefulness and students' Attitudes. Perceived Usefulness and Perceived Ease of Use account for .48 of variance on students' Attitudes (R^2 = .48). In terms of the relationships of both students' Attitudes and Subjective Norms on students' Intentions to use Internet Banking, the results show that both relationships are positive and significant with regression weights of .57 (t = 7.55, p < 0.001) and .38 (t = 4.88, p < 0.001), respectively. Students' Intention was explained as .62 of variance by students' Attitudes and Subjective Norms. In terms of the last three relationships, namely the relationship from students' Intentions, Perceived Ease of Use, and Perceived Usefulness to students' loyalty, the results show that the relationships from Individuals' Intention and Perceived Ease of Use on students' Loyalty are positive and significant, with regression weights of .45 (t = 4.49, p < 0.001) and .28 (t = 2.99, p < 0.01) respectively, while the relationship between Perceived Usefulness and students' Loyalty is positive but insignificant, with regression weight .10 (t = .92, p = .36). Students' Loyalty is explained as .47 of the variance (R^2 = .47). Next chapter (discussion chapter) will provide more details and justification of these results.

6.6.4 Structural Model Examination on the UK

The structural model tested on the sample of the UK provides a better fit. The results show that χ^2 is 581.187, which is less than in the sample of KSA with 336, with 336 degrees of freedom and significant probability value < 0.001. The value of GFI is 0.87, while it is 0.84 in the case of KSA. In terms of CFI, the results show that its value is better than the case of KSA. It is 0.94 in the UK case, while it is 0.90 in the case of KSA. RMSEA is less in the UK than in KSA: it is 0.051 in the UK, while it is 0.063 in KSA with 90% confidence between 0.044 and 0.058. According to these results, it can be concluded that the structural model fits well for both countries, but it provides better results for the UK sample than in the KSA sample. The next figure shows the regression weights between the constructs, t values, and squared multiple correlations (R^2) based on the UK sample.

Figure 6.3: Structure Model Results (the UK)
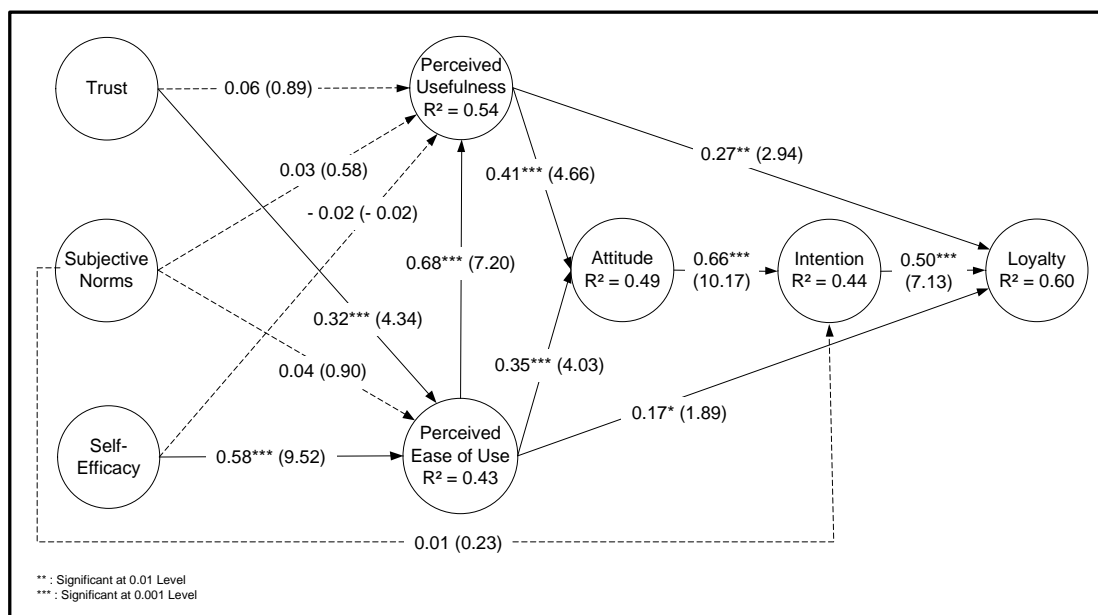
In the case of the UK, Figure 6.3 shows that there are 8 significant and 5 insignificant regression weights. In terms of the relationships of Self-Efficacy, Trust and Subjective Norms on Perceived Ease of Use, the findings show that the there are positive and significant effects for Self-Efficacy and Trust on Perceived Ease of Use, with regression weights of .58 (t = 9.52, p < 0.001) and .32 (t = 4.34, p < 0.001) respectively, while there is a positive but insignificant effect for Subjective Norms on Perceived Ease of Use, with regression weight .05 (t = .90, p = .37). Perceived Ease of Use is explained as .44 of the variance by Self-Efficacy, Trust and Subjective Norms. It can also be noted from the figure that there are

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insignificant effects for Self-Efficacy, Trust and Subjective Norms on Perceived Usefulness with regression weights -.02 (t = -.23, p = .82), .06 (t = .89, p = .37), and .03 (t = .58, p = .56), respectively. However, the relationship between Perceived Ease of Use and Perceived Usefulness is significant and positive with regression weight .68 (t = 7.20, p < 0.001). Perceived Usefulness accounts for .48 of variance due to Self-Efficacy, Trust, Subjective Norms and Perceived Ease of Use. The findings show that there are positive and significant effects from both Perceived Ease of Use and Perceived Usefulness on students' Attitudes with regression weights .35 (t = 4.03, p < 0.001) and .41 (t = 4.65, p < 0.001) respectively. Students' Attitudes account for .49 of the variance. In terms of the relationships from students' Attitudes and Subjective Norms on students' Intentions, the findings show that, there is a positive and significant effect from students' Attitudes on students' Intentions with regression weight .66 (t = 10.17, p < 0.001), while there is insignificant effect from Subjective Norms on students' Intentions with regression weight .01 (t = .23, p = 0.82). The results show that there are positive and significant effects from students' Intentions Perceived Usefulness and Perceived Ease of Use on students' Loyalty with regression weights .50 (t = 7.13, p < 0.001), 0.27 (t = 2.94, p < 0.01) and 0.17 (t = 1.89, p = .05) respectively. Students' loyalty accounts for .60 of the variance. The most significant construct that have no influence on UK's students is subjective norms. The results show that there is no significant influence of subjective norm on any another constructs in the model. More explanation will be provided in the following chapter section.

6.6.5   Hypnotises Results (KSA and the UK)

According to the final model results, there are 14 hypotheses. Eleven hypotheses were initially developed for this study and three hypotheses (H12, H13 and H14) were developed based on the data driven. These new three relationships are between Perceived Usefulness and Customers' Loyalty (H12), Perceived Ease of Use and Customers' Loyalty (H13), and Subjective Norms and Behavioural Intentions (H14). Table 6.13 shows the hypotheses results and the conclusions across KSA and the UK. It can be noted that there are some differences and similarities in the results. The following will highlight those differences and similarities in brief and more discussion will be provided in the following chapter.

In terms of the differences, Table 6.13 shows that seven hypotheses are different between the countries. The relationships between Trust and Perceived Usefulness (H5), Subjective Norms and Perceived Usefulness (H6), Subjective Norms and Intention (H14), Subjective Norms

and Perceived Ease of Use (H10). In addition, the relationship between Trust and Perceived Ease of Use (H9), Perceived Usefulness and Loyalty (H12), and Perceived Ease of Use and Attitude (H4) are supported in the UK, while in KSA these relationships are rejected.

In terms of the similarities, there are seven hypotheses that are similar across the countries. The relationship between Self-efficacy and Perceived Ease of Use (H11), Perceived Usefulness and Attitude (H3), Perceived Ease of Use and Perceived Usefulness (H8), Attitude and Intention (H2), and Intention and Loyalty (H1) are supported across KSA and the UK. The relationship between Perceived Ease of Use and Loyalty (H13) is supported in both KSA and the UK. While the last relationship between Self-efficacy and Perceived Usefulness (H7) is rejected in KSA and the UK.

In summary, in terms of KSA, there are ten hypotheses that are supported while four are rejected. In the UK, nine hypotheses are supported and five are rejected.

Table 6. 13 : The Hypotheses Results

NO	The hypotheses	KSA					The UK				
		Estimate	S.E.	C.R.	P	Conclusion	Estimate	S.E.	C.R.	P	Conclusion
H1	Customers' behavioural intentions significantly influence their loyalty towards Internet banking in both KSA and the UK.	0.454	0.098	4.494	***	supported	0.499	0.06	7.132	***	Supported
H2	Users' attitudes towards Internet banking significantly influence their intentions to use Internet banking in both KSA and UK.	0.573	0.057	7.552	***	supported	0.663	0.068	10.174	***	Supported
H3	Perceived usefulness significantly influences a person's attitude towards Internet banking in KSA and the UK.	0.723	0.163	6.747	***	supported	0.412	0.111	4.645	***	Supported
H4	Perceived ease of use significantly influences a person's attitude towards Internet banking in KSA and the UK.	-0.05	0.116	-0.591	0.555	Rejected	0.345	0.096	4.032	***	supported
H5	Customers' trust significantly influences perceived usefulness towards Internet banking in KSA and the UK.	0.347	0.074	4.366	***	supported	0.057	0.076	0.888	0.374	Rejected
H6	Subjective norms significantly influence perceived usefulness of Internet banking in both KSA and the UK.	0.325	0.083	3.863	***	supported	0.032	0.042	0.584	0.559	Rejected
H7	Self-efficacy significantly influences perceived usefulness towards Internet banking in KSA and the UK.	0.076	0.042	0.939	0.348	Rejected	-0.017	0.056	-0.225	0.822	Rejected

NO	The hypotheses	KSA					The UK				
		Estimate	S.E.	C.R.	P	Conclusion	Estimate	S.E.	C.R.	P	Conclusion
H8	Perceived ease of use significantly influences perceived usefulness towards Internet banking in KSA and the UK.	0.413	0.095	3.892	***	supported	0.681	0.085	7.201	***	Supported
H9	Customers' trust significantly influences perceived ease of use towards Internet banking in KSA and the UK.	0.056	0.07	0.845	0.398	Rejected	0.318	0.096	4.343	***	Supported
H10	Subjective norms significantly influence perceived ease of use towards Internet banking in KSA more than in the UK.	0.327	0.088	4.083	***	Supported	0.048	0.046	0.895	0.371	Rejected
H11	General self-efficacy significantly influences perceived ease of use towards Internet banking in KSA and the UK.	0.561	0.048	6.731	***	Supported	0.584	0.05	9.521	***	Supported
H12	Perceived usefulness will positive and significant influence customers loyalty in KSA and the UK.	0.099	0.12	0.918	0.359	Rejected	0.271	0.103	2.937	**	Supported
H13	Perceived ease of use will positive and significant influence customers loyalty in Saudi Arabia and the UK.	0.283	0.094	2.991	**	Supported	0.167	0.089	1.887	0.059	Supported
H14	There is positive and significant influence from subjective norm on individuals intention	0.384	0.089	4.876	***	Supported	0.012	0.053	0.229	0.819	Rejected

6.6.6 Mediation's Result

The initial conceptual model that was illustrated in figure 4.1 in section 4.2 (chapter four) proposed that perceived usefulness and ease of use will mediate and facilitate the influence of the external factors (trust, subjective norm and self-efficacy) on students' attitudes towards Internet banking. After the final results, two relationships were added to improve the structural model fits (figure 6.2 for KSA and figure 6.3 for the UK). These new relationships were from perceived usefulness and ease of use on customers' loyalty towards Internet banking. Conceptually, this means that perceived usefulness and ease of use will also mediate the relationships from trust, subjective norm and self-efficacy on students' loyalty towards Internet banking. This section will provide the mediation results of perceived usefulness and ease of use, and whether they mediate the influence of the independent factor on the dependent factor fully or partially. The mediation test in the current study was done on each country separately, because the study would like to examine whether, for example, the mediator role of perceived usefulness is similar on both countries (KSA and the UK).

According to the final structural model that was shown previously in figures 6.2 for KSA and 6.3 for the UK, there are three independent factors (trust, subjective norm and self-efficacy), two mediators (perceived usefulness and perceived ease of use) and two dependent factors (students' attitude and loyalty towards Internet banking). This section will be divided into two subsections. The first section (6.6.6.1) will provide the perceived usefulness's role to mediate the relationships from independent factors to dependent factors on each country one by one. The second subsection (6.6.6.2) illustrates the mediation role of perceived ease of use to facilitate the influence of independent factors on dependent factors on each country.

6.6.6.1 The Mediation Role of Perceived Usefulness

Table 6.14 shows the role of perceived usefulness to mediate the relationships of trust, subjective norm and self-efficacy on the dependent factors (loyalty and attitude). In addition, the table shows whether the mediation role is supported in each country, or supported in one country but not in another.

According to the KSA sample, the results indicate that perceived usefulness fully mediates the relationship from trust to loyalty in the case of KSA, while it partially mediates the influence in the UK sample, as indicated by changing in the influence from significant to insignificant in the case of KSA and significant reduction in the case of the UK. The results

indicate the influence of trust on loyalty perception through perceived usefulness. Thus, there is no direct influence in the case of KSA, while in the case of the UK loyalty perception was influenced directly and indirectly by trust perception. The influence of subjective norm on students' loyalty towards Internet banking is partially mediated by perceived usefulness in both countries. Perceived usefulness partially mediates the influence of self-efficacy on students' loyalty towards Internet banking in the KSA case and fully mediates the influence in the case of the UK.

In terms of the mediation role of perceived usefulness from independent constructs on the dependent construct (attitude), the results show that perceived usefulness partially mediates the effects of trust and subjective norm on students' attitude towards Internet banking in both countries. It can also be noted that the influence of self-efficacy on students' attitude is fully mediated by perceived usefulness in the case of KSA and partially mediated in the case of the UK.

Table 6. 14 : The Mediation Results of Perceived Usefulness (PU)

The Country	The Relationship			Model (1) the direct relationship				Model (2) the direct relationship when PU is included				The Conclusion
				Regression Weight				Regression Weight				
				Estimate	S.E.	C.R.	P	Estimate	S.E.	C.R.	P	
KSA	Loy	<---	T	0.31	0.10	3.49	***	0.04	0.10	0.47	0.64	Full Mediation
	Loy	<---	SN	0.63	0.12	5.76	***	0.47	0.12	4.43	***	Partial Mediation
	Loy	<---	SE	0.40	0.05	4.93	***	0.20	0.05	2.51	0.01	Partial Mediation
	Att	<---	T	0.40	0.13	4.86	***	0.11	0.10	5.03	***	Partial Mediation
	Att	<---	SN	0.52	0.16	5.86	***	0.24	0.13	2.98	0.00	Partial Mediation
	Att	<---	SE	0.33	0.06	4.82	***	0.06	0.06	0.92	0.36	Full Mediation
The UK	Loy	<---	T	0.40	0.12	4.32	***	0.22	0.10	3.02	0.00	Partial Mediation
	Loy	<---	SN	0.30	0.06	4.02	***	0.24	0.05	3.75	***	Partial Mediation
	Loy	<---	SE	0.32	0.06	4.39	***	0.06	0.06	0.90	0.37	Full Mediation
	Att	<---	T	0.43	0.13	4.83	***	0.25	0.11	3.61	***	Partial Mediation
	Att	<---	SN	0.18	0.07	2.66	0.01	0.12	0.06	2.08	0.04	Partial Mediation
	Att	<---	SE	0.41	0.06	6.43	***	0.19	0.06	2.93	0.00	Partial Mediation

6.6.6.2   The Mediation Role of Perceived Ease of Use

According to Table 6.15, it can be noted that the influences of trust and subjective norm on students' loyalty towards Internet banking are partially mediated by perceived ease of use, while perceived ease of use is fully mediated by the influence of self-efficacy on students' loyalty towards Internet banking.

In terms of the students' attitude towards Internet banking, the results show that perceived ease of use partially mediates the influence of trust, subjective norm on students' attitude in both countries, while it fully mediates the influence of self-efficacy on students' attitude.

Table 6. 15 : The Mediation Results of Perceived Ease of Use (PE)

The Country	The Relationship			Model (1) the direct relationship				Model (2) the direct relationship when PE is included				The Conclusion
				Regression Weight				Regression Weight				
				Estimate	S.E.	C.R.	P	Estimate	S.E.	C.R.	P	
KSA	Loy	<---	T	0.31	0.10	3.49	***	0.18	0.09	2.25	0.02	Partial Mediation
	Loy	<---	SN	0.63	0.12	5.76	***	0.48	0.11	4.75	***	Partial Mediation
	Loy	<---	SE	0.40	0.05	4.93	***	0.10	0.06	1.02	0.31	Full Mediation
	Att	<---	T	0.40	0.13	4.86	***	0.34	0.13	4.17	***	Partial Mediation
	Att	<---	SN	0.52	0.16	5.86	***	0.44	0.15	4.88	***	Partial Mediation
	Att	<---	SE	0.33	0.06	4.82	***	0.17	0.08	1.85	0.07	Full Mediation
The UK	Loy	<---	T	0.40	0.12	4.32	***	0.20	0.10	2.54	0.01	Partial Mediation
	Loy	<---	SN	0.30	0.06	4.02	***	0.24	0.06	3.72	***	Partial Mediation
	Loy	<---	SE	0.32	0.06	4.39	***	-0.08	0.07	-0.85	0.39	Full Mediation
	Att	<---	T	0.43	0.13	4.83	***	0.21	0.11	3.01	0.00	Partial Mediation
	Att	<---	SN	0.18	0.07	2.66	0.008	0.12	0.06	2.02	0.04	Partial Mediation
	Att	<---	SE	0.41	0.06	6.43	***	0.06	0.08	0.76	0.45	Full Mediation

6.7 Stage Five: Invariance Analysis

In this stage, several invariance analyses were performed to examine whether the proposed model can be generalized across different samples. As stated in the previous chapter (section 5.10.5), the aim of cross-validation is to provide a second confirmation of the measurement theory and to enable researchers to understand thoroughly the extent to which the results are perceived similarly in both groups (Hair et al., 2006).

According to the Hair et al. (2006), the invariance analyses can be performed in five levels. The first level is loose cross-validation; the second level is factor structure equivalence; while the third level is factor loading equivalence. The fourth is the structural weight equivalence and the final level is the latent mean equivalence. In the current study, four invariance analyses were performed and all the four levels were conducted on each invariance analysis. The first invariance analysis will be the comparison between two samples (KSA and the UK samples) (section 6.7.1). The second is between low and high uncertainty groups (section 6.7.2), while the third is between male and female (section 6.7.3). The last invariance analysis is between low and high experiences groups (section 6.7.4). These sections are illustrated below.

6.7.1 Multiple Groups Analysis (Invariance Analysis) across KSA and the UK

According to the above discussion, five invariance analysis levels were performed across the groups of KSA and the UK (loose cross-validation, factor structure equivalence, factor loading equivalence, structural weight equivalence, and latent mean equivalence). The aim of these invariance levels analyses is to test whether the structural model shows cross-validation between the two groups of respondents (KSA and the UK). The following will start with examining the fit test (loose cross-validation).

Loose cross-validation

This test will examine the structural model on both countries separately. Fit indices, factor loading and modification indices will be highlighted and examined for each country. This section will start by examining the structural model on the respondents from KSA. Once the KSA's model provides an adequate model fit, then the same structural model will be applied and examined on the respondents from the UK. Loose cross-validation was tested and supported and the results were provided in the above sections (6.6.3 and 6.6.4). The analysis

will proceed with testing the factor structural equivalence on both countries simultaneously, rather than separately as in loose cross-validation.

Factor Structure Equivalence

This test examines the original measurement mode in both samples (KSA and the UK). This model is called the unconstrained or totally free model because all patterns of free and fixed parameters are the same in all groups tested. According to the results, χ^2 is 1251.515 with 672 degrees of freedom and significant probability value $p < 0.001$. The RMSEA is .040 with a 90% confidence interval of 037 to .044. The CFI is .92. These results indicate that the same factor structure is appropriate for either sample. It can be concluded that the factor structure equivalence is supported and configural invariance for the KSA and the UK comparison is obtained. The analysis will proceed to examine the factor loadings equivalence in the following section.

Factor Loadings Equivalence

In this examination, the factor loadings equivalence model (measurement weights) will be compared to the unconstrained model. There are two levels of this examination. The first level is Full Metric Invariance, where all factor loadings are constrained to be equal across both groups (Hair et al., 2006). If the Full Metric Invariance was not supported so that the analysis will test the Partial Loadings Equivalence (second level) where just two factor loadings on each construct will be estimated and constrained to be equal across the two groups (KSA and the UK).

According to the results, the Chi-Square results for the Unconstrained and Measurement Weights models are 1251.515 and 1299.308, respectively. In terms of the differences in the Chi-Square for these two models, the results show that they are significantly different. $\Delta\chi^2$ is 47.793 with 20 degrees of freedom and $p < 0.001$. Therefore, it can be concluded that the full metric invariance was not supported. Accordingly, the analysis will proceed to examine the partial loadings equivalence where only two factor loadings per construct will be constrained to be equal across the groups.

In the current situation, there are 28 factor loadings in the measurement model. Table 8.16 in Appendix 19 shows the results that indicated that there are at least two factor loadings in each

construct are insignificant difference between the two groups. This result supports the partial loadings equivalence.

The analysis constraints indicate two factor loadings per construct to be equal between the groups. This means that there are 16 factor loadings that will be constrained to be equal across KSA and the UK. The results show that, the Chi-Square results for the Unconstrained and Measurement Weights models are 1251.515 and 1233.144 respectively. In terms of the differences in the Chi-Square for these two models, the results show that there is insignificant difference between the two groups: $\Delta\chi^2$ is 18.371 with 16 degrees of freedom and p = 0.30. These results indicate that the measurement items are understood similarly across both groups. Accordingly, it can be concluded that the partial loadings equivalence is supported.

Structural Weights Equivalence

In this examination, all the relationships in the structural model are constrained to be equal across both groups. Two models will be compared and Chi-Square will be calculated to examine whether these two models are statistically significant. The first model is the unconstrained model, while the second model is the structural weights model. When the Chi-Square is significantly different between these models, it can be concluded that the structural weights between the groups (KSA and the UK) are not equivalent. According to the current results, the Chi-Square results for the Unconstrained and Measurement Weights models are 1251.515 and 1371.077 respectively. The results show that the difference between these two models is statistically significant: $\Delta\chi^2$ is 119.562 with 34 degrees of freedom and p < 0.001. Table 6.16 shows the results.

Table 6. 16 : Invariance Analysis for structural Weights model for the two samples (KSA and the UK)

Model	DF	CMIN	P	NFI Delta-1	IFI Delta-2	RFI rho-1	TLI rho2
Structural weights	34	119.562	.000	.014	.016	.007	.008

The analysis proceeds to determine the sources of the non-invariance. $\Delta\chi^2$, Δdf and fit indices (CFI and RMSEA) will be provided in the following table. Table 6.17 shows the invariance analysis. There are 14 relationships but just 4 of them show statistically insignificant differences. This means that the samples in each country perceived these relationships

similarly. These relationships are not highlighted in the table below. The samples in each country provide similar values and importance for the relationships between their Self-efficacy and Perceived Usefulness, and between Intentions to Use Internet banking, Perceived Ease of Use, and Usefulness and their loyalty with their Internet banking. However, the results show that there are 10 relationships that have statistically significant differences between the samples. These relationships are highlighted in black. This means that both samples perceive the importance of the relationships differently. For example, the influences of Subjective Norms on Perceived Usefulness, Ease of Use and behavioural Intention were significant in the case of KSA but not in the case of the UK. accordingly, it can be concluded that the UK's students did not perceived Subjective norm as an importance construct influencing their opinions towards using Internet banking.

Table 6. 17 : Structural weight Equivalence (Invariance Analysis between the samples KSA and the UK)

Relationships			Invariance Analysis						
			χ^2	D/F	CFI	RMSEA	Δ D/F	$\Delta\chi^2$	P
PE	**<---**	**SE**	**1256.046**	**673**	**0.92**	**0.04**	**1**	**4.531**	**0.033**
PE	**<---**	**T**	**1260.908**	**673**	**0.92**	**0.041**	**1**	**9.393**	**0.002**
PE	**<---**	**SN**	**1263.006**	**673**	**0.92**	**0.041**	**1**	**11.491**	**0.001**
PU	<---	SE	1252.043	673	0.92	0.04	1	0.528	0.467
PU	**<---**	**T**	**1257.085**	**673**	**0.92**	**0.04**	**1**	**5.57**	**0.018**
PU	**<---**	**SN**	**1262.235**	**673**	**0.92**	**0.041**	**1**	**10.72**	**0.001**
PU	<---	PE	1254.96	673	0.92	0.04	1	3.444	0.063
Att	**<---**	**PE**	**1259.972**	**673**	**0.92**	**0.041**	**1**	**8.457**	**0.004**
Att	**<---**	**PU**	**1260.718**	**673**	**0.92**	**0.041**	**1**	**9.203**	**0.002**
Int	**<---**	**Att**	**1259.125**	**673**	**0.92**	**0.041**	**1**	**7.61**	**0.006**
Int	**<---**	**SN**	**1268.971**	**673**	**0.92**	**0.041**	**1**	**17.456**	**0.000**
Loy	<---	Int	1251.526	673	0.92	0.04	1	0.011	0.917
Loy	<---	PE	1252.255	673	0.92	0.04	1	0.74	0.39
Loy	<---	PU	1252.862	673	0.92	0.04	1	1.347	0.246

For more investigation, Table 6.18 shows the effect size (direct, indirect, and total effect). The purpose of providing this information is to determine what groups (KSA and the UK) have larger influence specifically on the significant relationships that shown in the above table. For example, the relationship between Self-efficacy and Perceived Ease of Use is statistically significant between the groups (KSA and the UK), as stated in Table 6.17. The following Table 6.18 shows which samples affect the relationship more than another does.

According to the results, it can be seen that the sample of the UK have total affect on the relationship more that the sample of KSA. The total affect of the sample of the UK is 0.48, while the total effect of the sample of KSA is 0.32, and so on.

Table 6. 18 : Un-standardised indirect, direct and total effects (KSA and UK samples)

Relationships			KSA			UK		
			Direct	Indirect	Total Effects	Direct	Indirect	Total Effects
PE	<---	SE	0.32	0	0.32	0.476	0	0.476
PE	<---	T	0.059	0	0.059	0.419	0	0.419
PE	<---	SN	0.359	0	0.359	0.041	0	0.041
PU	<---	SE	0.039	0.119	0.158	-0.013	0.291	0.279
PU	<---	T	0.325	0.022	0.346	0.067	0.256	0.324
PU	<---	SN	0.321	0.133	0.454	0.024	0.025	0.049
PU	<---	PE	0.371	0	0.371	0.613	0	0.613
Att	<---	PE	-0.069	0.408	0.34	0.389	0.316	0.705
Att	<---	PU	1.1	0	1.1	0.516	0	0.516
Int	<---	Att	0.433	0	0.433	0.69	0	0.69
Int	<---	SN	0.436	0.205	0.641	0.012	0.029	0.041
Loy	<---	Int	0.439	0	0.439	0.427	0	0.427
Loy	<---	PE	0.283	0.106	0.388	0.168	0.393	0.56
Loy	<---	PU	0.111	0.209	0.32	0.302	0.152	0.454

Structural Means Equivalence

In the current study, the mean differences on both groups (KSA and the UK) are examined in order to understand whether the samples value the constructs under investigation similarly. The results show that there is a significant difference between the groups, as indicated by the differences in the Chi-square, its degrees of freedom and probability value. The results indicate that the Chi-Square results for the unconstrained model and structural mean model are 1184.360 and 1440.457, respectively. The results show that the differences between these two model is statistically significant ($\Delta\chi^2 = 256.096$, $\Delta df = 28$, and $p < 0.001$). In terms of the structural mean model fits indices, the results show that CFI is .90 and RMSEA is .045. Table 6.19 shows these results.

Table 6. 19 : Invariance Analysis for structural means model for the two samples (KSA and the UK)

Model	DF	CMIN	P	NFI Delta-1	IFI Delta-2	RFI rho-1	TLI rho2
Structural means	28	256.096	.000	.031	.034	.027	.030

Table 6.20 shows the sources of the mean differences between the two groups. The results show that five constructs are perceived to be differences between the groups: Subjective Norm, Perceived Ease of Use, Attitude, Self-efficacy, and Trust. The importance of these constructs is viewed and weighted differently. For example, the UK sample perceived Subjective Norm, Attitude and Trust more important than the KSA sample, with estimation values of 0.835, 0.21, and 0.165, respectively. In contrast, the KSA sample perceived Ease of Use and Self-efficacy more important than in the UK sample, with estimation values of - 0.186 and - 0.288. The results also indicate that both samples perceived the importance of Intention to Use Internet banking, Loyalty and Perceived Usefulness similarly, with estimation value -0.099 (t = -1.724, p = 0.085), -0.03 (t = -0.541, p = 0.588) and 0.071 (t = 1.42, p = 0.156), respectively.

Table 6. 20 : Means: (KSA - Unconstrained)

The Constructs	Estimate	S.E.	C.R.	P
SN	0.835	0.078	10.683	***
PE	-0.186	0.055	-3.375	***
Att	0.21	0.07	2.988	0.003
Int	-0.099	0.057	-1.724	0.085
Loy	-0.03	0.056	-0.541	0.588
SE	-0.288	0.082	-3.51	***
PU	0.071	0.05	1.42	0.156
T	0.165	0.058	2.848	0.004

6.7.2 Multiple Groups Analysis (Invariance Analysis) across Low and High Uncertainty Avoidance

One cultural dimension is used in the current study (Uncertainty Avoidance). This section will start with a descriptive process, showing how this dimension is divided into two groups (low and high uncertainty avoidance, followed by a descriptive analysis, and then a statistical analysis that shows whether there is any moderating effect between the constructs in the

study's framework. In other words, whether there is any influence of Uncertainty Avoidance on the relationships between the constructs in the structural model.

Grouping Moderator Process

SPSS is used to create two groups. The first group is high uncertainty avoidance and the second group is low uncertainty avoidance. Each group contains individuals from both countries who have similar views about uncertainty avoidance. For example, the first group (high uncertainty avoidance) includes individuals from KSA and UK. In order to create these groups, the middle point (median) has to be identified. This middle point will help to divide each group. In order to identify the middle point, frequencies must be chosen from the descriptive statistics option in the SPSS (Analysis Menu), The SPSS is asked to divide these variables into two groups (50%) and the result is then ordered. According to the results in Table 6.21 the median is 4. This means that individuals who scored ≤ 4 will indicate low uncertainty avoidance and be coded 1 in SPSS, while individuals who scored > 4 will indicate high uncertainty avoidance and be coded 2.

Table 6. 21 : Uncertainty Avoidance Median Point (KSA & the UK)

N	Valid	532
	Missing	0
Mean		3.98
Median		4
Percentiles	50	4

The following is the descriptive analysis, indicating how many individuals there are in each group from both countries and how many individuals from either country in each group.

Data Descriptive

Table 6.22 shows the descriptive analysis concerning Uncertainty Avoidance (UA) groups (low and high). It can be noted that the sample of KSA shows slightly high UA, whilst the sample of the UK shows low UA. This means that the UK's students are more risk-taking than their peers in KSA. More specifically, in terms of the low UA group, the results show that there are 330 students from both countries who have low UA towards using Internet banking. In this group, it can also be noted that the students from the UK's sample are more in number than the students of the KSA sample: 210 (74%) and, 120 (48%) respectively. In terms of the high uncertainty avoidance, it can be noted that there are 202 out of 532 show

high uncertainty avoidance toward using Internet banking. There are 128 (52%) students from the sample of KSA, while there are 74 students (26%) from the sample of the UK. In general, the students from the KSA sample show slightly higher uncertainty avoidance, 128 (52%), while the students from the UK sample show lower uncertainty avoidance, 210 (74%).

Table 6. 22 : Uncertainty Avoidance Groups

Groups	KSA & the UK		KSA		UK	
	NO	%	NO	%	NO	%
Low uncertainty Avoidance	330	62	120	48	210	74
High uncertainty Avoidance	202	38	128	52	74	26
Total	532	100	248	100	284	100

Loose cross-validation

AMOS v16 is used to test whether the structural model fits well on both groups before structural weights' examination. Table 6.23 shows the model fit indices across low and high UA. In general, the results indicate that the structural model fits well across the groups. In terms of the low UA, χ^2 is 701.973 with 336 degrees of freedom and significant $p < 0.001$. GFI is .86 and CFI is .92. RMSEA value is 0.058 with 90% confidence between 0.052 and 0.064. In terms of the high UA, the results show that χ^2 is 603.118 with 336 degrees of freedom and significant $p < 0.001$. GFI is .83 and CFI is .90. RMSEA is 0.063 with 90% confidence between 0.055 and 0.071.

Table 6. 23 : Fit Indices Results (Low and High) UA

Fit indices	Low UA	High UA
CMIN	701.973	603.118
DF	336	336
P	0	0
CMIN/DF	2.089	1.795
RMR	0.07	0.067
GFI	0.86	0.83
AGFI	0.83	0.80
CFI	0.92	0.90
RMSEA	0.058	0.063
LO 90	0.052	0.055
HI 90	0.064	0.071

Factor Structure Equivalence

The original measurement model in both low and high uncertainty avoidance samples will be examined in order to test whether the same factor structure is supported across the group. In general, the unconstrained or totally free model is supported. The results indicate that chi-square is 614.737 with 322 degrees of freedom and a significant probability value. GFI and CFI are within the acceptable values at 0.88 and 0.93, respectively. The badness of fit indices (RMSEA) is also within the acceptable limit at 0.053 with 90% confidence for the value between 0.046 and 0.059. Accordingly, it can be concluded that the factor structure equivalence is supported across low and high uncertainty groups. The analysis will proceed to examine the factor loadings equivalence in the following section.

Factor Loadings Equivalence

As stated above, the Chi-square will be compared between the measurement and unconstrained models. The results show that the χ_2 in the measurement model is 1343.635, while it is 1305.300 in the unconstrained model. The difference in Chi-square in both models is statistically significant; $\Delta\chi^2$ is 38.335 with $p < 0.05$. This indicates that the groups did not understand all the measurement items similarly. This means the full metric equivalence is not supported.

