Information and communication technologies in the Kuwaiti Parliament: a user acceptance and adoption study

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A thesis submitted in partial fulfilment of the requirements of the University of Brighton for the degree of Doctor of Philosophy

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University of Brighton

June 2017

Abstract

Today, information and communication technologies (ICTs) affect political and administrative areas in a profound way, and the extent of this impact increases day by day. Nowadays, ICTs are increasingly employed to play an important role in the improvement of governmental work. Parliaments are central institutions in democratic government systems. ICT has the potential to assist in improving the representation function of these Parliaments by expanding the information capabilities for Parliaments and Members of Parliaments.

As with any new technology, user acceptance of the new technology is often hard to measure. This thesis examines whether Parliamentarians in Kuwait were practically willing to accept ICT of various kinds. It focuses upon Kuwait, which has a developing economy with a rapid rate of growth, and therefore makes a unique case study.

The unified theory of acceptance and use of technology (UTAUT) proposes that Performance Expectancy, Effort Expectancy, and Social Influence predictBehavioural Intentiontowards the acceptance of information technology. The theory further proposes that Facilitating Conditions andBehavioural Intentionpredict use behaviour in the acceptance of information technology. The theory has been assessed using many different applications, and it has become the model for measuring user acceptance. The Unified Theory of Acceptance and Use

of Technology (UTAUT) with moderating variables such as age, gender and education level has been used in this study as a proposed conceptual framework. The study has also incorporated a model of cultural difference, to explore the influence of cultural factors.

The study utilized mixed methods; questionnaires plus a set of interviews, within a case study approach. Two kinds of questionnaires were used. The first was an amended UTAUT model questionnaire and the second the software system usability survey (SUS). The sample was drawn from members of the Kuwaiti National Assembly, with 182 responses received. The interviews were conducted with Ministers, Members of Parliament, Heads of departments, and some employees of the National Assembly.

The study found that Performance Expectancy, Effort Expectancy, Facilitating Conditions, and Self-Efficacy were direct determinants of usage Intention in the Kuwait Parliament while Social Influence was not an effective determinant in this study, against the predictions of the UTAUT model.

Gender and educational level had no influence as moderators on the determinant factors investigated in this study. However, age was found to be a moderator on the impact of the determinants on usage Intention and behaviour of the Parliamentarians for Performance Expectancy.

KEYWORDS: Technology acceptance model, UTAUT, E-Government, E-Parliament, Culture, ICT, Kuwait.

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List of Abbreviations

C-TAMTPB	Combined Technology Acceptance Model And Theory of Planned Behaviour (Augmented TAM)
DTPB	Decomposed Theory of Planned Behaviour
EE	Effort Expectancy
FC	Facilitating Conditions
GDP	Gross Domestic Product
DOI	Diffusion of Innovations Theory
ISO	The International Organization for Standardization
MM	Motivational Model
MPCU	Model of Pc Utilization
MPs	Members of Parliament
OECD	Organization for Economic Cooperation and Development
OPEC	Organization of the Petroleum Exporting Countries
PE	Performance Expectancy
SCT	Social Cognitive Theory
SE	Self-Efficacy
SI	Social Influence
SMS	Short Message Service

TAM	Technology Acceptance Model
TAM2	Technology Acceptance Model 2
TAM3	Technology Acceptance Model 3
TPB	Theory of Planned Behaviour
TRA	Theory of Reasoned Action
UGT	Uses and Gratifications Theory
UTAUT	Unified Theory of Acceptance and Use of Technology

ACKNOWLEDGEMENTS

I give God all the praise for supporting me through this experience. My accomplishments and blessings are a reflection of His holy plan.

I would like to express my appreciation for the kind support of the School of Computing, Engineering, and Mathematics in the University of Brighton, which has allowed me to complete this research and to be one of the graduates of this prestigious University.

In particular, I thank my supervisors Dr. Lyn Pemberton, Head of Computing Division, and Dr. David Horner for encouraging me to perform at higher levels. Their optimism, spirit and vision helped me recognize my potential as well as my limitations.

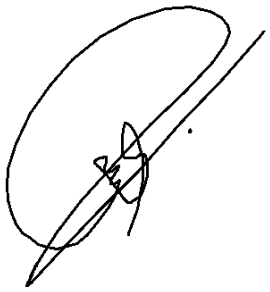
Then I would like to thank myself for all the support given to me in this beautiful journey. Thank you very much myself.

I would like to thank my parents and all of my family who have always given me love, support, spiritual support, and patience during this endeavor. I am grateful to them.

Finally, my warmest appreciation goes to my son and my two beautiful daughters, for their helping me realize a dream through unconditional love, patience, and many hours of loneliness. This project would not have come true without their undying support and understanding.

DECLARATION

I declare that the research contained in this thesis, unless otherwiseformally indicated within the text, is the original work of the auther. The thesis has not been previously submitted to this or any other university foe a degree, and does not incorporate any material already submitted for a degree.

Signed: 

Dated: 22 – June - 2017

CHAPTER 1 : INTRODUCTION

1.1 Introduction

Information and communication technology (ICT) is one of the most important means of promoting and supporting human development. ICT denotes “the integration of information and telecommunication technology sectors involving their convergence with the media technology sector based on common digital technology” (Sallai, 2012, p. 10). ICT includes computer hardware, software, networks and services, Internet technologies, services and applications, telecommunication and broadcasting systems and services (e.g. wireline, wireless, mobile and satellite). Today, ICT is not just a tool used to facilitate the business of institutions and individuals: it has become an absolute necessity for catching up with the rapid changes taking place in the present world. These changes influence the decisions of states and individuals alike. Technology has therefore become an important player in different fields in every country in the world (Abdulhady, 2006), and ICT can help the development of governments, financial institutions and international organizations (Brewer et al., 2005).

ICTs play a key role in many aspects of life, including education, retail and entertainment. The focus of this study is the use of ICT in government, and in particular in the work of Parliaments. A huge mass of information is often shared between government bodies and organizations. Using ICT in Parliament to manage and utilize such information in a more efficient manner has the potential to increase the effectiveness of Members of Parliament and

facilitate Parliamentary work. This in turn should help in the development of solutions to society's problems and in the formulation of effective laws.

However, new technology may not be successful if the intended user will not use it, or is not satisfied with it. It does not matter how potentially efficient ICT is if nobody is willing to use it. For this reason user non-acceptance is considered a major obstacle to the successful implementation of technology solutions. This research aims to understand technology adoption in this domain by investigating factors that affect technology acceptance among Parliamentarians[1] in Kuwait. The study therefore contributes to the area of Information Systems research that is concerned with socio-technical of innovation diffusion (Rogers, 1995).

1.2 An Overview of Kuwait

1.2.1 General

This section aims to set the context for the study by providing a brief overview of Kuwait in order a) to orient readers unfamiliar with the country

[1]The term Parliamentarian can have a range of meanings. It has been defined as "a person who is an expert in the formal rules and procedures of deliberative assemblies and other formal organizations" (Dictionary.com, 2015). A Parliamentarian is therefore an expert in rules of order and the proper procedures for the conduct of meetings of deliberative assemblies. Parliamentarians "assist organizations in the drafting and interpretation of laws and rules of order, and in the planning and conduct of meetings" (Opertec.ca, 2015). However, the Oxford dictionary defines Parliamentarian as "a member of a Parliament, especially one well versed in its procedure and experienced in debate" (Oxforddictionaries.com, 2015). In order to avoid confusion, the term Parliamentarian has been used in this thesis as a generic term covering Members of Parliament, Ministers, and employees in the Kuwaiti Parliament.

and region and b) to point to political and cultural issues that emerge as significant in the later chapters of the study.

Location

Kuwait is located in the northwest corner of the Arabian Gulf, bounded by the Arabian Gulf on the east; Iraq is located to the north and west of the State of Kuwait while Saudi Arabia is located to the south (E.gov.kw, 2016) (see Figure 1.1).The total area of Kuwait is just 17,818 square kilometres and the length of coastline including the coasts of islands is 500 kilometres (E.gov.kw, 2016). Arabic is the official language and Islam is the official religion.

Figure 1.1: Kuwaiti National Assembly (Wikitravel.org)

Economy

Kuwait is one of the richest countries in the world both at national and individual levels (E.gov.kw, 2016). The economy of the country depends heavily on oil production and export (Media.gov.kw, 2016). Kuwait is one of the most important producers and exporters of oil in the world and is a founding member of OPEC. The oil industry in Kuwait, which is owned by the government, represents more than 50% of GDP, 95% of exports, and 80% of government revenues (Kuwaitchamber.gov.kw, 2016).

Kuwait's population has reached about 3,065,850 inhabitants. Kuwaitis make up a third of this total, with other inhabitants made up of workers from other Arabic and African countries (Csb.gov.kw, 2016).

The State of Kuwait is a developed country in terms of social indicators, where the percentage of enrolment in primary and middle schools is 100%. Table 1.1 breaks the Kuwaiti population down by age group, educational level and use of the Internet. It is worth mentioning here that among people over the age of thirty (the legal age for candidacy for membership of the Kuwaiti Parliament) the percentage who use the Internet is 85.53%. Most of them (62.8%) are educated to at least secondary level.

Age Group	Gender	Total	Using Internet	University and Post Graduate Studies	Above Secondary and Below University	Secondary	Intermediate	Primary	Read and Write	Illiterate
30-34	**M**	35531	34684	9635	6268	9931	8007	871	431	388
	F	37220	35783	12737	7381	9184	5857	887	716	458
	T	**72751**	**70467**	**22372**	**13649**	**19115**	**13864**	**1758**	**1147**	**846**
35-39	**M**	31674	30806	9541	5279	7144	8081	877	422	330
	F	34245	32414	12083	5467	7756	6364	1102	923	550
	T	**65919**	**63220**	**21624**	**10746**	**14900**	**14445**	**1979**	**1345**	**880**
40-44	**M**	28540	27683	8212	4787	6915	7128	743	471	284
	F	31113	28480	9747	4432	7027	6651	1281	1149	826
	T	**59653**	**56163**	**17959**	**9219**	**13942**	**13779**	**2024**	**1620**	**1110**
45-49	**M**	24444	23552	7587	4043	5982	5458	683	401	290
	F	26689	23156	7445	3856	5674	5687	1335	1456	1236
	T	**51133**	**46708**	**15032**	**7899**	**11656**	**11145**	**2018**	**1857**	**1526**
50-54	**M**	17958	17057	5638	3050	4062	3947	648	393	220
	F	21358	16663	5063	3028	3989	4204	1257	1770	2047
	T	**39316**	**33720**	**10701**	**6078**	**8051**	**8151**	**1905**	**2163**	**2267**
55-59	**M**	13365	12181	3699	2205	2839	3209	624	513	276
	F	16525	10950	2860	1977	2588	3179	1147	2125	2649
	T	**29890**	**23131**	**6559**	**4182**	**5427**	**6388**	**1771**	**2638**	**2925**
60-64	**M**	8624	7199	2117	1345	1567	2022	603	615	355
	F	11630	5936	1462	927	1287	2029	970	2087	2868
	T	**20254**	**13135**	**3579**	**2272**	**2854**	**4051**	**1573**	**2702**	**3223**
65+	**M**	16812	9344	2274	1048	1933	3712	1693	3448	2704
	F	19211	4780	1100	356	891	2045	1402	4623	8794
	T	**36023**	**14124**	**3374**	**1404**	**2824**	**5757**	**3095**	**8071**	**11498**

Table 1.1: Kuwaiti Population (+30 years)
(Source: Central Statistical Bureau, 2011)

Table 1.2 shows that among the Kuwaiti population aged 20 to 29, the percentage of these who use the Internet is 97.95%. This is a highly educated sector of the population, with 79.8% educated at least to secondary level. This category represents the next generation of Parliamentarians.

Age Group	Gender	Total	Using Internet	University and Post Graduate	Above Secondary and Below University	Secondary	Intermediate	Primary	Read and Write	Illiterate
20-24	**M**	53029	52134	6610	10699	22999	10848	1136	396	341
	F	51268	50376	9273	13196	20929	6430	721	366	353
	T	**104297**	**102510**	**15883**	**23895**	**43928**	**17278**	**1857**	**762**	**694**
25-29	**M**	43074	42169	11729	10055	10826	8614	1006	460	384
	F	42993	41778	14742	11991	8804	5636	768	554	498
	T	**86067**	**83947**	**26471**	**22046**	**19630**	**14250**	**1774**	**1014**	**882**

Table 1.2: Kuwaiti Population (20 - 29 years)
(Source: Central Statistical Bureau, 2011)

Education level and Internet experience among Parliamentarians were factors included in the present study.

1.2.2 Kuwaiti Political Background

Kuwait operates with a written constitution established in 1962 (Aldean, 1999), which works to achieve a balance between the Parliamentary system and the presidential system. In the Parliamentary system, the Head of State exercises his powers through ministers. Hand in hand with this, the presidential aspect of the system allows the Prime Minister the freedom to choose members of the government (the Cabinet) from within and from outside the pool of elected MPs (Aldean, 1999). The legislature is represented by His Highness the Emir of the State of Kuwait (the President of the State) and the National Assembly (Parliament) (Figure 1.2).

Figure 1.2: Kuwaiti National Assembly
(Source: Kuwait National Assembly)

The Constitution also specifies how to elect Members of the National Assembly, their number and their membership period. Kuwaiti citizens, male and female, aged 21 years or above have the right to participate in the election of Members of the National Assembly. The exceptions are:-

1. Members of the military force,
2. Members of the police force and;
3. People who have been citizens of Kuwait less than 30 years.

According to the Constitution, voters are called every four years to select their representatives. However, early elections might be held if the Emir uses his rights to dissolve the Parliament, and calls for early elections.The National Assembly has been dissolved six times since 2006, and the government has resigned twelve times during the same period (Kna.gov.kw, 2016).

The number of Members of the Kuwaiti Parliament is fifty, ten from each constituency, based on the 2006 reduction of constituencies from 25 to five. Each voter is allowed to select four candidates, and the 10 candidates with the highest votes become Members of the National Assembly (Kna.gov.kw, 2016). Those elected occupy a Parliamentary seat for the legislative term. Voters are given absolute freedom to choose their representatives in Parliament: "Kuwait holds generally free and fair Parliamentary elections with near universal adult suffrage for citizens" (Herb, 2009, p. 379). Ministers are also Members of the National Assembly by virtue of their office, but the number of cabinet Members cannot exceed one-third of the 50 Members of the National Assembly. Therefore, the maximum number of the Council of Ministers cannot exceed 16 Ministers, including the Prime Minister.

Kuwait has no political parties: members of the Assembly are elected as individuals but often form informal clusters once elected (Almughni, 2010). The most prominent of these informal political groups are the "National Democratic Alliance (liberal), the Islamic Constitutional Movement, and the Islamic Popular Alliance" (Almughni, 2010, p.240).

Herb (2009) calls the Kuwaiti Parliament "the strongest in the Gulf and among the strongest in the Arab world" due in part to the "ability of a majority of the elected members… to interpellate and to vote no confidence in individual ministers. An interpellation is the Parliamentary questioning that must precede a vote of confidence" (Herb, 2009, p. 379) and is an indication of the powers wielded by elected members.

The Role of Women in Parliament

In 2005, women in Kuwait obtained the right to candidacy and election to the National Assembly and became entitled to be appointed as Ministers in the government (Alsabah, 2013). Despite media campaigns carried out over the past decades by groups of male and female political activists, the granting of political rights did not result in women entering the political arena, whether in Parliament or in the government. Only a small percentage of women were elected to Parliament. See Table 1.3.

Election Date	Men Candidates	Women Candidates	Women Elected
29 June 2006	249	28	None
17 May 2008	274	27	None
16 May 2009	210	16	4
2 February 2012	282	21	None
1 December 2012	279	14	3
28 July 2013	311	6	2

Table 1.3: Gender of Candidates for Election
(Source: moi.gov.kw, 2016)

Of this small percentage of candidates, those that do put themselves forward are seldom elected. There is also a continuous regression in this trend. In the elections of 2013, the number of candidates of women was six, whereas it was 14 in the December 2012, and 21 in the elections of February 2012, while 28 women were candidates in the elections in June 2006, the first elections women were allowed to participate in. This may be due to frustration which Kuwaiti women experience at the futility of participating in Parliament. This is because, in spite of involvement in the political process from 2006 to the present, the main demands of women remain unmet, regardless of whether the

elected candidate is male or female. Issues related to economic and social rights for women have been suspended and remain without solution.

A study by National Democratic Institution (NDI, 2007) suggests several reasons for the failure of any women to get elected in 2006, as mentioned in:

1. The sudden announcement of the elections did not leave any time for women to get ready,
2. Lack of experience,
3. Lack of voters' knowledge of women candidates,
4. Lack of voter confidence in the capacity of women Parliamentarians,
5. The absence of support for political groups,
6. The impact of tribalism and closed societies,
7. Opposing religious groups, and
8. Media trends that are anti-women.

The number of women elected does not reflect the relative weight of women within the electorate. In fact the number of female voters in all constituencies was 225,815, whereas the number of male voters was 195,754, i.e. 53.4%and 46 0.6% respectively of the total number of voters (Moi.gov.kw, 2016). There is currently only one female MP in the Kuwaiti Parliament.

The role of gender in technology acceptance will be explored in the study.

1.3. Statement of the Problem

Parliamentary functions range from representative and legislative to scrutiny, education and legitimation of the political system and conflict resolution.

ICTs have the potential to impact greatly on these functions, providing new means to enhance the work and image of Parliaments.

ICTs can be seen as impacting on the policy formation and legislative role of MPs in a number of respects. For example, one of the most important legislative tools available to Members of Parliament is the *Parliamentary question*. The legislator needs a large amount of information and statistics to assist in the formulation of the Parliamentary question. The amount of information available via the Internet and digital databases makes it easier for MPs to develop their expertise and saves time and effort in acquiring the information. Using this information in a fast and accurate way will help the MP to formulate the Parliamentary question and will ensure that the government gets the answer to the question in less time.

However, the features offered by ICT cannot be taken advantage of if Parliamentarians refuse or feel unable to use ICT. There are several reasons for the reluctance of some MPs to use information and communications technology, which include social and demographic characteristics, skills, and cultural aspects. Over recent years, models explaining the factors influencing technology acceptance have been developed, the most recent being UTAUT (Venkatesh et al, 2003). The current research is grounded in an amended UTAUT model, to determine and explain the impact of factors influencing the Parliamentarians' Intention to use the Kuwaiti Parliamentary website. The UTAUT model was chosen as the base theoretical model for this study because of its comprehensiveness and high explanatory power in comparison to other technology acceptance and use models. The results of this study will help decision makers to gain a better understanding of the factors that determine Parliamentarians' acceptance and use of Parliamentary websites. Using a model of this type ensures that key features are taken into account in

the research and also allows for comparison to other IT acceptance scenarios in different contexts. This in turn adds to an appreciation of the value of the model itself:

> While theoretical frameworks have been developed to explain the phenomenon of innovative technology adoption, these frameworks need to be contextually applied to identify whether the causal relationships between the attitude, Behavioural Intention and their determinants remain true across varied contexts (McFarland and Hamilton, 2006).

This application in context is one of the goals of the study.

1.4. **Potential Significance**

This study presents a range of findings and recommendations that enhance our understanding of Kuwaiti Parliamentarians' attitudes to ICT.

It identifies the cultural aspects that influence ICT usage in Parliament in the state of Kuwait. The nature of Kuwaiti society is different from the rest of the other Arab communities. The most prominent of these differences are highlighted in Kuwait's geographical location, which is located between the three large countries, Saudi Arabia and the Republic of Iran and Iraq, each with very large populations. Each of these countries has its own character, religious and political system. Although Kuwait is considered as a blend of these cultures, Kuwait is differentiated from these countries by its democratic political system. This may make it difficult to apply the results of studies in other Arab countries what do not share this tradition (Herb, 2009).

However the study helps to fill a general gap in knowledge as we have not identified any other study on the application of one of the theories of user acceptance in any Parliamentary institutions, within or beyond Arab countries. As will be seen in Chapter Two, what research has been carried out in the area

of e-Parliaments has tended to ignore or take for granted the role of the direct end users of the technology, i.e. the Parliamentarians, concentrating instead on issues affecting those receiving information, i.e. the citizens.

This study provides data that can be used in future studies on technology adoption initiatives in Kuwait. The study can also be replicated after a period of time has lapsed, in order to evaluate the extent to which specific conditions and data influence the results.

1.5. **Objectives**

The aim of this research was to explore current and potential use of information and communication technologies by Parliamentarians in Kuwait. The UTAUT model was applied and modified to achieve this goal. In order to achieve this aim, the study had five concrete objectives to achieve:

1. Reviewing the ways in which ICT is harnessed for use in Parliaments in a range of settings.
2. Analysing the current situation in Kuwait in order to provide a relevant backdrop to the study of ICT adoption in the Kuwaiti government.
3. Investigating ways in which Parliamentarians in Kuwait use and intend to use the Parliamentary website.
4. Investigating the influence of cultural factors on Parliamentarians in Kuwait with regards to ICT use.
5. Formulating a model of technology acceptance for Parliamentary website usage by Parliamentarians in Kuwait, which integrates local cultural factors.