The analysis proceeds to test partial metric equivalence. In this test, two items per construct must be constrained to be equal across groups. These two items per construct must have insignificant differences, and the Chi-square between the measurement and unconstrained models must have insignificant differences ($p > 0.05$). According the measurement model, there are 28 items. Eight items will be constrained to one, while the other (16 items) will be constrained to be equal across the groups (Low and High UA). Appendix 20 shows the differences in factor loadings across low and high UA

Two measurement items are constrained to be equal across both groups (low UA and high UA). The difference in Chi-square is statistically insignificant between the measurement and constrained models. $\Delta\chi^2$ is 22.911 with insignificant probability value $p = 0.12$. This indicates that the groups understand the questions (items) partially. It can be concluded that the partial metric equivalence is supported. The analysis will proceed to examine the structure model equivalence so that the relationships can be examined for differences.

Structural Weights Equivalence

As stated above, two models will be compared (structural and constrained). If the Chi-square between these models is statistically different, it can be concluded that the relationships between the constructs and their importance are statistically different across the UA groups (low and high). The results show that the Chi-squares between the structural and constrained models are 1394.87 and 1305.3, respectively. The difference in Chi-squares is statistically different ($\Delta\chi^2 = 89.573$, df = 34, and p < 0.001). This means that the importance of the relationships in the structure mode is statistically different across the groups. The following analysis will investigate whether the relationship between the constructs is statistically significant across the groups. The relationships will be examined one by one. The results show that the three relationships are statically different between the groups. The first relationship is between Trust and Perceived Usefulness. $\Delta\chi^2$ between the structural and constrained model is 14.544, with significant probability value p < 0.001. The second significant relationship is the relationship between Perceived Usefulness and Attitude, with $\Delta\chi^2$ (10.043) and p < 0.001. In terms of the last relationship, $\Delta\chi^2$ between the structural and constrained model is 4.593 and p < 0.05. These three relationships are highlighted in the Table 6.24.

Table 6. 24 : Structural Weight Equivalence (Invariance Analysis between low and high UA)

Relationships			Invariance Analysis						
			χ^2	D/F	CFI	RMSEA	Δ D/F	$\Delta\chi^2$	P
PE	<---	SE	1306.695	673	0.904	0.042	1	1.395	0.237
PE	<---	T	1306.822	673	0.906	0.042	1	1.522	0.217
PE	<---	SN	1306.422	673	0.907	0.042	1	1.122	0.289
PU	<---	SE	1305.412	673	0.907	0.042	1	0.112	0.738
PU	**<---**	**T**	**1319.843**	**673**	**0.905**	**0.043**	**1**	**14.544**	**0.000**
PU	<---	SN	1307.176	673	0.906	0.042	1	1.876	0.171
PU	<---	PE	1306.535	673	0.907	0.042	1	1.235	0.266
Att	<---	PE	1305.672	673	0.907	0.042	1	0.373	0.542
Att	**<---**	**PU**	**1315.342**	**673**	**0.905**	**0.042**	**1**	**10.043**	**0.002**
Int	<---	Att	1305.307	673	0.907	0.042	1	0.007	0.932
Int	<---	SN	1305.49	673	0.907	0.042	1	0.19	0.663
Loy	<---	Int	1305.417	673	0.907	0.042	1	0.117	0.732
Loy	<---	PE	1306.884	673	0.906	0.042	1	1.584	0.208
Loy	**<---**	**PU**	**1309.893**	**673**	**0.906**	**0.042**	**1**	**4.593**	**0.032**

The following analysis will examine the total effect on these three significant relationships so that the total effect from each group can be identified. From Table 6.25 it can be identify which groups affect the relationships more than another. In terms of the relationship between Trust and Perceived Usefulness, the results show that the relationship is affected by the low UA group more than the high UA group, with total effects .47 and .10, respectively. Both groups provide equal effect in terms of the relationship between Perceived Usefulness and Attitude. The last significantly different relationship is between Perceived Usefulness and Loyalty, with the results showing that high UA group provides a larger total effect than the low UA group, with 0.574 and 0.37, respectively.

Table 6. 25 : Un-standardised Indirect, Direct and Total Effects (Low and High) UA Groups

Relationships			Low UA			High UA		
			Direct	**Indirect**	**Total Effects**	**Direct**	**Indirect**	**Total Effects**
PE	<---	SE	0.438	0	0.438	0.347	0	0.347
PE	<---	T	0.16	0	0.16	0.311	0	0.311
PE	<---	SN	0.072	0	0.072	0	-0.006	-0.006
PU	<---	SE	-0.019	0.242	0.223	0.003	0.144	0.147
PU	**<---**	**T**	**0.382**	**0.088**	**0.47**	**-0.033**	**0.129**	**0.096**
PU	<---	SN	0.062	0.04	0.101	0.15	-0.003	0.147
PU	<---	PE	0.551	0	0.551	0.415	0	0.415
Att	<---	PE	0.065	0.565	0.629	0.147	0.175	0.322
Att	**<---**	**PU**	**1.024**	**0**	**1.024**	**0.421**	**0**	**0.421**
Int	<---	Att	0.616	0	0.616	0.626	0	0.626
Int	<---	SN	-0.003	0.067	0.064	0.031	0.038	0.069
Loy	<---	Int	0.431	0	0.431	0.386	0	0.386
Loy	<---	PE	0.29	0.221	0.511	0.124	0.274	0.397
Loy	**<---**	**PU**	**0.098**	**0.272**	**0.37**	**0.472**	**0.102**	**0.574**

Latent Means Equivalence

For further investigation, the analysis will examine the mean differences between the groups so that the importance difference of each single construct can be identified between the groups. Before examining each individual construct, the analysis will first examine the difference between the structure mean model and the unconstrained model. If the Chi-square is statistically different between the models, then the analysis will examine the constructs one by one in order to identify the source of the differences. The result shows that the Chi-squares

in the structural means and unconstrained models are 1364.869 and 1214.661, respectively. The difference in Chi-square between the models is statistically different. According to the result, $\Delta\chi^2$ is 150.208 with 28 degrees of freedom and p < 0.001, indicating that the groups provide significantly different views concerning the constructs' importance. As a result, the source of any significant difference will be examined and the constructs' means will be tested individually. According to the results, it can be noted that there are significant differences between the two groups on all constructs. Students in the high UA group value the constructs more than students in the low UA group. The Attitude construct is the larger significant difference, which means that individuals in high UA group view Attitude is an important construct that affects their decision towards Internet banking. It is followed by the Self-efficacy construct, then Subjective Norm, and Perceived Usefulness. The following Table 6.26 shows the latent mean difference across low and high uncertainty avoidance groups:

Table 6. 26 : Means: (Low UA - Unconstrained)

Constructs	Estimate	S.E.	C.R.	P
SN	-0.391	0.077	-5.05	***
PE	-0.279	0.06	-4.687	***
Att	-0.574	0.064	-8.968	***
Int	-0.374	0.058	-6.464	***
Loy	-0.344	0.058	-5.895	***
SE	-0.439	0.078	-5.647	***
PU	-0.394	0.053	-7.422	***
T	-0.259	0.057	-4.563	***

6.7.3 Multiple Groups Analysis (Invariance Analysis) across Gender (Male and Female)
Whether the framework is statistically equivalent across gender (male and female) will be tested in this section. Different levels of invariance analysis will be conducted. The analysis will start by testing the Loose Cross-Validation, and then factor loadings equivalence will be tested, and whether the structural weights are equivalent across gender is examined next. Lastly, direct, indirect and total effects from a construct to another, in addition to examining the latent means, will be determined.

Loose Cross-Validation
The study's structural model will be tested on both males and females from both counties. Table 6.27 shows the fits indices across gender. The results indicate that the structural model fits well across male and female samples, but with some differences. For example, the Chi

square value in the female sample is less than the value in the male sample, with 640.237 and 739.756, respectively. The CMIN/DF value is better in the female sample than the male sample, with 1.905 and 2.202, respectively. CFI in both samples is within the acceptable value > 0.90. The RMSEA value is almost the same across the groups. In general, according to the results, it can be concluded that loose cross-validation is supported and the analysis will be proceed to examine the factor structural equivalence across gender in the following section.

Table 6. 27 : Fit Indices Results (Male and Female) Gender

Fits indices	Structural Model	
	Male	**Female**
CMIN	739.756	640.237
DF	336	336
P	0	0
CMIN/DF	2.202	1.905
RMR	0.087	0.071
GFI	0.85	0.83
AGFI	0.82	0.80
CFI	0.91	0.90
RMSEA	0.063	0.063
LO 90	0.057	0.056
HI 90	0.069	0.071

Factor Structure Equivalence

The measurement model in both samples male and female will be examined so that factor structure can be tested across the group. The results show that the factor structure across the groups is supported. Chi-square is 695.295 with 322 degrees of freedom and significant p value. GFI and CFI are acceptable at 0.91 and 0.95 respectively. RMSEA is within the recommended value < 0.08 at 0.047 with 95% confidence for the value between 0.042 and 0.051. The analysis will proceed to investigate whether the factor loadings are equivalent across males and females in the following section.

Examination of Factor Loadings Equivalence across Gender

In this invariance analysis, two models will be compared (the measurement model and unconstrained model). The Chi-square value will be calculated and provided for this analysis so that whether the difference between these models is statistically significant or not can be

identified. Similar procedures that have been applied across KSA and the UK for low and high uncertainty avoidance groups will be applied in this section. Two levels of invariance analysis will be conducted: full metric equivalence level and partial metric equivalence level.

The results indicate that the Chi-square value for the unconstrained model is 1380.051 and 1425.508 for the measurement model. The differences in the Chi-square value ($\Delta\chi^2$) is 45.457 and statistically significant p < 0.01. Accordingly, it can be concluded that full metric equivalence is not supported so that the analysis will proceed to test for partial metric equivalence where just two measurement items in each construct will be controlled across male and female.

Appendix 21 shows the partial metric results across gender, item by item. First, two items per construct are chosen for this test. These items are highlighted in the table. The results indicate that the unconstrained model's Chi-square value is 1387.150, while it is 1412.203 in the measurement model. $\Delta\chi^2$ is 25.053 with insignificant p = 0.06. According to this result, the partial metric equivalence is supported. With more confidence, the analysis will examine whether the structural model is invariant across gender.

Examination of Structural Weights Equivalence across Gender

The similar procedure that has been conducted in factor loadings equivalence will be carried out in this section, but the difference is that in this section the structural model's Chi-square will be compared to the unconstrained model's Chi-square to examine whether the structural model is equivalent across gender. The results show that the structural model's Chi-square is 1465.766, while the unconstrained model's Chi-square is 1387.150. $\Delta\chi^2$ is 78.616 with significant p value p < .001. Based on this result, it can be concluded that the structural model is non-invariant (not equivalent) across male and female. The next step is to test each relationship individually in order to identify which relationships are not equivalent. In the other words, each relationship will be constrained equally across the groups. Table 6.28 shows the relationships in the structural model: Chi-square, degrees of freedom, CFI, RMSEA, $\Delta\chi^2$, Δ D/F, and p value. It can be noted from the table is that all the relationships are equivalence (insignificant difference in Chi-square values) across gender except two relationships with significant value of Chi-square. These two relationships are the relationships between Subjective Norm and Perceived Ease of Use, and the relationship between Subjective Norm and Perceived Usefulness.

Table 6. 28: Structural Weights Equivalence across Gender (Male and Female)

The Relationships			Invariance Analysis						
			χ^2	D/F	CFI	RMSEA	Δ D/F	$\Delta\chi^2$	P
PE	<---	SE	1380.1	673	0.906	0.045	1	0.047	0.829
PE	<---	T	1382.3	673	0.905	0.045	1	2.297	0.13
PE	**<---**	**SN**	**1392.9**	**673**	**0.904**	**0.045**	**1**	**12.879**	**0.000**
PU	<---	SE	1383.3	673	0.905	0.045	1	3.222	0.073
PU	<---	T	1381.9	673	0.906	0.045	1	1.88	0.17
PU	**<---**	**SN**	**1387.2**	**673**	**0.905**	**0.045**	**1**	**7.152**	**0.007**
PU	<---	PE	1380.3	673	0.906	0.045	1	0.263	0.608
Att	<---	PE	1380.4	673	0.906	0.045	1	0.399	0.528
Att	<---	PU	1381.5	673	0.906	0.045	1	1.398	0.237
Int	<---	Att	1380.9	673	0.906	0.045	1	0.886	0.347
Int	<---	SN	1380.3	673	0.906	0.045	1	0.261	0.61
Loy	<---	Int	1381.3	673	0.906	0.045	1	1.166	0.28
Loy	<---	PE	1381.5	673	0.906	0.045	1	1.411	0.235
Loy	<---	PU	1380.1	673	0.906	0.045	1	0.025	0.875

In order to identify which groups affect these significant relationships, unstandardised indirect, direct and total effects are calculated. Table 6.29 shows these results. In terms of the relationship between Subjective Norm and Perceived Ease of Use, it can be noted that this relationship is affected by the male group more than the female group, with total effect 0.15 and -0.06, respectively. In terms of the relationship between Subjective Norm and Perceived Usefulness, the results show that it is affected more by the male group than the female group, with total effects of 0.24 and 0.003, respectively. This indicates that males are more likely to be affected by the community's members than their own, while female are not influenced by social relationships. The results will explained in more detail in the following chapter, in section 7.6.1.

Table 6. 29 : Un-standardized Indirect, Direct and Total Effects across Gender

The Relationships			Male			Female		
			Direct	Indirect	Total Effects	Direct	Indirect	Total Effects
PE	<---	SE	0.433	0	0.433	0.416	0	0.416
PE	<---	T	0.165	0	0.165	0.346	0	0.346
PE	<---	SN	0.149	0	0.149	-0.065	0	-0.065
PU	<---	SE	0.087	0.183	0.27	-0.042	0.202	0.16
PU	<---	T	0.169	0.07	0.239	0.312	0.168	0.48
PU	<---	SN	0.176	0.063	0.239	0.035	-0.032	0.003
PU	<---	PE	0.423	0	0.423	0.485	0	0.485

The Relationships			Male			Female		
			Direct	Indirect	Total Effects	Direct	Indirect	Total Effects
Att	<---	PE	0.131	0.304	0.435	0.045	0.457	0.502
Att	<---	PU	0.72	0	0.72	0.942	0	0.942
Int	<---	Att	0.656	0	0.656	0.762	0	0.762
Int	<---	SN	-0.008	0.125	0.117	0.025	0	0.026
Loy	<---	Int	0.352	0	0.352	0.473	0	0.473
Loy	<---	PE	0.197	0.231	0.429	0.046	0.344	0.39
Loy	<---	PU	0.31	0.166	0.476	0.337	0.339	0.676

Examination of Latent Means Equivalence across Gender

In this section, the constructs' means differences between the groups will be investigated so that the important differences for each single construct can be identified between the groups. The analysis will first examine the difference between the structure mean model and the unconstrained model. If there is a statistically significant difference in Chi-square values between the models, then the analysis will examine the constructs one by one in order to identify the source of the differences. The results show that the Chi-squares in the structural means and unconstrained models are 1443.182 and 1338.952, respectively. The difference in Chi-square between the models is statistically significant. According to the result, $\Delta\chi^2$ is 104.229 with 28 degrees of freedom and $p < 0.001$. This indicates that the groups provide significantly different views concerning the constructs' importance. As a result, the source of any significant difference will be examined and the constructs' means will be tested individually. Table 6.30 shows the mean differences between male and female. Male means values are provided in the table and females means values will act as a referral group. The results indicate that there are four significant differences between male and female groups: Attitude, Intention, Perceived Usefulness, and Trust have been valued higher for the male group than the female group. On the other hand, Subjective Norm, Perceived Ease of Use, Loyalty, and Self-efficacy are not significantly different across the groups. The results indicate that male have more attitude and intention to use Internet banking. In addition, they perceive the usefulness of using Internet banking and trust the services more than females do. In contrast, females value others' opinions in the community as an important issue for using Internet banking.

Table 6. 30 : Means: (Male - Unconstrained)

The constructs	Estimate	S.E.	C.R.	P
SN	.045	.055	.823	.410
PE	.037	.060	.620	.535
Att	.206	.071	2.901	.004
Int	.148	.063	2.333	.020
Loy	-.039	.053	-.741	.459
SE	.086	.074	1.158	.247
PU	.201	.055	3.633	***
T	.288	.056	5.099	***

6.7.4 Multiple Groups Analysis (Invariance Analysis) across Low and High Internet Banking Experience Groups

This section will start by explaining how Internet banking experience as a new variable is created. The process of creating these two groups (low experience and high Internet banking experience) will be included. Then the study will examine the loose cross-validation, followed by an examination of the regression weight across the groups. The factor loadings equivalence, structural weights equivalence, and latent means equivalence across the groups will be tested.

Experience variable and groups creation process

Question 6 (frequency of use of Internet banking) and question 8 (the average number of financial transactions carried out in each session in Internet banking) in part two of the questionnaire (Appendix 3) will be combined to create the experience variable. Based on this new variable, the sample in both countries (KSA and the UK) can be divided into two groups (Low and High experience).

It can be noted that the question scale is different; number 6 has five options, while the other one has four. In order to process and analysis the data, the question number 8 will be converted from 4 to 5 so that Cronbach's alpha can be calculated and groups can be correctly created. Table 6.31 shows question number 8 with its old scale, the new scale, and the equation used in this process.

Table 6. 31 : Converting the question number 8 scale

Old scale (4)	New scale (5)	The equation
1	1.25	(1*5) / 4 = 1.25
2	2.5	(2*5) / 4 = 2.5
3	3.75	(3*5) / 4 = 3.75
4	5	(4*5) / 4 = 5

The following Table 6.32 shows these two questions. Each one is divided into two groups (low and high experience groups) by using the visual binning option in the SPSS. According to the table, it can be noted that not all individuals having access to the Internet banking carry out transactions. Some individuals access Internet banking but do not do any transactions, obtaining some information or checking the account history without doing any real transactions. The aim of the combination between these two questions (6 and 8) is to find out the individuals who access Internet banking frequently (weekly or daily) and do two and more transactions. This will indicate high Internet banking experience. In addition, the result indicates that Cronbach's alpha is .88 and the correlation between these two questions (6 and 8) is high at .79. These results indicate that the questions measure the same thing and can be combined to create two groups of low and high experience. Using SPSS, a new variable is created, which is the combination of the individuals' scores in the questions number 6 and 8. This is done by using compute variable option in the SPSS. Once this variable is created, it will be divided into two groups. The first group indicates low experience, whilst the second group indicates high experience. This also is done by using the visual binning option in the SPSS. This option will divide the variable according to its middle point. The following table also shows the number of individuals in each group and the percentage. The last row in Table 6.38 is the one that will be used in the invariance analysis. Accordingly, the 532 individuals from both KSA and the UK are placed into two groups. 360 individuals represents the first group (the low experience usage of Internet banking, KSA = 147 (59%) and the UK = 213 (75%), while the second group represents high experience (n = 172), including KSA = 101 (40%) and the UK = 71 (25%). The following sections will explain whether there are any differences between low and high experience groups based on the three levels (measurement weight level, structural weight level, and latent mean level). Before testing across these groups, the model fit indices will be examined so that the invariance analysis will be based on a valid and well fit model. The following section will start by examining the model fit across the groups and will be followed by testing the invariance analysis.

Table 6. 32 : Low and High Experience Groups Results

Question number	The statement	The scale	Experience groups		KSA and the UK		KSA		the UK	
					Frequency	Percent	Frequency	Percent	Frequency	Percent
6	How often do you use Internet banking?	- Non - Twice a year - Monthly - Weekly - Daily	Low	<= 3.00	313	58.8	195	78.6	118	41.5
			High	4.00+	219	41.2	53	21.4	166	58.5
			Total		532	100	248	100	284	100
8	The average number of financial transaction carried out in each session in Internet banking	- None - One transaction - Two transaction - Three transaction and more	Low	<= 2.50	358	67.29	137	55.24	221	77.82
			High	2.51+	174	32.71	111	44.76	63	22.18
			Total		532	100	248	100	284	100
6+8			Low	<= 3.25	360	67.7	147	59.3	213	75
			High	3.26+	172	32.3	101	40.7	71	25
			Total		532	100	248	100	284	100

Loose Cross-Validation

This section will provide the model fits indices results based on the low and high experience groups. Table 6.33 shows the results, which indicate that the structural model fits well across the groups. Chi-square (CMIN) in the high experience group is better than the value in the low experience group with values of 582.544 and 776.451, respectively, and significant probability value. All others values (CMIN/DF, CFI and RMSEA) are within the acceptable recommended values.

Table 6. 33 : Fits Indices Results (Low and High) Experience Groups

Fit indices	Low experience	High experience
CMIN	776.451	582.544
DF	336	336
P	0.000	0.000
CMIN/DF	2.311	1.734
RMR	0.074	0.089
GFI	0.858	0.817
AGFI	0.828	0.779
CFI	0.911	0.90
RMSEA	0.06	0.066

Factor Structure Equivalence

This test examines the original measurement mode in both samples (Low and High Experience Groups). This model is called an unconstrained or totally free model because all pattern of free and fixed parameters are the same in all groups are tested. According to the results, Chi-square (χ^2) is 1359.435 with 672 degrees of freedom and significant probability value $p < 0.001$. The RMSEA is .040 with a 90% confidence interval of .041 to .047. The CFI is .91. These results indicate that the same factor structure is appropriate for either sample. It can be concluded that factor structure equivalence is supported and configural invariance for the comparison of both groups is obtained. The analysis will now proceed to examine factor loadings equivalence in the following section.

Examination of Factor Loadings Equivalence across Low and High Experience Groups

According to Hair et al. (2006), two level of factor loadings invariance analysis will be done to examine whether there are any statistical differences across low and high experience groups. This was done in the previous instance with invariance analysis across low and high uncertainty avoidance across gender and across countries.

The results in the Table 6.34 indicate that the Chi-square for the unconstrained and measurement models is 1359.435 and 1383.412, respectively. In addition, the result shows that there is insignificant difference between these models ($\Delta\chi^2$ = 23.977 and p = 0.24). It also indicates that the groups (low and high experience) understood the questions similarly. Accordingly, it can be concluded that full metric invariance is supported and the analysis will now proceed to examine whether there are any significant differences in the structural model in the following section.

Table 6. 34 : Factorial Invariance Analysis across Low and High Experience (n = 532) Assuming Unconstrained Model to be correct

Measurement weights	χ^2	df	$\Delta\chi^2$	Δdf	P	CFI	RMSEA
	1383.412	692	23.977	20	0.243	0.907	0.043

Examination of Structural Weights Equivalence across Low and High Experience Groups

This section will examine whether the structural weights between the groups are equivalent. As was done in the previous invariance analysis, chi-square and its p value will be applied to determine the difference between the measurement model and the structural model.

The result shows that the Chi-square values of the measurement model and the structural model are 1383.412 and 1394.852, respectively. The difference between Chi-square is insignificant ($\Delta\chi^2$ = 11.441 and p = .651). This indicates that the low and high experience groups perceived similar importance for the relationships between the constructs. For example, the relationship between Trust and Perceived usefulness was perceived similarly by both groups. This indicates that both low Internet banking experience group beliefs that Trust is an significant factor

influencing their Internet banking adoption. The following chapter under section 7.6.2 will discuss the results in more details. The following Table 6.35 shows the structural invariance analysis across low and high Internet banking experience's results:

Table 6. 35 : Structural Invariance Analysis across Low and High Experience (n = 532) Assuming Model Measurement Weights to be correct

Structural weights	χ^2	df	$\Delta\chi^2$	Δdf	P	CFI	RMSEA
	1394.852	706	11.441	14	0.651	0.907	0.043

Examination of Latent Means Equivalence across Low and High Experience Groups

This section examines whether there is any significant difference between the groups on each single construct. Chi-square and its p value will be applied to test whether any significant differences exist between the measurement and structural means models. The result shows that the Chi-square for these two models (measurement model and structural means model) are 3064.229 and 6347.269, respectively. The difference in chi-square values are statically significant ($\Delta\chi^2$ = 3283.040 and p = 0.000). This means that the groups have different perspectives and values for the constructs. Table 6.36 shows the result.

Table 6. 36 : Mean: (Low experience- unconstrained) Model Measurement Weights to be correct

Structural mean	χ^2	df	$\Delta\chi^2$	Δdf	P	CFI	RMSEA
	6347.269	694	3283.04	8	0.000	0.907	0.043

The next analysis will test which constructs are different across the groups. Table 6.37 shows the mean difference across the groups. In can be noted that all the constructs are statistically significant across the groups, as indicated by the p values, except for the self-efficacy construct which shows insignificant difference across low and high experience groups. This indicates that the high experience group is higher than the low experience group in perceiving the Subjective Norm (-.183), Perceived Ease of Use (-.930), Attitude (-1.826), and Perceived Usefulness (-6.259). While the low experience group was higher than the low experience group in perceiving Loyalty (.759) and Trust (.976). The Self-efficacy construct is perceived similarly across the

groups, with p = 35. More explanation will be highlighted in the following chapter section 7.11.3

Table 6. 37 : Means: (Low Experience - Unconstrained)

The constructs	Estimate	S.E.	C.R.	P
SN	-.183	.068	-2.701	.007
PE	-.930	.071	-13.110	***
Att	-1.826	.075	-24.392	***
Int	1.176	.078	15.124	***
Loy	.759	.071	10.758	***
SE	.082	.088	.934	.350
PU	-6.259	.069	-90.404	***
Trust (T)	.976	.087	11.244	***

6.8 Summary

This chapter present the results from the final scales. The main results were divided into six sections that ranged from 6.2 to 6.7. Section 6.2 provided all the descriptive analysis concerning the computer background and experience, in general, across KSA and the UK. In addition, the samples' experience towards Internet banking across KSA and the UK was provided, followed by a description of the samples' demographic data in both countries. The sections from 6.3 to 6.7 covered all the results of the five stages that were stated in the previous chapter (section 5.10). The first section (6.3) presented the first stage of the data analysis (data screening); for example, missing data, outliers' detection, homogeneity of variance, normality and multicollinearity diagnosis were examined and covered and accordingly the data was cleaned up in order to prepare for further analysis. This was followed by testing and performing EFA in the second stage (section 6.4).

SPSS was used to perform the EFA. EFA was performed so that the relationships between the measurement items and their corresponding constructs can be examined. The current study applied the Varimax of orthogonal technique in principal component so that the factors were rotated to show the maximum variance of factor loading. Accordingly, fourteen factors were extracted. Section 6.5 provided the CFA results in order to confirm the output of EFA so that the measurement items can be confirmed to measure their corresponding constructs. The structural model's results

(stage four) where the relationships hypothesized between the constructs were identified and provided in section 6.6. The final stage of the main data analysis (stage five) providing invariance analysis across four groups, was illustrated in the section 6.7.

In summary, the results indicated that the whole model cannot be generalized across KSA and the UK, or across high and low uncertainty avoidance or across gender, but it can be generalized across low and high Internet banking experience groups. The results confirmed that there is significant moderation influence of the culture dimension (Uncertainty Avoidance). The conclusion based on the current results is that the conceptual model can be partially generalized. There are many significant findings that have been illustrated that will be discussed in light of the literature in the next chapter. The following chapter (chapter seven) will provide more detailed discussion of these findings.

Chapter Seven: Discussion of the Results

7.1 Introduction

As stated in the introduction chapter (section 1.5), the aim of the study is to develop a conceptual model that can be applied to examine customers' behaviour towards Internet banking across two distinct cultures: Kingdom of Saudi Arabia and the United Kingdom and moderated by the culture dimension (Uncertainty Avoidance). The aim of this chapter is to discuss the results based on the conceptual model, provide justifications and compare the results with the results of previous literature.

This chapter will start by summarising the current study's findings in the following section (7.2). Then the chapter will be divided into subsections. Section 7.3 will concentrate on comparing the robustness of the present study's findings with the existing theories and models in the context of Internet banking. This is followed by the section that complements the results of the present study with the relevant literature in section (7.4). Accordingly, sixth subsections that ranged from 7.4.1 to 7.4.6 will be illustrated. Section 7.5 and 7.6 will illustrate the mediation role on the conceptual model and moderator (Uncertainty Avoidance) impact on the direct relationships respectively. Finally, the chapter will be concluded by summarizing the most important issues in section 7.7

7.2 Summary of the Results

The conceptual model was developed from the existing models and theories that originally developed in the western culture in order to examine individuals behaviours in terms of how those individuals accept or reject technologies and what factor/s that may influences those individuals' behaviours are. These models and theories were developed to examine individuals' behaviour from different perspectives such as psychology, technology, management and marketing perspectives. Each of these perspectives provided different factors that may contribute significantly to explain human behaviours towards a specific situation or technology. The current study applied some of these models and theories to examine customers' behaviour towards Internet banking loyalty. The study adopted some factors from different perspectives such as technology perspective (perceived usefulness and ease of use), marketing perspective (trust and loyalty), and psychology perceived (attitude, intention,

subjective norm and self-efficacy). Appling factors from different perspectives will help to examine customers' behaviour towards internet banking in a comprehensive way. In this study, several steps for the data analysis were taken and explained in chapter five (Methodology). According to the findings chapter (chapter six), it can be noted from Exploratory Factor Analysis (EFA) that thirteen items (observed variables) were eliminated from the analysis due to their low factor ($< .40$) loadings or their cross-loadings with other constructs (Table 6.2). After the exploratory factor analysis, the analysis moved to test or to confirm these factors that yielded from the previous step (EFA), by using the SEM technique. AMOS v16 was used to perform the Confirmatory Factor Analysis (CFA) (section 6.5). Thirteen constructs (Table 6.4) were tested in CFA but the initial results were not satisfactory. The measurement indices of model fits were lower than recommended so the convergent and discriminant for the thirteen constructs cannot be tested, based on the low fits indices results. The measurement model was tested several times to find out any items with factor loadings and cross loadings based on the results obtained from the AMOS's output (Tables 8.10 to 8.12 in Appendix 16 show the results). At this stage of the analysis, eighteen items were taken out due to their low cross loadings with other constructs in the model. Accordingly, some constructs were eliminated from that analysis based on their low number of items, including customers' experience and Internet banking reputation. Other constructs such as Trust, Security and Privacy Perceptions were combined under one construct (Trust). After deleting some of the constructs and items that provide unsatisfactory results, the measurement model provided acceptable model fits indices results. In addition, the convergent and discriminant results for each construct were supported on both the sample (n = 532) and each country separately. The outcomes from the measurement model were eight constructs: Trust (T), Subjective Norm (SN), Self-Efficacy (SE), Perceived Ease of Use (PE), Perceived Usefulness (PU), Attitude (Att), Intention (Int), and Loyalty (Loy). Table 6.13 shows the hypotheses in the structural model, the regression weights results for each relationship, and the conclusion. In the following subsections, the results will be explained and compared with the results of previous studies.

7.3 The Comparison between the Current Research Model with Existing Theories and Models

The section compares the whole model fits and power (R^2) against some of the existing models. There are two criteria of selection these studies. The first one is that these studies must be in the context of Internet banking. The second one is that the studies should applied TAM and SEM technique as much as possible so that the comparison can be equivalence.

As stated in the literature review (section 3.7), nine theories and models were reviewed, including Innovation Diffusion Theory (Rogers, 1962, Rogers and Shoemaker, 1971, Rogers, 1983, Rogers, 1995), Social Cognitive Theory (SCT) (Bandura, 1986), Theory of Reasoned Action (TRA) (Ajzen and Fishbein, 1980, Fishbein and Ajzen, 1975), Theory of Planned Behaviour (TPB) (Ajzen, 1985), Technology Acceptance Model (TAM) (Davis, 1986, Davis et al., 1989), The Decomposed Theory of Planned Behaviour and TAM (DTPB) (Taylor and Todd, 1995b), Technology Acceptance Model (TAM2) (Venkatesh and Davis, 2000), Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2003) and Technology acceptance Model (TAM 3) (Venkatesh and Bala, 2008).

The current conceptual model is based on the combination of these theories and models to examine customers' behaviour towards Internet banking in KSA and the UK. In particular, the conceptual model is based on TRA, TAM and SCT. All of these theories and models aim to examine individual behavioural intentions towards a specific system or service by investigating a different number of factors relating, either directly or indirectly, to behavioural intentions. The current study goes further to examine whether behavioural intention to use a particular system (in the current study this is Internet banking) have any influence on user loyalty towards that system. The assumption is that the more behavioural intention customers have to use Internet banking, the more they may show loyalty and prefer a specific Internet banking service over others in the marketplace, or they may recommend their Internet banking service to others. This assumption has not been examined in previous literature.

According to the results, the conceptual model provided adequate fit results in both countries. It explained 45% of Saudi customers' loyalty towards Internet banking and

60% of the UK customers' loyalty. In contrast to the previous literature that applied SEM in the context of Internet banking (Table 7.1 below), the conceptual model can be applied with more confidence to examine customers' usage behaviour towards Internet banking. Comparing with the existing studies (Suh and Han, 2002, Suh and Han, 2003, Guriting and Ndubisi, 2006, Chong et al., 2010, Yap et al., 2010), the current study's model provides an adequate power explanation, as indicated by the R^2 value above. A more specific comparison can be done between the current study and the study carried out by (Alsajjan and Dennis, 2010). They developed a conceptual model and examined two student samples from the UK and KSA. The results indicated that their model explained customers' behaviour towards Internet banking better than the model in the current study. This differentiation can be attributed to the complexity of the conceptual model. In general, the more complex the model, the more low fit can be observed and the more low explaining power can be obtained. Alsajjan and Dennis (2010) model has five constructs compared with the current study which has eight constructs; thus the current study model is more complex. As a result, Alsajjan and Dennis (2010) model explained student behaviour as indicated by an R^2 value better than the current study. It can be noted that the current study develops a model that investigate customers' loyalty towards Internet banking, while Alsajjan and Dennis (2010) examined how customers' attitudinal intentions developed, but the current study goes further to examine customers' loyalty. The current study argues that affecting customers' attention to adopt and use a particular service might be easy, but obtaining customers' loyalty is difficult for many companies, especially those who work online. This may give this current study more importance because it examines what factors influence and contribute to customers' loyalty towards Internet banking and how the factors' influences are different across different markets and cultures. Both studies are considered acceptable and provide important results, contributing significantly to the existing literature in the context of Internet banking. It can be concluded that the objective of the current study is achieved.