1.6. Research questions

The study objectives have been translated into research questions. The study focused its investigation on four principal research questions to achieve this aim (corresponding to objectives 2, 3, 4 and 5 above) as the following:

1. How do Parliamentarians in Kuwait use ICT? In particular:

    - For what goals and tasks do Parliamentarians in Kuwait use the Parliamentary website?
    - What other applications are most heavily used by Parliamentarians in Kuwait?

2. To what extent do demographic factors (age, gender, and education) influence Parliamentarians' perceptions and behaviours with regards to ICT in Parliament?

3. What other factors influence Parliamentarians' Intention to use the Parliamentary website in Kuwait?

4. To what extent does the addition of cultural factors to the UTAUT model expand its explanatory power?

1.7. **Structure of the Thesis**

The thesis is structured as follows:

Chapter One presents an overview of the research, including a statement of the problem, the significance of the research and the research objectives, questions and potential contributions. It also briefly introduces the immediate context of the work, i.e. the state of Kuwait and particularly its political system.

Chapter Two is the literature review, setting out the major fields that contribute to the thesis, i.e. e-Government studies, models of technology acceptance and models of cultural difference.

Chapter Three presents the research methodology and its justification. It also presents the research process, design, development of the instruments, population, sample and data collection and data analysis methods. The chapter proposes a research model comprised of key determinants that are expected to influence the Intention to use ICT of Parliamentarians in Kuwait, together with the moderators that are expected to moderate the influence of these key determinants. The chapter concludes with the study's research hypotheses.

Chapter Four presents the findings of the study. The findings are based on the data collected from the survey questionnaire and the interviews. Evaluation of the hypotheses of the model, demographic characteristics, cultural differences, and background of Parliamentary website usage are discussed in this chapter.

Chapter Five presents an analysis of the results and provides a discussion of the findings in terms of the research questions and contributions and also in terms of relationship to the literature.

Chapter Six outlines the contribution to knowledge of this research. The chapter summarizes the research findings, highlighting also its limitations, draws conclusions and makes recommendations for policy and for future research directions.

A bibliography and appendices related to the study surveys and experimental results are included at the end of the thesis.

CHAPTER 2 : CONTRIBUTING RESEARCH FIELDS

In this chapter were view a range of studies from the three main fields that contribute to the study, i.e. e-Government studies (2.1), technology acceptance models (2.2) and models of cultural difference (2.3).

2.1.e-Government, e-Parliament and e-Democracy

With the widespread use of information and communication technology, terms such as e-Government, e-Parliament and e-Democracy have become common. Kingham (2003) describes the relationship between the government, Parliament and democracy as a complementary one. In his view the use of information and communication technology in a *Parliament* is meant to develop Parliamentary work, while the use of technology in *government* is meant to improve the effectiveness and efficiency of public services. In many ways this two-part view is still valid, with ICT being used by governments either to support the delivery of services to citizens or to improve government's own processes, including the functioning of Parliaments. More recently, of course, *e-Democracy* has developed as an important third strand in this picture, with citizens using ICT to engage more actively in the democratic process, e.g. through e-Petitions and organisation through social media (Abu-Shanab et al, 2010; Effing et al, 2011). This third aspect is extremely embryonic in Kuwait and thus remains outside the scope of the current study.

After a general introduction to the concept of e-Government (2.1.1), we review studies on the use of Information Communication Technology (ICT) in both government services (2.1.2) and in Parliament (2.1.3), in order to provide a context to this fairly recent development. Section 2.1.4 presents the role of a specific technology, the Parliamentary website, which is the focus of the current study.

2.1.1 E-Government

Some definitions of e-Government are extremely broad: one definition, formulated by OECD (2006), regards e-Government as simply "the use of ICT, particularly the Internet, to achieve better government".

More specifically, however, there is a widely shared consensus that e-Government is the use of ICT to enable citizens to access services and information. There are a great number of definitions of e-Government that concentrate on provision of citizen services. According to Margetts and Dunleavy (2002, p.13), "e-Government is about making the full range of government activities – internal processes, the development of policy and services to citizens – available electronically". Similarly, Abie et al., (2004) claim that e-Government is a powerful tool for managing and integrating existing information to make it easier for citizens to interact with services that are provided over the Internet. Alshehry et al. (2006) observe that the introduction of e-Government is considered to be a revolution in the field of public administration. Kaliannan and Awang (2009) suggest that e-Government has the ability to raise the performance of government through increasing efficiency and speeding up of transactions.

Focussing on the participation and satisfaction of citizens, Choudrie et al., (2004) define e-Government as an Internet-based activity through which

citizens access government information and services. Gartner (2002) defines e-Government as the transformation of public sector internal and external relationships through the usage of ICTs, with the goal of improving government services delivery and constituency participation. Similarly, the United Nations (2010) defines e-Government as the use of the Internet to provide information and public services for citizens.

It is clear that while some definitions are couched in terms of efficiency for governments, other writers focus on the citizen experience as a motivator for implementing e-Government services. The World Bank's 2006 definition, stating that e-Government involves the use of ICT to ensure effectiveness, efficiency, accountability and transparency in government operations, neatly encompasses the multiple motivations for e-Government.

Some writers attempt a further subdivision of the concept of e-Government. Ndou (2004) suggests that the e-Government concept should incorporate the following concepts:

- e-Administration, which is the computerization of administrative functions of governments at different organizational levels;
- e-Citizen to build trust in the government, and to ensure citizen satisfaction with services;
- e-Services and e-Society, which are concerned with establishing relationships between the government and society.

However, Nordfors et al., (2006) view e-Government as including four main areas: e-Administration, e-Democracy, e-Services and e-Commerce. Elsheikhet al. (2010)also assume a four-element model and believe that any definition of e-Government must focus on a) the technology, b) the change or transformational process of government, c) the impact of e-Government, and d) the needs and expectations of citizens. However all these definitions and

explanations of the meaning of e-Government agree on the desirability of the use of ICTs in citizen-government transactions.

2.1.2 E-Government services

Many national governments, particularly in the Western democracies, have invested heavily in the provision of such services. Figure 2.1 from the United Nations e-Government evaluation (UN, 2014), shows the top ten countries from an e-Government development perspective.

E–Government Development Index - Top 10 Countries	
Country	*Index*
Republic of Korea	0.9462
Australia	0.9103
Singapore	0.9076
France	0.8938
Netherlands	0.8897
Japan	0.8874
United States of America	0.8748
United Kingdom of Great Britain and Northern Ireland	0.8695
New Zealand	0.8644
Finland	0.8449

Figure 2.1: Top 10 E-Government Development Countries (UN, 2014)

As shown in Figure 2.2 from the same source, e-Participation goes hand in hand with e-Government service provision:

E–Participation Index Top 10 Countries	
Country	*Index*
Netherlands	1.0000
Republic of Korea	1.0000
Uruguay	0.9804
France	0.9608
Japan	0.9608
United Kingdom of Great Britain and Northern Ireland	0.9608
Australia	0.9412
Chile	0.9412
United States of America	0.9216
Singapore	0.9020

Figure 2.2: Top 10 E-Government Development Countries (UN, 2014)

Other governments, including Kuwait, have begun the process of implementing e-Government, but have not reached advanced positions in the United Nations e-Government evaluation (UN, 2014).Kuwait currently lies in the second band of e-Government development. According to the UN's evaluation (UN, 2016), "[t]here has been a sharp rise in the number of

countries that are using e-Government to provide public services online through one stop-platforms – an approach that makes it easier to access public services. In 2003, only 45 countries had a one-stop-platform, and only 33 countries provided online transactions. According to the 2016 Survey, "90 countries now offer one or more single entry portals on public information or online services, or both and 148 countries provide at least one form of online transactional services".

Kuwait was a relatively early adopter of e-Services. The National Committee for implementing e-Government was established in Kuwait to assess the status of current information technology and to establish a mechanism for creating an e-Government in Kuwait. In March 2002 the government created the Central Agency for Information Technology to implement the e-Government project. Since then, Kuwait has made considerable strides in the areas of Government-to-Citizen and Government-to-Government interaction (Abdelbarr and Alotaibi, 2010).

Kuwaiti e-Government currently has more than sixty e-Services offered including the e-Payment of electricity and water bills and civil ID fines (E.gov.kw, 2016). Tasdeed, an electronic payment service that specializes in government services and their fees, is one of the most popular e-Services offered by the Ministry of Finance. The Ministry of Social Welfare of Kuwait site offers e-Mail notification to citizens' requests, allows online submission of forms and payment, and allows creation of personal accounts online (United Nations, 2008).The Kuwait Government Online (KGO) portal was established in 2008 to provide a 'one-stop'centre for government-to-citizens (G2C) and government-to-business (G2B) interactions and transactions.

However there are still weaknesses. The Kuwaiti e-Government sites lack proper provisions for privacy and security of personal information. Anyone having the Civil ID number of a person can access all his/her personal information. In addition, most of the Kuwaiti e-Sites support only the Arabic language. Online payment options are still limited in Kuwait and users do not have the ability to personalize the website. Finally, there are no provisions for receiving email updates (Boujarwah, 2006).

In order to move from an agency-centric to a citizen-centric website, Kuwait has to integrate a vast array of information and services which requires an unprecedented level of cooperation among the various departments. The biggest challenge of deploying e-Governance is not technology but change management, which is important not only in terms of cultural change but also in terms of the change in operations and in process workflow which the automated environment will introduce (Abdelbarr and Alotaibi, 2010).

In their recent assessment of the maturity of service-oriented e-Government systems in Kuwait, Kraetzschmar and Lahlali observe that, unshackled by the financial constraints of many Western nations, Gulf states have "wholeheartedly embraced this innovative way of conducting the day-to-day business of government, driving forward ambitious e-Government projects" (Kraetzschmar and Lahlali, 2012). However, the authors conclude that there are still difficulties:

> "Whilst significant strides have been made in the development of e-Government since the early 2000s, key challenges remain in the delivery of user-friendly and customer oriented web-based e-services to citizens and residents. These pertain to an incomplete synchronization of e-services between the KGO portal land

> individual ministry websites, the limited availability of full e-services across government agencies, the absence of any integrated e-services involving multiple agencies, and the question able value of some of the e-services provided"
>
> (Kraetzschmar & Lahlali, 2012, p. 2).

Governments are still facing challenges in increasing adoption and usage rates of e-Government services, and there is a need to explore the nature of these challenges and the current state of the adoption of e-Government services especially in developing countries, including Kuwait. Wang and Hou (2010) indicate that one of the challenges lies not in ICT itself but in the need to focus on the work and functions of government. They suggest rebuilding trust in the relationship between government and the public through making radical changes at all levels, whether individual, private business or government institution.

The use of ICT to deliver government services has been the most important aspect of e-Government to this point. Other functions of e-Government have been in increasing access to central data by releasing datasets, often in machine-readable format, and, as mentioned above, in opening up government to social media. However our focus in this study is on a relatively under-researched area of e-Government, namely the role of ICTs in Parliament.

2.1.3 E-Parliament

In this section, the potential role of ICT in Parliament is presented with regards to a) the relationship between Parliaments and the public, b) Parliamentary work and c) ICT usage by Parliamentarians.

The United Nations Development Program (UNDP) report (2006) views e-Parliament as a benchmark of the relationship between the information system and the Parliament; where e-Parliament is defined as a Parliament that uses ICT to make its functions more efficient(Johnson, 2008). In a more detailed description, Ostling (2011) states that e-Parliament is a set of programs for dealing with information that documents and disseminates Parliamentary activities. With a different emphasis, Hackley et al. (2006) see e-Parliament as a system that makes maximum use of the Internet to link legislators across the world in one network.

ICT has a significant impact on democratic processes all around the world. In his investigation of the impact of ICT on Parliamentary legislation, Sobaci (2013) notes that developed and developing countries alike are making rigorous efforts to encourage the use of ICT in Parliaments. The motivations for this are multiple. Smith and Webster (2008), in their study of ICTs within the activities of members of the Scottish Parliament, point out that Parliament is the heart of a nation's political and democratic system, and consequently plays an important role in *displaying the impact* of new technologies. In this case, Parliament acts as a showcase for best practice in ICT application. However, most commentators concentrate on one or more of three motivators: improving communication between Parliament and citizens, improving Parliamentary processes and making Parliamentarians more effective. The next section discusses research that addresses the effect of ICT on communication between Parliament and public.

2.1.3.1 ICT as a Tool for Communication between Parliament and Public

By offering a wide range of electronic services, e-Parliament can work as a magnet attracting citizens to engage in active political participation, which in turn is reflected in the decision-making process (Papaloi and Gouscos, 2011). Coroli and Tutunaru (2006) argue that the optimal use of technical and organizational means in e-Parliament develops interaction and trust between society and Parliament, increases transparency of Parliament, improves the activities of the Parliament, and involves society in these activities. This view is echoed by the World e-Parliament report (United Nations, 2008), which regards an e-Parliament as a legislature that is empowered to be more transparent, accessible and accountable through ICT. Connected stakeholders use information and communication technologies to more effectively support the primary functions of representation, law-making and oversight. According to this report, e-Parliament empowers people, in all their diversity, to be more engaged in public life by providing higher quality information and greater access to Parliamentary documents and activities.

> E-Parliament "fosters the development of an equitable and inclusive information society" through the application of modern technology and standards and the adoption of supportive policies (United Nations, 2008, p. 12).

In a review of early developments in the use of ICTs by UK political parties Gibson and Ward (2000) concluded that ICT can enhance participation in electoral operations. This was reinforced by a later study by Lusoli et al. (2006), which used a questionnaire to examine public perceptions of the extent to which ICT can open up new channels of communication between MPs and the public in Parliamentary institutions in the United Kingdom, and

which found that technology can facilitate the participation of people in Parliamentary life. More recently Ribeiro (2013) found that the use of ICTs in Parliaments can encourage and promote public participation in the decision-making process, and can enhance efficiency in Parliament.

The public expect the following from Parliament: “timely answers to questions, online access to information, acceptable levels of access to information regarding Parliamentary processes, and effective interaction with Members of Parliament (MPs)" (Sobaci, 2012).In terms of electorate representation, studies emphasise that over the past three decades there has been a documented rise in the local service role of MPs in United Kingdom (Norton, 1994; Norton and Wood, 1993).Coleman and Norman (2000) suggest using ICT to produce new interactive channels that engender better communication between the electorate and its representatives; and Ward et al. (2007) view ICT as being able to impact on the legislative role of MPs, through developing MPs campaigns by gathering citizens’ views online and engaging experts' opinions via electronic consultation. On the basis of a study that investigated political representation in the networked society, using empirical testing in a statistical analysis of the use of personal websites in the German Bundestag, the Swedish Riksdag and the US House of Representatives, Zittel (2003) found that the Internet does indeed provide a new technological opportunity for political representatives to communicate with constituents. In a more recent major study, Nigel and Gillian (2010) examined the way in which British MPs in the 2005–2010 Parliament used ICT, specifically their websites, to explain to their constituents the use of allowances during the expenses scandal that surfaced in 2009. The authors point out those MPs can use ICT to communicate with constituents directly to

solicit feedback and to strengthen their responsiveness to public sentiment, which strengthens the accountability mechanism.

The role of new technologies with respect to increasing communication with the electorate lies in modernising existing practices by using technologies which improve the professionalism of MPs (Ward et al., 2007). Politicians have begun to use ICTs to interact with the public and to deepen public engagement (Ribeiro, 2012).Various studies indicate the success of these initiatives (Hill and John, 1998; Coleman, 2000; Gibson and Ward, 2000; Lusoli et al., 2006; Ribeiro, 2013; Griffith and Leston-Bandeira, 2012). For example, Hill and John (1998) examined the effect of the Internet on citizens by analysing the political content of postings to newsgroup discussions in the less democratic nations. They indicate that ICT, especially the Internet, created a new era of citizen activism. Coleman (2000) examined the role of ICT in political representation and reported that ICT makes Parliament more transparent.

ICT also makes the political process more inclusive. Marincu and McMullin (2004) conducted a comparative survey of web accessibility and HTML standards for samples of websites drawn from Ireland, the United Kingdom, France and Germany. They noted that the Internet helps people who have a disability to participate in political matters. Bowers and Gunter (2002) sought to apply a marketing efficiency model to the analysis of the use of websites by the three major political parties (Conservatives, Labour, and Liberal Democrats) in the UK during the 2001 general election. They found that the Internet allows politicians to engage with the younger generation of voters, and to spend more time with them regardless of their distant constituencies.

Lusoli et al. (2006) are sceptical about these effects. They argue that the use of ICT in Parliament "attracts only a small minority of voters who are generally already politically active and privileged" (Lusoli et al., 2006, p. 24). This may be the case if we conceive of this interaction as a one-way channel by which politicians communicate their views to citizens. As mentioned above, new technologies, particularly social media apps, have increasingly been taken up by members of the public over the last few years and used to disseminate political views and information quite outside the ambit of professional politicians (van de Donk et al, 2004).

To sum up, many of the studies cited would claim that electronic interactivity has a positive effect on trust between MPs and their constituents (Parent et al., 2005; Bowers and Gunter, 2002).However, there are others who argue that the use of ICTs cannot furnish a solution for some important political problems, such as inequalities in political participation due to divergences in socio-economic status (Schlozman et al., 2010).Furthermore, until recently, there has been an imbalance of influence at work, with professional politicians having more access to ICT's than citizens. Increasing take-up of the Internet, widespread ownership of mobile devices and the popularity of social networking are in the process of disrupting this pattern.

The next section discusses research that addresses the impact of ICT on improving the Parliamentary process.

2.1.3.2 ICT as a Tool for Improving Parliamentary Process

Implementing e-Parliament technologies has the potential to help to overcome bureaucratic obstacles by providing a more effective administrative system.

Many analyses focus on the role of technology in strengthening legislative capacity and changing the working life of Members of Parliament in the United Kingdom (Coleman, 1999; Ward and Lusoli, 2005; Jackson, 2008). For example, in their book, *Parliament in the Age of the Internet*, Coleman et al. (1999) discuss the impact of Internet on Parliament, and conclude that the successful functioning of any Parliamentary democracy is dependent upon efficient use of ICT. Hacker and Van (2000) refer to this stage of ICT use in Parliament as a digital democracy. In his book *E-Parliaments: the Use of Information and Communication Technologies to Improve Parliamentary Processes,* Kingham (2003) shows how ICTs are used to improve Parliamentary processes. He concludes that the countries that have an interest in using ICT in governance usually have the same interest in improving the workings of Parliament, and in progressing to providing better services online. He also states that the Parliaments that have embraced the new technology are perceived to have become more efficient in their internal working, and he observes that the representatives in these Parliaments have benefited from using ICT to extend their knowledge on different subjects and to enable them to become better connected with their electorate. The World e-Parliament Report 2012 echoes these points and suggests that the most important improvements in the work of Parliament made possible by ICT are the following:

1. More information and documents on the website,
2. Increased capacity to disseminate information and documents,
3. More timely delivery of information and documents to Members,
4. Better management of documents,
5. More interaction with citizens,
6. More efficient preparation of legislation,

7. More information provided to citizens,
8. More timely publication of reports of plenary proceedings,
9. Access to more information,
10. Exchange of information with other Parliaments, which allows access to better research,
11. More timely publication of reports of committee proceedings, and
12. Access to older documents. (United Nations, 2012)

All these improvements do, however come at the cost of a certain amount of effort, as mentioned by Ribeiro (2013), who, in investigating the strengthening of Parliaments through ICT, observes that online information creates special responsibilities and requires a lot of work and consultations.

This section has presented work on ways in which ICT can be used to make the processes of Parliament more efficient and often more open and transparent. The following section narrows the focus further by discussing research into the use of ICT by Parliamentarians themselves.

2.1.3.3 ICT Use by Parliamentarians

There is not a large amount of research into the use made by Parliamentarians of ICTs, with work clustering around Western democracies high in the UN e-Government development tables. Smith and Webster (2008) noted that published research has tended to focus on specific ICT applications used by Parliamentarians, for example websites and blogs. Ward et al. (2007) examined the use of new technologies, especially websites, by Australian Members of Parliament. They observe that few studies have been conducted on how Parliamentarians use new technologies and the consequences of that

use for their role. However they note that ICTs may facilitate change in the three categories of the work of legislators: as electorate representative, as party representative, and as national legislator.

In a study on use of ICT by MPs in seven European countries (Portugal, Austria, Germany, the Netherlands, Denmark, Norway and Scotland), (Hoff et al., 2004)shows that in the European countries a culture of using ICT now exists for MPs and the majority of citizens. They point out that MPs are using ICT in their information gathering, in dealings with Parliamentary staff, in contacts with citizens and in contacts with the media.