Table 7. 1: The Comparison Results Between the Previous Results and Current Study's Results in the Context of IB

Authors	Theory Applied	Systems	Groups	R²	Chi-square	P	DF	Chi-square/ DF	GFI	CFI	RMS EA
(Suh and Han, 2002)	TAM	Internet banking		56%	1922	0.000	368		0.851	0.943	0.067
(Mukherjee and Nath, 2003)	Commitment-trust theory	Internet banking			648.51		151		0.83		
(Suh and Han, 2003)	TAM	Internet banking		5%	1556.368	0.000	729	2.13	0.86	0.96	0.040
(Wang et al., 2003)	TAM	Internet banking		62%				3	0.9	0.97	0.034
(Beerli et al., 2004)		Internet banking		72%	414.814	0.076	375	1.106	0.85		
(Eriksson et al., 2005)	TAM	Internet banking							0.99	0.98	0.051
(Guriting and Ndubisi, 2006)	TAM	Internet banking		43%							
(Herington and Weaven, 2007)		Internet banking	Revised model		12.12	0.00			0.98		0.02
(Çelik, 2008)	TAM	Internet banking		54%							
(Grabner-Kräuter and Faullant, 2008)		Internet banking		58%		0.000		1.546	0.95	0.988	0.038
(Chong et al., 2010)	TAM	Internet banking		22%							
(Yap et al., 2010)		Internet banking		38%							
(Zhao et al., 2010)		Internet banking			282.5	0.000	128	2.21	0.93	0.93	0.053
(Alsajjan and Dennis , 2010)	TAM	Internet banking	UK	0.81	181.076		107	1.69	0.92	0.96	0.055
			KSA	0.83	211.715		107	1.98	0.94	0.97	0.05
The current study	TAM	Internet banking	UK	60%	581.187	0.001	336		0.87	0.94	0.051
			KSA	45%	670.284	0.001	336		0.84	0.9	0.063

7.4 Determinants of Customers' Loyalty towards Internet Banking a Cross KSA and the UK

The aim of this section is to evaluate the relationships and factors that influence customer' perceptions and loyalty towards Internet banking. Those factors that have been selected from the existing models and theories are evaluated and compared against the relevant literature. The section is structured into five subsections ranged from 7.4.1 to 7.4.6. Section 7.4.1 covers the direct relationships of Perceived usefulness, Ease of Use and Behavioural Intention on customers' Loyalty. The next four subsections illustrate the indirect relationships that ultimately lead to customers' Loyalty. The second section 7.4.2 illustrates the determinants of Behaviour Intention, while the third section 7.4.3 highlights the factors that influence customers' Attitude. The last three sections (7.4.4, 7.4.5 and 7.4.6) demonstrate the factors (trust, subjective norm and self-efficacy) that influence Perceived Usefulness, Ease of Use respectively. Section 7.5 highlights the mediators (Perceived Usefulness and Ease of Use) role in the conceptual model. Finally, the invariance analysis that examines the influence of Gender and Internet banking experience on the direct relationship in the conceptual model is illustrated in section 7.6.

7.4.1   The Direct Determinants of Customers' Loyalty

The assumption is that the more intention to use Internet banking services, the more customers expresses their loyalty towards their current Internet banking service providers. Customers' loyalty is one of the important factors that most companies look for. It is important to attract many customers, but it is difficult to determine how companies can keep those customers for a long time. Many of the previous researches have concentrated and measured customers' loyalty in different contexts providing different models and results such as the context of Internet banking (Moutinho and Smith, 2000, Beerli et al., 2004, Lam and Burton, 2006, Ferguson and Hlavinka, 2007, Casaló et al., 2008, Salmones et al., 2009, Ganguli and Roy, 2011). Some research has gone further and examined customers' loyalty across different cultures, such as Cyr (2008) and Jin et al.(2008). All these studies stated that customers' loyalty is an important indication of the business successful.

In line with previous research, the current study is focused on customers' loyalty as an indicator of whether banks successfully adopted Internet banking services, because the banking industry is highly competitive environment and is affected by the globalization issues, financial institutions, others banks, information technology and development. Moreover, the banking industry is

affected largely by customer demand. Accordingly, banks should focus on how to attract new customers (students) and make them loyal for a long time. This study develops a framework that can help banks in terms of their online services, such as Internet banking, to identify some factors that might be important to customers' loyalty. This study proposed that Perceived Usefulness, Perceived Ease of Use, and Intentions to Use Internet banking are important factors affecting and measuring directly customers' loyalty. These relationships have not been examined previously. In addition, these relationships are examined across cultures so that deeper insight can be gained in this study and previous research be enhanced.

Initially, the relationship between Perceived Ease of Use and customers' loyalty was not hypothesized. It was recommended by the modification indices (AMOS output) data driven that the link between these two constructs could improve the model fit. Accordingly, these two constructs were linked at the stage of testing the structural model on KSA sample (section 6.6.3). Many previous researches have been reviewed in the current study no previous research examined this relationship. Investigating whether Perceived Ease of Use has any effect on customers' loyalty adds a significant contribution to the previous knowledge, especially for the marketing discipline.

This relationship can be looked at from different perspectives, such as website design and service quality perspectives. In terms of the website perspective, Marcus and Gould (2000) state that how pictorial information is presented and organized, preferences for text versus graphics, directionality for how the language is written, and navigation tools can be affected by cultural differences among different individuals. It was stated that when the customers are more comfortable with designs, usability features and navigation tools, they will be more likely to revisit the site (Cyr and Trevor-Smith, 2004). This might be because the website is the only effective way for e-vendors to communicate with customers provide considerable amounts of information, and different products or services can be presented so that the easier the website is to use, the more customers can stay loyal. Chen and Dhillon's (2003) stated that website is the only way e-vendor firm communicates with its customers. Customers' purchase intentions can also be encouraged or discouraged by a website's appearance, structure and features, such as layout, appeal, graphics, readability and ease of use (Cyr et al., 2005). Cyr et al. (2005) noted that the previous research that have been done in the area of culture and design, such as Marcus and Gould (2000), has been inconclusive for developing loyal online customers.

In terms of service quality perspective, considerable numbers of researchers have found that several types of behavioural intentions (loyalty perception) were affected by the perception of service quality (Parasuraman et al., 1988, , 1994, Liu et al., 2000, Liu et al., 2001). Zeithaml et al. (1996) found that loyalty to a company and willingness to pay more were affected by service quality perceptions. Loyalty perception was affected indirectly by service quality through users' satisfaction, e-trust, customers' delight and relationship strength (Gummerus et al., 2004, Herington and Weaven, 2007).

The findings show that Perceived Usefulness, Ease of Use and Behavioural Intentions towards Internet banking explain 0.47 of variance in the sample of KSA and 0.60 in the UK sample. Compared with previous studies that focused on individuals' loyalty as an output of using Internet banking (Herington and Weaven, (2007), Casaló et al., (2008), Salmones et al. (Salmones et al., 2009), (Ganguli and Roy, 2011), selling food products (Donio et al., (2006), online health care service (Gummerus et al., (2004), online book and CD stores services (Ribbink et al., 2004), and the travel industry (Shankar et al., 2003) and banking sector (Ladhari et al., 2011), the current study provides a considerable amount of explanation on customers loyalty. However, customers' loyalty towards Internet banking is explained differently by these constructs across the two countries. In both countries, customers' loyalty is explained largely by individuals' intentions towards the system. However, as a secondary factor, customers' loyalty in KSA is determined by Perceived Ease of Use not by Perceived Usefulness, whereas in the UK sample, customers' loyalty is determined by Perceived Usefulness but not by Perceived Ease of Use.

Behavioral Intention

In terms of the relationship between behavioural intention and customers' loyalty, the current study adopts the basic notion of the Theory of Reasoned Action (TRA) (Fishbein and Ajzen, 1975, Ajzen and Fishbein, 1980). The basic assumption of TRA is that individuals' behaviour is affected by how strong individuals' behavioural intention towards a situation is. In other words, the more behavioural intentions individuals have, the more they are likely to perform a behaviour. The relationship between behavioural intention and individuals' behaviour has been tested from the information technology perspective. A large number of previous studies linked behavioural intention to use a system to actual usage behaviour (Davis et al., 1989, Davis, 1989,

Davis, 1993, Taylor and Todd, 1995a, Szajna, 1996, Dishaw and Strong, 1999, Suh and Han, 2002, Pavlou, 2003, Dennis et al., 2009). The relationship between behavioural intention and use behaviour has been examined from a cultural perspective (Al-Gahtani et al., 2007, Luna et al., 2002). Some other studies examined the relationship between behavioural intentions and use behavioural in the Internet banking context such as (Suh and Han, 2002, , 2003, Walker and Johnson, 2006, Zolait et al., 2009). Suh and Han (2002) stated that the proportion of purchase, purchase intention, and attitude are significant constructs that affect store loyalty. Many other studies from a customers' loyalty perspective have been reviewed for the current study and it was found that no previous researches have linked the individuals' intentions to use a system with the individuals' loyalty towards that system. Accordingly, the current study attempts to fill this gap by answering the question above and provides a significant contribution to the previous literature.

There is a similar effect of behavioural intentions and customers' loyalty in both countries (KSA and the UK). The regression weight values in both samples are statistically significant. The customers' intention in KSA towards Internet banking is significantly associated with their loyalty with ($\beta = 0.45$, CR = 4.49 and P < 0.001) and ($\beta = 0.50$, CR = 7.13 and P < 0.001) in the UK sample. These results indicate that the more intention toward Internet banking customers have the more loyalty toward Internet banking they have. This is an important finding that indicates that Internet banking is a significant financial distribution channel, which might be important for other channels, such as tele-banking or ATMs. Guerrero et al (2007) stated that Internet banking would be the most successful financial and retail distribution channel in terms of usage rate. This might be because that Internet banking is an important system for most of the customers' daily life and deals with the customers' personal and financial information. These reasons and might be more that makes Internet banking usage high. From the organizations' perspective, the results might indicate that the more banks influence customers intention to use or increase the Internet banking usage, the more customers' loyalty can be. As a result, banks' cost expenditure can be reduced such as paper and hand works or the number of banks' branches could be reduced. In addition, customers will be more willing to distribute a positive world of mouth in the marketplace so that a number of new customers can be attracted and the relationship with existing customers can be enhanced.

The above findings are supported by the invariance analysis that also shows that the relationship between customers' intentions and their loyalty is statistically insignificant. The difference in the Chi-square value is insignificant between the sample of KSA and the UK ($\Delta\chi^2 = 0.011$ and P = 0.917). This indicates that both samples value the relationship in a similar way. The samples provide similar total effects of intention to customers' loyalty. The total effect in the KSA sample is 0.439 and in the UK is 0.427. In terms of the latent mean analysis, the findings show that there is an insignificant difference between the individuals from both countries, which means that both groups have similar views and values of their intentions towards Internet banking.

Perceived Usefulness

In terms of whether Perceived Usefulness is associated with customers' loyalty, the study finds that Perceived Usefulness contributes differently to customers' loyalty in both groups. The relationship between Perceived Usefulness and customers' loyalty is insignificant in the KSA group ($\beta = 0.10$, CR = 0.99 and P < 0.36), while it is significant in the UK group ($\beta = 0.27$, CR = 2.93 and P < 0.01). These results indicate that Perceived Usefulness has no effect on customers' loyalty towards Internet banking in KSA sample. The effect of Perceived Usefulness might be fully mediated by customers' attitudes and intentions towards Internet banking. The insignificant result can be attributed to the fact that there might be some other factors and constructs affecting customers' loyalty towards Internet banking, such as customers' satisfaction or the relationship between customers and the service providers. These constructs might affect the importance of Perceived Usefulness. It was noted that banks' loyalty may be affected by the customers' relationship with the service provider (Lam and Burton, 2006). According also to the result, Perceived Ease of Use is more important to influence customers' loyalty than Perceived Usefulness in the KSA sample. Both samples from both countries are customers who are still undertaking their bachelor's degree; however, customers from the UK may know more functions and activities via Internet banking than their peers from KSA. In general, customers might have less information and carry out fewer financial transactions compared with other types of customers, such as full-time employees. ATMs provide very common services used in the KSA. There are many financial transactions that can be performed via ATMs machines, such as withdrawing money, bill payment and fund transference. As a result, the usefulness of using Internet banking might be affected by the services options that are provided by the ATMs. Thus, customers from KSA show that the usefulness of Internet banking may be less important than

being loyal towards Internet banking. Applying the research framework on different types of customers or different self-services, such as tele-banking, ATMs services, and Internet banking, should be performed in order to test whether Perceived Usefulness has a significant effect on customers' loyalty.

In terms of the relationship between perceived usefulness and customers' loyalty, the difference between both groups in the regression weights, both groups have similar values of the importance of the relationship between perceived usefulness and loyalty. The invariance result (Table 6.17) shows that the difference in the Chi-square is statistically insignificant between both groups ($\Delta\chi^2$ = 1.34 and P = 0.25). In terms of the total effect of Perceived Usefulness on customers' loyalty, the results (Table 6.18) indicate that the total effect of Perceived Usefulness on customers' loyalty shown by customers from the UK is more than for customers in KSA, 0.45 and 0.32, respectively. Table 6.20 shows that the there is no significant means differences between customers in both countries.

Perceived Ease of Use

In terms of the effect of Perceived Ease of Use on customers' loyalty towards Internet banking, the current research's findings show that the effect is different in both groups. The customers from both KSA and the UK show that their loyalty with Internet banking is affected by their perceptions of the ease of Internet banking with (β = 0.28, CR = 2.99 and P < 0.01) and (β = 0.17, CR = 1.89 and P < 0.05) respectively. The result indicates that providing ease of use website is an important factor influencing customers loyalty, be willing to provide positive world of mouth and enhancing their relationships wither current providers.

These are important findings that international businesses should be aware of. They also support previous studies that stated that culture is a significant construct that determines the individuals' behaviour (Lee and Green, 1991, Straub, 1994, Shore and Venkatachalam, 1996, Gefen and Straub, 1997, Straub et al., 1997, Jarvenpaa et al., 1999, Furrer et al., 2000, Luna et al., 2002, Tsikriktsis, 2002, Y.K et al., 2002, Cyr and Trevor-Smith, 2004, Liu et al., 2004, Cyr et al., 2005, Singh et al., 2005). In addition, recent studies have found that culture has a considerable effect on individuals' behaviour (Al-Gahtani et al., 2007, Cyr, 2008, Kim, 2008, Reimann et al., 2008, Schoefer, 2010). Perceived Ease of Use is one of the service quality dimensions that might be affected by the values and beliefs that individuals have. It was stated that consumer cultural

orientations were expected to have significant impact on service quality expectation (Dash et al., 2009). As noted above, the current study is the first one to examine the relationship between Perceived Ease of Use and customers' loyalty across different and distinctive culture according to Hofstede's (1980) dimension of culture. The difference in this relationship between KSA and the UK can be attributed to the customers' demand. Furrer et al. (2000) stated that individuals who came from cultures with a high degree of individualism (the UK) are more independent and self-centered because they are driven from their self-responsibility ethic so that they become more demanding than individuals from collectivism cultures such as KSA. Accordingly, customers from the UK might be more demanding than their peers from KSA. Providing easier website use might be not sufficient to determine customers' loyalty in the UK. Some other factors or tangible cues might play a significant role in determining customers' loyalty; for example, customers' satisfaction or some other dimension of service quality, such as responsiveness or empathy. The findings also show that the effect of Perceived Ease of Use on customers' loyalty is mainly indirect, through Perceived Usefulness or their attitude and intention. The finding shows that the indirect effect is larger than the direct effect; 0.393 and 0.168 in the UK sample. On the other hand, customers' loyalty from KSA is affected by Perceived Ease of Use. This indicates that the more a banks' website is easy to use of, the more loyal customers will be. The result may indicate that Banks in KSA provide website facilities which include easy navigation tools, understandable information and easy steps to perform different transactions. The invariance analysis (Table 6.17) shows that statistically this relationship is not different across both groups ($\Delta\chi^2 = 0.74$ and P = 0.39). This indicates that both groups value the relationship in a similar manner regardless of the differences in the regression weights. The total effect of Perceived Ease of Use on customers' loyalty in the UK group is larger than the total effect in the KSA, with values of 0.56 and 0.388, respectively. This is also supported by the significant latent mean result (Table 6.20) that the customers from the UK have a higher value and perception for Ease of Use factor as indicated by the negative result (- 0.186).

7.4.2 The Direct Determinants of Customers' Behavioural Intentions towards Internet Banking

Behavioural intention was stated as an important construct that determines individuals' actual behaviour. It was initially introduced in the Theory of Reasoned Action (TRA) (Fishbein and Ajzen, 1975, Ajzen and Fishbein, 1980). According to TRA, behavioural intentions are affected by individuals' attitude and Subjective Norm. Accordingly, behavioural intention to use Internet

banking is determined by two constructs: Attitude and Subjective Norm. These two constructs explained the values of R^2 (0.62) of the variance in the case of KSA and R^2 (0.44) in the UK group. In KSA group, the variance is explained largely by customers' attitude β (0.57), followed by subjective norm β (0.38), while in the UK, the variance is explained totally by customers' attitude β (0.66). The following sections will examined the effects of customers' attitudes and subjective norms on users' behavioural intentions.

Customers' Attitude

The current study found that customers' attitude has a significant influence on behavioural intention in both cases (KSA and the UK), with (β = 0.57, CR = 7.55 and P < 0.01) in KSA group and (β = 0.66, CR = 10.17 and P < 0.001) in the case of the UK. This result is consistent with previous research (Davis et al., 1989, Agarwal and Prasad, 1999, Dishaw and Strong, 1999, Lee et al., 2006, Hernandez et al., 2009). Chau and Hu (2001) compared TAM, TPB and Decomposed TPB, finding that behavioural intention was influenced by individual's attitude in all three cases. In the context of Internet banking, the relationship was examined and supported (Suh and Han, 2002, Suh and Han, 2003, McKechnie et al., 2006, Çelik, 2008). However, some researchers found insignificant relationship (Taylor and Todd, 1995a, Jackson et al., 1997). Taylor and Todd (1995a) integrated TAM and TPB to predict experienced and inexperienced users' behavioural, finding that the path from attitude to behavioural intention was not significant for either group and did not differ between the experienced and inexperienced groups. Taylor and Todd (1995b) compared TAM, TPB and the Decomposed TPB and found different results, such as in the case of TAM. Behavioural intentions were not affected by attitude, but TPB and the Decomposed TPB showed that there was a significant effect from attitude to intention. In terms of cross-culture research, the current result is consistent with Jarvenpaa et al. (1999), who conducted a study to examine both antecedents and consequences of consumer trust in a web store across Australia, Israel and Finland. They found that customers attitude towards an Internet store significantly affects their willingness to purchase from that store in all countries.

This indicates that customers attitude in both cases is a significant construct and affects users' behavioural intentions to use Internet banking. Banks should make a considerable effort to strengthen the customers' positive attitude so that their intentions to use Internet banking can be improved and behavioural intention, in turn, affects their loyalty. According to the results, the success of Internet banking may depend to the customers' attitude. The importance of customers'

attitude might depend on the situation under investigation. For example, in the situation where the system is voluntary to use and depends on the personal decision, users attitude towards the system might be more important than in the situation where the system is compulsory and personal decisions will be less important as users' attitude might be insignificant. In the current study, using Internet banking is voluntary and personal so that customers have full control over their behavioural intentions to use this service.

Even with the significant effect of users' attitude on behavioural intentions, the invariance result across the groups indicates that the relationship is statistically significant, as indicated by the difference in the value of Chi-square. Table 6.17 shows that the $\Delta\chi^2$ is 7.61 with significant probability value < 0.01. This indicates that customers from KSA have different views and values with regard to the importance of the effect of their attitude on their behavioural intention compare with those from the UK. The un-standardized effects results (Table 6.18) show that the total effect of users attitude on behavioural intention is higher in the UK group than in KSA group, with 0.69 and 0.43, respectively. However, the latent mean between KSA and the UK groups was significantly different with respect to users' attitude (Table 6.20). This difference suggests that the KSA group tends to value attitude more than those from the UK. This can be attributed to the context of the study (Internet banking). This context is important in customers' daily life, dealing with sensitive information and a considerable amount of risks in this environment so that the total effect of customers' attitude was more than for those in KSA. In KSA, the importance of students' attitude might be reduced by other constructs, such as Subjective Norm. In addition, Saudi students have more attitudes to use Internet banking comparing with UK students. This can be attributed to the monthly income that they received from their education provider. In Saudi Arabia, bachelor's degree students get support from the government for their education. Customers may feel that using Internet banking will give them full control to manage their banking accounts. This may example that Saudi customers have positive attitude towards Internet banking comparing with the UK customers.

Subjective Norms

Previously, the relationship between Subjective Norm and Intention to use a system has been investigated by Venkatesh and Davis (2000), Chau and Hu (2001), Taylor and Todd (1995b), Taylor and Todd (1995a), Venkatesh and Morris (2000), and Al-Gahtani et al. (2007). This relationship was examined cross-culturally by Lee and Green (1991) in the USA and Korea.

Moreover, it was examined in the context of Internet banking (Hernandez and Mazzon, 2007, Laforet and Li, 2005, Mäenpää, 2006). Howcroft et al.(2002) found that recommendation by family and friends was an important factor, encouraging individuals to adopt Internet banking in the UK. Sayar and Wolfe (2007) examined this relationship between the UK and Turkey. This relationship has not been tested across KSA and the UK. This study aims to examine this relationship and fill this gap.

The findings for this study indicate that the relationship is significant in the KSA (β = 0.38, CR = 4.88 and P < 0.001). The results support previous studies (Taylor and Todd, 1995b, Venkatesh and Morris, 2000, Al-Gahtani et al., 2007, Lee and Green, 1991, Hernandez and Mazzon, 2007, Howcroft et al., 2002). In the UK, the results show that this relationship is not significant (β = 0.01, CR = 0.23 and P = 0.82). This result goes along with the previous results (Venkatesh and Davis, 2000, Davis et al., 1989, Chau and Hu, 2001, Taylor and Todd, 1995a, Venkatesh and Morris, 2000, Laforet and Li, 2005, Mäenpää, 2006).

The difference in the results between the groups might be attributed to the culture differences. According to the Hofstede (1980), KSA is classified as a collectivism culture, where the members' values are more important than the individuals' values. According to this dimension of culture, customers in KSA tend to accept the groups' values and opinions that may be affected by other members in the community, such as their family and friends. This may be one of the reasons why Subjective Norm is a significant construct and a factor affecting customers' intention to utilize Internet banking and carry out varieties of online financial services. In contrast, the UK is classified as an individualism culture, where self-orientation and self-interest is a significant characteristic of its members. Accordingly, customers in the UK tend to believe that their abilities and skills to decide whether to use Internet banking are beneficial and many advantages can be obtained, so that their intention to use Internet banking will be based on their own opinions. Lee and Green (1991) found that Subjective Norm was more important than attitude towards the determination of behavioural intention in the Korean sample (collective culture) than the USA sample (individualism culture).

In addition, Saudi customers receive monthly support from the government so that their intention to use Internet banking is a useful way to manage their banking accounts. They may feel that Internet banking is a convenient system because their account can be accessed from different

places at any time. In order fully to understand the system, Saudi customers may depend on their friends and families' opinions or they may ask bank staff for more explanation.

According to the results, it can be concluded that this objective is partially supported, because in both countries there is a significant influence of customers' attitude on their intentions behaviour, but this relationship is statistically significant across countries, as indicated in Table 6.17.

7.4.3 The Direct Determinants of Customers' Attitudes towards Internet Banking

Customers' attitude is a significant indication of whether companies, in general, satisfy their customers as noted by positive attitudes towards products or services offered. In the current study, customers' attitudes are examined in the context of Internet banking to investigate whether this construct may have a significant effect on the customers' behavioural intentions. Following from previous studies (Davis et al., 1989, Davis, 1993, Taylor and Todd, 1995a, Taylor and Todd, 1995b, Jackson et al., 1997, Chau and Hu, 2001, Lu et al., 2003, Lee et al., 2006, McKechnie et al., 2006, Hernandez et al., 2009), the current study proposes that customers' attitudes towards Internet banking are determined by Perceived Usefulness and Ease of Use. Comparing with previous studies (Davis et al., 1989, Suh and Han, 2002, Suh and Han, 2003, Çelik, 2008), Perceived Usefulness and Ease of Use explained customers' attitude sufficiently. These two constructs explain 0.48 of variance ($R^2 = 0.48$) on customers' attitude in KSA sample, while they explain 0.49 of variance in the UK sample. However, it can be noted that these constructs contribute differently to explain customers' attitude so that their explanation power is not equal. Only Perceived Usefulness contributes to the customers' attitude in KSA sample, while both constructs contribute to the customers' attitude in the UK sample. The following two subsections will explain these relationships in details.

Perceived Usefulness

According to the previous literature, it is proposed that the more benefits and performance a system can provide to the end users, the more positive users' perception towards that system will be. The effect of Perceived Usefulness on customers' attitude is confirmed in both countries, with ($\beta = 0.72$, CR = 6.75 and $P < 0.01$) in the KSA sample and ($\beta = 0.41$, CR = 4.66 and $P < 0.01$) in the UK group. This confirms the previous literature that found significant influence of perceived usefulness on users' attitude (Davis et al., 1989, Davis, 1993, Taylor and Todd, 1995a, Taylor and Todd, 1995b, Agarwal and Prasad, 1999, Dishaw and Strong, 1999, Chau and Hu,

2001, Lee et al., 2006, Hernandez et al., 2009). In terms of the financial services, some research found significant relationship (Suh and Han, 2002, McKechnie et al., 2006, Çelik, 2008). However, Jackson et al. (1997) found insignificant relationship. The current result confirms that Perceived Usefulness is an important factor that influences and shapes customers' attitudes towards Internet banking.

Because of the aim of the study is to identify whether this relationship is statistically significant between the two samples, the invariance results (Table 6.17) indicate that the relationship between Perceived Usefulness and customers' attitude is statistically significant, giving a difference in the chi-squire values ($\Delta\chi^2 = 9.203$ and $P < 0.01$). This indicates that even customers from both countries perceived usefulness as a significant construct that shaped their attitudes. The importance of this construct is perceived differently to influence their attitude across the two cultures. It can also be noted that the total effect of Perceived Usefulness on users' attitude in the case of KSA is more than the total effect in the UK sample. In terms of the culture difference, the results confirmed that the latent mean (Table 6.26) indicates that low UA has a low value of Perceived Usefulness (- 039) compared with high UA. This might be because Perceived Usefulness is a significant factor that might reduce the high risk perceptions that those with high UA have.

The significant difference between the samples can be attributed to the importance of Perceived Ease of Use in the case of the UK. In the UK, customers' attitudes were influenced by both Perceived Ease of Use and Usefulness. The significant effect of Perceived Ease of Use reduced the effect of Perceived Usefulness on the customers' attitudes. However, in the KSA sample, customers' attitudes are influenced largely by Perceived Usefulness but not Ease of Use.

It can be noted from the descriptive results (Appendix 9) that 35% of customers from KSA performed two transactions and 9% performed three financial transactions or more, compared with customers from the UK where16% performed two transactions, while the majority (67%) performed just one transaction. This may indicate that the availability of Internet banking to perform different financial transactions is more important for the customers from KSA that those from the UK.

Perceived Ease of Use

It can be noted that Perceived Ease of Use and customers attitude towards a system has not been examined across countries. One of the current research objectives is to fill this gap by investigating the relationship between Perceived Ease of Use and customers' attitudes across KSA and the UK. With the relationship between Perceived Ease of Use and customers' attitude towards Internet banking, the current study found that there is a significant difference between KSA and the UK. The regression weight in the KSA sample is insignificant and negative with (β = - 0.59, CR = - 0.59 and P < 0.55), while it is significant and positive in the UK sample (β = 0.35, CR = 4.03 and P < 0.001).

In terms of the UK's result, it supports previous research (Davis et al., 1989, Davis, 1993, Taylor and Todd, 1995a, Taylor and Todd, 1995b, Jackson et al., 1997, Agarwal and Prasad, 1999, Suh and Han, 2002, Lee et al., 2006, McKechnie et al., 2006, Hernandez et al., 2009, Kim and Forsythe, 2009). In terms of the Internet banking context, the result supports (Çelik, 2008, Suh and Han, 2002). On the other hand, the insignificant relationship in the KSA sample is similar with (Chau and Hu, 2001)

It is an expected result to find an insignificant relationship in the sample of KSA that Saudi customers' attitude were not affected by Perceived Ease of Use. Previous research found that this relationship can change over time and users' experiences were improved. For example, Davis et al. (1989) had undertaken a longitudinal study at different times (beginning of the semester and the end of semester) and found that there was not a significant relationship between Perceived Ease of Use and users' attitude in the beginning of the semester, but this effect was significant by the end of the semester. In addition, Taylor and Todd (1995a) found that the relationship between Perceived Ease of Use and attitude was not significant in the experienced group. These results indicated that users' experience might have an effect of this relationship. In terms of the current study, customers from KSA show higher Internet banking experience than the customers from the UK (Table 6.31). This might explain why this relationship is insignificant in the KSA sample yet significant in the UK. In addition, the context of the study can have an effect on this relationship. For example, Taylor and Todd (1995a) applied their research on a Computing Resource Center, Davis et al. (1989) tested TAM on Word Processing and WriteOne systems, and Davis (1993) examined TAM on Electronic Mail and Text Editor. In the current study, Internet banking is used to test the research's model. Internet banking is not like any other

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system; it deals with an important part of people's daily life and is used to perform financial activities, where different risks and uncertainties issues are higher than in any different systems. This is because it is conducted via the Internet, which is an open environment where different parties can evolve and gain access to it. Customers from the UK might have recognized these risks so that their perceptions of Internet banking' ease of use is high. This might be because Internet banking is easier to use and most of the information that is provided by Internet banking is clear, the navigation and transactions process are clear, the more the risk perception can be reduced, and the more positive attitude can be obtained. Even customers from KSA show high experience compared with customers from the UK. They might not be aware of the risks of using Internet banking so that Perceived Ease of Use could be less important. Sathye (1999) found that individuals' awareness of the services was an significant factor in determining individuals' behaviour towards Internet banking. This point should be investigated in future research.

The invariance findings show that the relationship between Perceived Ease of Use and customers' attitude is statistically different between KSA and the UK. The difference in Chi-square is 8.457 with $P < 0.01$. The total effect of Perceived Ease of Use on attitude is higher for the UK compared with KSA, with 0.70 and 0.34, respectively. In terms of the latent means differences, the result shows that there is a significant difference between KSA and the UK. The latent mean difference is - 0.186, indicating that the UK group appear to have significantly higher perception of perceived ease of use (- 0.186) than the group from the KSA. This means that the KSA group has less perceptions of the ease of Internet banking to use than the UK group. According to the results, the fourth objective is partially supported and cannot be generalized across KSA and the UK.

As was mentioned at the beginning of this section, the fourth objective of the current study is to determine what factors influence customers' attitude towards using Internet banking and whether these factors can be generalized across different cultures. Accordingly, based on TAM, the current study identified Perceived Usefulness and Ease of Use and proposed that these factors will have significant influence on customers' attitude towards Internet banking. Thus, the study developed two hypotheses (H3 and H4) to meet the objective. According to the results, the objective is partially supported but cannot be generalized across KSA and the UK, because H3 is supported in both countries, while the other is not. In addition, both relationships show significant differences.

7.4.4   The Direct Determinants of Internet Banking's Usefulness

The current study attempts to examine the determinants of Perceived Usefulness and whether the influence, if any, of these determinants can be generalized across KSA and the UK. Perceived Usefulness, as stated in the TAM, is one of the most influential construct of individuals' behavioural intention to accept or reject a system. Previous literature identified different determinants of Perceived Usefulness (Davis, 1993, Chau, 1996, Igbaria et al., 1997, Jackson et al., 1997, Gefen and Keil, 1998, Agarwal and Prasad, 1999, Bhattacherjee, 2001, Venkatesh and Davis, 2000, Gefen et al., 2003b, Lu et al., 2003, Lee et al., 2006, McKechnie et al., 2006, Çelik, 2008, Hernandez et al., 2009). Along with these studies, the current study proposes that Perceived Usefulness is determined by four constructs: Trust, Subjective Norms, Self-efficacy, and Perceived Ease of Use. Most of the previous literature was conducted in a single country and just a few studies that focused on the determinants of Perceived Usefulness were conducted across cultures (Straub, 1994, Gefen and Straub, 1997, Straub et al., 1997, Alsajjan and Dennis, 2010). The current research's results confirm the importance of Perceived Usefulness to determine individuals' behavioural intentions, and the importance of the differences of its antecedents, across cultures.

The current finding contributes to the existing literature by showing that customers from different countries have different perceptions and beliefs towards the determinants of Perceived Usefulness. In the case of KSA, the results indicate that Perceived Usefulness was explained by R^2 (= 0.54) of variance with three constructs: Trust, Subjective Norm, and Perceived Ease of Use. Self-efficacy did not contribute to Perceived Usefulness. In contrast, Perceived Usefulness was explained by R^2 (= 0.48) of variance with Perceived Ease of Use alone. Trust, Subjective Norm, and Self-efficacy did not contribute to Perceived Usefulness. In both cases, Perceived Usefulness is largely explained by Perceived Ease of Use, with $\beta = 0.41$ and $\beta = 0.68$ in KSA and the UK, respectively. The following subsections will give more details on whether these relationships are statistically significant across KSA and the UK.

Trust

As hypothesized in the conceptual framework chapter, there is a positive and significant relationship between customers' trust towards Internet banking and their perception in terms of the usefulness of Internet banking. The assumption is that the more customers trust Internet

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banking, the greater usefulness will be. According to the current research results, the relationship between Trust and Perceived Usefulness is supported in the sample of KSA ($\beta = 0.35$, CR = 4.37 and P < 0.001). However, this relationship is not supported in the sample of the UK ($\beta = 0.06$, CR = 0.89 and P = 0.37).

According to previous studies, the relationship between Trust and Perceived Usefulness was empirically investigated in four studies (Pavlou, 2003, Gefen et al., 2003b, Eriksson et al., 2005). All of these studies used Technology Acceptance Model (TAM) Davis (1989) and Davis et al., (1989) as a theoretical foundation for their researches. Pavlou (2003) conducted two studies; the first one was exploratory and customers were used as a sample while the second study was confirmatory and a general online consumer sample was used. In both studies, the author found that there was a significant relationship between Trust and Perceived Usefulness. Gefen et al. (2003b) also found a significant relationship between these two constructs. Both of these studies were based on the evaluation of online shopping websites, such as Amazon, and online book vendor or online CD vendors, respectively. Eriksson et al. (2005) applied their research on Internet banking and found that Perceived Usefulness was affected by Trust.

It can be noted also from the previous studies that this relationship has not been investigated across countries as the current study has. In order to fill this gap, the current study attempted to investigate this relationship across KSA and the UK. It found significant results which indicate that the relationship between Trust and Perceived Usefulness cannot be generalized across cultures. In the current study, this relationship is significant in the sample of the KSA, which is similar to the previous studies (Pavlou, 2003, Gefen et al., 2003b, Eriksson et al., 2005). This result means that the more Saudi customers perceive that Internet banking is trustworthy and they feel safe, and their privacy can be controlled and their online accounts cannot be accessed by non-authorized parties, the more they will use and view Internet banking as useful and with benefits that can be obtained. In the case of the KSA sample, the human and social aspects behind Internet banking might play a significant role in this relationship. It was noted that costumers are not just dealing with the IT interface but they are interacting with humans who are running the business (Gefen et al., 2003b). Saudi Arabia was classified as a high collectivism culture (Hofstede, 1980). According to this dimension of culture, customers tend to trust their members' groups and value their beliefs more than individuals who are outside the groups. According to this notion, the relationship between Trust and Perceived Usefulness might be

affected by traditional relationship (face-to-face) contact, where customers can exchange their beliefs and values. These values and beliefs might be transferred to the online environment so that Saudi customers may belief that using Internet banking is trusted and useful. Doney and Cannon (1997) found that customers' trust was affected by the vendor investment in physical buildings, facilities, and personnel. Reichheld and Schefter (2000) stated that when customers trust the e-vendor, the benefits of the website can be recognized.

In contrast, there is not a significant relationship in the UK sample. This result is not expected, indicating that the UK customers' perceptions towards Internet banking usefulness are not affected by their trust. In an individualism culture such as the UK, customers may tend to trust their skills and performance to determine their behaviours. They may trust others individuals less from a collectivism culture, such as KSA. This can explain why this relationship is insignificant. This result may indicate that there are other factors affect the UK sample's perception towards Internet banking usefulness, suggesting further study should be done to find out these factors. As it was stated, trust is as social phenomena (Lu et al., 2003), and social uncertainty can explain this relationship. Trust is an important factor to reduce social uncertainty and increase one's expectations of how others will behave in situations such as business interactions (Fukuyama, 1995) cited in (Gefen et al., 2003b). In terms of the context of this study, customers may think that Internet banking is a situation where there is no clear or detailed information or the contract is insufficient to provide a complete legal protection to all parties involved in a situation. In this case, individual or e-vendor behaviour cannot be predicted and opportunistic behaviour might be in place (Gefen et al., 2003b); for example, customers in the UK sample may want to deal in situations where all parties' behaviour can be predicted according to the contract.

The invariance results also support the differences in the regression weights between the two samples. Table 6.17 indicates that $\Delta\chi^2$ (5.57) and $P < 0.05$ between KSA and the UK in terms of this relationship. It can also be noted that the total effect of Trust on Perceived Usefulness in the KSA sample is more than the total effect in the case of the UK, with 0.35 and 0.32, respectively (Table 6.18). The effect of Trust on Perceived Usefulness in the UK group might be mediated by Perceived Ease of Use as indicated by the indirect effect (0.26). The latent mean value is also significantly different between the two groups. Customers from KSA tend to value trust more than customers in the UK by 0.16. This indicates that Trust is perceived as an important construct to affect the customers' perceptions of Perceived Usefulness in the case of KSA.

From the culture perspective, the latent mean invariance results confirm that there is significant difference in the Chi-squire was significant $\Delta\chi^2$ (14.54) and P < 0.001 in the relationship between Trust and Perceived Usefulness across low and high uncertainty avoidance groups. According to the latent mean, the results indicate that high UA customers (KSA) tend to value trust more than those who have low UA. Banks should enhance and improve customers trust perceptions by providing security and privacy protection or providing a sufficient level of information and communications, so that high UA group would be more likely to adopt or use Internet banking more frequently and their perceptions about the usefulness of the services will be high. This result supports the arguments of Shore and Venkatachalam (1996) and Nakata and Sivakumar (1996) that users with high UA will be more anxious towards a technology that provides high risk so that they are more likely to be reluctant to accept and use new technology, while those who have low level of UA show more willingness to take the risks that are associated with new technology. Because the context of the current study is Internet banking, Trust will have a significant effect on users' behaviour, especially those with high UA level as this context is more risky than others.

Subjective Norm

The importance of Subjective Norm is as a construct affecting users' perceptions to accept or reject as system. Subjective Norm has been tested to examine users acceptance based on technology acceptance mode (TAM), such as Venkatesh and Davis (2000), Chau and Hu (2001), Taylor and Todd (1995a), Taylor and Todd (1995b), Venkatesh and Morris (2000) and Al-Gahtani et al.(2007). In addition, some others have tested the social presence as a construct affecting the use of a system through Perceived Usefulness across different cultures: Straub (1994) who tested the effect of social presence across Japan and USA, Gefen and Straub (1997) who conducted their study across Japan, Switzerland, and USA, and third-party seal and referral has been tested across USA and South Korea (Kim, 2008). In terms of the context of Internet banking, a number of studies have been focused on Subjective Norm, such as Hernandez and Mazzon (2007) in Brazil, and Howcroft et al. (2002) in the UK. The only study that tests Subjective Norm and its relationship to Trust or perceived manageability between the Kingdom of Saudi Arabia (KSA) and the United Kingdom (the UK) in the context of Internet banking has been (Alsajjan and Dennis, 2010).

Along with previous studies, the current study attempts to test whether subjective norms is an important construct in the context of Internet banking. Compared with previous works, this study investigates the relationship between subjective norms and perceived usefulness across two countries (KSA and the UK). As far as the author is aware, there is no previous study that has investigated these relationships across these two countries and moderated by Uncertainty Avoidance. The study's aim is to fill this gap and provide additional knowledge contributions. An important finding was found in the current study. There is a significant relationship between subjective norms and perceived usefulness ($\beta = 0.33$, CR = 3.86 and P < 0.001) in KSA sample, while the relationship was found to be insignificant in the UK ($\beta = 0.03$, CR = 0.58 and P = 0.55).

In terms of the KSA, the significant relationship between Subjective Norms and Perceived Usefulness is consistent with Venkatesh and Davis (2000). This result indicates that the KSA customers' decisions were affected by social influences, such as from their families, friends or any other person that is important to them. While this relationship was not significant in the UK sample, it indicates that customers' opinions to utilize Internet banking are not affected by their social life. The later result is consistent with Venkatesh and Davis (2000) study 2.

The invariance result in Table 6.17 indicates that the relationship is significantly different between KSA and the UK, as indicated by the difference in Chi-square value, $\Delta\chi^2 = 10.72$ and P < 0.01. In addition, the total effect result (Table 6.18) indicates that Subjective Norm directly affects Perceived Usefulness with total effect of 0.45 in the case of KSA, while it is 0.04 in the UK group. The latent mean indicates that the importance of Subject Norm for customers of KSA is more than its counterpart in the UK by 0.83.

The differences in these can be attributed to the cultural differences between KSA and the UK. It has been proposed that in cross-cultural psychology, there is a tendency to assume that culture is an important issue that explains the psychological and behavioural differences between groups of people (Berry et al., 1992). According to the Hofstede (1980), KSA and the UK are culturally different. KSA is classified as collectivism culture where the groups' values are more important than the individuals' values. According to this dimension of culture, customers in KSA tend to accept the groups' values and opinions. Their opinions may be affected by other individuals in the community, such as their family, friends, or even by their relationship with their traditional

banks. This may be one of the reasons why Subjective Norm is a significant construct and a factor affecting customers' opinions to use the Internet banking and perform varieties of online financial services. In contrast, the UK is classified as an individualism culture where self-orientation or self-interest is an important characteristic of individuals. According to this dimension of culture, customers in the UK tend to trust their ability to take a decision, whether using a system or performing such behaviour is important or not, so that others' opinions and effects are not that significant in the individualism culture. Lee and Green (1991) found that Subjective Norm was more important than attitude towards the determination of behavioural intention in the Korean sample (collective culture) than the USA sample (individualism culture).

The above result was also supported by the influence of the culture dimension (Uncertainty Avoidance) on the users' behavior in the current study. The result confirm in Table 6.25 that the total influence of subjective norm on Perceived Usefulness is higher for high uncertainty users (KSA) than those with low uncertainty avoidance (the UK) (0.14 and 0.10) respectively. This indicated that Subjective norm is important factor that influence users from high uncertainty avoidance society, because individuals tend to follow and accept others' opinions such as their families, friends or any members who are importance to them to utilize online services. This influence is low in the society with low uncertainty avoidance (the UK).

Self-Efficacy

In terms of the relationship between customers' self-efficacy and the perceptions of Internet banking usefulness, the result shows that customers in both countries produce insignificant effect of self-efficacy on perceived usefulness. The regression weights are ($\beta = 0.08$, CR = 0.94 and P = 0.35) and ($\beta = -0.02$, CR = - 0.23 and P = 0.82) in KSA and the UK, respectively. This result is not expected and the opposite of what was hypothesized. It was hypothesized that the more customers have self-efficacy and self-confidence in their abilities, the more their perceptions about how useful Internet banking is. However, the result indicates that customers' self-efficacy has no effect on the usefulness' perceptions of Internet banking. Compared with previous studies, this insignificant result is different. For example, Wang et al. (2003), Guriting and Ndubisi (2006), and Hernandez et al. (2009) found significant effects of computer self-efficacy and perceived usefulness. In addition, the customers from the UK show negative effect, while the KSA sample is positive. In terms of whether this relationship is statistically different across the countries, the invariance analysis in Table 6.17 indicates that this relationship is statistically

insignificant ($\Delta\chi^2$ = 0.528 and P = 0.467). The total effect of Self-efficacy on Perceived Usefulness of customers from the UK (at 0.28) is more than the total effect in the KSA sample (at 0.16). This result can be attributed to the customers' experience. Even though customers as sampling units show experience and self-confidence in using Internet banking, their self-efficacy affects their perceptions of how easy Internet banking is, but has no affect on their perceptions of its usefulness. This might be because the usage for customers who have just started using Internet banking (only for two or three years) might be limited to a few activities (transferring money from one account to another and bills payment), but they are being compared with other types of customers, such as employees, whose financial abilities are better than student customers. For example, customers were asked to indicate what types of financial transactions they usually performed via the Internet, the results show that checking accounts and transaction history accounted for 171 (69%) in KSA and 247 (87%) actions, respectively, in the UK. In addition, they show a low level of managing investment and stock trading usage, as indicated in (Appendix 9). Agarwal and Prasad (1999) examined the effect of individuals' prior experience on their perceptions of the system's Ease of Use and Usefulness and found that prior experience affected users' attitudes to use the system only through Perceived Ease of Use. It was found that IT knowledge was positively related to Internet banking adoption (Nielsen, 2002). Dishaw and Strong (1999) found that Perceived Usefulness was affected by the total experiences, and this indicates that more experienced users were better able to note the usefulness of the tool. Experience as a construct affecting Internet banking acceptance has been tested in the current study, but unfortunately it has not been supported in this study. In the current study, the effect of income on the relationship as a moderator has not been tested. Additional research should be done to examine whether there is any effect of experience and income on this relationship. Another research should be applied on other types of customers, who have different backgrounds, experience and income, to test whether the relationship between Self-efficacy and Perceived Usefulness might be changed according to these determinants.

Perceived Ease of Use

As it was stated, Perceived Ease of Use is a fundamental determinant of individuals' behaviour to accept or reject a system. It was proposed by (Davis, 1989, Davis et al., 1989). It has examined cross-cultural research by for example (Straub, 1994, Gefen and Straub, 1997, Straub et al., 1997, Al-Gahtani et al., 2007, Vance et al., 2008). In terms of the context of Internet banking, Perceived Ease of Use was tested in different studies (Aladwani, 2001, Çelik, 2008,

Chong et al., 2010, Eriksson et al., 2005, Gounaris and Koritos, 2008, Guriting and Ndubisi, 2006, Yap et al., 2010).

In terms of the relationship between Perceived Ease of Use and Perceived Usefulness, the current study found a significant and positive relationship between Perceived Ease of Use and Perceived Usefulness in both countries, with little difference in the regression weights; the regression weight in the sample of KSA is ($\beta = 0.41$, CR = 3.89 and P = 0.001), while it is ($\beta = 0.68$, CR = 7.20 and P = 0.001) in the UK. These results support the finding of the previous studies (Davis et al., 1989, Davis, 1989, Davis, 1993, Taylor and Todd, 1995a, Szajna, 1996, Igbaria et al., 1997, Jackson et al., 1997, Gefen and Keil, 1998, Agarwal and Prasad, 1999, Chau, 1996, Venkatesh and Morris, 2000, Venkatesh, 2000, Chau and Hu, 2001, Venkatesh et al., 2002, McKechnie et al., 2006, Kim and Forsythe, 2009). These results are also similar with what has been found in the Internet banking research such as (Çelik, 2008, Eriksson et al., 2005, Suh and Han, 2002, Wang et al., 2003). Many cross-cultural researches have been reviewed for the current study, none of them examining the relationship between Perceived Ease of Use and Usefulness. The current research attempts to fill this gap and to provide an empirical contribution to Internet banking context specifically, and online marketing generally.

These results are opposite what has been found by (Subramanian, 1994). This difference between the current study's results and what has been found by Subramanian (1994) could be attributed to the context of the study. The context in this study is Internet banking. This context is important for many individuals because it deals with their financial activities so that the more the Internet banking proves to be easy to use, the more activities and performance can be achieved. Another reason could be that the financial activities will be performed via the Internet where many risks and uncertainty issues can be recognized, such as personal computers can be hacked so that account number and personal information can be accessed, stolen and used by unauthorized parties. In addition, the sample units in the current study are students who may have different views and perceptions about Internet banking. Even customers, who started Internet banking a few years ago, still value the perception of how Internet banking's Ease of Use is a significant determinate of their perceptions of how useful the Internet banking is. Comparing the current study's results with Subramanian (1994) results, Subramanian (1994) carried out the research on employees (users of the two systems: Voicemail and Dial Up) in the context of the USA. The perception of how important a system is ease of use might be differing

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across different segment of customers. Applied this idea on the current research, the customers' perceptions of using Internet banking might be different than using voice mail and dial up. The Internet banking where financial activities are performed is run through the Internet where the risks might be high. While the voice mail and dial up systems were run through the internal net where most of the environmental issues can be controlled and managed so that the level of risks might be low.

Even the regression weights between the countries were different: 0.41 and 0.68 in KSA and the UK respectively, the invariance analysis results. Table 6.17 also indicates that the difference in the regression weights is insignificant ($\Delta\chi^2$ = 3.444 and p = 0.063). This indicates that the two samples (KSA and the UK) similarly value the relationship. In addition, the total effect (Table 6.18) of Perceived Ease of Use on Perceived Usefulness is more in the UK sample compared with KSA sample, at 0.61 and 0.37, respectively. In terms of the means analysis, Table 6.20 demonstrates that it is statistically different with estimation of (-0.186) and P < 0.001. This indicates that the values and importance of the perception of ease of use as a construct affecting their behaviours to use Internet banking in the UK sample are higher than customers' perceptions of KSA. This difference might be attributed to the customers' capabilities to utilize self-services, such as Internet banking. The more customers have the abilities to use a system, the less importance they give to the ease of use perceptions. The customers from the KSA might be more able and familiar to use self-services than customers from the UK. Additional research should be done to investigate why individuals from both countries provide significant difference in terms of the value or importance of the perceptions of ease of use. It was found that the KSA group performed more financial transactions than customers from the UK. This might reduce the importance of Perceived Ease of Use. It was stated in previous literature that the more experienced users are, the less significant Perceived Ease of Use will be. Based on the results indicated, this objective is partially supported.

7.4.5 The Direct Determinants of Internet banking's Ease of Use

According to TAM, Perceived Ease of Use is one of the fundamental constructs that affect individuals' behavioural towards choosing to use or not use a system. Many factors have been proposed and proved to influence users' perception of a system's ease of use (Davis, 1993, Chau, 1996, Igbaria et al., 1997, Agarwal and Prasad, 1999, Lucas and Spitler, 1999, Venkatesh, 2000, Chau and Hu, 2001, Venkatesh et al., 2002, Gefen et al., 2003b, Lu et al., 2003, Lee et al., 2006,

McKechnie et al., 2006, Hernandez et al., 2009). In the context of Internet banking, different factors were stated (Wang et al., 2003, Eriksson et al., 2005, Guriting and Ndubisi, 2006, Çelik, 2008). It can also be noted from cross-culture literature, and from the researcher's own knowledge, that there isn't any study that examines what factors affect Perceived Ease of Use across culture. In order to fill this gap, the current study investigates some essential factors that have been proved in the context of online services: Trust, Subjective Norms, and Self-efficacy. By examining whether these factors significantly influence Perceived Ease of Use and whether these relationships can be detected and moderated by Uncertainty Avoidance and are statistically significant across KSA and the UK, a contribution to the current literature can be made.

The current study's results indicate that these three constructs (Trust, Subjective Norms, and Self-efficacy) contribute differently to explain Perceived Ease of Use. In the case of KSA, Subjective Norms and Self-efficacy contribute significantly to Perceived Ease of Use. Both constructs explained 0.43 of the variance of Saudi customers' perceptions towards Internet banking's ease of use. Perceived Ease of Use was not influenced by Trust in the KSA group. In contrast, a considerable amount of variance ($R^2 = 0.44$) on Perceived Ease of Use was explained by Trust and Self-efficacy, while Subjective Norm did not contribute to explain the Perceived Ease of Use in the case of the UK. In both cases, the variance was explained largely by users' Self-efficacy. The following sections will illustrate and explain these factors and how they contribute to Perceived Ease of Use.

Trust

As hypothesized in the conceptual framework chapter, there is a positive and significant relationship between customers trust towards Internet banking and their perception in terms of the Internet banking's ease of use. The assumption is that the more customers trust Internet banking, the more ease of use there will be.

In terms of the relationship between Trust and Perceived Ease of Use, several previous studies emphasized the affect of Trust on individuals' perceptions of how difficult or easy the website, system and different applications are to use. This relationship was empirically investigated by Pavlou (2003) in online shopping in the USA ,and Eriksson et al. (2005) in the Internet banking in Estonia. Both studies found a significant effect of trust perception on individuals' perception of ease of use. Chircu et al. (2000) also hypothesized that Trust positively influences the

Perception of Ease of Use and they argue that the need to understand, monitor and control the detailed actions of the intermediary can be reduced by increasing the trust perception among individuals.

The current study found that the result was also different across these two countries. The result indicates that the relationship between Trust and Perceived Ease of Use was not significant in the KSA sample (β = 0.06, CR = 0.84 and P = 0.39). This result indicates that even if the KSA customers' perceptions towards Internet banking's usefulness was affected by their perceptions of trust, their perception of Internet banking's ease of use is not affected by their trust. The result was different to the findings in the previous study (Pavlou, 2003, Eriksson et al., 2005).

This result can be attributed to the website usability elements (Cyr and Trevor-Smith, 2004). Even the Saudi sample provides a higher degree of experience of using Internet banking, as provided in the invariance analysis across experience (Table 6.32 provides more details), than their peers in the UK. Customers from KSA may find website usability difficult to understand or they may spend too much time doing financial activities. For example, they may find it difficult to find relevant information on how they can transfer money from their current accounts to others accounts, the information on the web is too complicated or the banks may use specific financial terms that are difficult for normal users to understand. The perception of website design is one of the significant cited quality attributes (Wofinbarger and Gilly, 2003, Montoya-Weiss et al., 2003, Loiacono et al., 2007) and Perceived Ease of Use was examined and focused by several previous studies (Vance et al., 2008, Lucas and Spitler, 1999, Lee et al., 2006, Venkatesh, 2000). Accordingly, individuals' perception of service quality, including website design, navigation elements and information quality, may have a significant effect on the Saudi sample's perception towards the ease of Internet banking, thus diminishing the importance of Trust. Customer experience and its relationship to Perceive Ease of Use has been investigated previously (Agarwal and Prasad, 1999, Gefen et al., 2003b, McKechnie et al., 2006). It was also mentioned that Perceived Ease of Use will be affected by prior experience Taylor and Todd (1995a) and system usability will affect the user perception only after direct experience (Venkatesh and Davis, 1996).

In terms of the UK's sample, the relationship between Trust and Perceived Ease of Use was statistically significant (β = 0.31, CR = 4.34 and P < 0.001). This result confirms the previous

studies (Pavlou, 2003, Eriksson et al., 2005). The result indicates that Trust is an important factor affecting customers' acceptance of Internet banking in the UK, which is in the line with previous studies that stated that Trust was the significant construct in the Internet banking context (Daniel, 1999, Grabner-Kräuter and Faullant, 2008, Hernandez and Mazzon, 2007, Sathye, 1999, Suh and Han, 2003, Yap et al., 2010, Zhao et al., 2010). This significant finding might be attributed to the fact that customers from the UK trust websites that provide ease of design, clear structure and understandable information. This is because these websites provide attributes that can be used to judge whether they are trustworthy. It was found that there are significant relationships between navigation structural, visual appeal and Perceived Ease of Use (Vance et al., 2008). In addition, customer experience may play a significant role in explaining this result. According to Table 6.32 paged 300 in the previous chapter, the UK sample indicated low experience in Internet banking usage when compared to the sample of KSA. The current study found that there were 213 (75%) customers from the UK classified as low experience group compared with 147 (59%) in KSA. The effect of customers' experience and Perceived Ease of Use has been examined in the previous studies (Agarwal and Prasad, 1999, Dishaw and Strong, 1999, Gefen et al., 2003b, McKechnie et al., 2006). Moreover, in terms of culture dimensions, Hofstede (1980) may explain the result. According to Hofstede (1980), KSA and the UK represent a distinct culture and they have different values and beliefs. In an individualism culture, such as the UK, Jarvenpaa et al (1999) expected that customers would show a higher level of trust in online stores than in a collectivism culture like KSA.

The invariance results (Table 6.17) shows that the relationship between Trust and Perceived Ease of Use is statistically significant across both groups, as indicated by the differences in Chi-square value $\Delta\chi^2$ (9.39) and P < 0.01. This indicates that the groups perceived the relationships differently. It can be noted also that the total effect (Table 6.18) in KSA is less than the total effect in the UK. The latent mean result (Table 6.20) is also statistically different across the groups. Customers from KSA value Trust more than those from the UK. This indicates that the Saudi sample is socially driven because Trust is a social factor. Saudi group members trust those from their own communities but are less likely to trust members from outside the group. The latter result confirmed by the moderator (Uncertainty Avoidance) result that shown in Table 6.25 and 6.26 for the total effect of Trust on Perceived Ease of Use and the Trust latent mean respectively. The result indicated that the total effect of Trust on Perceived ease of use and Trust latent mean is higher for individuals from high uncertainty avoidance culture (the KSA case)

than their peers from low uncertainty avoidance (the UK case). This means that trust internet banking is important to reduce uncertainty and increase internet banking usage among members from high uncertainty avoidance.

Subjective Norms

In terms of the effect of Subjective Norm on Perceived Ease of Use, the study found that the effect varies across these two countries. This relationship has not been investigated by previous studies. The current study aims to fill this gap. The assumption of this relationship is that the more individuals take into consideration others' opinions concerning whether they should or should not perform such behaviours, the more their perceptions about how easy or difficult the behaviour under investigation will be. For example, when the other individuals' opinions about a system are difficult and needs so many steps to perform the activities, the lower ease of use perceptions will be. In order to explain the relationship, the current study is conducted in Internet banking, where the customers' perceptions about whether performing financial activities in Internet banking is easy or difficult and is affected by the bank-customer relationship. The more the banks have effective relationships with their existing customers, the more additional services such as Internet banking will be accepted and used. Gefen and Keil (1998) and Igbaria et al. (1997) provided empirical evidence that the better the relationship between a firm and the system's users, the more positive the users' perceptions about how easy the system is to use will be.

The study found that subjective norms affected customers' perceptions of Internet banking's ease of use in the case of KSA whilst, in the context of the UK, the relationship was not significant. (Table 6.13 shows the regression weight results.) The differences can be attributed to the cultural differences between KSA and the UK. It has been proposed in cross-cultural psychology that culture is an important issue that explains the psychological and behavioural differences among groups of people (Berry et al., 1992). According to Hofstede (1980), KSA and the UK are culturally different. KSA is classified as a collectivism culture, where the groups' values are importance than the individuals' values. According to this dimension of culture, individuals in KSA tend to accept the group values and opinions. Their opinions may be affected by other individuals in the community, such as their family, friends, or even by their relationship with their traditional banks. This may be one of the reasons that Subjective Norm is a significant construct and factor affecting customers' opinions to use Internet banking and perform a variety

of online financial services. In contrast, the UK is classified as an individualism culture, where self-orientation and self-interest are important individuals' characteristics. According to this dimension of culture, individuals in the UK tend to trust their abilities to take a decision, whether using a system or performing such behaviour is important or not. Thus, others' opinions and effects are not that significant in an individualism culture like the UK. Lee and Green (1991) found that Subjective Norm was more important than attitude towards the determination of behavioural intention in the Korean sample (collective culture) that in the USA sample (individualism culture).

Social Exchange Theory (SET), described by Kelley and Thibaut (1978) cited in Gefen and Keil (1998), might explain these results. According to this theory, human behaviour can be affected by a rational cost-benefit analysis. SET views the cost-benefit analysis from two different angles. The first angle is from social exchange, in which different parties (providers and users) are involved in such relationship (in the case of the current study, it is between banks and customers). The more social and interpersonal the relationship is between parties, the more behaviours and outcome can be expected. Perceived Ease of Use of a system is the important outcome from the relationship (Gefen and Keil, 1998). This view may provide a significant explanation of how Perceived Ease of Use was affected by the Subjective Norm. It was stated that social influences were equivalent to Subjective Norm (Taylor and Todd, 1995b). The second view is economic exchange, where actions and activities can be performed based on the costs and benefits associated with these actions. According to this perspective, customers in the UK may tend to perform and use Internet banking when the tangible outcomes are in place, such as free air-miles or there are special offers for customers who use Internet banking. Accordingly, customers from KSA may be affected by the social perspective, while the customers from the UK may be affected by the economic perspective. These perspectives are out of the scope of the current research and further study should be conducted to investigate whether these two perspectives have effects on the Internet banking users.

Moreover, the products and services life cycle may explain these findings. The earlier the products and services are introduced to customers, the more those customers' attitudes and opinions towards the services or products are shaped. In can be noted from previous research that Internet banking was first offered to the customers in the UK in 1997 (Sayar and Wolfe, 2007), while it was offered in the KSA in 2000 (http:/arraydev.com). In addition, 33 banks in the UK

provide online services, while 8 banks in KSA. Accordingly, customers' attitudes and opinions in the UK may be shaped and their skills and self-confidence might be improved so that the decision to perform any behaviour might be taken based on their own confidence. This may explain why Subjective Norm was not an important construct affecting customers' decisions in the UK to perform the behaviour (in this research, perform financial activities online). In contrast, the customers' opinions towards Internet banking may still be unshaped in the KSA and affected by other individuals' opinions, such as their families and friends. Individuals' attitudes and opinions might be the most difficult to change. The services might be resisted in the introduction phases and only accepted by a small number of customers. This might be the case in KSA. Venkatesh and Davis (2000) found that with increasing customers experience, the effects of Subjective Norm on individuals behaviour become insignificant.

Invariance results (Table 6.17) indicate that the influence of Subjective Norm on Perceived Ease of Use is statistically different between KSA and the UK groups, as indicated by Chi-squire value $\Delta\chi^2$ (11.49) and P < 0.01. This is evidence that customers from KSA believe in the opinions of others, and their behaviour and decisions to perform such behaviours are more likely to be influenced by other members in the society. Table 6.18 shows that the total effects of Subjective Norm on Perceived Ease of Use in the KSA group are more than the total effects in the case of the UK, with (0.36) and (0.04), respectively. In addition, the mean difference between both cases is statistically different, as indicated in Table 6.20, showing that customers from KSA believe that Subjective Norm is a significant construct that influences their behavioural, with mean value (0.83). In addition, the result confirmed that the relationship is moderated by the culture dimension uncertainty avoidance. Table 6.26 shows that the Subjective Norm is more significant influence high uncertainty avoidance users (the KSA case). This indicates that users' opinions to use internet banking are more likely to be influenced by others members in their society.

Self-Efficacy

According to previous literature, individual Self-efficacy is an important construct that determines individuals' behaviour. The concept of self-efficacy originally was provided by (Bandura, 1977, Bandura, 1982, Bandura, 1986). It was also stressed by (Gist, 1987, Gist and Mitchell, 1992, Bandura and Locke, 2003, Lee and Bobko, 1994). Some others were more specific and focused on Computer Self-Efficacy (Hill et al., 1987, Gist et al., 1989, Igbaria and

Iivari, 1995, Compeau and Higgins, 1995a, Compeau and Higgins, 1995b, Marakas et al., 1998, Compeau and Higgins, 1999, Agarwal et al., 2000, Hong et al., 2002). Recently, some studies also focused and examined users' self-efficacy, integrated with technology acceptance model (TAM), for example (Venkatesh, 2000). Some other studies examined user self-efficacy on the context of Internet banking (Wang et al., 2003, Walker and Johnson, 2006, Guriting and Ndubisi, 2006, Hernandez and Mazzon, 2007, Hernandez et al., 2009). In the current study, the general concept of self-efficacy has been applied in a similar way to Walker and Johnson (2006), who used a general concept of self-efficacy (capacity) to indicate personal capacity or capability to use technology-enable services successfully. This notion was adopted from (Dabholkar and Bagozzi, 2002, Walker et al., 2002, Karjaluoto et al., 2002). The relationship between this factor and how customers perceived Internet banking ease of use across cultures has not been investigated. The current study aims to fill this gap by examining customers' self-efficacy on KSA and in the UK, in terms of the adoption of Internet banking.

In terms of the relationship between customers' self-efficacy and their perception of ease of Internet banking, the current study found that there was a significant relationship between these two constructs in both countries (KSA and the UK) with ($\beta = 0.51$, CR = 6.73 and P < 0.001) and ($\beta = 0.58$, CR = 9.52 and P < 0.001) respectively. These results were expected and show that customers' self-efficacy determines the perceptions of Internet banking ease of use, which means that the greater the customers' self-efficacy to perform the behaviour, the more they find a system easy to use. In addition, compared with what has been found before, the result from this study supports the previous studies. For example, Wang et al. (2003) found a significant relationship between computer Self-efficacy and Perceived Ease of Use. Wang et al. (2003) result supported other previous studies (Igbaria and Iivari, 1995, Venkatesh and Davis, 1996, Agarwal et al., 2000, Venkatesh, 2000, Hong et al., 2002). In addition, Guriting and Ndubisi (2006) and Hernandez et al. (2009) found a significant effect of Self-efficacy on Perceived Ease of Use. The results indicate that customers' Self-efficacy (in both countries) is an important construct that determines behaviour about the ease of use of Internet banking. It can also be noted from the invariance analysis (Table 6.17) that even the relationship in both countries is significant, the differences between the KSA and the UK is statistically different as indicated by Chi-square difference $\Delta\chi^2$ (4.53) and P < 0.05. For more investigation, the current study calculated the effect size (Table 6.18) between the countries and found that the total effect of Self-efficacy on Perceived Ease of Use in the KSA is 0.32, while in the UK is 0.48. This

indicates that customers' Self-efficacy affects Perceived Ease of Use in the UK sample more than the effect in the sample of KSA. This result might be attributed to the culture differences between the countries. For example, in an individualism culture like the UK, individuals tend to have self-perceptions, self-confidence, and self-interest and put more value on their personal skills. Accordingly, the effect of their Self-efficacy on their Perceptions of Ease of Use is more than their peers in KSA.

7.4.6   Determinants of Customers' Trust towards Internet Banking

According to the previous literature, five factors have been proposed to have significant influence on users' trust: Security, Privacy, Communication, Reputation and user' Experience. Accordingly, five hypotheses were developed and illustrated graphically in section 4.3.6 in the fourth chapter. Based on the results from the third stage of the main data analysis (CFA) in the sixth chapter, in section 6.5, these five factors were not supported and valid in the current study. As a result, two constructs (Security and Privacy) were emerged with Trust, while the others (Communication, Reputation and Experience) were eliminated from the conceptual model so that this objective is not met and supported.

7.5   The Mediation's Role of Perceived Usefulness and Ease of Use

The conceptual model proposed that perceived usefulness and ease of use mediated that influence of external factors (Trust, Subjective Norm and Self-Efficacy) on customers' attitude towards Internet banking. According to the data driven, this objective was extended to include the influence of external factors on customers' loyalty towards Internet banking. Accordingly, it can be noted that there are three external factors as stated above, two mediators (Perceived Usefulness and Perceived Ease of use) and two dependent factors (Customers' Attitude and Loyalty). According to the basic idea of TAM that Perceived Usefulness and Ease of Use will mediate the effects of external factors on users' attitude to accept or reject a technology (Davis, 1989, Davis et al., 1989). The results indicate that Perceived Usefulness and Ease of Use mediated the influence of the external factors on the dependent factors with some variations in terms of whether the mediation is full or partial. The results support previous studies such as (Davis, 1993, Agarwal and Prasad, 1999, Dishaw and Strong, 1999, Venkatesh, 2000, Venkatesh et al., 2002, Gefen et al., 2003b, Pavlou, 2003, Lee et al., 2006), while other studies that used TAM did not provide the mediation results such as (Chau, 1996, Igbaria et al., 1997, Gefen and Keil, 1998, Lucas and Spitler, 1999, Bhattacherjee, 2001, Chau and Hu, 2001, McKechnie et al.,

2006, Hernandez et al., 2009). The findings indicate that customers' loyalty and attitudes towards Internet banking also were influenced by Trust, Self-efficacy and Subjective Norm indirectly through Perceived Usefulness and Ease of use. It should be noted that the results were vary from country to country. For example the influence of Trust on loyalty was fully mediated by Perceived Usefulness in the case of KSA but partially mediated in the case of the UK. This may indicate that even Saudi customers trust their Internet banking, they may not be loyal unless they recognised the usefulness of Internet banking. In terms of the UK sample, customers' loyalty tends to be influenced by their trust over or below their perception of the Usefulness of Internet banking. The later findings did not support the some existing literature in the context of Internet banking such as Herington and Weaven (2007), but in the case of KSA, the findings support Herington and Weaven (2007) who found no significant relationships between e-trust and e-loyalty.