The establishment of new Parliaments provides an interesting impetus for new approaches, including ICT use. In an investigation into the role of information age technologies underpinning the activities of the new Scottish Parliament and Parliamentarians' attitudes towards ICTs, Smith and Webster (2004) indicate that there is a positive attitude of MPs towards the democratic potential of new technologies. The Members of Parliament report that ICT improved the quality of their Parliamentary interactions with other Members, their administration, their constituency office and their constituents.

The Internet provides an obvious mechanism for MPs to explain their work and their positions (Nigel and Gillian, 2010). In a study on the impact of the Internet on Members of Parliament in the United Kingdom, Jackson (2008) found that MPs who have experience in the use of ICT in publishing blogs, SMSs, e-Newsletters, social networking sites (such as MySpace, Twitter and Facebook), Internet, and websites, are more aware of the advantages of using ICT in Parliament. Another study in the UK, by Norton (2008), examined four models of political representation in the UK Parliament: the traditional, party,

representative, and tribune, involving each of them in a different usage of the Internet. The results of this study indicate that Internet use by MPs reinforced existing means of promoting their message.

Other authors sound a more cautious note. Williamson (2009) argues that most MPs use the websites for transmitting their agendas rather than as a real avenue of communication between them and people. Kanthawongs (2007) examined how to enhance the engagement of Members of Parliament with e-Parliament systems in the Thai Parliament. He observed that Parliamentary utilization of ICT does not always guarantee success. Tyumre (2012) makes the important point that embracing the Internet is not an end in itself.

Most of the above studies suggest that the use of information and communication technology by Members of Parliament would raise the level of the legislative institution and increase its efficiency. This means that the individual Member of Parliament him/herself is an important element in determining the success of any e-Parliament project. However, this point was not mentioned in the United Nations report of 2012, which presented a global survey on achieving optimal application of e-Parliament. The survey covered the following seven topics as important factors in the success of any e-Parliament in the world:

1. Oversight and management of ICT (22 questions)
2. Infrastructure, services, applications and training (31 questions)
3. Systems and standards for creating legislative documents and information (12 questions)
4. Library and research services (28 questions)
5. Parliamentary websites (21 questions)

6. Communication between citizens and Parliament (24 questions)
7. Inter-Parliamentary cooperation (11 questions)

None of these topics specifically examines the Member of Parliament's ability to use information and communication technology, or the MP's acceptance of ICT. However, question 22 in the first topic asks: "What are Parliament's three biggest challenges in using ICT effectively?" The answer, that MPs' lack of knowledge of ICT is considered to be one of the biggest challenges, is one of 14 responses to this question. The results of this survey show that MPs' ignorance of ICT is a challenge for at least one third of 156 Parliaments and national legislative bodies in 126 countries around the world, which is a serious concern, because without the effective participation of MPs, countries cannot take advantage of all the other elements mentioned in the UN report. This provides the motivation for this research, which is concerned with understanding the factors that influence whether MPs choose to use the Parliamentary website in Kuwait, i.e. it examines the acceptance of ICTs by Kuwaiti MPs and other Parliamentarians.

The next section addresses the role of the Parliamentary website as the most commonly used ICT tool in any Parliament.

2.1.3.4 The Parliamentary Website – meeting the needs of citizens

The Parliamentary website is at the forefront of the tools used by Parliament to connect with the community and citizens. It is potentially an effective means by which to familiarize citizens with legislative and other aspects of the work of Parliament, but also a means of making information available conveniently for members of Parliament and their staff, in much the same way as other large organisations.

As individual countries have designed and built Parliamentary websites, a consensus has emerged about the standard functionality that should be incorporated in the genre. By far the most attention has been paid to the role of web sites in encouraging communication, transparency and citizen engagement, i.e. meeting the needs of citizens.

The Inter-Parliamentary Council (2000) identifies the most important content in the Parliamentary website to be the following:

1. An overview of the Parliament and its divisions, its committees and the statute and the rules of procedure of Parliament, and the full text of the Constitution.
2. A detailed explanation of the electoral system, the voting system, districting, conditions of election, nomination conditions, and results of recent elections.
3. Schedule of activities and dates of Parliamentary sessions, Parliamentary database to look at the laws of the enacting Parliament and a special section for the projects and the laws that MPs are currently working on.
4. Information on the staff of the Parliament office: President of Parliament and the Vice-Presidents with a brief description of the powers and prerogatives of the President of Parliament.
5. The names of all MPs with accurate information about party affiliation and e-Mail addresses for each of them. This list should be ordered alphabetically, or by party or constituency. There should also be a list of former MPs.
6. The names of all bodies and institutions of the Parliament with the names of their chairmen and members, a description of their functions and the

work they have done, a link to their websites on the Internet, and contact details.

7. A list of Parliamentary documents, with publication details and prices, and an explanation of how to acquire them.

Griffith (2008) states that all studies and recommendations on the Parliamentary website agree on the basics that must be found on the site: general information about Parliament, the text of current legislation (the Constitution), work and activities of the committees, the text of discussions that take place at meetings, usability and accessibility, tools for communication between the public and MPs, and good site administration. Furthermore, the site should provide communication tools for dialogue with citizens, and a facility for a feedback. Its design should also take into account the technical specifications of the site, like usability, accessibility, and availability of different languages. The administration of the site, in terms of planning and control, are also important considerations.

In any country, the Parliamentary website enables MPs to publicly display proposals and projects, and thereby involve citizens in law making by taking account of their views (Organization of American States, 2001).Through the Parliamentary website, citizens are informed of the positions of their representatives, their arguments, their voting, and the most prominent laws that have been approved or rejected (UNDESA, 2008). In particular the websites of the House of Representatives are described, by Olesen et al. (2006), as a means of promoting public awareness of current issues by drawing attention to the most important laws and projects that are formulated within the corridors of Parliament. Websites, therefore, play an important role, along with other ICT initiatives, in incentivising the improvement and

development of democracy, and in increasing the efficiency of the decision-making process by reducing the distance between citizens, MPs, and other government institutions.

They may also enable citizens to communicate their opinions on issues whilst these issues are being debated in Parliament. Coleman (2004) tested four research hypotheses on the nature of online public deliberation by applying them to the online Parliamentary consultations conducted on behalf of the UK Parliament between 1998 and 2002. He found that websites can enhance communication between government and the public by facilitating consultation and advice giving. Missingham (2011) suggests several important elements of a Parliamentary website which increase communication between MPs and citizens. The first is providing information on Parliamentary activities and ways of communicating with MPs. The second is providing space for participation in committees, such as the option to petition the committee members directly. The Inter-Parliamentary Union (IPU) (2009) adds to these: general information about Parliament, its members and their activities, and how to access to them, as well as information on the budget, search tools, and good information display.

Missingham (2011) observes the media and the general public are interested in the old recordings, activities of the Members, committee work, live broadcasts of Parliamentary sessions, and access to documents and records, all of which can be disseminated through the Parliamentary website (Missingham, 2011). The Media also can benefit from these websites by using them to extract the key information necessary for reports and articles.

Kampen and Snijkers (2003) point out that search functions in specialized databases on legislation and Parliamentary activities will help citizens to find information and to follow the activities of their representatives. This claim is reinforced by the World E-Parliament Report (2010), according to which a Parliamentary website needs specialized software tools to be able to deal with the growing amount of data and documents necessary to deliver the information required by concerned parties. These tools should be updated regularly to keep abreast of developments in technology, and they should enable access to the site from different places. The report identifies multi-level search engines - which provide a range in search options, from simple to advanced -as fundamental components of the Parliamentary website service to MPs and citizens alike. The report confirms that 81% of Parliaments in the world use search engines within their websites and provide multimedia recordings. Moreover 47% of the Parliaments in the world have the ability to broadcast live and direct from their websites. The report suggests that security of information and the capability and efficiency of the system's tools, which will have a direct impact on citizens' access to the Parliamentary site, should be taken into account.

The Inter-Parliamentary Union (IPU) suggests linking the Parliamentary website with other websites belonging to different Parliaments and different bodies of government. These links could help in overseeing the different levels of Parliament, and they could strengthen accountability to Parliament, which makes it easier for MPs to obtain information from government institutions.

2.1.3.5 The Parliamentary Website – meeting the needs of Parliamentarians

There has been little research into the detail of how Parliamentarians and similar representatives in different systems specifically use websites designed for them, and this is the area in which it is hoped that this study will make a contribution. However, some studies have included this perspective. An early study by Ward et al (2007) on Australian Parliamentarians' attitudes was rather damning:

> There is little to suggest that MPs are seeking to use new ICTs to create new interactive dialogues or relationships with voters. Nor is there much to suggest that representatives see ICTs as having any wider role in reshaping Parliamentary democracy. Currently, innovators and innovations are scarce in the Australian Parliamentary environment. Indeed, it would appear that few MPs have much of an Internet strategy. At best, the use of the Web and email fulfils an administrative modernization function where ICTs are primarily about the representation of MPs to voters rather than vice-versa. (Ward et al., 2007, p. 220)

Missingham's (2011) investigation of the Parliament of Australia's web site could be seen in part as a response to the situation reported by Ward et al. By means of interviews, she elicited from senators the following uses envisioned for ICT support to:

- Communicate with constituents;
- Communicate with the wider world (with a different priority to constituents);
- Get information that they require from the Parliament and more broadly (particularly media) through the Parliamentary website; and
- Support interaction, particularly for their role on committees.

They also distinguished three distinct aspects to their work, supported by different ICT functionalities. As Parliamentarians, they were supported by the Parliamentary web site. However as "politicians," their views were "delivered online through their blogs, websites, Twitter, Facebook, and other presences" while as party members, they relied on their political party's web services (Missingham, p. 431). This is an interesting mirroring of the various roles played by the Parliamentarians by the various technological support systems they use. Parliamentarians did use the web site to access information: "[t]he collections most used in ParlInfo Search by those working in the Parliament are bills and legislation (26.9%), media including press releases and media clippings (26.6%), and then library including articles (12.5%)" (op. cit. p. 432) However Missingham's subjects reported serious challenges to increasing their use of ICTs:

- Information overload;
- Information of variable reliability and quality;
- Differing roles and responsibilities between their personal websites, political party websites, and Parliamentary web pages;
- Having to deal with new technologies such as Twitter and Facebook with limited resources; and
- Understanding the channels (including traditional media and new media) and how they can best be used for communication with the public.

Several of these issues will re-emerge in the study of Kuwaiti Parliamentarians.

2.1.3.6 The Kuwaiti Parliamentary Website

The latest version of Kuwaiti Parliament's website was launched on 30th July 2013. It contains documents on democratic and Parliamentary life from the start of the constitutional era in the 1960s to the present, and a search engine for these documents. This makes it a useful reference resource for Parliamentary decision makers, researchers, and those generally interested in Parliamentary issues.

The website includes a number of updates, including a profile page for each MP with resumé, information, data, and contact details (See Figure 2.3), and a session calendar.

Figure 2.3: The Kuwaiti Parliamentary Website

The Kuwaiti Parliamentary website launched a service on the 16th Dec 2013, which allows citizens to contribute to the legislative process by putting forward suggestions with regard to the laws examined by committees of the National Assembly.

This section has provided a general background for the study by reviewing the literature on the various conceptualisations of e-Government and the role of

ICT in both government and Parliament, with examples from different countries. Importantly, it also motivates the work in this study by pointing to the importance of the role of the individual Parliamentarian in delivering the success of implemented ICTs (Section 2.1.3.3) and the challenges faced by members of Parliament in doing so (2.1.3.5). It also points to a lack of research into the Parliamentarians' perspective on the impact of ICTs in e-Parliaments, where the focus has been firmly on the needs of and benefits to citizens.

The next section introduces the topic of technology acceptance and describes the most influential models available for analysing the features that contribute to acceptance or non-acceptance of technologies.

2.2. Technology Acceptance

There has been a persistent effort, since the 1960's, to develop and validate models to explain the different factors that influence user acceptance of new technologies. Rooted in non-digital technologies (e.g. Rogers' work on agricultural innovations in post-war USA), these have now become popular as ways of approaching digital technologies, from early work in office automation to current research that covers a much wider gamut. Section 2.2.1. begins by setting out the underlying general models of individual behaviour on which technology acceptance research is based, i.e. the Diffusion of Innovation Theory (DOI) (Rogers, 1995) and the Theory of Planned Behaviour (TPB) (Ajzen, 1991), itself based on the Theory of Reasoned Action (Ajzen and Fishbein, 1980). It then presents a critical review of the most widely models specifically oriented to the acceptance of technology, i.e. the Technology Acceptance Model (TAM) (Davis, 1989;

Davis et al., 1989) and the Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2003). Section 2.2.2 presents the literature on the use of technology acceptance models in e-Government and Parliament. Section 2.2.3 discusses the selection of the UTAUT model as the model used in the study.

2.2.1. Models of ICT Acceptance

User acceptance of technology has been explained by Dillon (2001) as "the demonstrable willingness within a user group to employ IT for the tasks it is designed to support" (p. 4). Acceptance is a critical factor in determining the success or failure of any technology and has been conceptualised as an outcome variable in a psychological process that users go through in making decisions about technology (Dillon and Morris 1996).Many governments, organisations and companies seek to introduce IT in order to develop their efficiency by cutting costs, raising production volume or improving product or service quality (Legris et al., 2003). However, all these ambitions depend on the user's desire for, and acceptance of, these new technologies (Davis, 1989).

Studies of use and non-use of ICT's have reported many reasons why users do not adopt a technological innovation. The reasons given for non-adoption vary according to the users, their setting (home vs. work, in particular), the technology itself and multiple features of their environment, which will change over time.

For instance, Stewart (2003) investigated how people encounter and cope with new ICTs in the domestic setting. He found many reasons behind non-use of new technologies:

- lack of interest in ICT,
- refusal of the technology because the ICT is not good enough or there are better alternatives,
- the high cost of many new ICTs,
- lack of access to network infrastructure,
- lack of time and space in a busy life,
- restrictions imposed by family and work organizations,
- fear of breach of privacy.

Cushman and Klecun (2006), in a study on digital exclusion, found that the lack of use among non-users can be explained by paucity of knowledge of Internet tools. Abdulla (2007) investigated the information behaviours of print journalists in relation to the Internet and to information technologies. More than half of the non-users reported that time, training, and knowledge are the barriers that prevent them from using the Internet. On the other hand, Selwyn (2006) claims that socio-demographic factors such as age, gender or socio-economic background have limited impact on the use or non-use of ICT. Selwyn's claim contradicts an earlier study by Woolgar (2002), which suggests that the use of the ICTs depends primarily on local social context.

Given the plethora of individual reasons such as those cited above, there has been a desire to understand the forces involved in non-acceptance at a rather higher level of abstraction. Theoretical frameworks have been developed to predict the individual's Intention to adopt a new information technology, which has been understood, since Fishbein and Ajzen's work, to be a predictor of actual behaviour. Researchers developed several theoretical models and frameworks that explain or predict a person's decision to accept a new technology (Agarwal and Karahanna, 2000; Chakraborty, et al., 2008). Table 2.1shows these theories in order of date of publication.

Model	Developer	Year
Diffusion of Innovation Theory (DOI)	Rogers, E.	1962
Theory of Reasoned Action (TRA)	Ajzen, I. and Fishbein, M.	1980
Theory of Planned Behaviour (TPB)	Ajzen, I.	1985
Social Cognitive Theory (SCT)	Bandura, A.	1986
Technology Acceptance Model (TAM)	Davis, F., Bagozzi, R., and Warshaw, P.	1989
The Model of PC Utilization (MPCU)	Thompson, R., Higgins, C. and Howell, J.	1991
Motivational Model (MM)	Davis, F. and Warshaw, P.	1992
Augmented TAM or Combined TAM and TPB (C-TAMTPB)	Taylor, S. and Todd, P.	1995
The Unified Theory of Acceptance and Use of Technology Model (UTAUT)	Venkatesh, V., Morris, M., Davis, G. and Davis, F.	2003
Technology Acceptance Model 3 (TAM3)	Venkatesh, V. and Bala, H.	2008

Table 2.1: Technology Acceptance Models

In the rest of this section we present the most widely used and referenced of these models as candidates for use in this study.

2.2.1.1 Diffusion of Innovation Theory (DOI)

The Diffusion of Innovations is the title of Everett Rogers' 1962 book in which he sets out the mechanisms whereby new ideas and technology spread through cultures. Diffusion of innovation is understood to occur through a five-step process of decision-making by the potential user, referred to as knowledge, persuasion, decision, implementation and confirmation:

1. Knowledge: the user has no information about an innovation.
2. Persuasion: the user is interested in the innovation and he tries to seek information about it.

3. Decision: the user studies the advantages/disadvantages of using the innovation and decides whether he can accept the innovation or not.
4. Implementation: the user uses the innovation.
5. Confirmation: the user gives his final decision whether to continue using the innovation or not. See Figure 2.4.

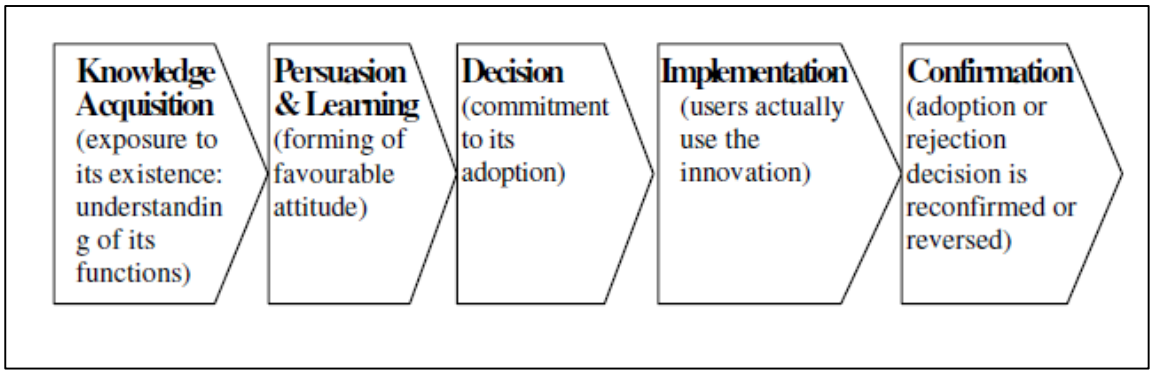


Figure 2.4: Innovation Decision Process
(Source: Prescott and Conger, 1995)

DOI includes five significant innovation characteristics, i.e. elements that make adoption more likely, i.e. relative advantage, compatibility, complexity, trialability and observability (Rogers, 1995). Relative advantage is the degree to which the innovation is considered as better than whatever it replaced. Compatibility indicates the degree to which the innovation is well-matched with the capabilities and experience of the user. Complexity is the degree of difficulty the user has in understanding the innovation. Trialability is "the degree to which an innovation may be experimented with on a limited basis" (Rogers, 2003, p.16). Observability is the ability of other people to see tangible results of innovation on the ground.

Studies found that DOI can be applied both at individual levels and organizational levels (Jeyaraj et al. 2006). However, the most important limitation of the theory is that it does not take into consideration an individual's resources or the social support available to the individual for adopting the new behaviour. Furthermore, Dillon and Morris (1996) consider that DOI provides little explanation of the concept of user acceptance, and that it deals only with innovation characteristics, and it is true that user acceptance figures strongly only in the second and third steps of the DOI process.

2.2.1.2 Theory of Planned Behaviour (TPB)

In 1985, the Theory of Planned Behaviour (TPB) was proposed by Ajzen as an extension of the Theory of Reasoned Action (TRA) (Ajzen, 1985; Safeena et al., 2013). As in the TRA, the best predictor of behaviour in TPB is considered to be Intention (TCW, 2004). While the original TRA model derives Intention to use form two constructs, attitude toward behaviour and subjective norm, TPB adds the construct of perceived Behavioural control or “perceptions of internal and external constraints on behaviour (Taylor and Todd, 1995, p. 149). TPB includes three types of beliefs that impact on the model’s main constructs: Behavioural beliefs that affect attitude, normative beliefs which affect subjective norm, and control beliefs which influence perceived Behavioural control (Lam, 2010), see Figure 2.5.