In both countries, subjective norm has direct and significant influence on customers' loyalty towards Internet banking. The influence was partially mediated by both perceived usefulness and ease of use. This indicates that customers' behavioural from both countries were influenced by their social communities such as their families and friends. This result supports the basic idea of TRA that individuals' behavioural will be influence by others' opinions about a system or the behaviour under the focus. The influence of subjective norm has been supported in different situation in the literature review such as its influence on behavioural intention (Taylor and Todd, 1995a, Taylor and Todd, 1995b, Lucas and Spitler, 1999, Venkatesh and Morris, 2000, Chau and Hu, 2001, Hernandez and Mazzon, 2007), social influence on perceived usefulness (Lu et al., 2003) and social factors on attitude (Dennis et al., 2009). The current study is the first one examined the directed relationship between subjective norms and customers' loyalty towards Internet banking indicating that customers are more likely to visit, revisit and be loyal with their services provider based on the their families and friends recommendations. The existing literature will be contributed by this result. In addition, perceived ease of use and usefulness partially mediated the influence of subjective norms on customers' attitudes towards Internet banking in both countries. This indicate that even customers have experience of how Internet banking be controlled and used, their attitudes are still affected by others' opinions in their society. This can be attributed to the how much banking knowledge they have, because they may have experiences but they also have lack of knowledge and awareness about the variety and the types of services offered. As a result, they are more likely to be influenced by others' opinion.

The current study confirmed that trust has significant influence on customers' attitude towards Internet banking. This influence was partially mediated by perceived usefulness and ease of use in KSA and the UK. It supports the existing studies such as (Suh and Han, 2002, Lu et al., 2003, Suh and Han, 2003, Grabner-Kräuter and Faullant, 2008). The result indicates that customers' attitude in both countries is significantly influenced by their trust perceptions. The result indicates that even customers have sufficient internet and Internet banking experience and banks provide a useful and ease of use website, trust still significant and important construct influencing users and may prevent them of using online services as stated by many studies in the Internet banking context such as (Sathye, 1999, Aladwani, 2001, Eriksson et al., 2005, Laforet and Li, 2005, Gan et al., 2006, Herington and Weaven, 2007, Chong et al., 2010, Yap et al., 2010, Zhao et al., 2010).

It can also be noted that perceived usefulness and ease of use fully mediated the effect of self-efficacy of customers' attitude towards Internet banking. This means that the direct relationship from self-efficacy and attitudes was not significant in both countries except the influence of self-efficacy on customers attitude was partially mediated by perceived usefulness in the case of the UK. the results confirmed previous results such as Venkatesh (2000) who found no direct and significant influence of computer self-efficacy on behavioural intention and the influence was mediated in full by perceived ease of use. Guriting and Ndubisi (2006) found that the effect of computer self-efficacy on customers' behavioural intention in the context of Internet banking was partially mediated by perceived usefulness and ease of use. On the other hand, Wang et al. (2003) examined the indirect influence of computer self-efficacy on behavioural intention via perceived usefulness, ease of use and perceived credibility in the context of Internet banking, while Hernandez et al. (2009) examined the indirect relationship from perceived self-efficacy on customers' attitude through perceived ease of use and usefulness in the context of online shopping, but both studies did not provide whether the influence was fully or partially mediated. The results confirmed the importance of perceived ease of use and usefulness to mediate the influence of customers' self-efficacy on their attitude. The results illustrated that even study have self-confidence and well-developed skills to use self-services, their positive attitudes will be influenced unless banks provide ease of use and usefulness banking website (Internet banking).

7.6 Conceptual Model Differences and Generalisability across (Gender and Internet Banking Experience

Several invariance analyses were performed in the current study. Three levels of invariance analysis were performed across those groups: measurement model, structural model and latent means equivalences. In general, the measurement model items were invariant (equivalent) across all groups, while the structural model and latent means were not invariant (not equivalent) across gender groups. In terms of the low and high experiences groups, the structural model and latent means were equivalent. This indicates gender, while it can be generalized across experiences groups. The following section will explain the differences between these three groups in which relationships and constructs.

7.6.1 Gender (Male and Female)

According to the invariance results, the partial measurement model was supported and the structural model was statistically significant. According to the Table 6.28, it can be noted that the influence of Subjective Norm on Perceived Ease of Use and Usefulness were significant, as indicated by the Chi-square value $\Delta\chi^2$ (12.879) for Perceived Ease of Use and (7.15) for Perceived Usefulness and both $P < 0.01$. In both relationships, the male group has the larger total effects of Subjective Norm on Perceived Ease of Use and Usefulness, with total effect (0.15) and (0.24), respectively, while the female group has the lowest total effect (- 0.6) for Perceived Ease of Use and (0.003) for Perceived Usefulness. The Subjective Norm's latent mean was insignificant in both groups. These results indicate that male's perceptions towards whether Internet banking's usefulness and ease of use tend to be influenced by others members' opinions in their society, such as families or friends. This result is opposite to the results of Venkatesh and Morris (2000) that women were more likely to be influenced by Subjective Norm towards performing such behaviours because they are more related with the groups' harmonious interrelationships as well as concern with group communications. The relationships between gender and Perceived Usefulness and Ease of Use were examined by McKechnie et al. (2006), who found no significant influence of gender on both Perceived Usefulness and Ease of Use. Gefen and Straub (1997) examined the influence of gender on Social Presence, Perceived Usefulness and Ease of Use across three distinct cultures, namely Japan, Switzerland and USA. They found that women had significant influence on Social Presence, Perceived Usefulness and Ease of Use. Al-Gahtani et al. (2007) investigated the relationship of Performance Expectancy (equivalent to usefulness), Effort Expectancy (equivalent to ease of use), and subjective Norms

on behavioural intention across gender in the case of KSA. They found that gender had no significant interaction with any of the latent constructs which meant that males and females perceived the relationships similarly. Contrary to the above studies, the current study found significant difference between males and females. Males tend to be more likely to be influenced by subjective norms than women.

This can be attributed to the context of the study (Internet banking). Some of the above studies carried out their research on new system usage in the organizational context where the risk might be low (Venkatesh and Morris, 2000), e-mail usage (Gefen and Straub, 1997) and computer usage (Al-Gahtani et al., 2007), while McKechnie et al. (2006) carried out their research in the context of financial distribution channels in the UK. Internet banking is high-risk environment so that customers might want to reduce risks, such as card security number stolen, privacy protection, and access by unauthorized parties, so that others' opinions might be important to reduce these risks. This is especially the case of males because females tend to use the Internet for social communication such as e-mail. Most of the above studies conducted their research on employees or general customers, the current study was conducted on undergraduate students who might have less experience and whose Internet banking usage is limited compared with other types of customers who have high experiences, particular in the domain of financial distribution channels. Because of the low experience, Subjective Norm might be important in affecting their behaviour so that their level of confidence to use Internet banking will be high.

7.6.2 Low and High Internet Banking Experience

The results indicate that the conceptual model can be generalized across low and high experience. The invariance analysis shows similarity in the measurement model and structural model, while some invariance results were found in the latent mean level. According to the latent mean results (Table 6.35), the high experience group valued Subjective Norm, Perceived Ease of Use, Attitude and Perceived Usefulness higher than the low experience group. This indicated that social influence is an important factor to influence the high experience group towards Internet banking. In addition, Perceived Ease of Use and Usefulness were important constructs in influencing high experience customers so that banks should recognise the importance of Internet banking Ease of Use and Usefulness to enable high experience customers to be encouraged to use Internet banking more. On the other hand, low experience customers have more intention to use Internet banking than high experience customers do. In addition, they have more trust

perceptions towards Internet banking than high experience customers do. Both groups provided and valued Self-efficacy similarly. As indicated by the insignificant p value (Table 6.37). This indicated that both groups believed that they have self-confidence to adopt and use self-services, such as Internet banking.

7.7 Summary

The current chapter covers many issues. First, it gave a summary of the results so that it can be clear and easy. The third section (7.3) made a comparison between the current research findings with the existing literature in the context of Internet banking in terms of the explanation power of the conceptual model. As a result, the study confirmed that the current conceptual model can be preferred over other existing models to explain users' behaviour towards Internet banking. The other sections in this chapter (ranged from 7.4 to 7.6) concentrated on research findings. These findings were compared with the existing literature and several justifications concerning the results were provided. The final section (7.6) discussed the invariance analysis findings that examine the moderator influence (low and high uncertainty avoidance) on the conceptual model. In addition, it illustrated whether there is any influence of Gender and Internet banking experience on the conceptual model.

The conclusion of the current study will be provided in the following chapter (chapter eight). It will summarise the study. In addition, the study implications will be illustrated, including theoretical, managerial, policy makers and methodological implications. Finally, the study limitations and future research recommendations will be highlighted.

Chapter Eight: Conclusion

8.1 Introduction

This doctoral study examined customers' behaviour and loyalty towards Internet banking across two distinct cultures. The study focused on the context of Internet banking, because it is an important technology innovation in individuals' daily life. From the perspective of banks and customers, it provides many advantages over other financial distribution channels. For example, technical and administration costs can be reduced because some of the financial transactions will be passed to customers. In addition, banks' services can be performed at different times and from different places by customers so that the travelling costs can be reduced and other benefits can be obtained. Many advantages of using Internet banking are described in the second chapter (section 2.5).

However, even though there are many advantages that customers can get, a large percentage of customers are not using Internet banking services. It can also be noted that a few research have been done across cultures. More specifically, there are quite a few studies that have been carried out in the Kingdom of Saudi Arabia. Accordingly and because of this lacking of research, the current study is encouraged to explore customers' behaviour in the market of KSA, compared with the customers' behaviour in the market of the UK. The purpose of the current chapter is to present theoretical, managerial, policy makers, and methodology implication. In addition to highlight the most significant theoretical and methodological limitations that lead to further study.

This chapter is structured as follows: the chapter will start by providing a summary of the current study results in section 8.2, followed by research implications in section 8.3 that include theoretical, managerial, policy makers and methodological implications. Section 8.4 illustrates the theoretical and methodological limitations and followed by focusing on future research suggestions in section 8.5. To conclude the chapter, a summary of the main points are highlighted in section 8.6.

8.2 Summary of the Study

The current study applied and examined empirically thirteen constructs linked in different ways to explain customers' loyalty towards Internet banking. Sixteen different hypotheses were performed and examined. The conceptual model was developed from existing literature and attempted to fill some significant gaps in the literature. In the current study, several theories and models were applied. The Theory of Reasoned Action (TRA), Technology Acceptance Model (TAM) and Social Cognitive Theory (SCT) are the fundamental foundations of the current conceptual model. Some other constructs were considered in the conceptual model, such as trust. Unlike the previous studies, where the main focus was on the actual usage behaviours as a consequence of the users' behavioural intention, the current research went further to examine whether customers' behavioural intention has any significant influence on their loyalty towards Internet banking. Using evidence from previous studies, the current study assumed that the more intentions the customers have, the more they prefer Internet banking over other forms of banking provided by other banks in the market, and the more they prefer Internet banking over other financial distribution channels, such as physical branches, tele-banking or ATMs.

The study applied a positivist philosophy methodology. In order to examine empirically the conceptual model, two groups of undergraduate student samples have been asked to participate in the study. The first group came from King Khalid University in KSA, while the second sample attended Brunel University in the UK. A total of 532 usable questionnaires were collected. In order to validate the conceptual model, a structural equation modelling technique was applied and analysis of moment structure (AMOS) software was applied to test the hypothesised relationships and perform the invariance analysis. The following section (8.3) will provide the current study implications.

8.3 Study Implications

The implications of the current research will be discussed and illustrated from different perspectives, such as theoretical, managerial (practical) and methodological perspectives. The following will illustrate these implications one by one.

8.3.1 Theoretical Implications

The current research has developed a cross-cultural framework moderated by uncertainty avoidance that may best describe customers' behaviour towards Internet banking loyalty. The

conceptual model was developed from reviewing extensive existing literature. This conceptual model has not been tested conceptually and empirically in existing literature. According to the literature review, many of the studies in the context of Internet banking have not developed a framework (Mols, 1998, Daniel, 1999, Aladwani, 2001, Kardaras and Papathanassiou, 2001, Papadopoulou et al., 2001, Thornton and White, 2001, Howcroft et al., 2002, Bradley and Stewart, 2003b, Devlin and Yeung, 2003, Joseph and Stone, 2003, Rotchanakitummuai and Speece, 2003, Joseph et al., 2005, Laforet and Li, 2005, Wan et al., 2005, Corrocher, 2006, Mäenpää, 2006, Shah and Siddiqui, 2006, Kuisma et al., 2007, Sayar and Wolfe, 2007, Johns and Perrott, 2008, Herington and Weaven, 2009). Accordingly, the current study attempts to contribute to the above literature by developing a cross-cultural framework moderated by the culture dimension uncertainty avoidance and examining it empirically.

The novelty of this research is based on the development of a cross-cultural framework moderated by the culture dimension uncertainty avoidance that investigates and examines empirically the factors that influence customers' loyalty towards Internet banking. This model was tested across two different cultures: KSA, with high power distance, collectivism, high uncertainty avoidance and femininity culture, and the UK, with low power distance, individualism, low uncertainty avoidance and masculinity culture. According to the cross-culture literature, it can be noted that there were a few models have been developed across culture (Straub, 1994, Gefen and Straub, 1997, Straub et al., 1997, Jarvenpaa et al., 1999, Liu et al., 2001 , Luna et al., 2002, Liu et al., 2004, Gefen and Heart, 2006, Cyr, 2008, Jin et al., 2008, Kim, 2008, Vance et al., 2008, Schoefer, 2010, Alsajjan and Dennis, 2010). It can also be noted that there was just one empirical study that examined customers' behaviour towards Internet banking acceptance across KSA and the UK (Alsajjan and Dennis, 2010). The current study argued that one study is important but not enough to explain customers' behaviour. In addition, the current study developed, utilized and examined different constructs and developed different relationships. The current conceptual model will be a significant contribution to the existing knowledge and enhance previous studies, such as (Alsajjan and Dennis, 2010). How customers behave differently across different cultures can be predicted by using the current research model.

In addition, the conceptual model contributes to existing literature by examining empirically the influence of customers' behavioural intentions on their loyalty towards Internet banking. According to the literature review (chapter 3 and section 3.6.4), this influence has not been

investigated. This study proved theoretically and statistically that the more customers or individuals have intentions towards a specific brand or system, the more they tend to have some level of loyalty towards those systems. This indicates that the more customers have intentions to use Internet banking now or in the future, the more they are likely to be loyal towards that Internet banking service and prefer it to other financial distribution channels such as tele-banking or physical branches. In addition, they tend to prefer their current Internet banking provider over others in the market. According to the findings, this influence was significant in both countries and customers' loyalty was influenced largely by behavioural intention more than service quality dimensions (perceived ease of use and usefulness).

The most significant contribution also is the influence of service quality dimensions (perceived ease of use and usefulness) on customers' loyalty towards Internet banking. According to the analysis, specifically the modification indices in the AMOS output recommended two relationships: the relationship between perceived ease of use and customers' loyalty, and the relationship between perceived usefulness and customers' loyalty. Many literatures in the area of customers' loyalty and service quality have been reviewed for this study and it was found that these relationships have not been examined before. Most of the existing literatures examined service quality as one construct that consists of different dimensions in the banking sector (Liu et al., 2001 , Beerli et al., 2004, Herington and Weaven, 2007). On the other hand, other new studies have treated service quality dimensions as different constructs (Ribbink et al., 2004, Gan et al., 2006, Vance et al., 2008, Yap et al., 2010). Each construct (dimension) was proposed to have its own influence and outcome different from other dimensions. Based on these arguments, and the previous, perceived ease of use and usefulness was treated in the current study as two dimensions of service quality. Each one is able to stand alone and has its own influence on customers' loyalty. According to the findings, the current study contributes to the existing literature that service quality should be examined individually so that each dimension's influence can be detected. In addition, the current study confirmed theoretically and empirically that perceived ease of use and usefulness have significant influences on customers loyalty and, perhaps the more interesting finding, that these influences were different across the cultures of KSA and the UK. The study found that there is no statistical difference between KSA and the UK. These results can contribute to the literature review and prove that service quality can be generalized across culture.

The current cross-culture study contributes to the existing literature by performing invariance analysis across low and high uncertainty avoidance. Uncertainty avoidance is one of the importance cultural dimensions (Hofstede, 1980), as some individuals from different countries or society avoid some matters that may have some sort of ambiguity and the outcome cannot be predicted, while other societies may have some willingness for risk taking. A limited number of studies have measured the culture dimension empirically (Furrer et al., 2000, Tsikriktsis, 2002, Vance et al., 2008, Schoefer, 2010), while others studies carried out their research across cultures but did not measure the culture dimensions (Straub, 1994, Gefen and Straub, 1997, Straub et al., 1997, Jarvenpaa et al., 1999, Liu et al., 2001 , Luna et al., 2002, Y.K et al., 2002, Liu et al., 2004, Cyr et al., 2005, Singh et al., 2005, Gefen and Heart, 2006, Cyr, 2008, Jin et al., 2008, Kim, 2008, Alsajjan and Dennis, 2010). Unlike the previous studies, the current study measures this dimension of culture and the conclusion is based on the real data. The current study confirmed that the cross-cultural framework in general is moderated by Uncertainty Avoidance dimension of culture. The latent mean for all the constructs proposed in the framework were significant among high uncertainty avoidance users. The study confirms the significant influence of subjective norm on perceived usefulness and ease of use in the case of the KSA. This analysis has not been performed in the existing literature.

Moreover, the current study examines whether the conceptual model can be generalized across male and female groups by performing the invariance analysis. It can be noted from the literature review that there is a lack of research in this area. Much of the existing literature proposed different models, but did not test whether these models can or cannot be generalized across gender. According to the results, this study can contribute to the existing literature as the influence of subjective norm on both perceived ease of use and usefulness cannot be generalized across male and female. The study found the total effects of male to be more significant than female on these relationships. Compared to the existing cross-culture literature, such as (Gefen and Straub, 1997) who examined the influence of gender on social presence, perceived ease of use and perceived usefulness across Japan, Switzerland and USA, the current study goes further to examine the generalizability across male and female groups within different cultures. This provides a significant contribution to the existing knowledge.

According to the literature review, it can be noted that there is a lack of research that examines how the low and high experience groups have different perceptions towards online services, in

general, and online banking, in particular. Some of the existing Internet banking studies examined customers' experience (Laforet and Li, 2005, Gan et al., 2006, Guriting and Ndubisi, 2006, Mäenpää, 2006). None of the above literature examined and empirically tested their conceptual model across low and high experience groups. This study contributes to the existing literature review, especially in the domain of Internet banking by examining and exploring the perceptions of low and high experience Internet banking users, and finds out whether these perceptions are statistically significant. The study contributes to this knowledge in that the proposed model can be generalized across low and high experience Internet banking users. Those groups of users perceived the constructs that were proposed and tested in the study's models similarly. However, the study found some variation on the latent means across the groups (Table 6.37 in chapter six) that high experience group perceived subjective norm, ease of use, attitude, perceived usefulness more important than low experience groups, while behavioural intention and loyalty trust were perceived as important constructs in the case of low experience groups. These findings contribute to the existing literature significantly as different experience groups would have different values for different constructs.

8.3.2 Managerial Implications

The current conceptual model is a significant tool to predict customers' behaviour towards Internet banking because the factors that significantly influence the Saudi sample might be different that those factors that influence the UK sample. Bank managers and web designers should be aware of these differences in order to deliver successful online services that are more likely to be accepted by a wide range of existing customers and attract new customers. It was noted previously that Internet banking is an efficient and successful way to provide banking services to a large number of customers in different geographical areas. It provides significant advantages over other financial distribution channels, such as tele-banking, ATMs, and physical branches. It can also be noted that the number of existing bank websites are increasing over time. Internet banking has become a strategic marketing tool in which customers can access a variety of online services and differentiate these services between one a bank to another in the market. Internet banking becomes a significant tool for cost reduction because a number of banking services can be performed by customers themselves so that banks' employee force and physical branches can be reduced. The above discussion may lead to the following questions:

- *Do customers from different groups and countries perceive Internet banking in the same way? If not.*
- *What are the factor/s influencing their decisions to adopt Internet banking? and*
- *Are these factors statistically significant across different groups of individuals, such as across KSA and the UK?*

It might be important for managers and web designers to understand these questions before providing and designing Internet banking services. When the banks want to survive and compete in the local and global market, they are required to know and understand their markets and customers' needs. This will be difficult to achieve and have competitive advantages over other competitors in the market if these online services are offered in an undesirable manner. As a result of this, these services will not be accepted and utilized by the end users and the full benefits cannot be achieved.

The current proposed model is an important tool to examine customers' behaviour towards Internet banking for bank managers and web designers, because it has utilized and examined eight constructs. These constructs were originally developed from different areas so that customers' behaviour could be detected clearly and factors from different areas that influence their behaviour more significantly could be identified. For example, some of the eight constructs were developed from marketing, such as trust and loyalty, while some came from information technology, such as perceived ease of use and usefulness. Others were developed from psychology and behaviour perspectives, such as self-efficacy, attitude and behavioural intentions.

According to the results based on the Saudi sample, it can be noted that customers' loyalty towards Internet banking was influenced directly significantly by their behavioural intentions and perceived ease of use, and indirectly by trust, subjective norm, attitude, perceived usefulness and self-efficacy. While in the UK sample, customers' loyalty was impacted directly and significantly by users' behavioural intentions, perceived ease of use and usefulness, and indirectly by trust, self-efficacy and attitude, while customers' loyalty towards Internet banking was not influenced by subjective norms. These findings may have some implications for bank managers and web designers. The following sections will illustrate some of these implications.

Behavioural Intention

Bank managers in KSA and the UK should focus on how to improve and influence Internet banking users' behavioural intentions, and ultimately their loyalty will be improved as well. Banks should develop some different strategies that will help to improve customers' intentions to use or enhance their usage behaviour towards Internet banking. For example, banks should develop their communication with their current customers and new potential customers in the market, such as sending e-mails that enhance the customers' sense of willingness. customers' intention to use Internet banking services is an important issue for both banks and customers themselves to improve the services that are offered through Internet banking. It is also necessary to determine whether there are any new services that should be added to the existing ones. In this way, banks in both countries will develop, enhance and strengthen customers' intention to use Internet banking services. In addition, bank managers can use different communication channels, such as customers' e-mail addresses, the Internet branch itself and public media (TVs, general and specific local and international newspapers and magazines, radio channels and different advertisements in the general public areas such as shopping centres and high street) in order to announce new services that will be offered soon or that have recently been provided so that existing and potential customers will be aware of them, and their intentions to stay with their current provider will be developed by using these different management and marketing strategies. As a result of adopting these strategies, customers' loyalty will be developed and enhanced. Those customers may feel and think that current Internet banking management would care about their needs and requirements, in addition to the fact that management has a clear strategic plan for the short or long-term so that customers will know where their current banks are going in the market. Moreover, when these strategies are adopted by the banks and the customers' loyalty is developed, customers may tend to influence other members in the society by distributing positive word-of-mouth among society members so that those customers will attract new customers to adopt Internet banking services. In addition to that, banks will be able to keep their existing customers for a longer time because, according to the customers' loyalty literature, keeping existing customers will be more profitable and likely to attract new customers at lower cost.

Perceived Ease of Use

According to the results, perceived ease of use has a significant influence on customers' loyalty in both the Saudi and the UK samples. Bank managers and website designer should work

together to make the web easier to use because customers' capabilities might differ from one customer to another. There are some different strategies that might help to make the web easier to use. For example, banks with the help of website designers can provide some self-tutorial guides in written form or on CD so that customers who have less experience in using Internet banking can read these materials in order to understand how to make certain financial transactions correctly. Several advantages might be gained by adopting this strategy; for example, these materials may reduce customers' anxiety and allow them to be more effective in their use of Internet banking. In addition, some customers might give these materials to other customers so that some different customers will be influenced. Bank managers and website designers should design and provide Internet banking websites that guide new and tentative users through the process step-by-step and incentivise and reward trials and regular patronage.

It is not enough just to provide these materials but banks should be more effective in discovering what difficult parts of websites are by measuring the actual customers' usage behaviour through the websites. For example, bank managers and website designers should work together to develop software that enables banks to track and measure the actual usage behaviour, such as how many clicks particular customers has made, what types of services customers usually performs, what types of services a customer never or rarely uses, and what services that have not been completed. For example, Shah and Siddiqui (2006) carried out an exploratory case study of a UK bank (Woolwich, that was taken over by Barclays Bank) to explore the critical success factors for implementing e-banking. They found that Woolwich invested heavily in technology and it set up software, such as a system called "QuickStream" that helps to analysis customers' behaviour during their visit to their website by recording customers' clicks. Recently the bank used another software package called 'Webtrend' that helps the bank to record where people enter the home page, how they navigate through it and how they leave the site. Moreover, Woolwich had a plan to use an advance software called 'Web-collaboration tool', which can identify where customers are on the website, record how long they have been on each page, information on the screen can be viewed in real time with typed massages on the customers' screen, and help and advice can be offered in real time. By tracking these behaviours, banks will be able to improve their services, discovering weakness in a website, and enabling banks to provide some different and concentrated recommendations to a particular customer.

Adopting these managerial strategies, banks will be able to influence positively customers' behaviours toward Internet banking. For example, customers might feel that their banks care about their requirements and provide them with some significant recommendations that meet their needs. As a result, customers' positive attitudes will be enhanced and might become difficult to change. These strategies might influence non-users to be users of Internet banking. Because the current framework proposed that perceived ease of use has a direct influence on customers attitude, perceived usefulness and customers' loyalty, and these influences have been supported in the current study, any developed in the website ease of use can be seen to directly influence these constructs. By successfully adopting these strategies, customers' attitude, customers' loyalty and their perceptions of the usefulness of the website will be developed. When customers perform the financial transactions more easily and in the correct way, they are more likely to perceive the usefulness of the website and to effectively use Internet banking services. Customers will be more skilful at carrying out some different transactions and setting up some new services. Moreover, customers will show more loyalty to their current Internet banking service. They are more likely to distribute a positive word-of-mouth, recommend it to other customers and prefer it above other financial distribution channels and other Internet banking providers.

Subjective Norm

Subjective norm has significant influence on perceived ease of use, usefulness and behavioural intentions in the case of KSA, while it has no influence in the case of the UK. Accordingly, banks and website designers in Saudi Arabia should pay more concentration on how to develop and integrate social matters through banking websites. For example, banks in Saudi Arabia might provide expert advisors, references and opinions through a chat or bulletin board, blog or social networking tolls that can spread different other's experiences. Banks in Saudi Arabia should also offer clear web links to other social communities where customers can exchange their opinions and help each other understand their services.

Banks can also create their own community in both ways (physical) by providing a place where customers can sit and discuss services with other customers and bank representatives, or by providing and creating an online community so that customers can register for free and sign up whenever they want. By using these different techniques, banks will get close to their existing

customers and provide them with essential support and advice. Moreover, customers in KSA with a particular bank can communicate effectively and their experiences can be shared.

Trust Perception

The study found that trust play a significant role in influencing perceived usefulness in the KSA case, and perceived ease of use in the case of the UK. Bank mangers in both countries have to pay more attention on how trust's perception can be developed and risk perception can be reduced so that Internet banking can be more acceptable to many segments of customers, in general, and among young age customers (customers), in particular, because they might be potential customers for many banks. Several practical strategies can be applied to develop customers' perception of trust in Internet banking. For example, to improve the trust perceptions, banks should reduce customers' fears about the security. It cannot be ignored that many banks provided different security strategies that help to make the web secure with access from unauthorized parties being difficult. For example, some banks, such as Barclays Bank, use secure layer technology that encrypts all of the information obtained from customers by logging in and filling in applications forms to storage and feedback to the customers (Shah and Siddiqui, 2006). Establishing this type of technology makes customers' private information held by the banks safe and difficult to be stolen and accessed by other parties. This will help to increase the customers' trust to use Internet banking. The most important issue for banks should be increase customers' awareness of any development in the security system and provide some insurance statement on websites that shows that any misuse will be covered by the banks. This strategy may help to increase the customers' trust in using or continue using the current services providers. Another strategy that banks can adopt is to develop their brand name. The more banks have strong and positive brand names in the market, the more customers may feel that banks are secure because they have the financial, technology and control abilities to manage and establish advance technology to protect any financial information from any misuse. In addition, the more banks use advance technologies for tracking customers' usage behaviours and provide some recommendations in real time, the greater customers trust will become because they will feel save that the bank provides essential support, and any incorrect transactions can be detected and solved immediately.

Self-Efficacy

The study supported that self-efficacy has a significant influence on perceived ease of use in both countries (KSA and the UK). According to this result, this study would recommend banks in both countries to assess their existing customers' capabilities and self-efficacy in terms of using Internet banking. This can be done by sending private email addresses to most or all customers (users or non-users by letter) asking them to fill out a survey that consists of questions that evaluate, for example, their technology skills, some essential financial knowledge, owning personal computers and some demographic data such as age, income, marital status, employment status, education level. Accordingly, the bank will be able to use this information, once returned, and assess the current statue of the customers' self-efficacy. In turn, they will be able to identify where the weakness points are that face customers. The bank will also be able to provide essential support that meets the customers' requirements. As stated above, banks can send emails or letters that provide self-tutorial guides in written form or on CD. In addition, banks can re-design some parts of the website so that it might be easier to follow and give clear step-by -step details. As a result, customers' self-confidence would be improved and they will perceive Internet banking ease of use. Moreover, banks can organise computer training courses and motivational sessions for all customers in different situations, particularly for those who have low experiences and self-efficacy.

8.3.3 Policy Makers Implications

The findings of this study confirm that trust, individuals' self-efficacy and other constructs, such as perceived ease of use and usefulness, are significant constructs influencing customers' behaviour towards Internet banking in both countries. It can be recognized that the cooperation between governments and the private sector, especially within the banking sector, is an important matter for both developed countries, such as the UK, and developing countries, such as KSA. Many government services in both counties are offered online in both countries and some of government service fees and charges can be paid through Internet banking accounts. For example, some of the utilities bills and police charges must be paid via the Internet banking and the financial support for the customers in KSA goes directly to their bank accounts. It is clearly important to make use of Internet banking so that the goals of providing these services online can be achieved. It is an important issue to make government websites and Internet banking easy to use and efficient for the end users.

The policy maker should communicate better with the banks to assess the services offered to the end users and find out any requirements they may have, helping banks to increase their performance in the provision of services. Because of the customers in both countries still worrying about security matters, trust has a significant influence on their Internet banking use. Policy makers and Internet banking should work together to develop some different techniques that make the security and privacy protection less of a concern and increase customers' trust. For example, strong institutional-based e-commerce transaction assurance mechanisms (e.g., accreditation, escrow and secure transaction guarantee) that include an educational program or campaign to strength online consumers' understanding of the role of institutional-based assurance mechanism in facilitating success in e-commerce transaction in general should be built by the industry-government-level committees and standard bodies (Kim, 2008), in particular Internet banking. Given this specific institution, customers' trust perceptions towards Internet banking will be increased and the use of online banking services can be developed because customers will have more confidence if something goes wrong and there will be a specific institution that can be contacted, through which the problem can be solved.

Because of the significant influence of perceived ease of use and usefulness on customers' attitudes and their loyalty to the particular system (Internet banking), government and banking policy makers should set up some different strategies to help customers make more use of Internet banking. For example, policy makers should provide some financial support to the families that cannot afford the full equipment or feel uncomfortable using online services. Families can be provided with a bank loan that will help them to buy the essential equipment, such as personal computers and better Internet connections. It is also important to make use of services, so policy makers should provide free training courses through which parents and their young children can understand how these services can be run. Schools are very important, providing a suitable environment to teach customers and give them some essential information about the governments' services, and how they can be used through Internet banking. In this way, customers' awareness of banking services, including Internet banking, will be improved.

Government and banking policy makers should work together to help customers to have online bank accounts. For example, the institutions such as the universities might allow bankers to have access to the customers and help them to set up their online accounts, providing them with all the support and guidelines they require to use Internet banking better. It is also a good idea to allow

some banks to open physical branches at universities so that the communication with customers might be easier and accessible.

8.3.4 Methodological Implications

The current study contributes to the existing literature by examining thirteen constructs and almost seventy one observed variables. According to the final results, some of these constructs and measurement items were eliminated from the study and the analysis confirmed eight constructs and thirty measurement items. These constructs, such as trust, subjective norms, self-efficacy, perceived ease of use, perceived usefulness, attitude, intention and customers' loyalty, and their measurement indicators were developed in western culture and the current study confirmed that they were valid and reliable and can be applied to examine customers' behaviour toward accepting or rejecting such technology.

The current study data was collected from customers who are still undertaking their bachelor's degree from two universities: one was from KSA (King Khalid University), while the other one was from the UK (Brunel University). Even using customers as sample invites criticism in the literature review. This has been approved as an appropriate sample for online services in general, providing all the justification for choosing customers. According to the Internet banking literature review, there are only two studies (Ricard et al., 2001, Alsajjan and Dennis, 2010) that have tested their conceptual models on a sample of customers. These two studies provided significant findings of what customers' perceptions look like, however they did not provide all the customers' perceptions. Thus, the current study would contribute to the literature review by providing some evidence from the findings of the customers' behaviour towards Internet banking. In addition, it would contribute significantly to the cross-culture research because this study was carried out across KSA and the UK.

The current study applied structural equation modelling (SEM) because it has been shown to have several advantages over other techniques, such linear regression, factor analysis, ANOVA and MANOVA. It can deal with a large sample size and examine simultaneous hypothesized causal relationships among multiple variables. Much of the existing literature applied SEM and used, for example, LISREL (Nielsen, 2002, Suh and Han, 2002, Mukherjee and Nath, 2003, Suh and Han, 2003, Wang et al., 2003, Eriksson et al., 2005), while others used AMOS (Beerli et al., 2004, Herington and Weaven, 2007, Gounaris and Koritos, 2008, Grabner-Kräuter and Faullant,

2008, Zhao et al., 2010, Alsajjan and Dennis, 2010) or PLS (Çelik, 2008). The current study used AMOS because of its advantages. It can be noted from the previous literature that there were a limited number of studies that used AMOS software to perform a multi-regression analysis, as well as multi-group analysis which was performed in the current study for the invariance analysis. Performing SEM and using AMOS, the current study would contribute to the existing literature as a result of its accurate findings from AMOS.

8.4 Study Limitations

The limitations of the current study would be looked at from different perspectives. The first one is the theoretical perspective that will illustrate the limitations from the theoretical site, such as what factors might be added to the conceptual model that have not been examined in the current study. It will also illustrate some of the factors that have not been supported in the study. The second perspective is the methodological one that addresses the issues relating to the generalizability of the study results, the design of the study and the data collection method. The following sections will illustrate these limitations from these perspectives.

8.4.1   Theoretical Limitations

Several limitations are highlighted concerning the theoretical limitations. First, the study did not examine Hofstede's (1980) other culture dimensions (i.e., individualism, power distance, masculinity, and uncertainty avoidance), and thus the results should be taken cautiously. Some results were discussed from culture differences perspectives. This discussion should be taken into consideration because, as stated, culture dimensions were not actually measured in the current study of each country individually.

Second, the current study identified constructs such as communication, Internet banking reputation and customers experience as determinants of customers trust, but the validities of these constructs were not supported in CFA. It is very important to examine these constructs so that factors influencing customers' trust towards Internet banking and the theoretical gaps that were identified can be filled. As a result, the current study cannot fill these gaps.

Third, in addition to the culture dimensions, there are several constructs that have not been examined in the current study, including customers' satisfaction of Internet banking services

offered. The current study proposed that customers' loyalty is the only dependent latent construct that illustrates the outcome of using Internet banking. It can be argued that customers' satisfaction might be a significant outcome with customers' loyalty. Accordingly, the value of the findings will be improved and the situation of Internet banking acceptance and its outcomes will be much clearer.

Finally, the current proposed model focuses on just two service quality dimensions: perceived ease of use and usefulness. The results will be limited to these two dimensions and cannot be generalized to other dimensions because the current study believes that each dimension has its own influence. Several service quality dimensions can be added to the proposed model, such as the design element of the website, interactivity, user interface and structure (Liu and Arnett, 2000, Loiacono and Watson, 2000, Riel et al., 2001a, Barnes and Vidgen, 2002, Madu and Madu, 2002).

8.4.2   Methodological Limitations

Several methodological limitations will be illustrated. First, the current study tested the proposed model in just one financial distribution channel (Internet banking), and thus it is difficult to generalize the results on other distribution channels, such as tele-banking, ATMs and m-banking, because each channel has its own strengths and weaknesses, and these services are complementary with each other so that the results will be limited to the Internet banking.

Second, the current study examined Internet banking in both countries in general. It did not differentiate between different Internet banking services from different providers. Different providers may have different strategies to deliver services to the end customers so that those customers may have different perspectives and attitudes towards the services.

Although student samples have proved to be suitable in the context of online services, in general, and Internet banking, in particular, and also have been used in many different contexts, the results from this study should not be generalized, instead they should remain limited to the student population.

Third, this study was conducted in one city in the KSA (Abha) and one city in the UK (London). Thus, the results might be limited to these two cities because different regions may have different perceptions of Internet banking.

Fourth, the study focused only on users of Internet banking, who might have similar views and values. Thus, the results should not be generalized to non-users of Internet banking.

Fifth, choosing and using only one data collection method can be problematic. The data collection method in the current study was based on the use of the questionnaire method so that some of the issues might be neglected because the design of questionnaire and the factors measured developed from the existing literature so that customers will be controlled by answering these questions only.

Sixth, the originally-hypothesised model has been much simplified and altered. Thus it could be argued that because many dimensions and items have been dropped, the research is not truly confirmatory. The results of the hypotheses tests should be treated with caution and further confirmatory studies are recommended.

Finally, the proposed model was examined at one point of time (cross-sectional design) so that established cause-and-effect relationships among the variables of interest will be difficult. Because of this, it might be difficult to measure the actual usage behaviour. This might be the reason that actual usage behaviour was not integrated to the proposed model.

In order to avoid some of these important limitations, several recommendations and suggestions for future researches are provided in the following section 8.5.

8.5 Future Research Suggestions

Some suggestions for future research will be provided so that the proposed model can be developed and extended. It should be noted that the findings of the current study contribute to the existing literature in the area of customers' behaviour, cross-culture studies, information technology and service quality. The current study went beyond technology acceptance to examine the influences, if any, on the users' loyalty towards that system (in the current study, customers' loyalty towards Internet banking). According to the results, this contribution is

supported. This study believes that there are still opportunities for developments and extensions. This section will provide and highlight some of these opportunities.

First, the current proposed model was examined in the context of Internet banking, it is an important issue to re-examine the proposed model on different contexts. For example, the proposed model can be applied to examine customers' behaviour in the context of specific or particular online companies that sell and provide different products and services such as airline industries for example the proposed model can be applied to examine customers' behaviour towards Saudi Arabia or British airlines and examine whether their still a significant influence of behavioural intentions on customers' loyalty.

Second, further study should apply the proposed model to examine customers' behaviour towards Internet banking services that are offered by different providers so that the variation between providers can be detected and several applications from the results can be provided. In addition, this also will give external validity of the proposed model and can be generalized.

Third, the proposed model can be extended by adding some significant constructs, such as customers' satisfaction, and additional services qualities, as stated above. This may provide additional explanation power for understanding customers' behaviour. The constructs in the proposed model did not explain the full customers' behaviour. The current study found that the proposed constructs explained 0.45 of the customers' loyalty in the KSA, while the explanation power was 0.60 in the case of the UK. This means that the full customers' loyalty towards Internet banking was not explained in full, indicating that some different constructs may be more important than the constructs that were already examined in the current study and should be investigated. The current study suggests that customers' satisfaction and additional service qualities should be included and examined empirically.

Fourth, according to the findings, some constructs, such as communication, Internet banking reputation and customers' experiences, were not valid and were not supported in the current study. Further study should examine these factors in the same or different contexts so that their influences on customers' trust can be examined empirically. These three constructs have been examined and proved to be important constructs for accepting the online services, but only a few

studies have examined their influences on customers' trust. Accordingly, this study recommends further study to examine these constructs as antecedents of customers' trust.

In order to investigate what factors affect customers' behaviour, for example in the context of Internet banking, more precisely, different approaches for data collection should be applied. In the current study, as stated above, an applied quantitative approach and questionnaires are applied as a method for data collection. Future study should investigate the phenomena of technology acceptance behaviour in the context of Internet banking by applying the qualitative approach incorporating in-depth interviews with, for example, the university customers. Applied mix-methods will help to examine the situation correctly. Some different factors might be raised by the customers in the interview stage. These factors have not been examined in the existing literature. When different factors are identified from the culture and market of KSA, for example, is a significant point to be included in the proposed model. This may give strong contributions in the existing literature from two points: the first point is to examine new constructs that have not already been examined, while the second one is to examine these new constructs in the western culture and anew market, such as the UK. Further study should collect qualitative data and be empirically examined and confirmed by the quantitative data.

Sixth, the current proposed model should be replicated and examined on the general sample (i.e. customers from different backgrounds and experiences), not just customers so that the external validity of the model can be tested and supported. There is a question of whether the current model can be generalized to a wider sample outside customers. Such a general sample may have different experiences, attitudes, and behaviour.

Seventh, the current study examined customers' behaviours in two universities: King Khalid University in KSA and Brunel University in the UK. This is stated as a limitation of the study. Future research should re-examine the proposed model on different customers, from different universities and from different regions of these two countries so that the applicability and results can be generalized with more confidence.

Finally, the proposed model in the current study was examined at just one point of time. Customers' behaviour may change over time as a consequence of technology development. It is an important issue to re-examine the proposed model at different points of time so that customer

behaviour stability over time can be tested. In order to achieve this research aim, further research could apply the longitudinal study that may help determine if the relationships studied in the current study differ over the time.

8.6 Summary

Several important issues were provided in this chapter. An overview of the study was provided that includes the theories applied in the research, theoretical gaps and methodology matters, such as the philosophy of the research, the population, the samples, the instrument that used for main data collection and data analysis technique. This chapter also covered some significant implications from three perspectives: theoretical, managerial, policy makers and methodological implications. The theoretical and methodological limitations of the study were stated and research recommendations for further studies were highlighted.

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Appendices

Appendix 1: A Summary of Cited National Culture Values Dimensions in IS Domain

Table 8. 1: A Summary of Cited National Culture Values Dimensions in IS Domain

Culture Dimensions	Definition
Uncertainty Avoidance (Hofstede, 1980, , 1991) Free Will vs. Determinism (Kluckhohn and Strodtbeck, 1961) High Trust vs. Low Trust (Fukuyama, 1995)	Degree to which people in a country prefer structured over unstructured situations: from relatively flexible to extremely rigid. Also, this refers to the degree that people in a society bear risk, from risk averse to risk taker. Also, the degree that people in a society trust and feel comfortable when dealing with the unknown.
Power Distance (Hofstede, 1980, , 1991) Hierarchy vs. Egalitarian (Schwartz, 1994) Authority Ranking Relationships (Fiske, 1992) Equality – Hierarchy (Hampden-Turner and Trompenaars, 1994)	Degree of inequality among people, which the population of a country considers as normal: from relatively equal to extremely unequal.
Masculinity/femininity (Hofstede, 1980, , 1991)	Degree to which "masculine" values, like assertiveness, performance, success and competition, prevail over "feminine" values, like the quality of life, maintaining warm personal relationships, service, caring, and solidarity: from tender to tough.
Individualism/Collectivism (Hofstede, 1980, , 1991) Individualism/Communitarianism (Trompenaars, 1993) Wide sharing vs. Non sharing (Newman et al., 1977) Communal Sharing Relationships (Fiske, 1992) Idiocentric – Allocentric (Triandis, 1995)	Degree to which people in a country have learned to act as individuals rather than as members of cohesive groups: from collectivist to individualist.
Confucian Dynamism (Long-term orientation vs. short term orientation) (Hofstede and Bond, 1988, Hofstede, 1994)	Long-term orientation cultures value virtues oriented toward future rewards, in particular perseverance and thrift. Short term orientation stands for the fostering of virtues related to the past and present, in particular respect for tradition, preservation of 'face' and fulfilling social obligations.
Universalism-Particularism (Trompenaars, 1993, Hampden-Turner and Trompenaars, 1994)	Degree to which people in a country compare generalist rules about what is right with more situation-specific relationship obligations and unique circumstances

Culture Dimensions	Definition
Neutral vs. Emotional Relationship Orientations (Trompenaars, 1993) Analyzing vs. Integrating (Hampden-Turner and Trompenaars, 1994) Objective- Emotional (Newman et al., 1977) Rationalism- Humanism (Lessem and Neubauer, 1994)	Degree to which people in a country compare 'objective' and 'detached' interactions with interactions where emotions is more readily expressed.
Specific vs. Diffuse Orientations (Trompenaars, 1993) Inner-directed vs. outer-directed (Hampden-Turner and Trompenaars, 1994)	Degree to which people in a country have been involved in a business relationship, within which private and work encounters are demarcated and 'segregated-out'
Achievement vs. Ascription (Trompenaars, 1993) Achieved status vs. Ascribed Status (Hampden-Turner and Trompenaars, 1994) Merit based vs. Relationship based (Newman et al., 1977) Equality Matching Relationships (Fiske, 1992)	Degree to which people in a country compare cultural groups which make their judgments of others on actual individual accomplishments (achievement-oriented societies) with those where a person is ascribed status on grounds of birth, group membership or similar criteria.
Conservatism vs. Affective/intellectual autonomy (Schwartz, 1994) Improvement vs. maintaining status quo (Newman et al., 1977)	Degree to which people in a country emphasise maintenance of status quo (conservatism), or emphasise creativity or affective autonomy emphasises the desire for pleasure and an exciting life.
Harmony vs. Mastery (Schwartz, 1994) High context vs. Low context (Hall, 1960, Hall, 1976, Hall and Hall, 1990)	Degree to which people in a country concerned with overcoming obstacles in the social environment (Mastery) vs. concern beliefs about unity with nature and fitting harmoniously into the environment.
Market Pricing Relationships (Fiske, 1992) Accumulation of Wealth vs. 'Just Enough' (Kluckhohn and Strodtbeck, 1961)	Degree to which people in a country think in terms of prices and investment.
Monochronic vs. Polychronic (Lewis, 1992) Time as sequence vs. time as synchronization (Hampden-Turner and Trompenaars, 1994)	Attitudes toward use of time in performing tasks either focusing on issues one at a time (monochronic) or performing of activities in parallel (polychronic).
Monomorphic – Polymorphic (Bottger et al., 1985)	A population in which virtually all individuals have the same genotype at a locus.
Paragmatism – Idealism (Lessem and Neubauer, 1994)	Pragmatism is characterized by the insistence on consequences, utility and practicality as vital components of truth. The pragmatists' world is pluralistic, attentive to context, relativistic about truth and value, devoid of metaphysical concerns except as they have practical consequences.

Source: adopted from (Ali and Brooks, 2008)

Appendix 2: The Background of the Study Population

In terms of Brunel University, Wikipedia (2011a) provided a history background about Brunel University and stated that it is one of the British universities that were established in the 1960s. Going back to the 1957, Brunel University was established from Acton Technical College, which split into two in 1957 (Acton Technical College and Brunel college of Technology). Because Brunel College of Technology was awarded the status of College of Advanced Technology, it was decided to expand to another site in order to accommodate additional buildings, so that Uxbridge, Hillingdon was chosen for the new buildings in 1962. The university used both campuses (Acton Technical College and College of Advanced Technology) until it finally left the Acton site in 1971. Brunel University merged with Shoreditch College of Education in 1980 and West London Institute of Higher Education in 1995. Because of these mergers, the number of courses was increased, giving Brunel the capabilities and strengths to deliver a variety of courses, such as engineering, science, technology, social sciences, arts, humanities and others. In addition, the number of students was increased to over 12,000. The departments of Physics, Chemistry and Materials Engineering were closed in the late 1990s. In 2004, the reorganization of the university's faculties and departments into schools was initiated by Vice-Chancellor Steven Schwartz. Currently, Brunel University has eights academic schools (School of Arts, Brunel Business School, Brunel Low School, School of Engineering and Design, School of Health Sciences and Social Care, School of Information Systems, Computing and Mathematics, School of Social Sciences and School of Sport and Education). In 2008, Brunel University was ranked 296th in the world and 38th in the UK. In 2010/11, there are 15,446 students that includes undergraduate (10,345), PG Taught PGCE (319), PG Taught (3,460), PG Research (974) (Brunel, 2011). The population of the current study is the undergraduate level across all schools in the year of 2008/9, whose population size is 10,339 undergraduate students.

King Khalid University (KKU) is a public university in Abha, a city located in the southwest of the KSA (Wikipedia, (2009). In 1998, Prince Abdullah bin Abdulaziz, Crown Prince and Deputy Prime Minister took a significant decision and authorized the establishment of KKU by the integration of two branches of Al Imam Muhammad Ibn Saud Islamic University and King Saud University. According to the Ministry of Higher Education in KSA, KKU was established in 1999 (Mohe, 2011a). During 1999 to 2010, King Khalid University was developed in terms of its courses and its branches across different cities in Asir region. It has ten faculties in the main campus in Abha, along with the faculty of Community in Besha, Namas, and Moheal Assir. It

has developed and provided different courses through the ten faculties (Faculty of Medicine and Medical Sciences, Pharmacy, Computer Sciences, Engineering, Islamic studies, Dental, Education, Arabic Language, English and translations, Sciences, and Management Sciences and Accounting. According to Mohe (2011b), there were 38,899 bachelor degree students at different colleges in different cities in Assir region, including 36,658 full time students and 2,241 who study from home. The population of the current study is full time students in Abha city, with the total population of the study of 18,918 students.

Appendix 3: English copy of the Questionnaire

Investigating Factors Affecting Customers' Acceptance of Internet Banking: a Comparative study between Saudi Arabia and the UK

2009

Dear Participant

This project has to be completed in part fulfilment of my PhD degree program and your assistance would be helpful. The aim of this study is to compare the Kingdom of Saudi Arabia and the United Kingdom in terms of factors affecting customers when accepting or rejecting Internet banking services.

I would very much appreciate it if you could complete this survey, which should take no longer than 15 minutes to complete. You have the right to withdraw at any time and confidentiality is protected. The data will be used just for research purposes and will be securely stored. If you required further information please feel free to contact me. My contact details are shown below.

Many thanks….

Abdullah AL-Ghamdi

Brunel Business School

London, UB8 3PH

E-mail: Abdullah.alghamdi@brunel.ac.uk.

Tel: 07825581415

Part One: Personal Computing, Internet Knowledge and Experiences (please tick the appropriate answer)

1. Do you own a personal computer?	☐ Yes	☐ No		
2. How would you rate your:	Very poor	Poor	Moderate	Good	Very good
a- Computer knowledge	☐	☐	☐	☐	☐
b- Familiarity with the Internet	☐	☐	☐	☐	☐
3. How long have you been using the Internet	☐ less than 1 year	☐ 1 – 2 years	☐ more than 2 years	☐ Don't use
4. How much is your daily use of the Internet?	☐ less than 1 hr	☐ 1 – 3 hrs	☐ more than 3 hrs	☐ Don't use

Part Two: Internet Banking Usage, *(please tick the appropriate answer)*

Do you use Internet banking?		☐ Yes		☐ No	
5. How often do you use Internet banking?	☐ None	☐ Twice a year	☐ Monthly	☐ Weekly	☐ Daily
6. Where do you usually use Internet banking?	☐ I do not use	☐ At home	☐ At work	☐ At University	
	☐ In a bank	☐ In a library	☐ In a friends' place	☐ In another place (........................)	
7. The average number of financial transactions carried out in each session?	☐ None	☐ One transaction	☐ Two transactions	☐ three transactions and more	
8. What sort of financial operations you usually do? You can tick more than one	☐ None	☐ Checking accounts and transaction history	☐ Bills payment	☐ Transfer funds between accounts	
	☐ Managing investments and stock trading	☐ Searching for information	☐Others:..		

Part Three: How do you feel about the following statements? Please circle the number that best describes your level of disagreement/agreement with the following statements?

No	The Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
11	Using Internet bank is financially secure.	1	2	3	4	5
12	I am not worried about the security of the Internet banking.	1	2	3	4	5

No	The Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
13	Matters of security have no influence on my using the Internet banking.	1	2	3	4	5
14	I think customer data is kept securely by Internet banking.	1	2	3	4	5
15	Bank cards information is not at risk of leakage theft.	1	2	3	4	5
Privacy						
16	I trust in the ability of Internet bank to protect my privacy.	1	2	3	4	5
17	Internet banking will not sell my personal information to third parties without my permission.	1	2	3	4	5
18	Internet banking is concerned about consumer privacy.	1	2	3	4	5
19	Internet banking will not divulge consumers' personal data to other parties.	1	2	3	4	5
20	Internet banking system is able to control customer privacy in general.	1	2	3	4	5
Communication: Quality of Information						
21	Internet banking provides high quality information.	1	2	3	4	5
22	Internet banking clearly mentions all costs to the customer before transactions are approved.	1	2	3	4	5
23	I can access to appropriate banking information with minimal effort.	1	2	3	4	5
Communication: Quality of Response						
24	Internet banking keeps its customers informed about the latest developments.	1	2	3	4	5
25	Internet banking response to customer queries is immediate.	1	2	3	4	5
26	Internet banking regularly seeks feedback from its customers.	1	2	3	4	5
27	Internet banking system allows customers to evaluate banking services.	1	2	3	4	5
Communication: Openness						
28	Internet banking clearly mentions its rules, regulations, policies and practices to the customers.	1	2	3	4	5
29	Internet banking creates an open environment where customers can freely interact with other customers and communicate about the services of the bank	1	2	3	4	5
Internet Banking Reputations:						
30	Internet banking has a reputation for being honest.	1	2	3	4	5
31	Internet banking is known to be concerned about customers.	1	2	3	4	5
32	Internet banking is well known in my society.	1	2	3	4	5
33	Internet banking has a good reputation.	1	2	3	4	5
Customers' Experiences:						
34	Using Internet banking has been a good experience for me personally.	1	2	3	4	5
35	I have positive experiences of using Internet banking.	1	2	3	4	5
36	I frequently use Internet banking services.	1	2	3	4	5

No	The Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
37	I frequently check for new or improved online Internet banking services.	1	2	3	4	5
38	I am familiar with the processes of Internet banking.	1	2	3	4	5
39	I am familiar with searching for products and services on the Internet banking	1	2	3	4	5
Bank's Trustworthiness:						
40	Internet banking is trustworthy.	1	2	3	4	5
41	Internet banking wants to be known as one which keeps promises and commitments.	1	2	3	4	5
42	I trust Internet banking, because it keeps my best interests from its priorities.	1	2	3	4	5
43	I find it necessary to be not cautious with Internet banking.	1	2	3	4	5
44	Internet banking has more to lose than to gain by not delivering on their promise.	1	2	3	4	5
45	Internet banking behaviour meets my expectations.	1	2	3	4	5
Technological Abilities:						
46	I have well-developed technological abilities.	1	2	3	4	5
47	I have no problem adapting to new technology-enabled service systems.	1	2	3	4	5
48	I believe I have the ability to make use of technology-enabled services.	1	2	3	4	5
49	I feel comfortable with technology-enabled services.	1	2	3	4	5
50	I find technology-enabled services not complicated to use	1	2	3	4	5
Perceived Ease of Use:						
51	Learning to use Internet banking is easy for me.	1	2	3	4	5
52	I find it easy to do what I want to do when using Internet banking	1	2	3	4	5
53	My interaction with the Internet banking is clear and understandable.	1	2	3	4	5
54	Internet banking is flexible to interact with.	1	2	3	4	5
55	It is easy for me to become skilful in the use of Internet banking.	1	2	3	4	5
56	Overall, I find Internet banking easy to use.	1	2	3	4	5
Perceived Usefulness:						
57	Using Internet banking enables me to utilize services more quickly.	1	2	3	4	5
58	Using Internet banking improves my performance of utilizing banking services.	1	2	3	4	5
59	Using Internet banking for my banking services increases my productivity.	1	2	3	4	5
60	Using Internet banking enhances my effectiveness of utilizing banking services.	1	2	3	4	5
61	The use of the Internet banking system makes it easy to get more benefits from banking services.	1	2	3	4	5

No	The Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
62	Overall, Internet banking is useful to me.	1	2	3	4	5
Customers' Attitudes:						
63	The idea of using Internet banking to access to online services is appealing.	1	2	3	4	5
64	I like the idea of using Internet banking.	1	2	3	4	5
65	Using the Internet banking to access to online services is a good idea.	1	2	3	4	5
66	I believe that Internet banking represents an important innovation.	1	2	3	4	5
67	I believe that Internet banking is critical for banks to get a competitive edge.	1	2	3	4	5
Customers' Intentions:						
68	I would consider using Internet banking in the next 3 months.	1	2	3	4	5
69	I would consider using Internet banking in the next year.	1	2	3	4	5
70	Given available access to Internet banking, I would use it.	1	2	3	4	5
71	I would use my bank cards to access to Internet banking account.	1	2	3	4	5
72	I am very likely to provide my bank the information it needs to better serve my needs.	1	2	3	4	5
Customers' loyalty:						
73	I would recommend Internet banking to other people.	1	2	3	4	5
74	I prefer a particular Internet banking above others.	1	2	3	4	5
75	I have the intention to continue my relationship with Internet banking.	1	2	3	4	5
76	There is a positive effect of new banking technology on my bank loyalty.	1	2	3	4	5
77	It is likely that I will continue my loyalty to Internet banking.	1	2	3	4	5
Subjective Norms						
78	My friends think that I should use Internet banking.	1	2	3	4	5
79	Generally speaking, I want to do what my friends think I should use Internet banking.	1	2	3	4	5
80	My family thinks that I should use Internet banking.	1	2	3	4	5
81	Generally speaking, I want to do what my family thinks I should do.	1	2	3	4	5
82	People who are important to me think that I should use Internet banking.	1	2	3	4	5
83	People who influence my behaviour would think that I should use Internet banking.	1	2	3	4	5
Culture Dimensions: Low and High Uncertainty Avoidance (UA)						
84	It is important to have online banking requirements and instructions spelled out in detail so that I always know what I am expected to do.	1	2	3	4	5
85	Internet bank managers expect me to closely follow instructions and procedures.	1	2	3	4	5

No	The Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
86	Rules and regulations are important because they inform me what Internet banking expects of me.	1	2	3	4	5
87	Standard operating procedures are helpful to me when performing financial activities.	1	2	3	4	5
88	Instructions for operations are important for me when performing financial activities.	1	2	3	4	5

Part Four: Demographic Data, *(please tick the appropriate answer)*

89. Gender	☐ Male ☐ Female
90. Marital Statues	☐ Single ☐ Married ☐ Divorced ☐ Other:
91. Age	☐ Less 25 ☐ 25 - 35 ☐ 36 – 45 ☐ 46-63 ☐ 63 or above
92. Education	☐ Bachelor Degree ☐ Master Degree ☐ PhD Degree ☐ Other:
93. Income per year	☐ Under £3000 ☐ £3001- £5000 ☐ £5001- £7000 ☐ £7001- £9000 ☐ More than £9000
94. Your Occupation	☐ Student ☐ Government Employer ☐ Private Sector Employer ☐ Business Man/ Business Women
95. I class myself as:	☐ White: British/Irish/Any other white background. ☐ Mixed: White and Black Caribbean/White and Black and Asian/Any other mixed. ☐ Asian or Asian British: Indian/Pakistani/Bangladeshi/Any other West of South Asian. ☐ Black or Black British: Caribbean/African/Any other Black background. ☐ Chinese: Chinese/ Any other East Asian Background ☐ Other (please specify):………………………………………….

Appendix 4: Translation Steps

Brislin (1970) suggested a seven-step procedure to provide adequate translation from English to other languages, however these steps can be changed in the post research projects. First, a researcher should write an English version that can be translatable. Second, he/she should secure competent translators, familiar with the content involved in the source language materials. Then, instruct two bilingual translators: one translates from the English version to the target language, and another to blindly translate back from the target to the English language. Fourth, the researcher should employ several raters who can examine the original, target and the back translated versions for errors which may change the questions' meaning. If errors are found, it may be necessary to repeat the third step and the original English may need to be changed (decentring process). Fifth, when no meaning errors are found, a researcher should pre-test the translated materials to target language-speaking people. Finally, a researcher should administer the materials to bilingual subjects, some seeing the English versions, some seeing the translation, and some seeing both. Answers should be assessed by means, standard deviations and correlation coefficients, and be similar across groups. The seventh step is to report the experience using the different criteria for equivalence by determining the verdict of translation adequacy derived from the meaning error standard and a simple pre-test, and comparing it with the verdict derived from the more formal and time-consuming administration to subject (step six). If the verdict is the same for many research projects, future research might demand the simpler meaning error standard and pre-test.

Appendix 5: Arabic Copy of the Questionnaire

<div dir="rtl">

**العوامل المؤثرة على العملاء تجاه إستخدام النظام المصرفي عبر الإنترنت :
دراسة مقارنة بين المملكة العربية السعودية و المملكة المتحدة البريطانية**

2009

عزيزي المشارك

تعتبر هذه الدراسة احد المتطلبات الاساسية للحصول على درجة درجة الدكتوراه ، وبالتالي فإن مساعدتكم ستكون موضع تقديري. الهدف من هذه الدراسة هو إجراء دراسة مقارنة بين المملكة العربية السعودية و المملكة المتحدة حول العوامل التي تؤثر على العملاء لقبولهم أو رفضهم استخدام النظام المصرفي عبر الإنترنت.

المرجو توضيح رأيك في العوامل الموضحة في الاستبيان والتي قد تلعب دورا هاما في قبول النظام المصرفي عبر الإنترنت . أرجو عدم إهمال اي سؤال حتى لو شعرت عدم إنطباقها عليك. معلومات البحث ستكون موضع حماية من أي استعمال خاطئ. ستستخدم المعلومات لأغراض البحث تماما ومن ثم تخزينها بشكل يضمن سريتها. الزمن المتوقع لتعبئة هذا الاستبيان قد لا يتعدى 15 دقيقة. إذا كانت هناك أية استفسارات ارجو الاتصال بالباحث مباشراً من خلال المعلومات المدونة أدناه: ـ

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</div>

الجزء الأول: الخبرة الشخصية باستخدام الحاسب الآلي والإنترنت

		لا ☐		نعم ☐		1. هل تملك حاسب شخصي؟
جيد جداً	جيد	متوسط	ضعيف	ضعيف جداً		2. ما هو تقديرك لكلاً من
☐	☐	☐	☐	☐		a. إلمامك بعلوم الحاسب الآلي
☐	☐	☐	☐	☐		b. تعودك على إستخدام الإنترنت
لا أستخدم ☐	أكثر من عامين ☐	1 - 2 عام ☐	أقل من عام ☐			3. منذ متى تستخدم الإنترنت؟
لا أستخدم ☐	أكثر من 3 ساعات ☐	1 - 3 ساعات ☐	أقل من ساعة ☐			4. ما حجم إستخدامك اليومي للإنترنت؟

الجزء الثاني: إستخدام النظام المصرفي عبر الإنترنت (المرجو التأشير على الإجابة التي تعكس رأيك وذلك بوضع إشارة ☑)

	لا ☐		نعم ☐	هل تستخدم النظام المصرفي عبر الإنترنت؟
يومياً ☐	أسبوعياً ☐	شهرياً ☐	مرتين في العام ☐	لا استخدم ☐	5. ما حجم إستخدامك للنظام المصرفي عبر الإنترنت؟
عند الأصدقاء ☐	في العمل ☐	في المنزل ☐	لا أستخدم ☐	6. أين تستخدم النظام المصرفي عبر الإنترنت؟
مكان آخر ☐	في المكتبة ☐	في البنك ☐	في الجامعة ☐	
3 عمليات أو أكثر ☐	عمليتان ☐	عملية واحدة ☐	لا يوجد ☐	7. كم متوسط العمليات المالية التي تجريها في الأستخدام الواحد؟
تحويل مبالغ مالية بين الحسابات البنكية ☐	إدارة الإستثمارات وتداول الأسهم ☐	مراجعة حسابي والعمليات المنفذة ☐	لا يوجد ☐	8. ما هي طبيعة العمليات التي تقوم بتنفيذها؟ ممكن تختار أكثر من عملية
.... آخرى: ☐	الحصول على معلومات ☐	تسديد الفواتير ☐		

الجزء الثالث: فيما يلي عددا من العبارات التي تمثل العوامل التي تؤثر على مدى استخدام العملاء للانترنت في العمليات المصرفية (المرجو وضع دائرة حول الرقم الذي يمثل درجة موافقتك أو عدم موافقتك بالنسبة لكل عبارة مثلاً ②)

أوافق بقوة	أوافق	محايد	أعارض	أعارض بقوة	العبارات	الرقم
5	4	3	2	1	إستخدام الإنترنت في العمليات المالية مضمون وآمن.	11
5	4	3	2	1	لست قلقاً من أمن النظام المصرفي عبر الإنترنت.	12
5	4	3	2	1	المسائل الأمنية ليس لها تأثير على قرار إستخدام النظام المصرفي عبر الإنترنت.	13
5	4	3	2	1	يوفر النظام المصرفي عبر الإنترنت الآمان والحفاظ على معلوماتي الشخصية.	14
5	4	3	2	1	معلومات البطاقة البنكية ليست معرضة للتسرب أو السرقة	15
					الخصوصية	
5	4	3	2	1	النظام المصرفي عبر الإنترنت قادر على حماية خصوصيتي.	16
5	4	3	2	1	النظام المصرفي عبر الإنترنت لايمكن أن يبيع معلوماتي الخاصة لطرف ثالث بدون إذني.	17
5	4	3	2	1	يهتم النظام المصرفي عبر الإنترنت بخصوصية العملاء.	18
5	4	3	2	1	النظام المصرفي عبر الإنترنت لن يفشي معلومات العملاء الشخصية لطرف ثالث.	19
5	4	3	2	1	النظام المصرفي عبر الإنترنت قادر على التحكم بأمان خصوصية العميل بشكل عام.	20
					جودة المعلومات المقدمة من خلال النظام المصرفي عبر الإنترنت	
5	4	3	2	1	يقدم النظام المصرفي عبر الإنترنت معلومات عالية الجودة.	21
5	4	3	2	1	يوضح النظام المصرفي عبر الإنترنت جميع تكاليف العمليات المالية قبل اعتمادها.	22
5	4	3	2	1	يمكن الحصول على المعلومات البنكية المناسبة بأقل مجهود.	23
					جودة الرد من خلال إستخدام النظام المصرفي عبر الإنترنت	
5	4	3	2	1	يُطلع النظام المصرفي عبر الإنترنت العملاء على أحدث التطورات.	24
5	4	3	2	1	يوفر النظام المصرفي عبر الإنترنت معلومات عن إستفسارات العملاء في وقت قصير.	25
5	4	3	2	1	يهتم النظام المصرفي عبر الإنترنت بأستمرار عن آراء العملاء.	26
5	4	3	2	1	يسمح النظام المصرفي عبر الإنترنت للعملاء بتقييم الخدمات المصرفية الالكترونية.	27