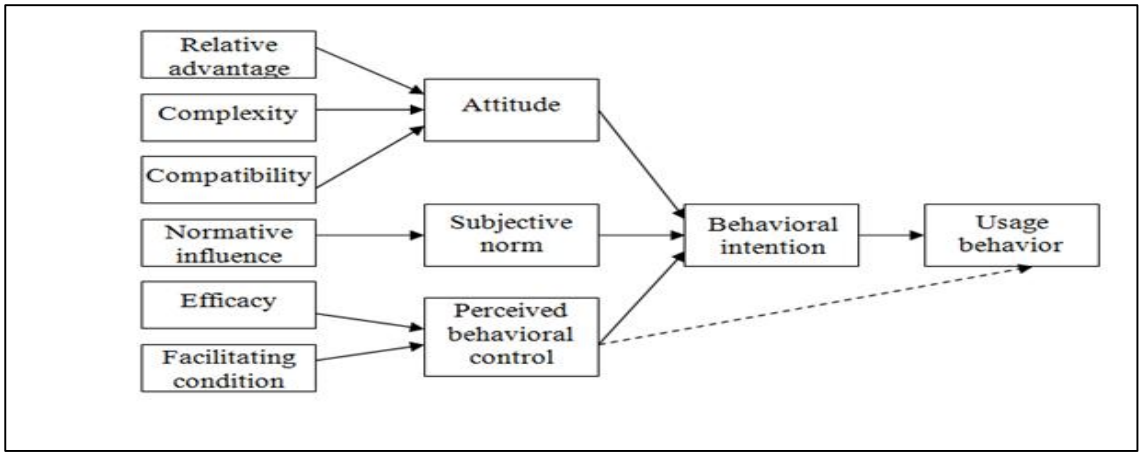


Figure 2.5: The Theory of Planned Behaviour (TPB)
(Source: Ajzen, 1985)

LaMorte (2016) sets out a number of perceived limitations of the TPB, many of which are addressed by later models:

- It assumes the person has acquired the opportunities and resources to be successful in performing the desired behavior, regardless of the Intention.
- It does not account for other variables that factor into behavioral Intention and motivation, such as fear, threat, mood, or past experience.
- While it does consider normative influences, it still does not take into account environmental or economic factors that may influence a person's Intention to perform a behavior.
- It assumes that behavior is the result of a linear decision-making process, and does not consider that it can change over time.
- While the added construct of perceived behavioral control was an important addition to the theory, it doesn't say anything about actual control over behavior.
- The time frame between "intent" and "behavioral action" is not addressed by the theory. (LaMorte, 2016, p. 3)

2.2.1.3 Technology Acceptance Model (TAM)

While Diffusion of Innovation Theory and TRA/TPB are both intended as general models, not tied to a specific type of innovation or behaviour, a succession of models have been developed to deal with the narrower issue of the adoption of technology, specifically ICT. This is motivated by the need for businesses in particular to understand how best to optimise ICT use in their organisations.

The Technology Acceptance Model (TAM) was developed by Fred Davis and his colleagues, based on the Theory of Reasoned Action (TRA) model (Davis et al., 1989). Davis explains that the reason for developing TAM "is to provide an explanation of the determinants of computer acceptance that is general, capable of explaining user behaviour across a broad range of end-user computing technologies and user populations" (Davis et al., 1989, p.985). The model is determined by two constructs representing user beliefs: perceived usefulness and perceived ease of use (Venkatesh and Davis, 2000; Lam, 2010). Perceived usefulness is defined as the degree to which a user believes that using a particular technology will enhance his job performance (Davis et al., 1989). Perceived ease of use refers to the degree to which a user believes that using a particular technology will be free of effort (Davis et al., 1989).

A number of external variables influence Behavioural Intention to use and actual usage indirectly through their influence on perceived usefulness and perceived ease of use. External variables include: objective system design characteristics, training, computer Self-Efficacy, user involvement in design, and the nature of the implementation process (Davis, 1989) (See Figure 2.6).

TAM also includes two dependent constructs: attitude towards using and Behavioural Intention to use a technology. Behavioural Intention is a measure of the strength of user's Intention to perform a specific behaviour (Fishbein and Ajzen, 1975). Many empirical studies reported that Behavioural Intention is a good predictor of actual usage of a technology (Davis et al. 1989; Venkatesh and Davis, 2000; Sun 2003).

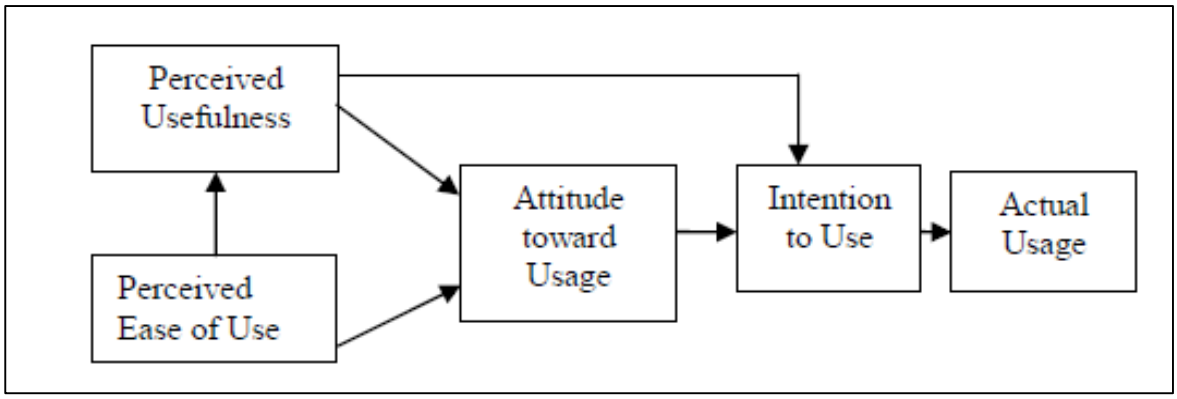


Figure 2.6: Technology Acceptance Model
(Source: Davis et al., 1989)

A major shortcoming of the TAM is that it cannot provide an explanation about how the two beliefs (perceived usefulness and perceived ease of use) "are formed or how they can be managed to alter user behaviours" (Koh et al., 2010, p.181). Another problem of TAM is that it did not help to specify technology use in terms of user level (e.g. individual or organisation) (Venkatesh and Speier 2000), or user characteristics (e.g. age, gender, occupation) (Chau and Hu 2001; Venkatesh and Morris 2000).

Liang and Yeh (2009) suggest that the shortcoming of TAM is its assumption that user attitude is the only factor to determine user Intention, ignoring the influence of other contextual factors. Moreover, Ghazizadeh et al., (2011) point out that the original TAM did not incorporate the influence of social and control factors as used in the TPB.

2.2.1.4 The Unified Theory of Acceptance and Use of Technology (UTAUT)

The UTAUT was introduced by Venkatesh et al. (2003) as the result of reviewing and combining the constructs of eight earlier research models, including those mentioned above, namely:

- Diffusion of Innovation Theory (DOI)
- Theory of Reasoned Action (TRA)
- Theory of Planned Behaviour (TPB)
- Technology Acceptance Model (TAM)
- Motivational Model (MM)
- Combined Theory of Planned Behaviour - Technology Acceptance Model (C-TAMTPB)
- Model of Personal Computer Utilization (MPCU)
- Social Cognitive Theory (SCT).

Like the TAM and descendants, the UTAUT model aims to explain users' Intention to use an information system and their consequent usage behaviour (Venkatesh et al. 2003).

Determinants and Moderators

As shown in Figure 2.7, UTAUT includes four key constructs as direct determinants of usage Intention and behaviour. These are:

(1) Performance Expectancy
(2) Effort Expectancy
(3) Social Influence
(4) Facilitating Conditions.

The theory also proposes gender, age, experience, and voluntariness as median factors, or moderators, for the four key constructs.

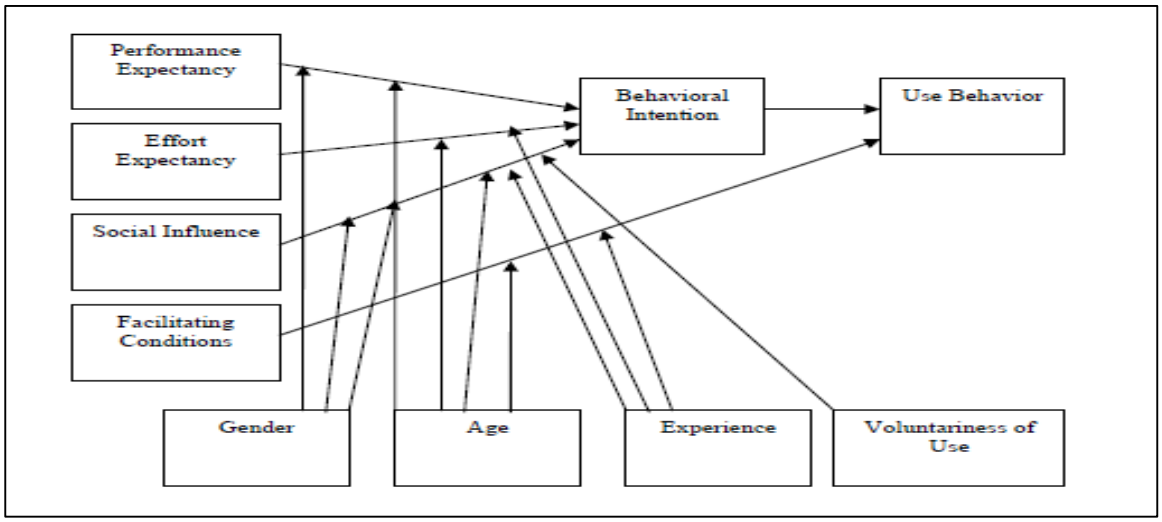


Figure 2.7: Unified Theory of Acceptance and Use of Technology (UTAUT)
(Source: Venkatesh et al. 2003)

Direct determinants

Behavioural Intention

Consistent with the models TRA, TPB, TAM, Combined TAM-TPB and MM, Behavioural Intention (BI) to use a technology has a significant positive influence on eventual technology usage (Venkatesh et al. 2003).

Behavioural Intention refers to the strength of a person's Intention to adopt certain behaviour (Davis et al., 1989). It is considered a dependent variable as well as an independent variable in most studies that use technology acceptance models. BI is affected, according to the Theory of Reasoned Action model, by both the person's attitude towards the behaviour and a

person's subjective norm (Repeepisarn, 2012). Under TRA, the behaviour of a given subject is best predicted by their Behavioural Intention, which, in turn, is determined by the person's attitudes and subjective norms (Social Influence) (Fishbein and Ajzen, 1975).

Under TPB, the explanation of a person's behaviour lies in their Behavioural Intention, which is influenced by perceived Behavioural control, attitude and subjective norms (Alzahrani and Goodwin, 2012). Ajzen (1991) states: "a central factor in the Theory of Planned Behaviour is the individual's Intention to perform a given behaviour" (p. 181). Ajzen goes on to explain that "as a general rule, the stronger the Intention to engage in behaviour, the more likely should be its performance" (p. 181). Ajzen (1991) continues that "a Behavioural Intention can find expression in behaviour only if the behaviour in question is under volitional control" (p. 182). As mentioned above, many empirical studies report that Behavioural Intention is a good predictor of actual usage of a technology (Davis et al. 1989 and Venkatesh and Davis, 2000; Sun 2003). Davis et al., (1989) presented a study reporting that people's computer use could be predicted reasonably well from their Intentions. Sun (2003) reported that Behavioural Intentionis a good predictor of actual usage of a technology. The results of Taylor and Todd's study (1995a) of inexperienced and experienced users confirm that there is a stronger correlation between Behavioural Intention and behaviour (usage) for experienced users.

In technology acceptance models, use behaviour is modelled as a direct function of Behavioural Intention (Taylor and Todd 1995a). User behaviour is largely influenced by Behavioural Intention, which on its own explains almost 30% of variance in behaviour (Taylor and Todd, 1995a).

Performance Expectancy

Venkatesh et al. (2003) defined Performance Expectancy as the "degree to which an individual believes that using the system will help him or her to attain gains in job performance" (p.477). They suggested that the construct is valid across all stages of acceptance and in both mandatory and voluntary settings. They also suggested that the construct is moderated by age and gender.

Effort Expectancy

Venkatesh et al. (2003) defined Effort Expectancy in their study as the degree of ease associated with the use of the system. It is similar to the TAM construct "perceived ease of use." The influence of Effort Expectancy on Intention to use changes according to the gender, age and experience of users, and they propose that Effort Expectancy will be most salient for women, particularly those who are older and with relatively little experience with the system..

Social Influence

Venkatesh et al. (2003) suggested that this construct is not significant in a voluntary setting, but becomes significant in a mandatory setting, and in the early stages of acceptance. They defined this construct as: "the degree to which an individual perceives that important others believe he or she should use the new system" (p.451).

Facilitating Conditions

Facilitating Conditions are 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). When both Performance

Expectancy and Effort Expectancy constructs are present, the Facilitating Conditions become non-significant in predicting Intention to use (but influences actual usage). When moderated by experience and age, Facilitating Conditions will have a significant influence on usage behaviour.

Moderators

In the UTAUT model, these are the moderating factors of gender, age, experience, and voluntariness of use.

Gender

Venkatesh et al (2003) hypothesised that gender would moderate the influence on Performance Expectancy (H1), Effort Expectancy (H2) and Social Influence (H3) on Behavioural Intention to use technology, as detailed in Figure 2.8 (Venkatesh et al, 2003, p. 255).

Age

Myers and Connor (1992) emphasized that older workers are slower than young workers in the speed of adaptation to any new work environment. This point has been proved by both Morris and Venkatesh (2000) when they found that attitude toward using the technology has an impact on younger workers while short term, subjective norm, attitude toward using technology and perceived Behavioural control have a clear impact on older workers. Figure 2.8 again sets out the moderator effect of age for PE, EE and SI.

Experience

Venkatesh, et al. (2003) suggested that an increase in experience would decrease the influence of Effort Expectancy and Social Influence on Behavioural Intention to use the information system. They defined user experience as the time elapsed since the initial use of the IT application. Kim

and Malhotra (2005) also confirmed that if user experience increases, the Effort Expectancy and Social Influence decreases.

Voluntariness

Voluntariness is defined as whether or not an individual has the choice to use a new system or not (Rawstorne et al., 2000). Moore and Benbasat (1991) described voluntariness of use as the degree to which the use of an innovation is perceived as voluntary, or of one's free will. Another definition has been given for voluntariness by Venkatesh and Davis (2000), i.e. the extent to which potential adopters perceive the adoption decision to be non-mandatory. Based on Hartwick and Barki's (1994) research, voluntariness has a greater effect in the early stages of adoption of computer technology. Voluntariness was expected to moderate the influence of Social Influence on Intention to use.

Hypothesis Number	Dependent Variables	Independent Variables	Moderators	Explanation
H1	Behavioral intention	Performance expectancy	Gender, Age	Effect stronger for men and younger workers
H2	Behavioral intention	Effort expectancy	Gender, Age, Experience	Effect stronger for women, older workers, and those with limited experience
H3	Behavioral intention	Social influence	Gender, Age, Voluntariness, Experience	Effect stronger for women, older workers, under conditions of mandatory use, and with limited experience

Figure 2.8: Influence of moderators
(Venkatesh et al, 2003)

This section has introduced general models of behaviour (DOI, TRA, and TPB) together with models specifically aimed at describing and predicting technology acceptance (TAM and UTAUT). As we have seen, UTAUT combines constructs from a large number of preceding models. UTAUT itself, now widely used, is also the subject of multiple extensions. For instance, UTAUT has increasingly taken into account the fact that IT is now used

outside the business contexts for which it was originally developed. widespread in consumer and leisure technologies (Venkatesh et al, 2012). In the following section, we present a review of studies that have applied technology acceptance models specifically to examine technology acceptance in e-Government and as far as has been possible, e-Parliament, settings, in both developed and developing countries.

2.2.2. E-Government Studies Using Technology Acceptance Models

Each country has its own political, economic, cultural and social conditions that reflect its environment, and thus affect the successful adoption and implementation of e-Government initiatives within its context. Although there is probably no one universal model can be applied to all countries for the adoption and implementation of e-Government services and applications, several studies have addressed in detail the factors that affect the successful adoption and implementation of such services and applications in different contexts.

2.2.2.1 E-Government Acceptance Studies in Developed Countries

A number of studies based on technology acceptance have investigated e-Government adoption in developed countries. In an early influential study, Carter and Bélanger (2005) surveyed a group of just over 100 citizens of the state of Virginia to understand the factors that affect their adoption of two specific state online systems in Virginia: the Department of Motor Vehicle (DMV) and the Department of Taxation (TAX). This study takes the integration between TAM, DOI, and trustworthiness as a theoretical basis for the study of the adoption of e-Government services and applications. Trustworthiness is a new addition to the model constructs available in DOI and TAM-based models, but the authors point out that while “Americans

believe that e-Government has the potential to improve the way government operates, … they have 'concerns about sharing personal information with the government over the Internet, fearing that the data will be misused and their privacy diminished'…Privacy and security are reoccurring issues in e-Commerce and e-Government research (2005, p. 9).The results indicate that the perceived ease of use, compatibility and trustworthiness are factors affecting the Intention of the citizen to adopt and use e-Government services. The study suggests that perceived image and relative advantage were not significant factors in adoption. While unable to find a good explanation for the relative advantage finding, the authors suggest an explanation for that the image finding: "In the United States, use of the Internet has become so visible – from magazine ads to demonstrations of use on television – that citizens may not view its use as extraordinary. Therefore, using the Internet to transact with the government is not image enhancing: it is normal" (2005, p. 19).

In a study by Schaupp and Carter (2005), using the Carter and Bélanger model (2005), to investigate factors affecting young voters in their adoption of the e-Voting system in the US, the results indicate again that perceived usefulness, compatibility and trust are influential factors in Intention of the citizen to adopt and use the voting system over the Internet, while the perceived ease of use, image, and relative advantage were not among the influencing factors.

A later study based in the US initiative to encourage citizens to file their tax returns electronically, entitled "E-File adoption: A study of US taxpayers' Intentions" by Schaupp et al. (2010a) adjusted the UTAUT model into a comprehensive model of e-File adoption. The empirical study on 260 United States taxpayers, integrated the UTAUT model with the other factors

including perceived risk, online trust and optimism bias to explore the e-File adoption of the US taxpayers, the findings showed that all the factors including Performance Expectancy, Social Influence, Facilitating Conditions, and optimism bias had a crucial impact on e-File adoption Intention. A subsequent study (Schaupp et al, 2010b) emphasized the role of trust, risk and optimism as factors influencing adoption.

Similar studies have been published for developed countries other than the US, but using similar approaches. To give two examples from many, Phang et al., (2005) pointed out that the perceived usefulness is the main factor affecting the Intention of the senior citizens to adopt and use e-Government services and applications in Singapore. This study aimed at identifying the antecedents of TAM's perceived usefulness for the adoption and use of senior citizens to e-Government services. The results indicate that the safety of online transactions and the perceived ease of use, both are significant factors in predicting perceived usefulness of senior citizens to adopt and use e-Government services and applications. Factors such as compatibility and image did not show effect on the perceived usefulness of senior citizens to adopt and use e-Government services and applications. This is likely to be due to cultural considerations related to Singapore.

Wang (2003) address the factors that affect the adoption of the citizens to e-Tax system in Taiwan based on the TAM model. The results indicate that the computer Self-Efficacy is one of the factors that affect the Intention of the Taiwanese citizen to adopt and use e-Tax system through perceived usefulness, perceived ease of use, and perceived credibility. According to the study, higher levels of computer Self-Efficacy have a positive impact on ease of use and usefulness beliefs. They also report the positive impact of Self-Efficacy on the Intention of the citizens to adopt and use e-Tax system in

Taiwan. In the same context, Hung et al., (2006) referred to the TPB to identify the factors that affect the public acceptance of the online tax filing and payment system (OTFPS), an e-Government service in Taiwan. The results suggest that factors such as ease of use; perceived usefulness; perceived risk; compatibility; trust; Self-Efficacy; external influences; interpersonal influence; and Facilitating Conditions, were critical factors in the adoption of OTFPS on Taiwanese to accept the e-Government services. In addition, the results indicate a correlation between the attitude and Behavioural Intention to adopt and use e-Tax system (attitude toward the behaviour). Fu et al., (2006) pointed to the same conclusion reached by the Wang' study (2003) in terms of whether perceived usefulness is the key factor which affects the taxpayer's Intention to adopt and use the appropriate method for them to pay their taxes. This study is based on the integration between the theories of Theory of Planned Behaviour (TPB), TAM and other factors, such as perceived risk, and compatibility, to explore the factors affecting the adoption and use e-Tax system in Taiwan. The results indicate that the perceived risk and the independent variables in the TPB (subjective norm, Self-Efficacy, resource Facilitating Conditions, and technology Facilitating Conditions) did not show significance in the interpretation of the behaviour of Taiwanese taxpayers to use e-Tax system.

Some studies explored the differences in demographic characteristics of citizens on the adoption of e-Government services. For instance, Choudrie and Dwivedi (2005) examined the effect of the awareness of citizens on their adoption of e-Government initiatives in the UK. The results indicate that the differences in demographic characteristics of citizens, including gender; age; education; income and social class, explain the differences in the awareness of citizens on the adoption of e-Government services and applications.

In another study, Akman et al. (2005) investigated the impact of gender and education in the use of e-Government services in Turkey. The researchers argue that there are differences in gender, education and occupation between people using ICT. Different groups of people were surveyed in the public and private sectors. The findings showed that differences in gender and education had a significant impact on the adoption of e-Government services. The researchers found that males used e-Government information and services more than females, and as the level of education of survey participants increased, the interaction with e-Government also increased.

Likewise, Reddick (2005) refers to the characteristics of the citizens which affect the adoption of e-Government services in the US. The results indicate that the demographic and social characteristics of citizens, including gender; age; education; type of work and online experience affect the behaviour of the citizen to adopt e-Government services and applications. The study also found that older citizens are less likely to adopt and use e-Government services.

Comparative studies have also begun to appear. For instance, Rufin et al compare the take-up of e-Government in the US and Spain (Rufin et al, 2014). Using a TAM model, together with hypotheses based on Hofstede's cultural dimensions, the researchers found "differences in the relationship between compatibility and use Intention, with stronger effects in the USA sample. Furthermore, while perceived ease of use significantly impacts Intentions for the USA sample, it does not for the Spain sample and while trust is not significant in the USA sample, it is for the Spain sample" (p. 43).

The use of DOI, TAM and similar models is widespread in e-Government research. In a very useful overview published in 2012, Bélanger and Carter(2012) examine both the most highly cited articles in the field and those

published in the leading IS journals, and conclude that “most of the published e-Government research employs popular theories in technology adoption and technology diffusion, although a vast array of other theories are also used. Approximately one third (10 of 31) of the theories used in the sampled studies are the technology acceptance model (Davis, 1989), the unified theory of acceptance and use of technology (Venkatesh, Morris, Davis, and Davis, 2003), the diffusion of innovations theory (Rogers, 2003), or its adaptation, the innovation and diffusion theory (Moore and Benbasat, 1991) (Belanger and Carter, 2012, p. 372). Interestingly for our methodological choices, they note a difference between the two types of article: [articles in the highly cited sample do not include qualitative studies. The depth of insights that can be gained from qualitative studies is important to the field. IS researchers should continue to conduct both quantitative and qualitative studies, as has been shown in the leading IS journal articles” (p. 375). The current study integrates both types of data.

2.2.2.2 E-Government Acceptance Studies in Developing Countries

Similar studies have been conducted in developing countries. Wangpipatwong et al. (2008) explored the factors that may affect the Intention of the citizen on the continued use of e-Government services in Thailand. The study includes the integration between TAM and computer Self-Efficacy to explain the intent of the continuation of the Thai citizens to use e-Government services and applications. The results indicate that the perceived usefulness and perceived ease of e-Government use, both affect the Intention of the citizen to adopt and use e-Government services and applications. The results also indicate that the computer Self-Efficacy has a positive effect on the perceived ease of e-

Government use, and therefore impact positively on the Intention of the citizens of Thailand to continue to use e-Government services.

Gupta et al. (2008) used the UTAUT model to study the adoption of ICT to enhance government's interactions with its employees in India. They found that Performance Expectancy, Effort Expectancy, and Social Influence have a positive impact on Intention to use technology in a government organization. Zhan et al. (2011) attempted to explore the motivators for government employees to use e-Government by conducting an empirical survey in three government organizations in China. They found that Performance Expectancy influences employees' Behavioural Intention, and that Facilitating Conditions affect the use of ICT.

In the context of the Middle East, some studies have been conducted to explore the factors that may affect the users of the adoption of e-Government services. Alzahrani and Goodwin (2012) have applied the UTAUT model in their study of citizen adoption of e-Government services in Saudi Arabia. Their results suggested that Facilitating Conditions, along with Effort Expectancy and Performance Expectancy, have a significant impact on citizens' Intention to use these services. Alshehri et al, (2012) explored the key factors of Saudi citizens' acceptance of e-Government services using the UTAUT model, concluding that while Performance Expectancy, Effort Expectancy, and Facilitating Conditions significantly influenced on Intention to adopt, Social Influence not a significant factor.

In other studies geared to the Middle East, researchers have drawn attention to national culture as a possible influencer of attitudes. For instance, AlAwadhi and Morris (2008) explored the factors that affect the citizens of the adoption of e-Government services in Kuwait, based on UTAUT model. The results

indicate that factors such as Facilitating Conditions, peer influence, Performance Expectancy, and Effort Expectancy, explain the behaviour of Kuwaiti citizens towards the adoption and use of e-Government services. The study also points to other factors such as culture and trust, which were not examined in this context, but in future studies because of their importance.

Similarly but in different context, Al-Shafi et al., (2009) explored the factors that affect the Behavioural Intention to use of citizens for adopting e-Government services in Qatar, based on the same model (UTAUT). The results showed that there are three factors, Performance Expectancy, Social Influence, and Facilitating Conditions, that had a significant impact on the Behavioural Intention of citizens to adopt and use e-Government services in Qatar. The study also points to the likely importance of cultural factors.

2.2.2.3 Acceptance Studies of E-Parliament

Acceptance of e-Parliament services has attracted much less academic interest than citizen acceptance of e-Government services, particularly from the Parliamentarians' viewpoint. This mirrors the general lack of research into Parliamentarians' perspective mentioned above (sections 2.1.3.3. and 2.1.3.5). In this section we discuss the three relevant studies that have been identified.

In her PhD thesis (reported in Kanthawongsand Lee, 2007) Penjira Kanthawongs develops an e-Parliament engagement model in the Thai Parliament, based on integrating Human-Computer Interaction (HCI), Technology Acceptance Model (TAM), Diffusion of Innovation Theory (DOI), Trust and the Post-Adoption Model (PAM). Kanthawongs identifies a set of 13 predictor variables, comprising system factors (including e-Communication, e-Parliamentary library, and e-Report), strategic use of IT (in terms of information provision, networking, participation, and

campaign/presentation), individual factors (usefulness, ease of use, as well as Self-Efficacy), social factors (subjective norm along with word of mouth) and trust. The researcher concludes that together the 13 e-Parliament factors explain 60.6% of the variance in MP engagement.

Kanthawongs and Lee confirm that even though the MPs show positive attitudes toward the use of e-Parliament systems, they may not be the actual users of the systems. They suggest testing the questionnaire with other actual users of e-Parliament systems such as the MPs' assistants, the MPs' staff, the MPs' academic experts, and the Parliament staff because these groups of people are likely to be other important actual users of the systems (p. 19). To address this gap, this study covers all employees who work in Kuwaiti Parliament beside the MPs and Ministers.

Kanthawongs and Lee also call for more cross-national comparative studies to be carried out to enable a better understanding of the role of the model's constructs: "If the research model of this study is tested with MPs from different cultures such as the American culture and Asian cultures, both subjective norm and word of mouth might have higher significant relative influence on MP engagement" (p. 18).

Zahrudin et al (2015) used constructs from the TAM to investigate engagement by members of the Malaysian Parliament with technologies provided for them with the Intention of reaching out to their electorate. Their particular focus was the role of social factors, specifically social norm and word-of-mouth interpersonal communication. They suggest that MP's currently view ICT usage as disruptive and do not engage with technologies:

> [T]he agenda of ICT is not well received by some politicians. Consequently, many public and government interests in ICT fail to make a significant impact on the critical mass. As the MPs are legislators or policy makers, their enthusiasm on ICT will bring impact on critical mass. Unfortunately, ICT is not approved, accepted, encouraged, and implemented as their norm and culture(Zahrudin et al, 2015, p. 453).

They set themselves the task of establishing the relationship between MP's ICT usage and their reports of social factors that might have an impact on this:

> [G]reater usage of ICTs is associated with subjective norm in which an individual's judgment will be influenced by whether most people who are important to the individual will approve of a particular behavior under consideration… Moreover, the positive word of mouth among Parliamentarians is linked to the likelihood that an MP may spend more time online or have the engagement with the Internet because they show a high level of conformity with their peers (ibid).

The results of questionnaires returned by 67 (of 222) members of the House of Representatives, (of 222 members) showed that while informal word of mouth recommendation did not correlate significantly with engagement, the social norm construct did show a significant correlation. While Zahrudin et al do not draw any conclusions about the role of national or other cultural factors in their findings, they do suggest that national cultural norms should be investigated:

> [T]he individual's life and work is within a cultural environment. The values, norms, attitudes, and practices are dominant and serve as shared sources of socialization and social control… Thus value, norm, and culture can affect the MP and politician engagement with ICT… Since national culture is presumed to influence the inhabitants of a country in a similar way, while national culture differs across countries, it is useful to derive a framework of how the differences in culture and norms are transformed into the differences in ICT adoption, participation, and engagement among MPs (p.452).

In the third example of acceptance studies of Parliamentarians, close to the perspective of the current study, Olasina and Mutula (2015) report on a study using UTAUT concepts to investigate the attitudes of Nigerian legislators to e-Parliament adoption. The authors clearly signpost their interest in cultural issues: "E-Parliament has gone global but the national culture may affect the adoption behaviour of legislators and citizens to it" (Olasina and Mutula, 2015, p. 492). Data collection methods included a survey questionnaire of 346 federal legislators in Nigeria and in-depth interviews conducted with five members of the public, in an attempt to assess the influence of factors of national culture on adoption of e-Parliament by legislators and citizens in Nigeria. The study was based on the UTAUT model, and particularly investigated the Performance Expectancy construct. The results showed that "the dimensions of national culture such as masculinity, uncertainty avoidance and Confucian dynamics ('face saving') had moderate effects on the relationship between perceived usefulness, perceived ease of use and Intention to adopt e-Parliaments by legislators and members of the public in Nigeria" (p. 502), while other dimensions of culture and cultural contexts such as individualism and power distance had no significant effect on Performance Expectancy of e-Parliament adoption in the context of Nigeria. Olasina and Mutula used the research framework reproduced as Figure 2.9, which makes clear the concepts and relationships explored in their study:

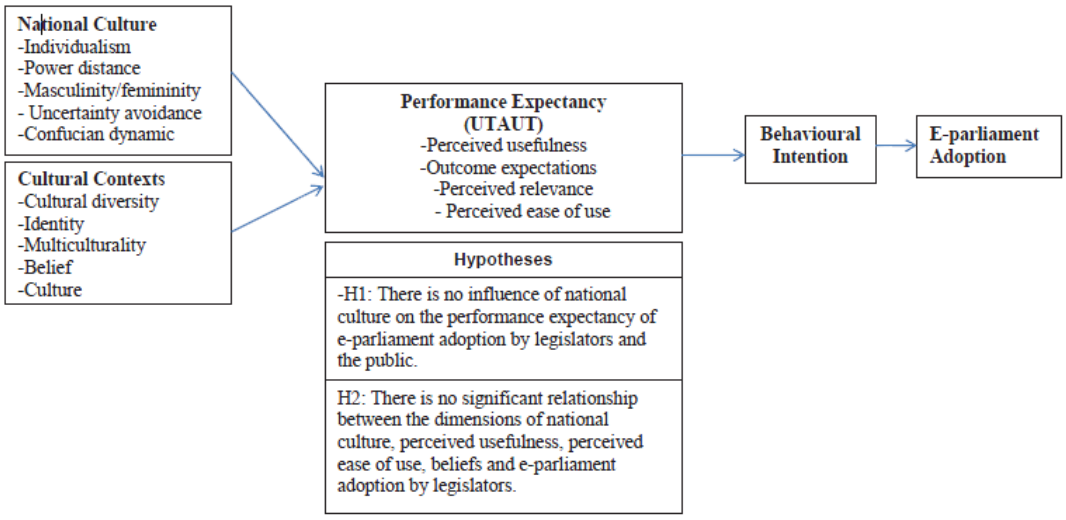


Figure 2.9: Olasina and Mutula (2015) Research Framework

This section has pointed to the large amount of research that has been conducted into e-Government, much of it taking a technology acceptance orientation (Bélanger and Carter, 2012). One important outcome of the search for literature on e-Government has been the awareness of the lack of research into e-Parliaments, as opposed to e-Government services for the citizen.

We have concentrated on studies employing a broad technology acceptance approach. It is clear that the studies reported here have not simply identified that the "conventional" TAM/UTAUT factors such as usefulness, ease of use, Performance Expectancy, Social Influence, Facilitating Conditions, Self-Efficacy, compatibility and external influence adoption, but also that acceptance models have also undergone extensions, as researchers integrate influencing elements such as trust (Carter and Bélanger, 2005), risk aversion (Li and Huang, 2009), habit (Escobar-Rodriguez et al, 2014), fun (Venkatesh, 2000), educational level (AlQueisi, 2009) and income (ibid). One source of suggested new factors is the national and local culture in which ICT is used (Olosina and Mutula, 2015). This was a key focus in the current study.

Studies carried out in developing countries pointed to the effects of the same constructs as in the developed world, but equally leave open the possibility of the influence of national and local culture.

The next session discusses models for conceptualising cultural differences.

2.3. Cultural Difference

2.3.1. Models of Culture

Hofstede (2001), whose work on cultural dimensions is by far the most widely referenced in this field, defines culture as "the collective programming of the mind which distinguishes the members of one group or category of people from another" (p. 9). It represents the enduring values of a nation or society, distinct from "superficial manifestations of culture, often mistaken for national culture but includes the deeper underlying level of values, which determines the meaning to people of their practices often overlooked" (p. 393).

Hofstede has now extended his original four dimensions to six dimensions on which cultural differences may usefully be described:

1 power distance,
2 uncertainty avoidance,
3 individualism versus collectivism,
4 masculinity versus femininity,
5 long-term versus short-term orientation (in some versions referred to as Confucian dynamic)
6 indulgence versus restraint (Hofstede et al., 2010).

Power Distance is "the extent to which the less powerful members of organizations and institutions (like the family) accept and expect that power is distributed unequally" (Hofstede, 2001, p.9). When there is low power distance the subordinates and superiors within a culture are more likely to consider each other as equals (Hofstede, 2001).

Uncertainty Avoidance is"the extent to which the members of a culture feel threatened by ambiguous or unknown situations" (Hofstede et al., 2010, p. 191). "Countries exhibiting strong UAI maintain rigid codes of belief and behaviour and are intolerant of unorthodox behaviour and ideas. Weak UAI societies maintain a more relaxed attitude in which practice counts more than principles" (Hofstede, n.d.).Singapore is an example of a country where avoiding uncertainty is a cultural preference, while Greece is at the opposite end of the scale.

Individualism is found in "societies in which the ties between individuals are loose: everyone is expected to look after him or herself and his or her immediate family" (Hofstede et al., 2010, p.92). By contrast **Collectivism** applies to "societies in which people from birth onward are integrated into strong, cohesive in-groups, which throughout people's lifetime continue to protect them in exchange for unquestioning loyalty" (Hofstede et al., 2010, p.92). Individualism within cultures refers to limited social connectedness, whilst collectivism means that people with similar, or the same, origins join together (Marcus and Gould, 2000b). Examples of countries exhibiting individualism are the UK, Italy and the US, while Japan, Taiwan, Colombia and Iran are seen as collectivist.

A society is high on the **Masculinity** scale when "emotional gender roles are clearly distinct: men are supposed to be assertive, tough, and focused on

material success, whereas women are supposed to be more modest, tender, and concerned with the quality of life" (p.140). Hofstede defines a **feminine** society as occurring "when emotional gender roles overlap: both men and women are supposed to be modest, tender, and concerned with the quality of life" (Hofstede et al., 2010, p.140)."The concepts of masculinity and femininity are related to roles, not physical characteristics" (Chaijenkij, 2010, p.69). According to Hofstede et al. (2010), feminine societies tend to use the Internet for rapport-building whereas masculine societies use the Internet for fact gathering and in the feminine societies many women are in elected political positions.

"**Long Term Orientation** stands for the fostering of virtues oriented toward future rewards, in particular perseverance and thrift" (Hofstede et al., 2010, p.239). The opposite of this is **Short Term Orientation**, which "stands for the fostering of virtues related to the past and present in particular, respect for tradition, preservation of face, and fulfilling social obligations" (Hofstede et al., 2010, p. 239). In a similar definition Bearden et al. (2006) describes long term orientation as the degree to which culture focuses on the future.

For the **Indulgence vs. Restraint** pairing, indulgence refers to "a tendency to allow relatively free gratification of basic and natural human desires related to enjoying life and having fun" (Hofstede et al., 2010, p.281) , while restraint refers to "a conviction that such gratification needs to be curbed and regulated by strict social norms" (Hofstede et al., 2010, p.281).

It must be noted, however, that Hofstede's dimensions have been criticised by some researchers. Schepers (2006) considers Hofstede's dimensions to oversimplify the concepts of individualism and collectivism. Similarly,

Jordon (1994) and Berry et al (1992) pointed out some limitations of Hofstede's dimensions, for instance:

1 The findings cannot be generalized to the population at large because the data is collected from only one segment of the society (i.e. the middle class in a single company).
2 Hofstede's study assumes that one culture equates to one nation.

Baskerville (2003) argues that there can be more than one culture in one country at any one time, and a number of studies have confirmed that a specific culture is not necessarily equivalent to a specific country. To overcome this constraint, Chakuthip (2007) suggested adding an individual level of analysis into any acceptance model to understand the roles of various cultural values in the adoption of IT.

Hofstede himself is careful to point out that "his core values apply to national cultures and not to individuals due to intra-cultural variability. The values that define individualism for nations, do not go together to define individualism for individuals i.e. we do not compare individuals but we compare what is called central tendencies in the answers from each country" (Al Sharqawi, 2004, p. 98).

2.3.2. Cultural dimensions of Kuwait

Although Kuwait was not included in Hofstede's original work on attitudes amongst IBM employees, Hofstede does make some pertinent points relevant to the Middle Easter region. Hofstede (1980) describes the Arab region as a single region with a high degree of diversity and complexity. For instance, on the influence of Islam, which plays a significant role in the daily life of Arabic countries, he points to its egalitarianism: "In Islam, all believers are equal

before God-although they may be very unequal in society" (Hofstede, 2001, p. 114). According to Hofstede (2009), Arab societies can be considered as collectivist in nature, since people in the Arab countries have a strong commitment to the group and to family. They have high uncertainty avoidance and do not accept change easily (Hofstede, 2009). Arabic culture is categorised by the Hofstede (2001) index as a high Masculinity-Femininity culture. Females in the Arab world are assigned a restricted set of roles and few women are found in senior management. Arabic cultural beliefs may also create gender-based segregation in the work place.

Within the Middle Eastern region, Kuwait provides a unique context with regards to its geography and economy, its demographic structure, and the nature of its society. The country lies between three countries, Iran, Iraq, and Saudi Arabia, each of which has distinct customs, religious life, traditions, and political system. All these countries have contributed to the formation of a unique and complex culture. Kuwaiti society contains a mix of Sunni and Shiite culture and a culture open to the world and at the same time maintaining Islamic traditions, a culture of respect for the ruler and at the same time respect for the Constitution together with a belief that people are decide their destiny.

Alsharqawi (2004) investigated Kuwaiti work-related values. Based on Hofstede's Value Survey Module 94 (VSM49), she found the results, from a sample of 228 employees working in the public and private banking sectors as shown in Table 2.2. Although she had hypothesised that Hostede's dimensions, rooted in Western culture, would not "fit" the Kuwaiti situation, in fact the original dimensions worked reasonably well.

Hofstede' Dimensions	Score	Result
Power distance (PDI)	29.20	small power distance
Individualism (IDV)	71.45	strongly individualist
Masculinity (MAS)	6.60	very strongly feminine
Uncertainty Avoidance (UAI)	62.55	medium-strong
Long Term Orientation (LTO)	50.50	medium

Table 2.2: Hofstede' Dimensions in Kuwait

Several results confounded Alsharqawi's hypotheses. For instance while she expected a medium power distance, in fact the result was that power distance is small, a result she explains with reference to the egalitarian force of religion but also to "the speed of wealth onset, its source, distribution and its quantity are all extremely influential effectors of PDI, and other dimensions, that fall under the predictor 'Wealth" (Alsharqawi, p. 211). The masculinity/femininity dimension result was also a surprise, as Alsharqawi, basing her prediction on observations of masculine social behaviour, had predicted a high masculinity score, in contrast to the very high femininity score found in here survey. One explanation for "the very low masculinity score might be that Kuwaiti females represent the majority of university graduates, hence the most qualified new recruits, in this rapidly developing country. Women are leaving their homes to work and get more career experience, though it must be noted that the international business and educational exposure Kuwaitis get is primarily with Britain and the United States of America, both very masculine societies" (Alsharqawi, p. 218).According to Alsharqawi (2004), the following characteristics and features in Kuwait, can explain the score in every index as shown in Table 2.3.

Features of Kuwait that affect the power distance index are:	
1.	The climate is hot and extreme.
2.	High GDP, which means that it is considered a wealthy country.
3.	Greater centralization of authority in organizations.
4.	Less qualified lower class.
5.	No taxes
Features that affect the uncertainty avoidance index are:	
1.	Development of rules controlling social behaviours.
2.	The climate and the wealth also affects in this index.
Features that affect the individualism index are:	
1.	Family structure and clan adherence is very strong.
2.	Cultures tend to be group-oriented.
3.	Legal structure protects group and community interests.
Features that affect the masculinity index are:	
1.	Sex roles are clearly differentiated.
2.	Islam designates roles and certain positions for both women and men in society.
3.	Moderate belief in achievement and ambition.
Features that affect the long term orientation index are:	
1.	Kuwaitis have a drive towards high spending.
2.	The high GDP is considered to influence this index also.