أوافق بقوة	أوافق	محايد	أعارض	أعارض بقوة	العبارات	الرقم
					الشفافية	
5	4	3	2	1	يُعرض النظام المصرفي عبر الإنترنت قوانيه وأنظمته وشروطه لعملائه بوضوح.	28
5	4	3	2	1	يمكن النظام المصرفي عبر الانترنت العملاء من الاتصال مع بعضهم للتعرف على الخدمات المصرفية الالكترونية.	29
					سمعة البنك من خلال النظام المصرفي عبر الأنترنت	
5	4	3	2	1	يتمتع النظام المصرفي عبر الإنترنت بثقة عملائه.	30
5	4	3	2	1	يهتم النظام المصرفي عبر الإنترنت بعملائه.	31
5	4	3	2	1	النظام المصرفي عبر الإنترنت معروف ومستخدم في مجتمعي.	32
5	4	3	2	1	يتمتع النظام المصرفي عبر الإنترنت بسمعة جيدة بشكل عام.	33
					خبرة العملاء	
5	4	3	2	1	إستخدام النظام المصرفي عبر الإنترنت تجربة جيدة لي شخصياً.	34
5	4	3	2	1	أكتسبت خبرة إيجابية من خلال إستخدامي للنظام المصرفي عبر الإنترنت.	35
5	4	3	2	1	أستخدم الخدمات البنكية من خلال النظام المصرفي عبر الإنترنت بشكل متكرر.	36
5	4	3	2	1	أراجع بشكل مستمر الخدمات البنكية من خلال النظام المصرفي عبر الإنترنت.	37
5	4	3	2	1	أنا على علم جيد بعمليات النظام المصرفي عبر الإنترنت.	38
5	4	3	2	1	أنا على دراية بالبحث عن الخدمات والسلع البنكية عبر الإنترنت.	39
					جدارة النظام المصرفي عبر الأنترنت بالثقة	
5	4	3	2	1	النظام المصرفي عبر الإنترنت جدير بالثقة.	40
5	4	3	2	1	يرغب النظام المصرفي عبر الإنترنت في أن يعرف بالنظام الذي يفي بالوعود والإلتزامات.	41
5	4	3	2	1	اثق بالنظام المصرفي عبر الإنترنت لأنه يضع مصالحي ضمن أولوياته.	42
5	4	3	2	1	ليس من الضروري توخى الحذر في التعامل مع النظام المصرفي عبر الإنترنت.	43
5	4	3	2	1	يخسر النظام المصرفي عبر الإنترنت أكثر في حالة عدم وفائه بوعوده.	44
5	4	3	2	1	يتوافق النظام المصرفي عبر الإنترنت مع توقعاتي.	45
					القدرات التكنولوجية	
5	4	3	2	1	أمتلك قدرات متقدمة لإستخدام التكنولوجيا.	46
5	4	3	2	1	لا أواجه اي صعوبة في التكيف مع الخدمات التي تعتمد على التكنولوجيا الحديثة.	47
5	4	3	2	1	لدي القدرة على الإستفادة من الخدمات والمميزات التي تعتمد على التكنولوجيا الحديثة	48
5	4	3	2	1	أشعر بإرتياح تجاه الخدمات المعتمدة على التكنولوجيا الحديثة.	49
5	4	3	2	1	لا أشعر بصعوبة في إستخدم الخدمات التي تعتمد على التكنولوجيا الحديثة.	50
					السهولة في إستخدام وتعلم الخدمات المصرفية البنكية عبر الإنترنت	
5	4	3	2	1	تعلم النظام المصرفي عبر الإنترنت سهل بالنسبة لي.	51
5	4	3	2	1	أجد سهولة في تنفيذ العمليات البنكية عند التعامل مع النظام المصرفي عبر الإنترنت.	52
5	4	3	2	1	التعامل مع النظام المصرفي عبر الإنترنت واضح ومفهوم.	53
5	4	3	2	1	النظام المصرفي عبر الإنترنت يتميز بالمرونة والسهولة.	54
5	4	3	2	1	من السهولة أن أكون ماهراً في إستخدام النظام المصرفي عبر الإنترنت.	55
5	4	3	2	1	إجمالاً النظام المصرفي عبر الإنترنت سهل الإستخدام.	56
					الفائدة من إستخدام الخدمات المصرفية عبر الإنترنت	
5	4	3	2	1	إستخدام النظام المصرفي عبر الإنترنت يساعدني في تنفيذ العمليات المالية بشكل سريع.	57
5	4	3	2	1	يحسن النظام المصرفي عبر الإنترنت قدراتي في التعامل مع الخدمات البنكية.	58
5	4	3	2	1	يزيد إستخدام النظام المصرفي عبر الإنترنت في العمليات البنكية من خبرتي المالية.	59
5	4	3	2	1	يعزز إستخدام النظام المصرفي عبر الإنترنت فعاليتي في الإستفادة من الخدمات المصرفية.	60
5	4	3	2	1	إستخدام النظام المصرفي عبر الإنترنت يسهل الإستفادة من الخدمات البنكية.	61
5	4	3	2	1	إجمالاً النظام المصرفي عبر الإنترنت يفيدني في الإستفادة من الخدمات المصرفية.	62
					مواقف واتجاهات العملاء تجاة الخدمات المصرفية عبر الإنترنت	

أوافق بقوة	أوافق	محايد	أعارض	أعارض بقوة	العبارات	الرقم
5	4	3	2	1	فكرة إستخدام النظام المصرفي عبر الإنترنت للحصول على الخدمات البنكية فكرة رائعة	63
5	4	3	2	1	تعجبني فكرة إستخدام النظام المصرفي عبر الإنترنت للأستفادة من الخدمات البنكية.	64
5	4	3	2	1	إستخدام النظام المصرفي عبر الإنترنت للحصول على الخدمات البنكية فكرة جيدة.	65
5	4	3	2	1	أعتقد أن النظام المصرفي عبر الإنترنت يمثل إبتكار هام وضروري.	66
5	4	3	2	1	النظام المصرفي عبر الإنترنت ضروري للبنوك للحصول على ميزة تنافسية في السوق.	67
					أستعداد العملاء لإستخدام الخدمات المصرفية عبر الإنترنت	
5	4	3	2	1	سأخذ في اعتباري إستخدام النظام المصرفي عبر الإنترنت في الثلاثة اشهر القادمة.	68
5	4	3	2	1	يوجد لدي إستعداد كبير لإستخدام النظام المصرفي عبر الإنترنت في العام القادم.	69
5	4	3	2	1	في حالة تمكني من النظام المصرفي عبر الإنترنت أتوقع إستخدامه.	70
5	4	3	2	1	سوف استخدم البطاقة البنكية للوصول لحسابي البنكي من خلال النظام المصرفي عبر الإنترنت.	71
5	4	3	2	1	سوف اقدم المعلومات التي يحتاجها البنك من خلال الخدمات البنكية عبر الإنترنت وذلك في سبيل الحصول على خدمات أفضل.	72
					إنتماء وولاء العملاء إتجاة النظام المصرفي عبر الأنترنت	
5	4	3	2	1	أنا مستعد لتقديم نصائح بالتعامل مع النظام المصرفي عبر الإنترنت.	73
5	4	3	2	1	أفضل النظام المصرفي عبر الإنترنت والمقدم حالياً من البنك المتعامل معه في إنجاز العمليات المالية على النظم المصرفية المقدمة من البنوك الآخرى.	74
5	4	3	2	1	يوجد لدي أستعداد كبير في إبقاء صلتي وتعاملي مع النظام المصرفي عبر الإنترنت.	75
5	4	3	2	1	التكنولوجيا البنكية الحديثة لديها تأثير ايجابي على ولائي للبنك.	76
5	4	3	2	1	من المرجح أن أواصل إنتمائي للنظام المصرفي عبر الإنترنت الحالي.	77
					الفردية والجماعية (معايير الشخصية)	
5	4	3	2	1	يرى أصدقائي ضرورة استخدامي للنظام المصرفي عبر الإنترنت.	78
5	4	3	2	1	أود القيام بما نصحني بة أصدقائي وذلك بإستخدام النظام المصرفي عبر الأنترنت.	79
5	4	3	2	1	ترى أسرتي ضرورة إستخدامي للنظام المصرفي عبر الإنترنت.	80
5	4	3	2	1	أود القيام بما نصحتني به أسرتي وذلك بإستخدام النظام المصرفي عبر الأنترنت.	81
5	4	3	2	1	الناس المهمين بالنسبة لي يرون ضرورة إستخدامي للنظام المصرفي عبر الإنترنت.	82
5	4	3	2	1	الناس الذين لهم تأثير على سلوكي يرون ضرورة إستخدامي للنظام المصرفي عبر الإنترنت	83
					الأبعاد الثقافية: تجنب المخاطر	
5	4	3	2	1	من المهم توافر التعليمات ومتطلبات النظام المصرفي عبر الإنترنت تفصيليا حتى أكون على دراية بما يجب القيام به.	84
5	4	3	2	1	يتوقع مني المدير المسؤول عن النظام المصرفي عبر الإنترنت إتباع التعليمات والإجراءات	85
5	4	3	2	1	القوانين والنظم مهمة لأنها تحيطني علماً بما يتوقعة النظام المصرفي مني.	86
5	4	3	2	1	الإجراءات الأساسية الموحدة للبنوك مفيدة لي في القيام بالأنشطة المالية.	87
5	4	3	2	1	التعليمات في تنفيذ العمليات مهمة لي في القيام بالأنشطة المالية.	88

الجزء الرابع: المعلومات الشخصية

89. الجنس	☐ ذكر ☐ أنثى
90. الوضع الأجتماعي	☐ أعزب ☐ متزوج ☐ مطلق
91. العمر	☐ أقل من 25 ☐ 25 - 35 ☐ 35 – 45 ☐ 45 - 63 ☐ 63 أو أكثر

92. التعليم	بكالوريوس ☐ ماجستير ☐ دكتوراة ☐ أخرى ☐
93. الدخل الشهري	أقل من 1000 ريال سعودي ☐ 1000 – 3000 ريال سعودي ☐ 3000 – 5000 ريال سعودي ☐ 5000 - 7000ريال سعودي ☐ أكثر من 7000 ريال سعودي ☐
94. الوظيفة	طالب ☐ موظف إداري ☐ عضو هيئة تدريس ☐ آخرى:- ☐ ....

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Appendix 6: Goodness-Of-Fit (GOF) Indices

Absolute fit index

χ^2 is the basic absolute fit index. According to this test, there should be low values to support the model as representative of the data. It gives the differences between two matrices (observed covariance matrix and estimated covariance matrix). The lower the χ^2 values, the more the model can be fit. However, there are some drawbacks that can affect the use of χ^2 values. First, this test can be affected by the sample size and the number of observed variables. When the sample size and the number of observed variables increase, the χ^2 values will increase to a point where the differences between observed and estimated covariance matrix are identical (Hair et al., 2006). Consequently, χ^2 can be difficult to be used as an indicator of SEM fit so that many alternative measures of fit are improved to correct for the bias of large samples and increased model complexity. The resulting p-value that is associated with χ^2 values, and shows the statistical significance, will be less meaningful as sample size becomes large or the number of observed variables becomes large (Hair et al., 2006).

Another absolute fit index is the goodness-of-fit index (GFI). This test is used to provide a fit statistic that is less sensitive to sample size. GFI's acceptable value range is from 0 to 1, with higher values indicating the model fits well. An adjusted goodness-of-fit index (AGFI) is also another absolute fit index that is association with GFI. It takes into account differing degrees of model complexity. The nearer the values are to 1, the more the model fits.

Root means square residual (RMSR) and standardized root mean residual (SRMR) are important absolute fit indices and can be categorised as badness-of-fit in which high values are an indication of poor model fit. These indices calculate the error in prediction for each covariance. These errors are residuals. The RMSR is the square root of mean of these squared residuals: an average of the residuals between individual observed and estimated covariance and variance terms (Hair et al., 2006, p747). However, comparing RSMR results from one model to the next will be difficult unless the results are standardized. To avoid this problem, an alternative statistic based on residuals is used. SRMR is a standardized value of RSMR and can be used for comparing fit across models. Lower values of RMSR and SRMR indicate better fit. Every possible covariance can be calculated by SMSR and potential problems can be noted. Any covariance with values below -4.0 or above 4.0 can be a problem (Hair et al.,(2006) and action has to be taken to solve it.

Root mean square error of approximation (RMSEA) is another measure that tries to correct the tendency of the χ^2 test statistic to reject models with a large sample (more than 500) or a large number of observed variables (Hair et al., 2006). Lower values of RMSEA indicate better fit. Values are below .10 are considered acceptable values of better model fit. Confidence intervals can be constructed by using this index.

There are other absolute indices such as normed χ^2, which is the ratio of χ^2 to the degrees of freedom for a model, and its acceptable value is 3:1 or less which indicates better model fit. The expected cross-validation index (ECVI) is an approximation of the goodness-of-fit the estimated model would achieve in another sample of the same size (Hair et al., 2006, p748). In addition, the actual cross-validation index (CVI) can be formed by using the computed covariance matrix, derived from a model in one sample to predict the observed covariance matrix taken from a validation sample (Hair et al., 2006, p748). The last absolute fit index is Gamma Hat, which takes into consideration both the sample size and model complexity. Its values can range between .9 and 1.0.

Incremental Fit Indices

These indices are different comparisons to absolute fit indices in that they assess how well a specified model fits relative to some alternative baseline model in which all observed variables are assumed to be uncorrelated (Hair et al., 2006). There are four incremental fit indices: Normed Fit Index (NFI), Comparative Fit Index (CFI), Tucker Lewis Index (TLI), and Relative Noncentrality Index (RNI). The following paragraphs provide information on each of these indices, including their concepts and acceptable values.

Normed fit index is a ratio of the difference between the χ^2 value for the fitted model and a null model divided by the χ^2 value for the null model. Its value is ranged between 0 and 1. The closer the value is to 1, the more the model can be thought of as fitting well. In terms of comparative fit index (CFI), which is an improved version of NFI, its values range form 0 and 1. The closer the value is to 1, the more the model fits well. CFI is the most widely used index. Any values less than .90 are considered as undesirable and indicate poor model fit. The Tucker Lewis index (TLI) is similar to CFI and its values range from 0 and 1; the closer to 1, the better the model fit can be. Practically, TLI and CFI provide very similar values (Hair et al., 2006). In terms of the last incremental index, relative noncentrality index (RNI), the observed fit resulting from testing

a specified model can be compared to a null model. Its value also ranges from 0 to 1. The closer values are to 1, the more the model fits well.

Parsimony Fit Index

It is aimed to provide information regarding which model among a set of competing models is best. They can be improved by a better fit or a simpler model. They relate model fit to model complexity so that the more complex models are, the better the fit that can be expected (Hair et al., 2006). There are two parsimony indexes. The first one is parsimony goodness-of-fit index (PGFI), which is an adjustment of GFI and its value ranges between 0 and 1 so that two models can be compared and the model with the higher value of PGFI will be preferable. The second index is parsimony normed fit index (PNFI) which is an adjustment of NFI. When its value is high, it indicates a better model fit.

Appendix 7: Invariance Analysis Tests

Loose cross-validation

The first test is loose cross-validation, where the same CFA model used with the original sample is imposed on the validation sample. In this test, the same factor structure is used so that the same number of degrees of freedom must be equal and no comparison of fit is made between samples, but the model fit must be acceptable in both groups separately in order to proceed with confidence (Hair et al., 2006). The second test is equivalent covariance matrices, which can be applied to determine whether the covariance matrices are equal across the two groups. However, this test is redundant with others tests that will be mentioned next and it can proceed to the next tests no matter what is the outcome of this test (Hair et al., 2006).

Factor structure equivalence

The third test is factor structure equivalence, where the CFA model using data from both samples can be tested simultaneously and factor structure is constrained between samples. This model is referred to as the totally free multiple group model (TF) because all parameters (factor loading, covariance, and errors) are freely estimated in each sample. The χ^2 value and corresponding fit statistics can be applied to test how well the model fits both covariance matrices. If the fit indices for the two samples are sufficient, then cross-validation can be presented and evidenced (Hair et al., 2006).

Factor loading equivalence

The fourth test is factor loading equivalence, where the factor loading estimates may be equal in each sample so that $\Delta\chi^2$ (change in chi-square) can be computed between this model and the TF model. If the $\Delta\chi^2$ is significant, the added constraints have significantly worsened the fit, but if it is not significant, then constraining the loading estimates has not worsened fit and cross-validation is presented and evidenced (Hair et al., 2006).

Factor loading and interfactor covariance equivalence

The fifth test is factor loading and interfactor covariance equivalence. This test assumes that the interfactor covariance paths are equal between samples. As stated above, the overall fit indices can be examined and a $\Delta\chi^2$ can be computed between this and the previous test (factor loading

equivalence). If the change in $\Delta\chi^2$ is not significant, then the added constraints have not worsened fit and cross-validation is presented (Hair et al., 2006).

Factor loading, interfactor covariance and error variance equivalence

The last test is factor loading, interfactor covariance, and error variance equivalence. This test is referred to as tight cross-validation [35] (Hair et al., 2006). In this test the error variance associated with each residual will be constrained to be equal between samples. If the $\Delta\chi^2$ is not significant, then the added constraints have not worsened fit and cross-validation is presented (Hair et al., 2006).

Appendix 8: Computer Background (KSA & the UK)

Table 8. 2: Computer Background (KSA & the UK)

			KSA		UK	
			Frequency	**Percent**	**Frequency**	**Percent**
Computer ownership	Valid	Yes	222	89.5	281	98.9
		No	26	10.5	3	1.1
		Total	248	100	284	100
Computer knowledge	Valid	Very poor	3	1.2	1	0.4
		Poor	8	3.2	7	2.5
		Moderate	105	42.3	77	27.1
		Good	81	32.7	127	44.7
		Very good	51	20.6	72	25.4
		Total	248	100	284	100
Internet familiarity	Valid	Very poor	4	1.6	1	0.4
		Poor	10	4	2	0.7
		Moderate	58	23.4	23	8.1
		Good	66	26.6	135	47.5
		Very good	110	44.4	122	43
		Total	248	100	283	99.6
	Missing		0	0	1	0.4
	Total		248	100	284	100
The length of using the Internet	Valid	Less than 1 year	20	8.1	1	0.4
		1 – 2 years	51	20.6	4	1.4
		More than 2 years	174	70.2	278	97.9
		Total	245	98.8	283	99.6
	Missing		3	1.2	1	0.4
	Total		248	100	284	100
The daily use of the Internet	Valid	Less than 1 hr	68	27.4	10	3.5
		1 – 3 hrs	117	47.2	130	45.8
		More than 3 hrs	61	24.6	144	50.7
		Total	246	99.2	284	100
	Missing		2	0.8	0	0
	Total		248	100	284	100

Appendix 9: Internet Banking Background (KSA & the UK)

Table 8. 3: Internet Banking Background (KSA & the UK)

			KSA		UK	
			Frequency	**Percent**	**Frequency**	**Percent**
Using Internet banking	Valid	Twice a year	50	20.2	22	7.7
		Monthly	145	58.5	96	33.8
		Weekly	49	19.8	137	48.2
		Daily	4	1.6	29	10.2
		Total	248	100	284	100
Number of financial transactions	Valid	None	1	0.4	29	10.2
		One transaction	135	54.4	192	67.6
		Two transactions	88	35.5	46	16.2
		Three transactions and more	23	9.3	17	6
		Total	247	99.6	284	100
	Missing		1	0.4	0	0
	Total		248	100	284	100
Internet banking usage location	I do not use	Yes	0	0	0	0
		No	248	100	284	100
	At Home	Yes	225	90.7	274	96.5
		No	23	9.3	10	3.52
	At Work	Yes	2	0.8	14	4.93
		No	246	99.2	270	95.1
	At University	Yes	11	4.4	38	13.4
		No	237	95.6	246	86.6
	In The Bank	Yes	19	7.7	15	5.3
		No	229	92.3	269	94.7
	In the Library	Yes	7	2.8	17	5.99
		No	241	97.2	267	94
	At a Friend's Place	Yes	31	12.5	13	4.58
		No	217	87.5	271	95.4
Number of financial transactions	Checking Accounts and Transaction History	Yes	171	69	247	87
		No	77	31	37	13
	Bills Payment	Yes	168	67.7	130	45.8
		No	80	32.3	154	54.2
	Transfer Funds	Yes	137	55.2	184	64.8
		No	111	44.8	100	35.2
	Managing Investment and Stock Trading	Yes	47	19	8	2.8
		No	201	81	276	97.2
	Searching for Information	Yes	68	27.4	27	9.5
		No	180	72.6	257	90.5

Appendix 10: Demographic Data (KSA & the UK)

		KSA		UK	
		Frequency	**Percent**	**Frequency**	**Percent**
Gender	Male	171	69	134	47.2
	Female	77	31	150	52.8
	Total	248	100	284	100
Marital Statues	Single	220	88.7	262	92.3
	Married	27	10.9	17	6
	Divorced	1	0.4	4	1.4
	Other	0	0	1	0.4
	Total	248	100	284	100
Age	Less 25	222	89.5	236	83.1
	25 - 35	24	9.7	43	15.1
	36 – 45	0	0	3	1.1
	46-63	0	0	2	0.7
	Missing	2	0.8	0	0
	Total	248	100	284	100
Education	Bachelor Degree	247	99.6	284	100
	Master Degree	0	0	0	0
	PhD Degree	0	0	0	0
	Missing	1	0.4	0	0
	Total	248	100	284	100

		KSA		UK	
		Frequency	**Percent**	**Frequency**	**Percent**
Occupation	Students	248	100	284	100
	Total	248	100	284	100
Nationality background	Saudi	248	100	0	0
	White: British/Irish/Any other white background.	0	0	106	37.3
	Mixed: White and Black Caribbean/White and Black and Asian/Any other mixed.	0	0	16	5.6
	Asian or Asian British: Indian/Pakistani/Bangladeshi/Any other West of South Asian.	0	0	94	33.1
	Black or Black British: Caribbean/African/Any other Black Background	0	0	36	12.7
	Chinese: Chinese/ Any other East Asian Background	0	0	16	5.6
	North African	0	0	3	1.1
	Middle eastern/Asian	0	0	9	3.2
	Missing	0	0	4	1.4
	Total	248	100	280	98.6

Income					
KSA			**UK**		
Income (SR) per month	NO.	%	Income (£) per year	NO.	%
Under SR1000	155	62.5	Under £3000	170	59.9
SR1000-SR3000	75	30.2	£3001- £5000	61	21.5
SR3001-SR5000	10	4	£5001- £7000	16	5.6
SR5001-SR7000	2	0.8	£7001- £9000	11	3.9
More than SR7000	6	2.4	More than £9000	22	7.7
Missing	0	0	Missing	4	1.4
Total	248	100	**Total**	284	100

Appendix 11: Normality Test (KSA)

Table 8. 4: Normality Test (KSA)

Shape Descriptors			Tests of Normality					
			Kolmogorov-Smirnova			Shapiro-Wilk		
Variables	Skewness (Statistic)	Kurtosis (Statistic)	Statistic	df	Sig.	Statistic	df	Sig.
S.11	-0.72	-0.29	.304	248	.000	.852	248	.000
S.12	-0.75	-0.11	.316	248	.000	.844	248	.000
S.13	0.22	-1.01	.205	248	.000	.904	248	.000
S.14	-0.78	-0.20	.278	248	.000	.854	248	.000
S.15	-0.37	-1.04	.231	248	.000	.885	248	.000
P.16	-0.72	-0.20	.279	248	.000	.866	248	.000
P.17	-0.90	0.18	.274	248	.000	.843	248	.000
P.18	-0.98	0.95	.293	248	.000	.823	248	.000
P.19	-0.84	0.40	.283	248	.000	.849	248	.000
P.20	-0.91	0.64	.291	248	.000	.840	248	.000
Com.21	-0.98	0.59	.303	248	.000	.834	248	.000
Com.22	-0.98	0.76	.286	248	.000	.839	248	.000
Com.23	-1.16	0.77	.285	248	.000	.798	248	.000
Com.24	-0.73	-0.12	.276	248	.000	.863	248	.000
Com.25	-0.75	-0.07	.293	248	.000	.860	248	.000
Com.26	0.18	-0.74	.197	248	.000	.910	248	.000
Com.27	-0.14	-1.08	.225	248	.000	.896	248	.000
Com.28	-0.79	0.17	.309	248	.000	.849	248	.000
Com.29	0.25	-0.95	.206	248	.000	.903	248	.000
Rep.30	-0.84	0.82	.302	248	.000	.844	248	.000
Rep.31	-0.68	-0.01	.301	248	.000	.858	248	.000
Rep.32	-0.30	-0.83	.238	248	.000	.896	248	.000
Rep.33	-0.65	0.37	.300	248	.000	.853	248	.000
Ex.34	-1.20	1.37	.302	248	.000	.803	248	.000
Ex.35	-1.03	0.62	.298	248	.000	.815	248	.000
Ex.36	-0.40	-0.40	.221	248	.000	.892	248	.000
Ex.37	-0.56	-0.44	.278	248	.000	.870	248	.000
Ex.38	-0.38	-0.70	.223	248	.000	.894	248	.000
Ex.39	-0.11	-0.84	.192	248	.000	.911	248	.000
T.40	-0.78	0.46	.290	248	.000	.856	248	.000
T.41	-0.46	0.08	.276	248	.000	.867	248	.000
T.42	-0.36	-0.49	.223	248	.000	.902	248	.000
T.43	0.59	-0.68	.255	248	.000	.872	248	.000
T.44	-0.63	-0.48	.247	248	.000	.877	248	.000
T.45	-0.61	0.31	.237	248	.000	.876	248	.000

Shape Descriptors			Tests of Normality					
			Kolmogorov-Smirnova			Shapiro-Wilk		
SE.46	-0.48	-0.73	.254	248	.000	.885	248	.000
SE.47	-0.61	-0.44	.283	248	.000	.866	248	.000
SE.48	-0.93	0.46	.295	248	.000	.837	248	.000
SE.49	-1.05	1.25	.295	248	.000	.821	248	.000
SE.50	-0.62	-0.42	.236	248	.000	.875	248	.000
PE.51	-0.94	0.64	.294	248	.000	.841	248	.000
PE.52	-0.90	0.47	.305	248	.000	.830	248	.000
PE.53	-0.59	-0.26	.291	248	.000	.851	248	.000
PE.54	-0.72	0.16	.284	248	.000	.860	248	.000
PE.55	-0.83	0.31	.275	248	.000	.848	248	.000
PE.56	-0.99	0.99	.304	248	.000	.821	248	.000
PU.57	**-1.43**	**2.69**	**.320**	**248**	**.000**	**.765**	**248**	**.000**
PU.58	-0.86	0.81	.297	248	.000	.814	248	.000
PU.59	-0.67	0.60	.280	248	.000	.828	248	.000
PU.60	-0.90	0.95	.324	248	.000	.821	248	.000
PU.61	**-1.11**	**2.32**	**.296**	**248**	**.000**	**.787**	**248**	**.000**
PU.62	-0.95	0.98	.269	248	.000	.815	248	.000
Att.63	**-1.61**	**2.37**	**.276**	**248**	**.000**	**.728**	**248**	**.000**
Att.64	-1.16	1.03	.264	248	.000	.783	248	.000
Att.65	-1.39	1.97	.273	248	.000	.756	248	.000
Att.66	-1.38	1.69	.283	248	.000	.757	248	.000
Att.67	-1.38	1.42	.292	248	.000	.749	248	.000
Int.68	-1.00	0.70	.258	248	.000	.834	248	.000
Int.69	-1.02	1.06	.261	248	.000	.814	248	.000
Int.70	-1.20	1.46	.248	248	.000	.792	248	.000
Int.71	-1.09	1.19	.260	248	.000	.820	248	.000
Int.72	-1.01	0.97	.238	248	.000	.822	248	.000
Loy.73	-0.68	-0.04	.240	248	.000	.877	248	.000
Loy.74	-0.78	0.35	.282	248	.000	.859	248	.000
Loy.75	-0.99	0.93	.291	248	.000	.827	248	.000
Loy.76	-0.53	-0.26	.247	248	.000	.881	248	.000
Loy.77	-1.23	1.89	.332	248	.000	.791	248	.000
SN.78	-0.78	0.29	.261	248	.000	.866	248	.000
SN.79	-0.78	0.40	.299	248	.000	.847	248	.000
SN.80	-0.49	-0.25	.253	248	.000	.877	248	.000
SN.81	-0.53	0.07	.258	248	.000	.862	248	.000
SN.82	-1.14	1.70	.312	248	.000	.808	248	.000
SN.83	-0.74	0.41	.283	248	.000	.844	248	.000

Appendix 12: Normality Test (UK)

Table 8. 5: Normality Test (UK)

Variables	Skewness (Statistic)	Kurtosis (Statistic)	Statistic	df	Sig.	Statistic	df	Sig.
	Shape Descriptors		**Tests of Normality**					
			Kolmogorov-Smirnova			**Shapiro-Wilk**		
S.11	-.630	.977	.324	284	.000	.820	284	.000
S.12	-.313	-.857	.229	284	.000	.896	284	.000
S.13	.427	-.726	.226	284	.000	.895	284	.000
S.14	-.506	.228	.285	284	.000	.860	284	.000
S.15	.322	-.446	.196	284	.000	.907	284	.000
P.16	-.549	-.119	.284	284	.000	.869	284	.000
P.17	-.686	.098	.272	284	.000	.869	284	.000
P.18	-.564	.302	.291	284	.000	.853	284	.000
P.19	-.409	-.244	.245	284	.000	.884	284	.000
P.20	-.527	.241	.290	284	.000	.857	284	.000
Com.21	-.673	.818	.297	284	.000	.841	284	.000
Com.22	-.353	-.368	.241	284	.000	.892	284	.000
Com.23	-.641	.371	.315	284	.000	.834	284	.000
Com.24	-.425	-.313	.273	284	.000	.875	284	.000
Com.25	-.268	-.009	.240	284	.000	.876	284	.000
Com.26	-.093	-.544	.184	284	.000	.903	284	.000
Com.27	.060	-.418	.207	284	.000	.903	284	.000
Com.28	-.445	-.363	.288	284	.000	.861	284	.000
Com.29	.317	-.460	.204	284	.000	.905	284	.000
Rep.30	-.070	.056	.250	284	.000	.878	284	.000
Rep.31	-.045	-.331	.231	284	.000	.878	284	.000
Rep.32	-.757	.449	.288	284	.000	.850	284	.000
Rep.33	-.433	-.050	.284	284	.000	.862	284	.000
Ex.34	-.737	.664	.272	284	.000	.820	284	.000
Ex.35	-.890	1.606	.299	284	.000	.801	284	.000
Ex.36	-.871	.438	.291	284	.000	.842	284	.000
Ex.37	.477	-.399	.231	284	.000	.893	284	.000
Ex.38	-.765	.678	.303	284	.000	.832	284	.000
Ex.39	-.233	-.603	.191	284	.000	.908	284	.000
T.40	-.566	.334	.281	284	.000	.861	284	.000
T.41	-.222	.292	.243	284	.000	.857	284	.000
T.42	-.025	.273	.273	284	.000	.864	284	.000
T.43	.204	-.492	.200	284	.000	.902	284	.000

			Kolmogorov-Smirnova			Shapiro-Wilk		
T.44	-.291	-.141	.208	284	.000	.895	284	.000

			Tests of Normality					
Shape Descriptors			Kolmogorov-Smirnova			Shapiro-Wilk		
T.45	-.445	.474	.294	284	.000	.844	284	.000
SE.46	-.693	.937	.307	284	.000	.835	284	.000
SE.47	-.924	1.324	.328	284	.000	.810	284	.000
SE.48	-.943	1.991	.333	284	.000	.784	284	.000
SE.49	-.831	1.105	.334	284	.000	.800	284	.000
SE.50	-.719	.547	.303	284	.000	.844	284	.000
PE.51	-.900	1.734	.289	284	.000	.796	284	.000
PE.52	-.761	.904	.285	284	.000	.813	284	.000
PE.53	-.590	.760	.284	284	.000	.815	284	.000
PE.54	-.594	.192	.284	284	.000	.846	284	.000
PE.55	-.537	.349	.277	284	.000	.835	284	.000
PE.56	-.724	1.087	.265	284	.000	.792	284	.000
PU.57	-.586	.372	.284	284	.000	.809	284	.000
PU.58	-.435	.031	.287	284	.000	.831	284	.000
PU.59	-.333	-.471	.257	284	.000	.861	284	.000
PU.60	-.156	-.258	.286	284	.000	.835	284	.000
PU.61	-.230	-.419	.263	284	.000	.860	284	.000
PU.62	-.841	1.193	.273	284	.000	.797	284	.000
Att.63	-.775	.853	.291	284	.000	.837	284	.000
Att.64	-1.113	1.889	.295	284	.000	.790	284	.000
Att.65	-.951	1.457	.290	284	.000	.802	284	.000
Att.66	-.886	1.439	.265	284	.000	.818	284	.000
Att.67	-.692	-.097	.244	284	.000	.841	284	.000
Int.68	-1.209	1.117	.271	284	.000	.772	284	.000
Int.69	**-1.393**	**2.243**	**.284**	**284**	**.000**	**.755**	**284**	**.000**
Int.70	-1.242	1.595	.269	284	.000	.770	284	.000
Int.71	-.832	.044	.245	284	.000	.850	284	.000
Int.72	-.533	.126	.231	284	.000	.879	284	.000
Loy.73	-1.005	1.389	.268	284	.000	.809	284	.000
Loy.74	-.287	-.203	.212	284	.000	.878	284	.000
Loy.75	-1.001	1.280	.262	284	.000	.816	284	.000
Loy.76	-.102	-.123	.233	284	.000	.873	284	.000
Loy.77	-.740	.940	.287	284	.000	.826	284	.000
SN.78	-.136	-.244	.219	284	.000	.897	284	.000
SN.79	-.106	-.282	.241	284	.000	.900	284	.000
SN.80	-.159	-.117	.230	284	.000	.900	284	.000
SN.81	-.075	-.437	.212	284	.000	.909	284	.000