Table 2.3: Characteristics and Features in Kuwait

As is clear from the above, wealth is factor in three out of five of Hofstede's indexes for Kuwait. With regard to this point, Alsharqawi observes that wealth could help to spread a technological and educational culture in the society.

2.3.3. Culture and Technology Adoption

A number of studies have explored ways of integrating cultural factors, typically using Hofstede's cultural dimensions, with technology acceptance models, both at a general level and also in studies targeting technology acceptance in individual countries.

Ford et al (2003) point to the need to understand cultural difference in Information Systems design and implementation (not necessarily technology acceptance), citing a number of compelling examples:

> National culture has been illustrated to influence IS above and beyond political, economic, and physical factors. For instance, Straub…has found that due to the characteristics of the written Japanese language and because of other cultural factors, Japanese workers prefer to use facsimile machines rather than e-Mail, whereas this preference was not noted in the U.S. Montealgre…illustrates a situation where a manager, who was educated in the U.S., wishes to implement an IS, but must first take into account the national culture and environment in order to successfully implement the system. Jarvenpaa and Leidner… also illustrated this phenomenon with a Mexican company that had to consider the national cultural norms and values in order to ensure implementation success. (Ford et al, 2003, p. 8)

An important point made by Ford et al, who review a large number of studies using Hofstede's work, is that cultural dimensions should be seen as operating at national rather than individual or even small group levels:

> …researchers must be sure to use the dimensions for the purposes for which they were intended. As mentioned earlier, Hofstede's dimensions are intended to describe values at a national (or group, i.e., subculture) level, not at an individual level. They are helpful in developing and bounding theory that considers national cultural differences relevant. They are not useful in investigating small relatively homogenous groups where the real differences are likely to be less than the natural variance within the national culture. (p. 20).

This is a useful caveat for the current study, where a relatively small and select group is the object of analysis.

Straub et al (1997) produced an early influential example of the application of cultural dimensions to IT acceptance. They "translated" the high level dimensions into attitudes that were more immediately relevant to IT use, e.g. assertiveness (= high masculinity), choice of rich media (= uncertainty avoidance), use of email (= low individualism) and so on, in a study that compared IT acceptance across three countries, the US, Switzerland and

Japan. Although the model used, the original TAM, was successful in explaining the US and Swiss results, it did not "fit" the Japanese experience. Straub suggest that this underlines the importance of practitioners understanding how "cultural factors might affect a multinational organisations ability to adopt and utilize IT" (p. 9).

In a widely cited paper, Srite and Karahanna (2006) set out to examine how national culture might influence technology acceptance at the individual level, explaining that "[w]hile national culture is a macro-level phenomenon, acceptance of technology by end-users is an individual-level concern" (p. 680). They suggest that rather than applying cultural dimensions "raw" to the technology acceptance models, they need to be mediated through an individual: "national culture impacts the values an individual holds, which in turn influence technology acceptance" (p. 680). In two empirical studies to test the relationships between factors in the TAM model, they found that

> Social norms are stronger determinants of intended behavior for individuals who espouse feminine and high uncertainty avoidance cultural values. Contrary to expectations, espoused masculinity/femininity values did not moderate the relationship between perceived usefulness and Behavioural Intention but, as expected, did moderate the relationship between perceived ease of use and behavioural Intention. (p. 679).

Other studies have attempted to test hypothesise directly based on cultural dimensions as potential explanations for relationships between technology acceptance model factors. In an interesting study of the acceptance of computer security software in the US and South Korea, Dinev at al (2009) hypothesise that as national of a country with high uncertainty avoidance and collectivism scores, Koreans will be more likely to be influenced by the subjective norm than those from the US in their adoption of anti-spyware. Figure 2.10 shows the proposed modification to the model they used, Pavlou

and Fygensen's extension to the TPB (Pavlou and Fygensen, 2006), which includes the constructs of awareness and controllability:

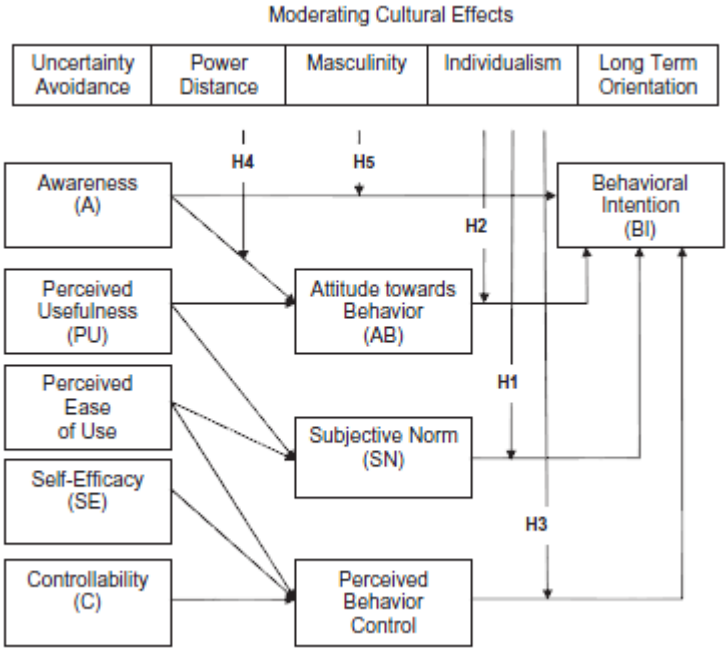


Figure 2.10: model used by Dinev et al (2006)

Dinev et al found that their culturally influenced hypotheses were largely confirmed.

Finally, Al-Gahtani et al's (2007) study of IT acceptance in Saudi Arabia is an example of a study conducted in a country geographically and culturally close to Kuwait, building on the UTAUT framework used in the current study. Al – Gahtani et al compare IT acceptance in Saudi Arabia with the US, referring to the cultural dimensions scores of each country in order to generate hypotheses about relationships between the various UTAUT factors. The cultural dimensions scores are shown below in Table 2.4:

Cultural dimension	United States	Saudi Arabia
Uncertainty avoidance	46	68
Power distance	40	80
Masculinity	62	52
Individualism	91	38
Long-term orientation	29	N/A

Table 2.4: Hofstede' Dimensions for US and Saudi Arabia

For instance, Al-Gahtani et al hypothesised that as "[t]here are rigid boundaries in social roles and expectations for women compared to men in Saudi Arabia and thus there are far fewer women in professional knowledge worker roles, …women in Saudi Arabia would be less inclined than men to expect that the use of computers would enhance their job performances and thus advance their professional careers" (p. 684). Similarly, as members of a collectivist society, Saudi Arabians would be more likely to be affected by subjective norm in their technology adoption attitudes than national of the very individualistic US. Eight out of fifteen of these culturally-modified hypotheses were supported by the survey data.

2.4. Summary

In this chapter we have reviewed of studies in three areas that contribute to the current research, i.e. e-Government, technology acceptance models and national cultural difference.

While a great deal of attention is paid to e-Government for public services and increasingly, to increase democratic involvement, the topic of e-Parliaments has been rather neglected, and there has, in particular, been very little attention paid to the attitudes and behaviour or Parliamentarians themselves as

system users. Olasina and Mutula's work on the Nigerian Parliament (2015) is an encouraging development which mirrors in many ways the concerns of the present study, particularly as it pays attention to national cultural factors.

The aim of the second part of the chapter was to provide an overview of the current literature relating to the measurement of behaviour in ICT adoption. The well-known theories and models in technology acceptance in e-Government adoption field were reviewed. Whilst many theories and models in technology acceptance have been used as a theoretical base by a large number of researchers, the UTAUT model is one of the most accepted theories for explaining acceptance of technologies. This literature described the UTAUT model and its origin. By analysing the literature, it is evident that UTAUT model has proven to be a useful theoretical model in helping to understand and explain usage behaviour in information systems implementation and has been tested in many empirical studies.

The third section of the chapter introduced Hofstede's cultural dimensions model as applied to Kuwait and showed examples of ways in which cultural factors might be integrated into the traditional technology acceptance approach. Alsharqawi's work on characterising Kuwait provides a useful tool in the current study, as do the various accounts of integration of cultural dimensions into technology acceptance studies.

The next chapter introduces the methodology of the research, including the role of mixed methods in the research model. Other sections in the next chapter discuss data collection and sampling, and provide a detailed explanation of the analytical techniques used. The chapter also discusses the theoretical research model, which posits hypotheses concerning the relationship between the variables included in the model.

CHAPTER 3 : RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the research design and methodology that was used in this study. The chapter starts by describing the research paradigm, in section 3.2. The research methods including research methodology, interview method and questionnaire method are then presented in section 3.3. The next section, 3.4, presents the amended UTAUT as a model that incorporates eight preceding models. Sections 3.5 discuss the research population, types of samples and sample size. Section 3.6 describes the development of the questionnaire including questionnaire design and pre-testing, questionnaire distribution and interviews. This is followed by a discussion of the data analysis and a discussion of reliability and validity in section 3.7 and 3.8. The research ethical issues are reviewed in section 3.9, and the chapter concludes with a summary.

3.2 Research Paradigm

The term “paradigm” was first used by Thomas Khun in his book, *The Structure of Scientific Revolutions* in 1970. Khun described the term paradigm as “the entire constellation of beliefs, values and techniques, and so on shared by the members of a community” (1970, p. 175). Thus, a paradigm can be understood as a basic set of beliefs and assumptions that guide a researcher’s enquiry.

Henning et al., (2004) described the paradigm as a framework in which theories are created, which affects how people see the world, determines

individual perspectives and forms our personal understandings of how things are interconnected.

The classification of paradigms depends on how researchers identify the problem and determine the methodology. Many researchers have divided the various research paradigms into many categories. For instance, Hussey and Hussey (2003) and Creswell (2009) identify four philosophical perspectives on research methodologies: Post-positivism/ Positivism, Interpretivism, Advocacy and participatory, and the Pragmatic paradigm. There are three philosophical paradigms that social researchers have long debated as to which is the appropriate approach to choose in order to conduct research. These are positivism, interpretivism, and critical theory (Orlikowski and Baroudi 1992; Trauth, 2001). However, Burrell and Morgan (1979) divided social paradigms into the four paradigms of functionalism, interpretivism, radical humanism and radical structuralism. Schultz and Hatch (1996) suggested that the study of organisational culture incorporates two main views: functionalism and interpretivism. In information systems disciplines, the paradigms used in e-Government research have tended to be positivism and interpretivism (Orlikowski and Baroudi 1991; Heeks 2006; and Irani et al., 2006).

The main assumptions underlying the paradigm of any research are to do with methodology, epistemology and ontology (Neuman, 2003; Guba and Lincolon, 1994). Methodological assumptions are concerned with the approaches used for data acquisition (Cohen et al., 2001). Epistemology explains how we obtain knowledge of external reality and how things can be made known to the researcher (Alsukkar, 2005). Epistemological assumptions are concerned with ways of perceiving and acquiring knowledge (Bryman, 2001). Epistemology is also understood as a philosophical term that clarifies "what is the relationship between the researcher and that being researched"

(Creswell and Clark, 2007, p. 24). Epistemology consists of two main research philosophies: positivist and interpretive. Ontology is concerned with what exists, and ontological assumptions are therefore concerned with the nature of the world and the human being in the social context (Bryman, 2001).

Positivist studies are based on the existence of fixed relationships within phenomena, which are typically explored with a form of structured measurement instrumentation, like surveys or experiments (Orlikowski and Baroudi, 1991). In the positivist paradigm the researcher assumes that reality is objectively given and can be described by measurable properties which are independent of the researcher and his or her instruments (Ravarini, 2010). Advocates of this paradigm believe that the social world is a world of natural phenomena. They assumes that social reality, including attitudes, beliefs, behaviours and satisfaction can be measured objectively by the employment of traditional scientific methods by independent observers (Elsheikh, 2011). Positivist research involves quantifiable measurement of variables, testing of hypotheses, and drawing of participants from a representative sample (Straub et al., 2004). Research that falls under this paradigm starts with formulating hypotheses that are subjected to empirical testing through quantitative methods (Buttery, 1991).

Johnson and Onwuegbuzie (2004) argue that positivists believe that social science enquiry should be objective, in that time- and context- free generalizations are possible, and the cause of the outcome can be determined precisely and validly. However, Healy and Perry (2000) argue that positivism is inappropriate for research that relates to people and their real-life experiences. Some positivist studies abandon the social context and are thus unsuccessful at capturing the complexity of reality (Monteiro et al., 2003). Boland (1985) argues that “positivist research starts with theory and proceeds

through empirical tests designed to disconfirm the theory" (p.194). There has been much debate on whether or not this positivist paradigm is suitable for the social sciences (Hirschheim, 1985). However, approaches to case studies can be both positivist (Benbasat et al., 1987; Miles and Huberman, 1994; Yin, 1994) and interpretive (e.g. Boland and Day, 1989; Zuboff, 1988). The primary data collection techniques in positivism are comprised of surveys based on specified sampling and outcome-oriented experiments (Christie et al., 2000).

The interpretive approach is another paradigm, often adopted in the social sciences, to overcome the major disadvantages of positivism (Guba and Lincoln, 1994). It attempts to understand phenomena through the meanings that people assign to them (Boland, 1985). Interpretive research focuses on the complexity of human sense-making (Kaplan and Maxwell, 1994). Interpretive researchers use qualitative research approaches to provide an understanding of the social and organisational contexts through words; they report detailed views of participants and are conducted in a natural setting (Creswell, 2003). The philosophical basis of interpretive research is phenomenology and hermeneutics (Boland, 1985).

Information System (IS) research can employ the interpretive approach, depending on the causal research epistemology (Orlikowski and Boroudi, 1992; and Myers, 1997). The nature of the interpretive research method is to concentrate on human ideas and actions in the social and organisational situation (Klein and Myers, 1999). The objective of interpretive research is to combine people's words, documents and observations into a coherent picture expressed primarily through the participants' voices (Trauth and Jessup, 2000). In addition, interpretive researchers concentrate on the cultural and historical context (Darke et al., 1998) and try to understand phenomena by

capturing the meanings that participants assign to them (Orlikowski and Baroudi, 1991). The interpretive approach, instead of testing theoretically deductive hypotheses, allows researchers to make sense of the people and the organisation under study, and to develop a theory via an inductive process that concentrates on the details of the data in order to find the important factors, categories and interrelationships revealed by open questions(Patton, 1990), Bode and Burn (2001).

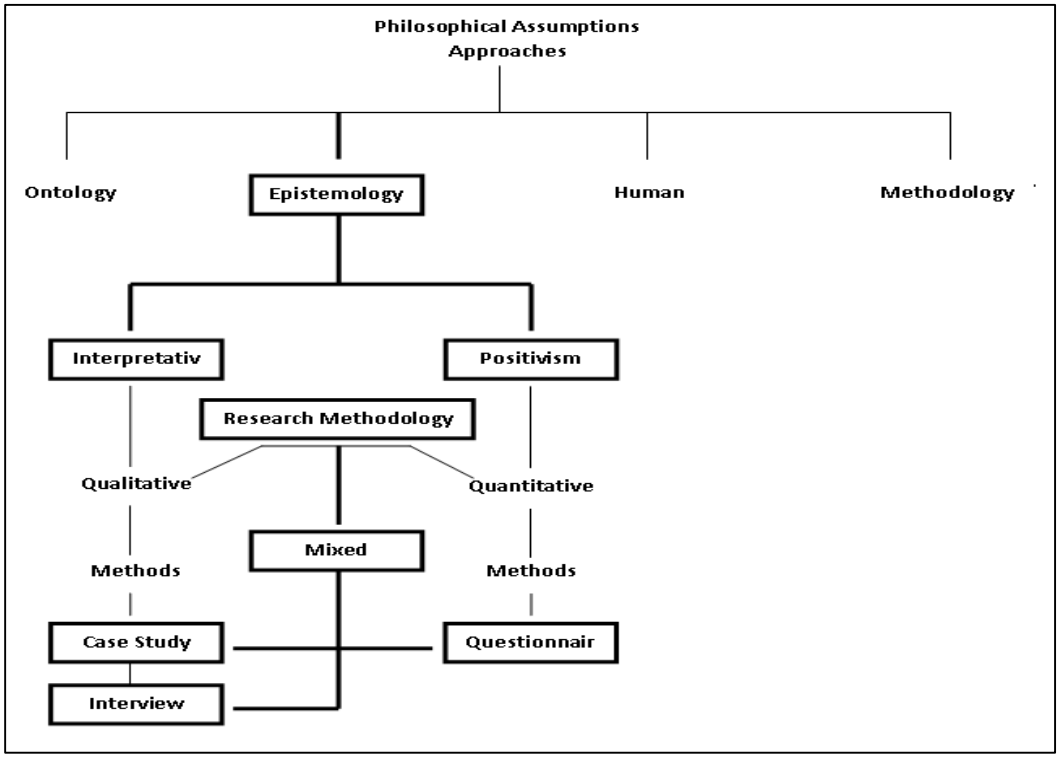


Figure 3.1: Research Approach, Methodology and Methods

This research is considered as epistemological research. It can be considered as being amenable to positivist approaches and to interpretive approaches, because there is a need for applying both quantitative and qualitative methods (mixed method). The combination of positivist and interpretive approaches are appropriate for this study because they enable the researcher to check the

accuracy of the findings and to provide a fuller picture of the influencing factors, by comparing information from different sources.

The mixed methods comprised of these two approaches (positivist and interpretive), in turn, facilitate the validation of data through triangulation. Each of the approaches has advantages and disadvantages, but the combination of the two approaches is among the potential solutions for overcoming the constraints of the two methods.

Many researchers have shown an interest in combining the qualitative and quantitative approaches. For examples, Petter and Gallivan (2004) emphasised the importance of combining the two approaches, especially in information science research, as this provides a better understanding of the phenomena associated with the adoption and implementation of such systems in different organisational and social contexts.

Bouma and Ling (2004) state that the mixed methods approach differs from the quantitative approach in that it can answer questions about what is occurring in a specific situation, provide a thorough explanation of what is occurring in a discussion or in a society, and captures the significance of feeling, effects and messages.

Some researchers (Gable, 1994; Hughes, 2006) indicate that combining the two approaches helps in triangulation, integration and validation of data. Greene et al., (1989) observes that the combination of qualitative and quantitative approaches in research achieves the following objectives: triangulation, complementarity, development, and expansion. In accordance with Denzin and Lincoln (2005), this study uses mixed methods for triangulation in order to secure in-depth understandings of the phenomena in question.

The term triangulationis drawn from trigonometric laws associated with triangles, where values of one angle can be known if the values of the two other angles are given (Denscombe, 2007). Triangulation allows researchers to look at research issues from different angles. This means that different methods can be used, different data sources utilized, or even that different researchers can join together in carrying out one study.

Triangulation allows researchers to compare the findings of one method with findings of another method. One advantage of using triangulation in social sciences is that the outcomes of one method can be corroborated or criticized through comparison with the findings of another method. Moreover, the findings of one research method can be complemented by something new and/or different, deriving from the findings of another method.

Many qualifying terms are used with regard to triangulation. One example is methodological triangulation, which means using similar methods as a check on the accuracy of findings. Another example is data triangulation, where the validity of findings can checked by using different sources of information, or using data collected at different period of time, i.e. “time triangulation”. Space triangulation refers to the use of various cultural, social or geographical settings to understand a phenomenon. Investigator triangulation occurs when different researchers’ interpretations and views on the same issue are presented. This can enhance the consistency of findings of research as contended by Denscombe (2007). In this research, data triangulation is the focus.

3.3 Research Methods

3.3.1. Quantitative Methodology

Quantitative approaches are used to generate numerical data by transforming what is observed, reported or recorded into quantifiable units (Denscombe, 2010, p.232). Elsheikh (2011) defines the quantitative approach as an approach that is concerned with the collection and analysis of objective or numerical data, which is often presented in graphs, charts or tables.

3.3.2. Qualitative Methodology

The qualitative approach focuses on the collection and analysis of non-numerical data (Elsheikh, 2011). Qualitative research methods were developed in the social sciences to enable researchers to study social and cultural phenomena (Myers, 2006). The qualitative research approach depends on the interpretive paradigm within the social sciences (Neuman, 2006). Qualitative approaches focus on the examination of meanings and processes, rather than on calculations in terms of amount, frequency or quantity (Labuschagne, 2003). The goal of qualitative research is the development of concepts which assist in comprehending a social phenomenon in its natural settings, placing due emphasis on the experiences, views and implications of all participants (Pope and Mays, 1995). According to Healy and Perry (2000), qualitative data provides a better understanding of phenomena, as well as fruitful insights on the best practices and experiences, more information on incentives and constraints that affect the decision-making process, and it allows the researcher to study the attitudes that affect the adoption of IT.

3.3.3. Mixed Methodology

This research combines complementary qualitative and quantitative research methods to provide a richer contextual basis for interpreting and validating

results (Dennis, 2001; Igalens and Roussel, 1998; and Daly et al., 1999). According to Creswell (2003), a mixed method design is useful since it combines both quantitative and qualitative approaches to utilize the advantages of both. Mixed methods is a research strategy that crosses the boundaries of conventional paradigms of research by deliberately combining methods drawn from different traditions with different underlying assumptions. Collecting different kinds of data from different sources by different methods provides a broader scope of coverage and, therefore, a fuller picture of the unit of study than what would have been achieved otherwise (Bonoma, 1985).

Creswell et al. (2003) developed a parsimonious system for classifying mixed methods research designs. They identify six primary types of mixed methods research designs:

1. Sequential Explanatory (Collection and analysis of quantitative data followed by a collection and analysis of qualitative data),
2. Sequential Exploratory (An initial phase of qualitative data collection and analysis followed by a phase of quantitative data collection and analysis),
3. Sequential Transformative (Collection and analysis of either quantitative or qualitative data first. The results are integrated in the interpretation phase),
4. Concurrent Triangulation (Two or more methods used to confirm, cross-validate, or corroborate findings within a study. Data collection is concurrent),
5. Concurrent Nested (A nested approach that gives priority to one of the methods and guides the project, while another is embedded), and
6. Concurrent Transformative (The use of a theoretical perspective reflected in the purpose or research questions of the study to guide all methodological choices). (Creswell et al., 2003).

This study uses the sequential exploratory and concurrent triangulation approaches, as explained below in section 3.4 Research Design.

3.3.4. Case Study

There are many definitions of the term case study. One of these definitions, by Yin (2003), defines case study as "an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident" (p.13). Case studies as a method of research have a number of strengths, the most important point being that case study data is strongly rooted in reality (Howison, 2010).A case study focuses on understanding situation and context, and may involve a range of techniques including interviews, observation, questionnaires and document analysis (Darke et al., 1998).

It might be of some importance at this point to briefly refer to the advantages and disadvantages of case study methodology as described by (Denscombe, 2007). The first advantage is that case study approach focus on one or a few instances, where researchers can illustrate the details of the social situation being studied. A second strength of the case study is that it allows the use of multiple research methods to capture the complex reality under scrutiny. Thirdly, case studies may use not only multiple methods but also multiple sources of data. Another advantage of this approach is its suitability for researchers who have little control over the events they are studying. This is due the fact that this approach aims to investigate phenomena as they are in their natural setting. Finally, the case study approach can fit in well with the needs of small-scale research by concentrating efforts on one or a few sites. However the case study approach is not free of weaknesses. One major criticism is directed at the credibility of generalisation of findings. Another

disadvantage of the case study approach is that it is regarded as producing soft data.

This approach is suitable for pursuing the research aims of this project, i.e. exploring the factors that potentially affect Kuwaiti Parliamentarians' Intention to use the Parliamentary website. A case study approach was therefore chosen for this study, because it enables the interpretation of the data collected through multiple sources of evidence, which include surveys and interviews, and because triangulation is necessary in the case study methodology.

Mixed methods are employed, with the qualitative method consisting of interviews, and the quantitative method consisting of a survey that comprises two parts. The first part consists of the UTAUT model questionnaire, and the second part consists of the usability-testing questionnaire. The methods used in this study will be discussed in the following sections.

3.4. Research Design

In this research, two mixed methods designs are used. The first one is the sequential exploratory design, which starts with the collection of preliminary qualitative data to explore a phenomenon. In the next step, which represents the point of interface in mixing, this design builds on the results of the preliminary qualitative phase, to develop a quantitative tool. In this study, initial expert interviews were conducted, which informed the design of the questionnaire instrument to explore the Intention of Kuwaiti' Parliamentarians to use the Kuwaiti Parliament website.

These developments connect the first mixed methods design with the second one, which is the concurrent triangulation design. In concurrent triangulation

designs, quantitative and qualitative data are collected and analyzed at the same time. Data analysis is usually separate, and integration usually occurs at the data interpretation stage. Interpretation typically involves discussing the extent to which the data triangulate or converge. Individual semi-structured interviews with Parliamentarians were the method used in this study to complement the questionnaire data.

The main reasons for using semi-structured interviewing in this research is allowing the interviewee the flexibility to raise any issues they felt might be pertinent and open enough to produce follow-on questions out of interviewees' responses. The process aimed to provide insight into the applicability of existing theoretical constructs (UTAUT) whilst discovering some of the difficulties that might exist in Parliament and which might prevent the use of Parliamentarians for Parliamentary website. The list of interview questions is attached (Appendix I).

Finally, the researcher interprets to what extent and in what ways the two sets of results converge from each other and relate to each other to create a better understanding of the factors that may affect the Intention of Kuwaiti' Parliamentarians to use the Kuwaiti Parliament website. The overall research design is set out as a diagram in Figure 3.2 below.

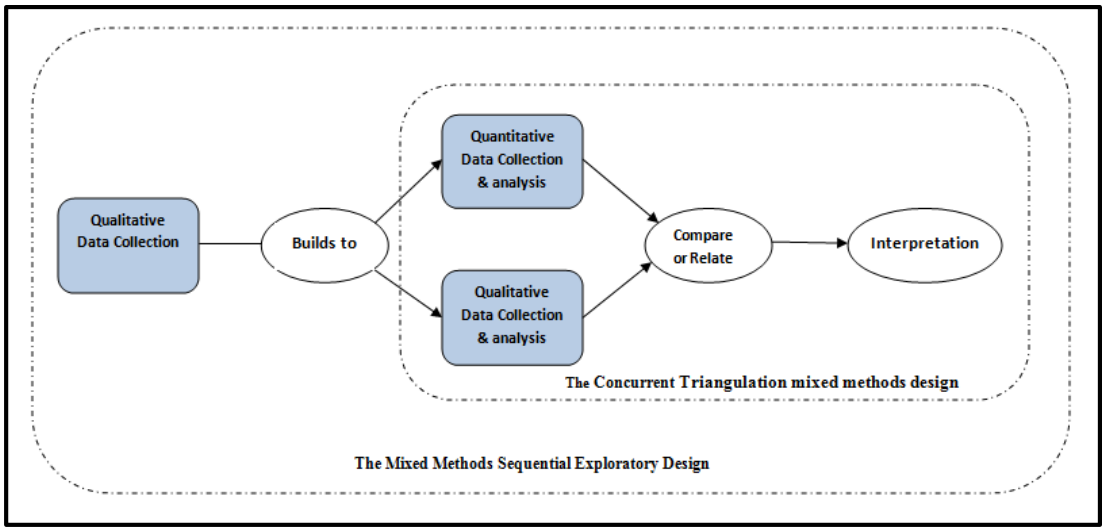


Figure 3.2: The Study's Mixed Methods Research Design

3.5. Research Model

This study used the literature to identify the factors that could enhance Parliamentarians' Intention to use the Parliamentary website. In addition, in order to determine their relevance and appropriateness in the Kuwaiti context and that of the Kuwaiti Parliament in particular, preliminary interviews were conducted a range of senior officials to explore the current situation with respect to Parliamentary website use. This would allow us to judge the relevance and appropriateness of the proposed UTAUT model factors in the Kuwaiti context. The preliminary information gathered from the preliminary interviews and the literature review helped in designing a questionnaire, and in developing the theoretical framework for this study. The preliminary interviews provided more information about specific variables of interest with additional insights of possible determinants that seemed to be important in selecting and forming the appropriate amended model for this study.

The model would help to analyse the reasons for resistance toward the technology and would also help to take efficient decisions to improve user acceptance and usage of the technology.

The unified theory of acceptance and use of technology (UTAUT) is adopted as the main theoretical model in this study. The Unified Theory of Acceptance and Use of Technology (UTAUT) has several advantages that make it the preferred choice among researchers over other models. These advantages are the following:

1. The UTAUT model helps to understand factors the influence acceptance of an important new technology, and to explain the behaviour of people or organizations in their use of IT (Turner et al., 2010).

2. The UTAUT model is an empirically validated model. Researchers are increasingly testing its suitability, validity and reliability to explain technology adoption in deferent contexts (Anderson and Schwager, 2004; Zhou and Wang, 2010; Oshlyansky et al., 2007). For instance, Oshlyansky et al. (2007) attempted to validate the UTAUT model across nine culturally diverse countries including the US, the UK, South Africa, Saudi Arabia, New Zealand, Malaysia, India, Greece, and the Czech Republic. Data on general website use were collected from undergraduate and postgraduate students in these countries. The UTAUT questionnaire was translated into six languages: Arabic, Czech, Dutch, French, Greek, and Malay. The results showed that UTAUT model can be useful in providing into cross-cultural technology acceptance differences.

3. The UTAUT model explains 70% of technology acceptance behaviour Intention whereas other models, in the above literature review (TAM, TPB, and DOI) explains 30% to 40% (Venkatesh et al. 2003).

4. The UTAUT includes more factors affecting the Intention of the behaviour that mentioned in the previous literature review and overcomes the deficiencies of the other models. See Table 3.1

Model	Determinants of Behaviour
TRA	Attitudes towards the behaviour+ Social Influences (Ajzen and Fishbein, 1980; Ajzen, 1991).
TPB	Attitude towards behaviour+ subject norms + PBC (Ajzen, 1991).
DTPB	Attitude towards behaviour (compatibility, complexity, and relative advantage)+ subject norms + PBC (Efficiency, and Facilitating Conditions) (Taylor and Todd, 1995a).
TAM	Perceived Usefulness +Perceived Ease Of Use (Venkatesh, 2000; Porter and Donthu, 2006).
DOl	Innovation attributes + innovators' characteristics (Rogers, 2003).
SCT	Self-Efficacy + outcome expectations + affect (Compeau et al., 1999).
MM	Intrinsic motivation (enjoyment and fun) +extrinsic motivation (perceived usefulness) (Davis et al., 1992).
MPCU	Beliefs + affect+ social norms+ perceived consequences+ habit+ Facilitating Conditions (Triandis, 1979).

Table 3.1: Determinants of Behaviour in Acceptance Models
(Source: AlQeisi, 2009)

As can be seen from Table 3.1, the UTAUT model was developed from Venkatesh, Morris, Davis, and Davis in 2003 while the TAM3 model was

developed from Venkatesh and Bala in 2008. Given that TAM3 is a later model for technology acceptance, more empirical researches are needed to test its practical use. By contrast, UTAUT has been applied to a number of different types of systems and extended to suit several contexts.

Moreover, as shown in Table 3.2, Intention to use explains 53% of the variance for the TAM3 model while in the UTAUT model is 70%, and usage behaviour explains 35% of the variance for TAM3 while in the UTAUT model is 52% (Venkatesh and Bala, 2008; Venkatesh et al., 2003).

	Explained Variance (Adjusted R)	
	Intention to Use	**Usage Behaviour**
UTAUT	70%	52%
TAM3	53%	35%

Table 3.2: Explained Variance in the Models
(Source: Tang and Chen, 2011)

The UTAUT model was chosen as the basis of the model for this study since it is a widely accepted practical model and a robust model of technology acceptance covering the issues that emerged from the preliminary study. Therefore, it is considered to be the most appropriate model, among the different types of technology acceptance models, for this research study because the UTAUT model reviews and synthesises the major theories in the user acceptance of information technology. The literature survey and preliminary research results suggests modifications to the UTAUT Model, in order to make it more relevant for research into technological adoption in Kuwait.

The UTAUT states that behaviours towards using information systems are directly affected by four elements including Performance Expectancy, Effort

Expectancy, Social Influence, and Facilitating Conditions (Venkatesh, Morris, Davis, and Davis, 2003). Further, gender, age, experience, and voluntary use are defined as facilitating factors that shape an individual's behaviours.

This study relies on a UTAUT model proposed by Venkatesh et al (2003) in which some of the variables have been changed and others have been added as it has been retained to some of them. These added elements, have been excluded from the original UTAUT model. According to Venkatesh et al (2003, p. 425), the UTAUT model "was formulated, with four core determinants of Intention and usage, and up to four moderators of key relationships". They "theorized that four constructs will play a significant role as direct determinants of user acceptance and usage behaviour: Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Conditions" and these determinants were moderated by "the key moderators (gender, age, voluntariness, and experience)" (Venkatesh et al, 2003, p: 447). In their study, "attitude toward using technology, Self-Efficacy, and anxiety are theorized not to be direct determinants of Intention" (Venkatesh et al, 2003, p: 447).

According to the preliminary interviews and the literature review, this study expects attitude toward using technology, Self-Efficacy, and anxiety to behave differently and may have an affect on the Parliamentarians' Intention to use the Parliamentary website. Figure3.3 below shows the amended model in this study.

In addition to the direct determinants of the UTAUT model, Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Conditions, described in Chapter Two, the next sections discusses the amendment of the Behavioural Intention and use behaviour as dependent variable in this study, the two direct determinants and the modified moderators which have been

added to the amended model of this research and the reasons behind these changes. In addition to mention briefly the elements that has not undergone any change.

In these sections, an overview of the research hypotheses in this area will be provided via the use of existing hypotheses, and to develop new hypotheses appropriate for this research topic, which come from literature review, preliminary interviews, and observations of the characteristics of Kuwaiti culture.

Dependent Variable:
Behavioural Intention to Use

Many studies have found a correlation between Behavioural Intention and use behaviour are positively high (Chen and Zeng, 2012; Mei et al, 2013). Chen and Zeng, 2012 tried to understand End-Users' Acceptance of ERP Systems in Chinese large companies by applying the UTAUT model. Based on the survey, they found the Behavioural Intention is positively correlated to user Behavioural. In a similar study, Mei et al (2013) ran an empirical study of user acceptance of WeChat in China to find the factors affecting a Mobile Application's Acceptance. They found that use behaviour and Behavioural Intention are strongly correlated to each other.

In order to use Spearman correlation analysis to test correlation among these factors, this study integrated Behavioural Intention and use behaviour into one variable Behavioural Intention to use the Parliamentary website.

Direct Determinants:

Existing direct determinants and related hypotheses in UTAUT model:

- **Performance Expectancy**

  Hypothesis H1: *Performance Expectancy will have a positive influence on Behavioural Intention to use the Parliamentary website.*

- **Effort Expectancy**

  Hypothesis H2: *Effort Expectancy will have a positive influence on Behavioural Intention to use the Parliamentary website.*

- **Social Influence**

  Hypothesis H3: *Social Influence will exhibit a positive influence on Behavioural Intention to use the Parliamentary website.*

- **Facilitating Conditions**

  Hypothesis H4: *Facilitating Conditions will not influence Behavioural Intention to use Parliamentary website.*

The form of this last hypothesis is based on the fact that most members of the questionnaire population will have access to the same technologies and services, which will mitigate any effect of this parameter.

Added direct determinants and related hypotheses in amended UTAUT model:

- **Anxiety**

Anxiety refers to an individual's emotional reaction when performing a job (e.g., using a computer) (Li, 2008). It is defined as "the fear experienced when

interacting with a computer or anticipating an interaction" (Mcdonald, 2002). Compeau and Higgins (1995a) state that anxiety relates to feelings of nervousness and unease when performing a specific behaviour. Anxiety was originally considered within UTAUT. However, in their review of the eight prominent IT acceptance and motivation models, the authors of UTAUT Venkatesh et. al. (2003) found seven constructs, including anxiety, to be significant direct determinants of acceptance and use of technology in one or more of the individual models. They found that three of these constructs (Self-Efficacy, anxiety and attitude) did not have any direct effect on Intention to use the technology, and these constructs were dropped from UTAUT, leaving the other four (Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Conditions). Consistent with UTAUT, in Akber's study (2013), he found computer anxiety did not have a significant influence on Behavioural Intention.

However, some other research used demographic variables or individual characteristics (age and gender, computer experience, computer anxiety, computer Self-Efficacy) as factors not as moderators and found that these factors are significant predictors of computer use (Durrington, Repman and Valente 2000; Dusick 1998).

According to the preliminary interviews and the literature reviews and to investigate the influence of cultural factors on Parliamentarians in Kuwait with regards to ICT use, this study hypothesizes anxiety as a direct determinant may have an affect on the Parliamentarians' Intention to use the Parliamentary website:

> ***Hypothesis H5:*** *Anxiety will exhibit a negative influence on Behavioural Intention to use Parliamentary website.*

- **Self-Efficacy**

Self-Efficacy is defined as the judgment of one's ability to use a technology to accomplish a particular job or task (Compeau and Higgins, 1995b). Bandura (1986) defines Self-Efficacy as the belief that one has about one's capability to perform a particular behaviour. Marakas et al. (1998, p.128) defined computer Self-Efficacy as "an individual's perception of efficacy in performing specific computer-related tasks within the domain of general computing". Monsuwe et al. (2004) state Self-Efficacy is an individual's self-confidence in his or her ability to perform tasks across multiple computer application domains. Compeau and Higgins (1995b) defines computer Self-Efficacy as "an individual's perception of his or her own ability to use computer in the accomplishment of a task rather than reflecting simple component skill".

In the UTAUT model, Venkatesh et. al. (2003) did not incorporate the Self-Efficacy construct in the UTAUT model as it was found to have no impact on Behavioural Intention (Band, 2006). Consistent with UTAUT, in Akber's study (2013), he found computer Self-Efficacy did not have a significant influence on Behavioural Intention.

However research by (Durrington, Repman and Valente 2000; Dusick 1998) found that these factors are significant predictors of computer use. Gong et al. (2004) comment that computer Self-Efficacy has a direct positive effect on Intention to use web-based applications

According to the preliminary interviews and the literature reviews and to investigate the influence of cultural factors on Parliamentarians in Kuwait

with regards to ICT use, this study hypothesizes Self-Efficacy as a direct determinant may have an effect on the Parliamentarians' Intention to use the Parliamentary website:

Hypothesis H6: *Self-Efficacy will exhibit a positive influence on Behavioural Intention to use Parliamentary website.*

Moderators:

The following moderators and related hypotheses are taken from the UTAUT model:

- **Gender**

Hypothesis H1a: *Gender will moderate the influence of Performance Expectancy on Behavioural Intention to use Parliamentary website.*
Hypothesis H2a: *Gender will moderate the influence of Effort Expectancy on Behavioural Intention to use Parliamentary website.*
Hypothesis H3a: *Gender will moderate the influence of Social Influence on Behavioural Intention to use Parliamentary website.*

- **Age**

Hypothesis H1b: *Age will moderate the influence of Performance Expectancy (PE) on Behavioural Intention (BI) to use the Parliamentary website.*
Hypothesis H2b: *Age will moderate the influence of Effort Expectancy on Behavioural Intention to use the Parliamentary website.*
Hypothesis H3b: *Age will moderate the influence of Social Influence on Behavioural Intention to use the Parliamentary website.*
Hypothesis H4a: *Age will moderate the influence of Facilitating Conditions on Behavioural Intention to use the Parliamentary website.*

Added moderators and related hypotheses in the amended UTAUT model:

- **Level of Education**

Education has a significant impact on the adoption of e-Government services. Alawadhi and Morris (2008) observed that as the level of education of survey participants increased, the interaction with e-Government also increased. The same result was found with Zakaria (2001) who said that only the highest educational level was a significant predictor of the variance of IT implementation. Based on the preliminary interviews and the literature review, this study exchanged *experience,* in the Venkatesh et al. Model with *education level*.

This study hypothesizes education level as a moderator that has no influence on the determinants in the research model which affect the Parliamentarians' Intention to use the Parliamentary website. The negative form of these hypotheses is based on the fact that there is expected to be little difference in educational attainment across the questionnaire population, and therefore little visible influence of this parameter.

> ***Hypothesis H2c:*** *Education level will not moderate the influence of Effort Expectancy on Behavioural Intention to use the Parliamentary website.*
> ***Hypothesis H3c:*** *Education level will not moderate the influence of Social Influence on Behavioural Intention to use the Parliamentary website.*
> ***Hypothesis H4b:*** *Education level will not moderate the influence of Facilitating Conditions on Behavioural Intention to use the Parliamentary website.*

- **Attitude:**

Fishbein and Ajzen (1975) define attitude as an individual's positive or negative feeling about performing the target behaviour, whilst Venkatesh et al. (2003) define attitude toward technology as an individual's overall affective reaction to using a system. Therefore, Lam (2010) confirmed that an individual will have a favourable attitude towards using an information system if he believes that doing it will have positive consequences. Moreover, Aubke (2007) said that the relationship between attitude towards using any system and Behavioural Intention is based on the understanding that an individual's attitude towards a system may directly influence the Intention to use such a system.

As mentioned above, in the finished UTAUT model, Venkatesh et al. (2003) did not incorporate the attitude construct in the UTAUT model as it was found to have no impact on Behavioural Intention(Band, 2006). However, attitude towards usage of technology has been shown to have an influence on the acceptance and use of new technology (Kripanont, 2007; Algahtani et al., 2007; Alawadhi and Morris, 2008; Oshlyansky et al., 2007).