SN.82	-.135	-.104	.237	284	.000	.898	284	.000
SN.83	-.091	.050	.253	284	.000	.890	284	.000

Appendix 13: Homogeneity of Variance Results

Table 8. 6: Homogeneity of Variance Results

Test of Homogeneity of Variance (No: 532)		Levene Statistic	df1	df2	Sig.
Trust	Based on Mean	.892	1	528	.345
	Based on Median	.990	1	528	.320
	Based on Median and with adjusted df	.990	1	527.982	.320
	Based on trimmed mean	.884	1	528	.348
Subjective Norms	Based on Mean	4.882	1	528	.028
	Based on Median	6.089	1	528	.014
	Based on Median and with adjusted df	6.089	1	499.812	.014
	Based on trimmed mean	5.308	1	528	.022
Perceived Ease of Use	Based on Mean	6.141	1	528	.014
	Based on Median	4.989	1	528	.026
	Based on Median and with adjusted df	4.989	1	516.830	.026
	Based on trimmed mean	4.982	1	528	.026
Attitude	Based on Mean	4.464	1	528	.035
	Based on Median	3.113	1	528	.078
	Based on Median and with adjusted df	3.113	1	524.751	.078
	Based on trimmed mean	1.789	1	528	.182
Intention	Based on Mean	.156	1	528	.693
	Based on Median	.033	1	528	.857
	Based on Median and with adjusted df	.033	1	516.085	.857
	Based on trimmed mean	.218	1	528	.641

Test of Homogeneity of Variance (No: 532)		Levene Statistic	df1	df2	Sig.
Loyalty	Based on Mean	.710	1	528	.400
	Based on Median	.768	1	528	.381
	Based on Median and with adjusted df	.768	1	494.790	.381
	Based on trimmed mean	.846	1	528	.358
Perceived Usefulness	Based on Mean	.007	1	528	.935
	Based on Median	.179	1	528	.672
	Based on Median and with adjusted df	.179	1	525.154	.672
	Based on trimmed mean	.042	1	528	.838
Self-Efficacy	Based on Mean	31.672	1	528	.000
	Based on Median	32.767	1	528	.000
	Based on Median and with adjusted df	32.767	1	526.123	.000
	Based on trimmed mean	31.146	1	528	.000
Privacy	Based on Mean	3.041	1	528	.082
	Based on Median	1.892	1	528	.170
	Based on Median and with adjusted df	1.892	1	527.978	.170
	Based on trimmed mean	2.842	1	528	.092
Security	Based on Mean	14.346	1	528	.000
	Based on Median	14.071	1	528	.000
	Based on Median and with adjusted df	14.071	1	525.168	.000
	Based on trimmed mean	13.963	1	528	.000

Appendix 14: Correlations Matrix

Table 8. 7: Correlations Matrix (KSA and the UK, No: 532)

	Trust	Subjective Norms	Perceived Ease of Use	Attitude	Intention	Loyalty	Usefulness	Self-Efficacy	Privacy	Security	Communication	Reputation	experience
Trust	1	.168(**)	.400(**)	.414(**)	.336(**)	.414(**)	.448(**)	.234(**)	.531(**)	.447(**)	.391(**)	.449(**)	.436(**)
Subjective Norms	.168(**)	1	0.076	.288(**)	.202(**)	.276(**)	.206(**)	0.039	.244(**)	.282(**)	.139(**)	.143(**)	.187(**)
Perceived Ease of Use	.400(**)	0.076	1	.427(**)	.436(**)	.471(**)	.545(**)	.535(**)	.327(**)	.196(**)	.280(**)	.362(**)	.542(**)
Attitude	.414(**)	.288(**)	.427(**)	1	.578(**)	.544(**)	.557(**)	.321(**)	.420(**)	.294(**)	.216(**)	.316(**)	.430(**)
Intention	.336(**)	.202(**)	.436(**)	.578(**)	1	.571(**)	.512(**)	.330(**)	.322(**)	.228(**)	.152(**)	.307(**)	.465(**)
Loyalty	.414(**)	.276(**)	.471(**)	.544(**)	.571(**)	1	.499(**)	.322(**)	.363(**)	.298(**)	.186(**)	.278(**)	.459(**)
Perceived Usefulness	.448(**)	.206(**)	.545(**)	.557(**)	.512(**)	.499(**)	1	.350(**)	.409(**)	.307(**)	.272(**)	.388(**)	.497(**)
Self-Efficacy	.234(**)	0.039	.535(**)	.321(**)	.330(**)	.322(**)	.350(**)	1	.221(**)	.147(**)	.126(**)	.260(**)	.474(**)
Privacy	.531(**)	.244(**)	.327(**)	.420(**)	.322(**)	.363(**)	.409(**)	.221(**)	1	.597(**)	.424(**)	.413(**)	.377(**)
Security	.447(**)	.282(**)	.196(**)	.294(**)	.228(**)	.298(**)	.307(**)	.147(**)	.597(**)	1	.311(**)	.283(**)	.241(**)
Communication	.391(**)	.139(**)	.280(**)	.216(**)	.152(**)	.186(**)	.272(**)	.126(**)	.424(**)	.311(**)	1	.447(**)	.312(**)
Reputation	.449(**)	.143(**)	.362(**)	.316(**)	.307(**)	.278(**)	.388(**)	.260(**)	.413(**)	.283(**)	.447(**)	1	.500(**)
Experience	.436(**)	.187(**)	.542(**)	.430(**)	.465(**)	.459(**)	.497(**)	.474(**)	.377(**)	.241(**)	.312(**)	.500(**)	1

Appendix 15: Extraction Method: Principal Component Analysis

Table 8. 8: Extraction Method: Principal Component Analysis

	Total Variance Explained								
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	15.966	24.564	24.564	15.966	24.564	24.564	4.282	6.588	6.588
2	4.58	7.046	31.609	4.58	7.046	31.609	4.106	6.317	12.905
3	3.382	5.203	36.812	3.382	5.203	36.812	4.021	6.187	19.092
4	2.769	4.26	41.072	2.769	4.26	41.072	3.535	5.439	24.53
5	2.2	3.385	44.457	2.2	3.385	44.457	3.374	5.19	29.721
6	1.991	3.062	47.52	1.991	3.062	47.52	3.307	5.088	34.808
7	1.782	2.742	50.261	1.782	2.742	50.261	3.068	4.72	39.528
8	1.543	2.373	52.635	1.543	2.373	52.635	3.029	4.659	44.188
9	1.452	2.234	54.868	1.452	2.234	54.868	2.636	4.056	48.243
10	1.267	1.949	56.817	1.267	1.949	56.817	2.267	3.487	51.73
11	1.233	1.897	58.714	1.233	1.897	58.714	2.091	3.216	54.947
12	1.212	1.865	60.579	1.212	1.865	60.579	2.07	3.185	58.132
13	1.114	1.714	62.293	1.114	1.714	62.293	1.93	2.969	61.101
14	1.06	1.631	63.923	1.06	1.631	63.923	1.835	2.822	63.923

Appendix 16: Measurement Model Examination on both (KSA and UK)

The measurement model is run eight times, from 1.1 to 1.8. The goal of these runs is to identify any misfit problems. On each run, model fit, factor loading and modification index are examined. In terms of the first model run (1.1), the results indicate that the χ^2 is 4394.424 with 1924 degrees of freedom and probability value is < .001 which is significant. GFI is 0.783. In terms of the incremental fit index CFI, its value is 0.851. While the badness of fit index (RAMSEA) is 0.049 and 90% between 0.047 and 0.051. These results indicate that the measurement model has bad fit values (GFI and CFI), while RMSEA's value is within the acceptable value of < .10. According to these results, the model has to be improved and misfit problems have to be identified so that the factor loadings and modification index will be examined.

According to the factor loadings, it can be noted that there are four items with low factor loading values < .50, namely S.13, Ex.37, Com.25, and Re.32 with values .43, .41, .44 and .43 respectively. In addition, in order to identify any cross-loading and high errors correlation, AMOS output creates two tables which modification indices. The first table shows the covariance values between errors. The most important values of errors that are related to the same construct, the high errors values the more their related items produce problems which effect the overall model fit. The second table shows the regression weight values that can be used to identify any cross loading, especially the items with high loading value on unrelated constructs. These two tables are examined and indicate that there are nine items with cross loadings: Re.32, SE.49, Int.72, Com.25, Com.29, Ex.36, Ex.37, Ex.38, and SN.78. According to this information, at this stage four items will be deleted. They are S.13 and Re.32, based on its low factor loading < .50, and Ex.37 and Com.25, based on their low factor loading and cross loading (see Table 6.12 for cross-loadings). The measurement model will be re-tested in order to examine its improvement after the items' deletion. The following table shows cross loading values.

Table 8. 9: Cross-loading Examination (Measurement model 1.1)

The regression paths			M.I.	Par Change
Com.25	<---	Reputation	43.479	0.545
	<---	Perceived Usefulness	33.629	0.432
	<---	Intention	17.563	0.271
	<---	Attitudes	38.308	0.356
	<---	Trust	51.719	0.438
	<---	Subjective Norms	20.888	0.237
	<---	Privacy	48.739	0.406
	<---	Security	49.661	0.422
Com.29	<---	Intention	21.938	-0.331
Ex.37	<---	Subjective Norms	73.092	0.522

The second measurement model (1.2) is examined with 13 constructs and 56 items. The results indicate that the overall model fit GFI and CFI are increased and χ^2 and RMSEA are reduced. According to the results, χ^2 is decreased from 4394.424 in the model (1.1) to 3676.051 in the second model (1.2) with 1678 degrees of freedom and a signification probability value < .001. GFI also is increased from 0.783 to 0.805. CFI is increased from 0.851 to 0.874 in the second model (1.2). RMSEA is slightly decreased from 0.049 to 0.047 with 90% confidence that the value is between 0.045 and 0.049. These results indicate that the measurement model has poor fit values except RMSEA which is still within the acceptable value.

The factor loading and modification indices are reviewed. In terms of the factor loading, there is one factor loading is < .50. This item is UA.85 with regression weight at .36. In terms of the modification indices (MI), it can be noted that Int.72 and Ex.36 have cross loading with other constructs in the model. Int.72 has cross loadings with two constructs, while Ex.36 has cross loadings with six constructs. The following table shows these cross loadings.

Table 8. 10: Cross-loading Examination (Measurement model 1.2)

The regression paths			M.I.	Par Change
Int.72	<---	Subjective Norms	38.226	0.296
	<---	Security	25.542	0.296
Ex.36	<---	Reputation	20.954	0.327
	<---	Perceived Usefulness	21.557	0.309
	<---	Loyalty	26.85	0.353
	<---	Intention	32.665	0.33
	<---	Attitudes	27.778	0.271
	<---	Trust	18.521	0.233

Standardized residual covariance is examined so that any items with high residual values more than ±4 will affect the model fit. According to this standardized residual covariance matrix, one item is identified with five high residuals values. This item is SN.78 which has five high-residual values with five items (L.77, L.74, L.76, Int.72, and Att.63), with values 4.513, 4.154, 3.764, 4.072, 3.92 respectively. According to the above result two items will be excluded at this stage Int.72, and SN.78. The measurement model will be examined and the results will be provided.

The measurement model (1.3) is slightly improved after deleting Int.72, and SN.78. According to the results, χ^2 is decreased from 3676.051 in the model (1.2) to 3273.313 in the third measurement model (1.3) with 1504 and significant probability value <.001. GFI is increased slightly from 0.81 to 0.82. CFI is increased also from 0.87 to 0.88. In terms of RAMSEA, it does not change, its value 0.047 with 90% confidence that the value is between 0.045 and 0.049.

According to the above results, the model has to be improved so that the factor loadings and the modification indices are reviewed. In terms of the factor loadings, all are within the acceptable value > .50. According to the modification indices, some cross-loadings were noticed. Com.29 and Ex.36 have the largest values of cross-loadings. The item Com.29 is loading on the Intention construct and its MI value is 19.57, while Ex.36 is loading on six constructs (Reputation, Usefulness, Loyalty, Intention, Attitudes, and Trust), with modification indices 21.113, 21.636, 26.813,

30.819, 27.724, and 18.522 respectively. According to the standardized residual covariance, it can be noted that the item Ex.36 has two high values of standardized residual covariance, with Re.33 and SN.80 at 4.372 and 4.8 respectively. According to the above results, it is decided to exclude two items (Com.29 and Ex.36). The measurement model will be re-examined and the results will be provided below.

The measurement model 1.4 is examined and the results indicate a slight improvement in the model fits. According to the results, χ^2 is decreased from 3273.313 to 3010.965 with 1393 degrees of freedom and significant probability value < .001. GFI is increased from 0.82 to 0.83. CFI is increased as well from 0.88 to 0.89. RMSEA does not change significantly. Its value is 0.047 with 90% confidence between 0.044 and 0.049.

It can be noted from the measurement model 1.4 that three constructs have less than three observed variables (items): Reputation, Communication, and Experiences. All have two items. Based on Hair et al. (2006), using only two or three items to represent each construct should be avoided whenever possible because it has the potential impact on the SEM ability to provide a true test of a model. As a rule of thumb, it was stated that "latent constructs should be indicated by at least three measured variables, preferably four or more; in other words, latent factors should be statistically identified" (Hair et al., 2006, p790). According to this, it is decided to exclude these three constructs from the analysis. The measurement model will be re-examined with 10 constructs and 46 measured variables. The results will be provided in the following measurement model 1.5.

According to the results, the measurement model 1.5 shows a slight improvement. χ^2 is decreased from 3010.965 to 2547.6 with 1120 degrees of freedom and significant probability value < .001. GFI is increased from 0.825 to 0.834. CFI is increased as well from 0.891 to 0.90. RMSEA is slightly increased from 0.047 to 0.049 with 90% confidence that the value is between 0.046 and 0.052. According to these results, the model provides adequate fit values, especially CFI and RMSEA. However, according to the modification indices, the model also can be improved because there are some cross-loadings and a high value of standardized residual covariance. In terms of the cross-loadings, it can be noted that there are nine high cross-loadings from four items

(PU.61, SE.49, SN.80, and P.20). The following Table 6.14 shows these across loadings.

Table 8. 11: Cross-loading Examination (Measurement model 1.2)

The regression paths			M.I.	Par Change
PU.61	<---	Subjective Norms	15.95	0.153
SE.49	<---	Attitudes	19.705	0.169
SN.80	<---	Perceived Usefulness	10.897	0.207
	<---	Loyalty	10.043	0.204
	<---	Trust	18.085	0.221
	<---	Security	14.445	0.203
P.20	<---	Loyalty	10.606	0.191
	<---	Uncertainty Avoidance	12.483	0.198

In addition, the modification indices indicate that there are two high correlation errors. The first one between L.77 and L.76, while the second one between SN.80 and SN.83. The investigation shows that SN.80 has high standardized residual covariance with Int.71 at 4.00. According to the above examination, it is decided to exclude 5 items (PU.61, SE.49, SN.80, P.20 and L.76. The measurement model will be re-examined and the results will be provided in the following measurement model 1.6.

According to the results, the measurement model 1.6 shows some improvement. χ^2 is decreased from 2547.6 to 1973.087 with 890 degrees of freedom and significant probability value < .001. GFI is increased from 0.834 to 0.857. CFI is increased from 0.896 to 0.91. RMSEA is decreased slightly from 0.049 to 0.048 with 90% confidence that the value is between 0.045 and 0.051.

In terms of the current study, the results indicate that all factor loadings are within the recommended value > .50. In terms of the Average Variance Extracted (AVE), the results show that seven constructs (Privacy, Subjective Norms, Perceived Usefulness, Perceived Ease of Use, Attitudes, Intention, Self-Efficacy, and Loyalty) have an acceptable value of AVE, 0.57, 0.62, 0.55, 0.51, 0.56, 0.58, 0.56, 0.66, and 0.50 respectively. However, there are two constructs (Security and Trust) which have low

AVE values, .42 and .38 respectively. In term of the constructs' reliability, the results show that all constructs provide acceptable reliability values. They range from .68 to .88. According to this result, it can be concluded that the convergent validity is not supported because of these two constructs (Security and Trust). The analysis proceeds to examine the discriminate validity in order to identify the correlation between Security and Trust, and find out whether this correlation is lower or larger than their own Square Root of Variance. According to the results, the correlation between Trust and Privacy is high at .70, which is higher than Trust's square root of variance .61. The results also indicate that the correlation between Trust and Security is .69 which is also higher than Trust's square root of variance of .61. The discriminate matrix shows that the correlation between Privacy and Security is high (.79) which is larger than the Privacy's square root of variance (.75). These results indicate that these three constructs (Security, Trust and Privacy) do not discriminate from each other. These results are explained from statistical stand points

From item content standpoints, these three constructs might be understood similarly by the samples in both countries. In addition, by examining the contents of these two constructs, it can be noted that some questions contents are similar, for example the question that related to the Security construct labelled S.14, "I think customer data is kept securely by Internet Banking" can be understood as similar to the question P.17 "Internet Banking will not sell my personal information to third parties without my permission" or P.19 "Internet banking will not divulge consumers' personal data to other parties", all related to the Privacy construct. Customers' personal data is shared across these three questions (S.14, P.17, and P.19). Also questions S.15 and P.20 can be understood in a similar way because they share the same concept meaning of whether the Internet banking able and control customers' information and their privacy. In addition, Trust's item number 41 and Privacy item number 20, and Security's items number 14 and 15 can be understood similarly because they share common values that Internet banking able to control all financial activities and they cannot be accessed by a third party or an unauthorized person. In addition, all these things are taken as important issues from the banks' perspectives and they should be priorities.

From theoretical points of view, Morgan and Hunt (1994), who introduced the Commitment-Trust Theory, stated that shared values in an important construct that affect the relationship marketing among different partners. They identify shared values as "the extent to which partners have beliefs in common about what behaviours, goals and policies are important or unimportant, appropriate or inappropriate, and right or wrong (Morgan and Hunt, 1994, P25). Mukherjee and Nath (2003) applied the Commitment-Trust Theory in the online banking context. In their research, shared values were treated as a multi-dimensional construct to indicate the shared common beliefs between banks and customers, which include common beliefs such as ethics, security and privacy. It was stated that trust is an important factor, especially in the online environment (Gefen et al., 2003b, Lu et al., 2003, Pavlou, 2003). Unfair pricing, conveying inaccurate information, violations of privacy, unauthorized use of credit card information, and unauthorized tracking of transactions are examples of behaviours that affect individuals' levels of trust (Gefen et al., 2003b). Some of these behaviours are included as indicators of customers trust. Security and privacy are the two key ingredients of a wireless trust environment (Lu et al., 2003). Factors that affect Internet banking provision in the UK and in the Republic of Ireland and found that security is one of the important obstacle to accept Internet banking (Daniel, 1999). Trust or risk perceptions have been investigated in online banking in many different studies (Aladwani, 2001, Gan et al., 2006, Grabner-Kräuter and Faullant, 2008, Herington and Weaven, 2009, Hernandez and Mazzon, 2007, Howcroft et al., 2002, Joseph and Stone, 2003, Joseph et al., 2005, Kardaras and Papathanassiou, 2001, Kuisma et al., 2007, Laforet and Li, 2005, Mäenpää, 2006, Ndubisi and Sinti, 2006). These studies agree that security and privacy are the important components of trust perception. For example, Rotchanakitummuai and Speece (2003) conducted a qualitative study on the B2B level in Thailand, finding that there are three barriers affecting Internet banking acceptance among corporate customers. One of these barriers was trust issues, including security, transaction's reliability, trust in the service provider, and privacy.

According to the above evidences, Security, Privacy and Trust will be treated as one construct that is named Trust instead of using separate distinct constructs, and their discriminate validity have not been supported by the current study. In the current

study, and from now on, Security, Privacy and Trust will be represented by the Trust construct

After the combination of these three constructs, Security, Privacy and Trust, the measurement model (1.7) is examined with eight constructs: Trust (Security, Privacy, and Trust), Self-Efficacy, Perceived Usefulness, Perceived Ease of Use, Attitudes, Intention, Loyalty and Subjective Norms, with 45 items to test how this combination affects the model fit. According to the results, χ^2 is increased from 1973.087 to 2220.344 with 909 and significant probability value < .001. GFI and CFI are decreased from 0.857 to 0.838 and from 0.91 to 0.891 respectively. In terms of badness of fit (RMSEA), the result shows that its value is affected by this combination. It is increased from 0.048 to 0.052 with 90% confidence that the value is between 0.049 and 0.055. The RMSEA's value is still within the acceptable recommended value.

In order to improve the model fit, the factor loadings and modification indices are examined so that any misfit problems can be identified. The results show that there are three low factor loadings: S.15, T.45, and T.41. They have low factor loadings at 0.48, 0.45 and 0.44 respectively. All these items are related to one construct (Trust). In addition, modification indices provide some cross-loadings, especially from item T.45. It has cross-loadings with five constructs (Perceived Usefulness, Self-Efficacy, Loyalty, Intention, and Perceived Ease of Use), with MI values 10.135, 15.506, 19.856, 13.747 and 40.493 respectively. In addition, T.41 is noted to have cross-loadings with Perceived Ease of Use with 11.291. Moreover, it can be noted that T.45 and S.15 have high standardized residual covariances with L.73, SN.79 and SN.81. Based on this examination, it is decided to drop S.15, T.45 and T.41 from any further analysis. The measurement model will be re-examined and the results are provided in the following measurement model (1.8).

Appendix 17: Assessing Measurement Model based on KSA Sample

According to the results, the measurement model (1.9) provides poor fit results. χ^2 is 1591.578 with 783 degrees of freedom and significant probability value $p < 0.001$. GFI is 0.767 which is an unacceptable value. In terms of the incremental fit indices (CFI), the result shows that it has an unacceptable value as well at 0.847. RMSEA's value is 0.065 with 90% confidence is between 0.06 and 0.069. In general, when the measurement model is tested separately on each country, the model fit values are reduced (GFI and CFI), and RMSEA is increased. Based on these results, the factor loading and modification indices will be reviewed.

According to the factor loading values, the item T.42 has low factor loadings at 0.46. All other items are within the acceptable value > 0.50. In terms of the modification indices, they show that there is still one item with cross-loading. This item is T.40 which has cross-loadings with six constructs: Perceived Usefulness, Self-Efficacy, Loyalty, Intention, Attitudes and Perceived Ease of Use, with values 27.085, 4.726, 12.606, 15.094, 22.655, 14.042 and 12.975 respectively. In terms of the error covariances, the findings show that there are three items with high error covariances: PU.60, Att.66 and T.14 with values 13.261, 15.228 and 32.752 respectively. The investigation also provides that the item T.40 has high standardized residual covariances with four items (PU.57, PU.58, PU.59, and Att.64) with values 3.614, 4.593, 3.698 and 3.614 respectively. Based on these results, five items will be excluded from the analysis: T.42, T.40, PU.60, Att.66 and S.14. The measurement model will be re-examined and the results will be provided in the measurement model 1.10.

According to the results, the measurement model 1.10 is improved. χ^2 is decreased from 1591.578 in the measurement model 1.9 to 1126.36 in the measurement model 1.10 with 593 degrees of freedom and significant probability value $p < 0.001$. GFI is increased from 0.767 to 0.802 and CFI from 0.847 to 0.883. RAMSEA is decreased from 0.065 to 0.060 with 90% confidence that it is between 0.055 and 0.066. Based on these results, the model provides poor fit results. It needs to be improved by evaluating the factor loadings values and modification indices.

According to the factor loadings, the findings show that there is not any item with low factor loadings < 0.50. The modification indices are reviewed and the findings show that the item UA.87 has high error covariance. In addition the modification indices indicate that three items have across loadings: P.16, Att.67 and SE.50. P.16 has cross-loadings with three constructs (Perceived Usefulness, Loyalty and Perceived Ease of Use), Att.67 has cross-loadings with three constructs (Perceived Usefulness, Loyalty, and Intention), while the last item SE.50 has cross-loadings with two constructs (Perceived Usefulness and Perceived Ease of Use). Based on this examination, it is decided to exclude three items (P.16, Att.67, and SE.50). After deleting these three items, the measurement model will be re-tested to examine whether the model's fits are improved and be within the acceptable values. The results will be provided in the following measurement model (1.11).

According to the results, the measurement model 1.11 is improved. In terms of χ^2, it is decreased from 1126.36 in the model 1.10 to 843.528 in the model 1.11. GFI is increased from 0.802 to 0.828. CFI is increased from 0.883 to 0.901. RAMSEA is decreased from 0.060 to 0.058 with 90% confidence that the value is between 0.052 and 0.064. Based on these results, it can be concluded that the measurement model fits well on the sample of KSA and there is more confidence from analysis of the constructs validity.

Appendix 18: Correlation Matrix for Nomological Validity

Table 8. 12: Correlation Matrix based on KSA and the UK (No: 532)

	Trust	Subjective Norms	Perceived Ease of Use	Attitude	Intention	Loyalty	Perceived Usefulness	Self-Efficacy
Trust	1	.245(**)	.252(**)	.386(**)	.288(**)	.288(**)	.350(**)	.201(**)
Subjective Norms Items	.245(**)	1	.076	.288(**)	.202(**)	.276(**)	.206(**)	.039
Perceived Ease of Use	.252(**)	.076	1	.427(**)	.436(**)	.471(**)	.545(**)	.535(**)
Attitude	.386(**)	.288(**)	.427(**)	1	.578(**)	.544(**)	.557(**)	.321(**)
Intention	.288(**)	.202(**)	.436(**)	.578(**)	1	.571(**)	.512(**)	.330(**)
Loyalty	.288(**)	.276(**)	.471(**)	.544(**)	.571(**)	1	.499(**)	.322(**)
Perceived Usefulness	.350(**)	.206(**)	.545(**)	.557(**)	.512(**)	.499(**)	1	.350(**)
Self-Efficacy	.201(**)	.039	.535(**)	.321(**)	.330(**)	.322(**)	.350(**)	1

Table 8. 13: Correlation Matrix based on KSA (No: 248)

	Trust	Subjective Norms	Perceived Ease of Use	Attitude	Intention	Loyalty	Perceived Usefulness	Self-Efficacy
Trust	1	.301(**)	.223(**)	.358(**)	.341(**)	.255(**)	.425(**)	.242(**)
Subjective Norms	.301(**)	1	.355(**)	.454(**)	.539(**)	.569(**)	.448(**)	.227(**)
Perceived Ease of Use	.223(**)	.355(**)	1	.386(**)	.433(**)	.432(**)	.521(**)	.503(**)
Attitude	.358(**)	.454(**)	.386(**)	1	.642(**)	.483(**)	.566(**)	.333(**)
Intention	.341(**)	.539(**)	.433(**)	.642(**)	1	.551(**)	.553(**)	.332(**)
Loyalty Items	.255(**)	.569(**)	.432(**)	.483(**)	.551(**)	1	.513(**)	.332(**)
Perceived Usefulness	.425(**)	.448(**)	.521(**)	.566(**)	.553(**)	.513(**)	1	.360(**)
Self-Efficacy	.242(**)	.227(**)	.503(**)	.333(**)	.332(**)	.332(**)	.360(**)	1

Table 8. 14: Correlation Matrix based on the UK (No: 284)

	Trust	Subjective Norms	Perceived Ease of Use	Attitude	Intention	Loyalty	Perceived Usefulness	Self-Efficacy
Trust	1	.141(*)	.339(**)	.393(**)	.267(**)	.364(**)	.271(**)	.221(**)
Subjective Norms Items	.141(*)	1	.048	.119(*)	.097	.259(**)	.034	.084
Perceived Ease of Use	.339(**)	.048	1	.535(**)	.428(**)	.496(**)	.605(**)	.552(**)
Attitude	.393(**)	.119(*)	.535(**)	1	.546(**)	.659(**)	.543(**)	.379(**)
Intention	.267(**)	.097	.428(**)	.546(**)	1	.586(**)	.486(**)	.316(**)
Loyalty	.364(**)	.259(**)	.496(**)	.659(**)	.586(**)	1	.505(**)	.281(**)
Perceived Usefulness	.271(**)	.034	.605(**)	.543(**)	.486(**)	.505(**)	1	.377(**)
Self-Efficacy	.221(**)	.084	.552(**)	.379(**)	.316(**)	.281(**)	.377(**)	1

Appendix 19: Factor Loadings Equivalence (Invariance Analysis) KSA and the UK

Table 8. 15: Factor Loadings Equivalence (Invariance Analysis) KSA and the UK

Relationships			Standardized Regression Weights		Invariance Analysis		
			KSA	UK	Δ DF	Δ CMIN	P
PE.52	<---	PE	0.605	0.808	Constrained to 1		
PE.53	<---		0.786	0.817	1	0.001	0.981
PE.54	<---		0.737	0.745	1	0.054	0.816
PE.56	<---		0.656	0.74	1	0.108	0.742
L.75	<---	Loy	0.753	0.738	1	1.203	0.273
L.74	<---		0.763	0.507	Constrained to 1		
L.77	<---		0.625	0.779	1	2.978	0.084
SN.81	<---	SN	0.592	0.661	Constrained to 1		
SN.82	<---		0.789	0.842	1	1.11	0.292
SN.83	<---		0.701	0.936	1	0.19	0.663
S.12	<---	T	0.527	0.398	Constrained to 1		
P.19	<---		0.695	0.828	1	2.135	0.144
P.18	<---		0.737	0.728	1	0.112	0.738
P.17	<---		0.781	0.879	1	0.845	0.358
Att.63	<---	Att	0.721	0.749	1	0.000	0.994
Att.65	<---		0.751	0.848	1	2.905	0.088
Att.64	<---		0.893	0.844	Constrained to 1		
Int.70	<---	Int	0.782	0.791	1	0.184	0.668
Int.71	<---		0.744	0.458	Constrained to 1		
Int.69	<---		0.677	0.832	1	3.849	0.05
Int.68	<---		0.721	0.902	2	3.868	0.145
PU.60	<---	PU	0.612	0.758	Constrained to 1		
PU.57	<---		0.694	0.741	1	1.83	0.176
PU.59	<---		0.647	0.736	1	1.552	0.213
PU.58	<---		0.793	0.777	1	1.112	0.292
SE.46	<---	SE	0.669	0.774	1	2.483	0.115
SE.48	<---		0.786	0.886	1	1.213	0.271
SE.47	<---		0.923	0.908	Constrained to 1		

Appendix 20: Standardized Factor Loadings Equivalence (Invariance Analysis) across Low and High UA

Table 8 16: Standardized Factor Loadings Equivalence (Invariance Analysis) across Low and High UA

The relationships			Standardized Estimate		Invariance Analysis		
			Low UA	High UA	ΔDF	Δχ²	P
PE.52	<---	PE	0.698	0.71	Constrained to 1		
PE.53	<---		0.793	0.798	1	0.001	0.977
PE.54	<---		0.782	0.693	1	0.733	0.392
PE.56	<---		0.703	0.703	1	0.022	0.882
Att.63	<---	Att	0.706	0.728	1	1.99	0.158
Att.65	<---		0.783	0.772	1	1.983	0.159
Att.64	<---		0.856	0.824	Constrained to 1		
Int.70	<---	Int	0.807	0.742	1	0.001	0.975
Int.71	<---		0.541	0.607	1	3.297	0.069
Int.69	<---		0.792	0.671	Constrained to 1		
Int.68	<---		0.871	0.601	1	5.191	0.023
L.75	<---	Loy	0.756	0.631	1	3.008	0.083
L.74	<---		0.639	0.585	1	0.01	0.922
L.77	<---		0.696	0.717	Constrained to 1		
SE.46	<---	SE	0.731	0.729	Constrained to 1		
SE.48	<---		0.844	0.752	1	0.352	0.553
SE.47	<---		0.907	0.93	1	0.127	0.721
S.12	<---	T	0.437	0.47	Constrained to 1		
P.19	<---		0.744	0.782	1	0.018	0.892
P.18	<---		0.736	0.699	1	0.358	0.55
P.17	<---		0.819	0.833	1	0.442	0.506
SN.81	<---	SN	0.707	0.648	Constrained to 1		
SN.82	<---		0.849	0.866	1	1.11	0.292
SN.83	<---		0.843	0.913	1	0.19	0.663
PU.60	<---	PU	0.652	0.674	Constrained to 1		
PU.57	<---		0.731	0.6	1	1.615	0.204
PU.59	<---		0.666	0.708	1	1.112	0.292
PU.58	<---		0.791	0.778	1	0.074	0.785

Appendix 21: Standardized Factor Loadings Equivalence across Gender (Male and Female)

Table 8. 17: Standardized Factor Loadings Equivalence across Gender (Male and Female)

The Relationships			Male	Female	Δ DF	Δ CMIN	P
PE.52	<---	PE	0.76	0.664	Constrained to 1		
PE.53	<---		0.79	0.835	1	0.304	0.581
PE.54	<---		0.744	0.741	1	0.07	0.792
PE.56	<---		0.732	0.658	1	0.517	0.472
Att.63	<---	Att	0.814	0.619	1	5.982	0.014
Att.65	<---		0.784	0.82	Constrained to 1		
Att.64	<---		0.879	0.845	1	0.162	0.687
Int.70	<---	Int	0.855	0.733	1	8.268	0.004
Int.71	<---		0.526	0.628	Constrained to 1		
Int.69	<---		0.806	0.741	1	1.589	0.207
Int.68	<---		0.796	0.839	1	1.126	0.289
L.75	<---	Loy	0.837	0.614	1	0.382	0.537
L.74	<---		0.75	0.41	Constrained to 1		
L.77	<---		0.712	0.653	1	3.85	0.05
SE.46	<---	SE	0.725	0.718	1	1.254	0.263
SE.48	<---		0.841	0.792	1	0.076	0.783
SE.47	<---		0.942	0.864	Constrained to 1		
S.12	<---	T	0.48	0.439	Constrained to 1		
P.19	<---		0.784	0.752	1	0.039	0.843
P.18	<---		0.726	0.751	1	0.000	0.988
P.17	<---		0.827	0.814	1	0.102	0.749
SN.81	<---	SN	0.602	0.794	Constrained to 1		
SN.82	<---		0.858	0.847	1	0.99	0.48
SN.83	<---		0.88	0.881	1	1.21	0.23
PU.60	<---	PU	0.716	0.624	Constrained to 1		
PU.57	<---		0.706	0.738	1	0.004	0.949
PU.59	<---		0.661	0.72	1	4.939	0.026
PU.58	<---		0.784	0.816	1	0.588	0.443