Akbar (2013) applied UTAUT model in his study to conduct empirical research testing the factors that influence students' acceptance and use of technology in their academic environment. The data shows that the more positive the attitude students have towards using technology, the more likely it is for them to accept it. Kutlay, 2012 examined the factors affecting the acceptance of mobile homecare system. These factors were assessed by taking the UTAUT model as a theoretical model. One of the study's results is that attitude was found to have a positive effect on the performance expectance of the Mobile Homecare System Users. Similarly, the UTAUT model was

adopted by Yeoh and Benjamin (2011) in their study on Behavioural Intention to use e-Banking services in Malacca and Kuala Lumpur. They concluded that Performance Expectancy and attitude toward using e-Banking services influenced Intention of using e-Banking services. Therefore, based on the preliminary interviews and the literature mentioned above, and to investigate the influence of cultural factors on Parliamentarians in Kuwait with regards to ICT use, attitude was reinstated to the model in this study.

This study hypothesizes attitude toward using technology as a moderator that may have an influence on the Performance Expectancy in the research model which affect the Parliamentarians' Intention to use the Parliamentary website:

> ***Hypothesis H7:*** *Attitude will have a positive effect on the Performance Expectancy of Parliamentarians to use the Parliamentary website.*

- **Voluntariness**

As discussed in Section 4.3.4, the original UTAUT model considers voluntariness to be a moderator. The focus of this study is on exploring factors affecting Parliamentarians' acceptance of the Parliamentary website, which implies that users are free regarding their use of the website or not. Hence, it is not necessary to classify their usage into voluntary or mandatory contexts. Therefore, voluntariness is excluded from the amended model of this study.

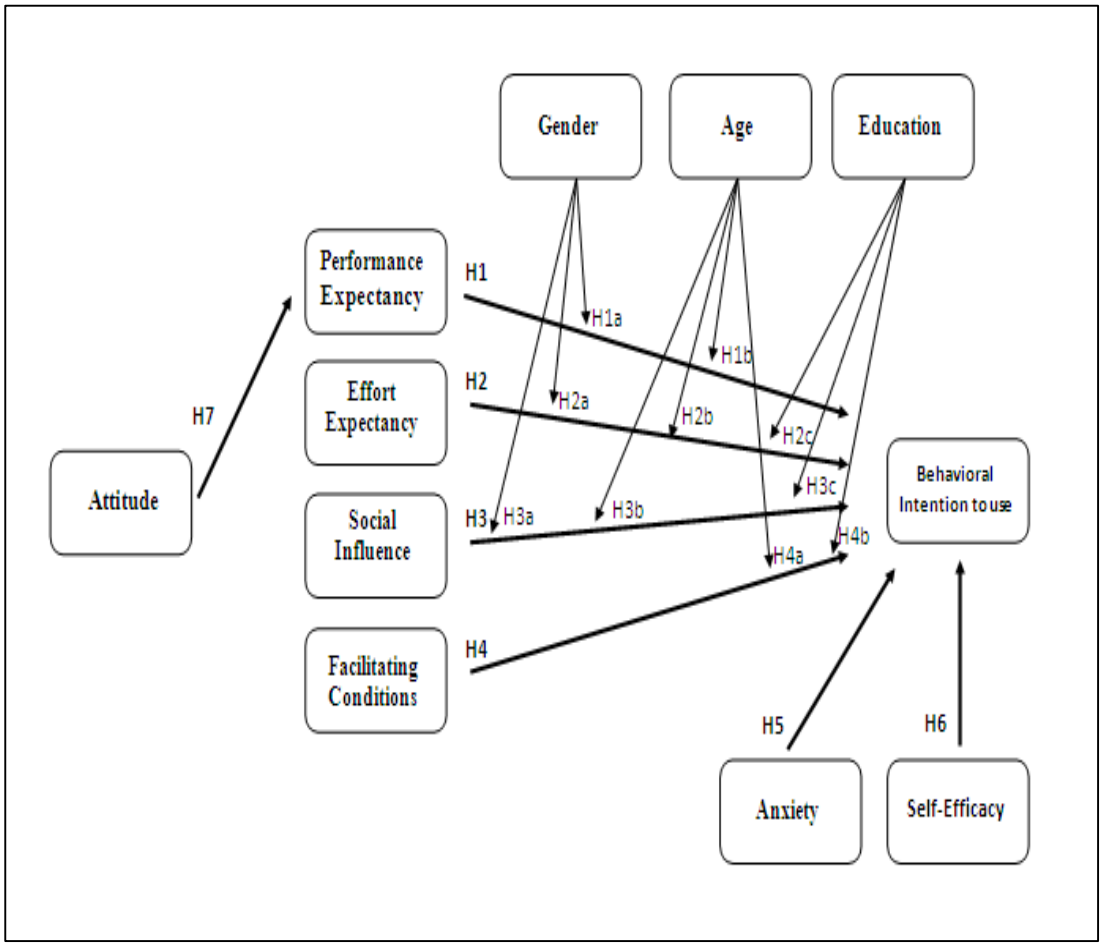


Figure 3.3: Amended UTAUT Model (Research Model)

3.6. Population and Sample

A population refers to the totality of cases that conform to some designated specifications, which could be people, events, or things of interest to the researcher (Sekaran, 2000; Churchill, 1987). The population of this study consists entirely of Parliamentary employees and MPs in Kuwait. The number of staff of the Parliament is 698 employees, while the number of MPs and Ministers is 65.

A representative sample is defined as part of the target population selected to represent the total population (Cooper and Schindler, 1998). Sampling design and sample size are important for establishing transferability, where Lincoln and Guba (1986) define transferability as the capacity for transferring the findings of a study to other circumstances which have related parameters, characteristics and populations. Denscombe (2002) explains that when a sample is transferable then "sufficient information is given about the characteristics of the sample or the cases used in the research for judgements to be made about the extent to which findings can be expected to apply more widely" (p. 181).Transferability is "accepted as case study strength as what has occurred in one study may be transferable to another" (Howison, 2010, p.50).

Individuals who use the Kuwaiti National Assembly website and work in the Kuwaiti National Assembly are the target sample of this study. As a result of the small population size, this study tended to depend on non-probability sampling techniques to estimate the required sample size. Denscombe (2010) refers to this method of using a representative sample with a non-probability sampling technique as a pragmatic approach. He argues that using a representative sample with "non-probability sampling techniques can produce data that are sufficiently accurate for the purposes of research" (Denscombe, 2014, p.49). Using this approach, however, depends on good judgement based on experience rather than on mathematical calculations (Denscombe, 2010). For this study, since the size of the population is small, it was important to use all of the population as targets for the survey (Sekaran, 2003). This makes it possible to apply the study to each member of the population (Hussey and Hussey, 1997).

3.7. Data Collection

Data collection is the process through which opinions and useful information is collected from the respondents. There are different methods for data collection; in this study, the instruments were two interviews and two questionnaires. The details of the design and application of the instruments is given below.

3.7.1. Initial Interviews

As an exploratory stage of this study in Kuwait Parliament, a series of unstructured, preliminary interviews were conducted in order to examine the factors that appear to affect and influence the Parliamentarians' Intention to use Parliamentary website in Kuwait. These interviews were conducted in September 2012 in the Kuwaiti National Assembly.

An unstructured interview is often seen as an informal interview that is not structured by the standard list of questions. An unstructured interview is particularly useful for a preliminary study to in order test what the responses might be to a particular issue (Doyle, 2004; Seidman, 1998).

The interviews were conducted by face to face interviewing with open-ended questions to collect preliminary information from some of the Heads of departments namely: the Secretary-General of the Kuwaiti National Assembly, the Director of Personnel Management, the Director of Documentation and Documents, the Director of Information Department, the Head of Research and Studies, and the Director of the Library from the Kuwaiti National Assembly. The questions were aimed to investigate the working environment of Parliamentarians associated with use of the ICTs and the Parliamentary website.

The interviewees from different sectors were selected in order to be able to discover the factors and issues that affect the Parliamentarians' Intention to use the Parliamentary website from different experts' views. The researcher explained the background as well as the significance of the study and the objectives of the interview. The interviewees were advised that their participation was voluntary and that their responses would remain confidential.

The objectives of the interviews were to:

1. Appraise the ICT situation in the Kuwait Parliament.
2. Identify the future plans related to the Parliamentary website and the online services in the Kuwait Parliament.
3. Identify potential advantages of using the Parliamentary website.
4. Identify the perceived difficulties that face the Parliamentary website use in the Kuwait Parliament.

The results are briefly reported here rather than in Chapter Four since they are not seen as a major contribution in their own right but rather as an input to the research model tested via the other study instruments.

To clarify the current ICTs situation in Kuwait Parliament, the interviewees confirmed that Kuwait's Parliament has a good ICT level in terms of the services provided by the information technology sector of the Secretariat of the Kuwaiti National Assembly. The Parliament recently launched electronic services serving members of Parliament, consisting of electronic voting and a database of archived the Parliamentary questions.

With regard to potential advantages of using the Parliamentary website in Kuwait Parliament, the interviewees pointed out that Parliamentary work

requires the use of information technology in all fields so that they can provide a complete picture of its performance, and even then be judged on this performance. They claimed that Parliamentary work needs to use all means of transparency as it reflects the pulse of democratic action within the state, and failure to use technology is a failure in the consolidation of democracy and the principles of integrity, transparency and hence accountability and the credibility. They stated that information technology is fused with the Parliamentary work and democracy now in any country in the world.

In addition to the effort in training MPs and new employees on how and ways to deal with the modern Parliamentary technology especially with regard to electronic voting and dealing with computers for dispensing handle the papers in Parliament, all of the interviewees brought up the issues involving Parliamentarians concerns about the use of Parliamentary website in the following areas:

1. Anxiety of the use the Parliamentary website and violation of security and privacy.
2. The difficulty of reporting of new services for the site.
3. The website language (Arabic and English).
4. Suffering from system slowdowns and website stopping.
5. The ability of Parliamentarians to use the services and Self-Efficacy to take advantage of these services.
6. The difficulty of developing the site and linking it with other government agencies.

Thus from the preliminary study that were mentioned in this chapter, it is clear that there are key elements stand out on the surface in the Kuwaiti

society, especially in the Parliament, that may affect the Intention of Parliamentarians to use the Parliamentary website in Kuwait Parliament. These informal results fed into the technology acceptance model to be tested.

3.7.2. Questionnaire Surveys

Questionnaires are considered to be one of the most popular tools used to collect data in research. Sekaran (2003) believed that questionnaires could be used for large numbers of individuals in the population since they are less expensive, less time-consuming, and don't require specific skills, in comparison to interviews. In contrast, Hussey and Hussey (1997) argued that one of the most prominent problems relating to the use of questionnaires is the issues of confidentiality. However, this issue can be solved through using cover letters to make it clear that all data will be handled confidentially. In addition, the questionnaire is an instrument typically administered at a distance. This means the questionnaire itself must be unambiguous. Similarly, any ambiguous data can be explored in follow-up interviews.

3.7.2.1. Website Usability Evaluation - SUS

The ISO's 9241 definition of usability is "[t]he effectiveness, efficiency and satisfaction with which specified users achieve specified goals in particular environments. Effectiveness: [is] the accuracy and completeness with which specified users can achieve specified goals in particular environments" ((ISO-9241-11). According to Rubin (1994) a website that is usable should display four factors: usefulness, effectiveness, learnability, and user satisfaction. Usability evaluation can be carried out either by gathering objective quantitative data (by observing the time a user takes to complete a task,

number of clicks necessary and so on) or via subjective data such as gathered via a questionnaire of users.

In 1996, John Brooke developed a questionnaire that allows the usability practitioner to quickly and easily assess the usability of a given technology or service (Brooke, 1996). The global assessment of usability is called the system usability scale (SUS) (Borsci et.al, 2014). SUS is the most popular questionnaire for measuring attitudes toward system usability (Sauro and Lewis, 2011).The SUS items have been developed according to the three usability criteria defined by the International Organization for Standardization (ISO-9241-11):

1. Effectiveness: the ability of user to complete tasks using the system.
2. Efficiency: the extent to which they expend resource in achieving the user's goals.
3. Satisfaction: the user's subjective reactions using the system (p.2).

SUS has many advantages. Sauro and Lewis (2011) based on analysis of the data collected, said that SUS can be used on small sample sizes with reliable result and. Its measures are learnability and usability. Brooke (1996) said that SUS has a good ability to identify systems with good and poor usability. Its major disadvantage is probably its very generic nature. In Figure 3.4, Bangor et al. (2008) showed in their study comparing SUS with other alternatives that the SUS test can assess a wide range of interface technologies from voice response systems (IVRs) to websites. They found that SUS was relatively quick and easy to use.

Survey Name	Abbreviation	Developer	Survey Length (Questions)	Availability	Interface Measured	Reliability
After Scenario Questionnaire	ASQ	IBM	3	Nonproprietary	Any	0.93[a]
Computer System Usability Questionnaire	CSUQ	IBM	19	Nonproprietary	Computer based	0.95[b]
Poststudy System Usability Questionnaire	PSSUQ	IBM	19	Nonproprietary	Computer based	0.96[b]
Software Usability Measurement Inventory	SUMI[c]	HFRG	50	Proprietary	Software	0.89[d]
System Usability Scale	SUS	DEC	10	Nonproprietary	Any	0.85[e]
Usefulness, Satisfaction and Ease of Use	USE	Lund	30	Nonproprietary	Any	Unreported[f]
Web Site Analysis and Measurement Inventory	WAMMI	HFRG	20	Proprietary	Web based	0.96[g]

Figure 3.4: A comparison between SUS and other alternatives (Bangor et. al, 2008)

Sauro and Lewis (2011) and Bangor (2008) found that SUS can be applied for many different technologies. Tullis and Stetson (2004) said that SUS provides superior assessments of website usability compared to other questionnaires.

SUS statements were presented to the Parliamentarians as a part of the survey after the UTAUT statements.

3.7.2.2. Questionnaire Design

A questionnaire was designed to explore the elements of the study's model. This questionnaire aims at testing the research model and the study hypotheses. In designing the questionnaire, three things were important: the wording of the questions, planning the issues of variable classification, and the general appearance of the questionnaire.

Some parts of the questionnaire (Section A) were from previous studies of relevance to this one. The information collected from the Parliamentarians was divided into four sections: attitudes and motivations (Ticehurst and Veal, 2000), usability testing, background of ICT usage, and demographic

information. As the mother language in Kuwait is Arabic, the questionnaire was translated into Arabic, in order to avoid any difficulty for the participants in understanding the questions.

A cover letter attached to the questionnaire included an explanation of the goals of the study. It explained that the study is a research project conducted at the University of Brighton, Brighton, United Kingdom, that all information obtained would be anonymous and confidential, and would only be used for the purposes of the present study. At the top of the questionnaire, was a declaration that the questionnaire is only intended for Parliamentarians in the Kuwaiti Parliament who are Members of the Kuwaiti National Assembly, Members of the Cabinet, or employees in the Parliament.

The questionnaire was divided into four sections running from A to D. The Likert 7-point scale was used in section A, because it is popular for measuring attitudes and it is easily dealt with. In a Likert scale, the respondent is asked to respond to each of the statements in terms of several degrees of agreement or disagreement. In this study, seven choices were used according to the measurement scales used in previous well-known studies such as Davis (1989). In Figure 3.5, the scale is shown as ranging from strongly disagree = 1, quite disagree = 2, slightly disagree = 3, neutral = 4, slightly agree = 5, quite agree = 6, and strongly agree = 7. This kind of data is called ordinal data. Ordinal data is “based on counts of things assigned to specific categories which stand in some clear, ordered, ranked relationship” (Denscombe, 2010). "In statistical terms, these objections amount to arguing that the level of measurement of the Likert response scale is ‘ordinal’ rather than ‘interval’" (Johns, 2010, p: 9).

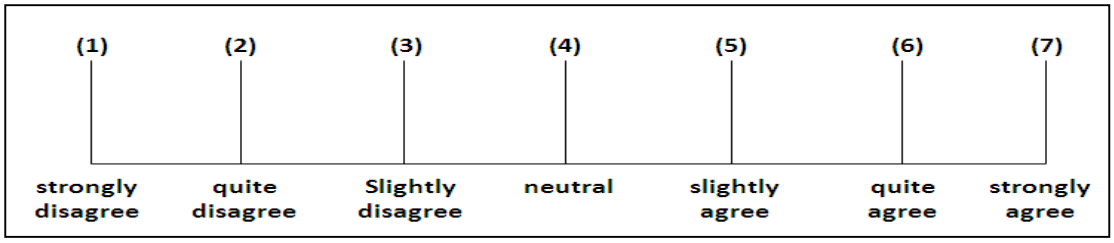


Figure 3.5: Likert 7-point scale

Section A was used to evaluate the amended model of technology acceptance (research model) and focused on the determinants that were expected to influence behaviours. Measurement items used in this section were adapted from the measurement items originally used in many models including TAM2 (Venkatesh and Davis 2000), DTPB (Taylor and Todd 1995b) and UTAUT itself (Venkatesh et al. 2003). For the validity of the instrument, the questions used in the measurement of the research model were based on validated items from previous studies (Venkatesh et al., 2003; Venkatesh and Davies, 2000; Taylor and Todd, 1995a, 1995b; Kripanont, 2007).

In section B, the Brooke, (1996) SUS questionnaire was used. The questionnaire consists of ten statements. Each statement has five points on the Likert scale: strong disagreement is number (1) and strong agreement is number (5) and the data is therefore ordinal. This usability test was employed to get a fuller understanding of the factors that affect the Intention of Parliamentarians to use the Kuwait Parliament website. Note that the Arabic language was used here as well.

The data in section C and D are a nominal data. According to Denscombe (2010), nominal data “come from counting things and placing them into categories” (p. 237) e.g. male/female. Section C focused on the background of the use of the website and of information and communication technology

applications. It comprised six questions all established as nominal scales. Section D consists of eight questions. These were developed to explore the demographic information of Parliamentarians. A copy of the questionnaire is shown in Appendix IV.

In designing the questionnaire, some aspects and characteristics of individuals, such as inclination to privacy and tendency to boredom were taken into consideration. Therefore, the demographic questions normally come close to the end of the questionnaire (Grinnell, 1997). The reason behind this is that when a respondent feels too bored to go on the questionnaire, little information is lost. The kind of questions posed here was focussed on measuring the effect of some variables used in the research model (e.g. gender, age and level of education).

3.7.2.3. Pre-Testing

Pre-testing or piloting refers to the distribution of the questionnaire to a limited number from the population before the full scale survey. If problems occur in the pre-test, it is likely that similar problems will arise in a full-scale survey (Sekaran, 2003). The purpose of pre-testing is to identify problems with the data collection instruments and to find possible solutions. If problems do appear, it is advisable to make as few amendments as possible to the questionnaire. Once the questionnaire has been distributed, amendments are not possible. The pre-testing questionnaire helps to reduce errors and allows amendments to be made before the full scale survey (Cooper and Schindler, 1998).

Pre-testing helps to solve problems that occur in understanding the questions, for example confusion in the wording of questions. This is important because

question wording substantially influences accuracy (Zikmund, 2003). A basic statistical analysis was made of this pre-test.

For this research, a pre-testing study was conducted within the Kuwaiti National Assembly. Pre-testing study was carried out from 15 April 2014 to 15 May 2014. It was administered personally to provide any explanation that might be raised by any respondent (Parliamentarian), to manage the duration of the survey, to capture respondents' reactions, and to correct any error in the survey. Fifty-five questionnaires were been sent to the Parliamentarians in this phase. Answering a questionnaire required about 15 to 45 minutes. The pre-testing study revealed some grammar and spelling mistakes but no problems of meaning.

3.7.2.4. Questionnaire Distribution

Questionnaire distribution can be carried out using printed or electronic forms. Boyer et al. (2001) mentions several disadvantages of the use of computerized questionnaires or distributing the questionnaire via Internet. They are as follows:

1. The questionnaire via Internet is displayed by applications. However, people are not willing to learn new programs and applications just on one occasion.
2. In the questionnaire via Internet, side comments or views are not acceptable in most Internet applications, unlike for the printed questionnaire.
3. One cannot take a quick look at the content of the questionnaire to get an impression of the full content when using the Internet.
4. There is the possibility of losing data when sending the questionnaire via Internet.

For these reasons printed questionnaires were used in this study. This was further justified by the fact that the data collection was conducted in a specific area. In addition, the targeted population was relatively small compared to other countries. This type of questionnaire has disadvantages and the most prominent of these disadvantages are high expenses and time consumption when compared with the questionnaire via the Internet. The questionnaires were distributed by hand buy the researcher. They were either filled in on the spot and collected, or taken away to be completed and collected later.

This section provides a detailed description of the qualitative data collection via interviews. The interview provides an excellent opportunity to gather in-depth information from an individual (Cavana et al, 2001).The findings derived from the qualitative approach enabled further investigation and follow-up in order to provide further confirmation for the model and hypotheses.

As stated by Bernard (2005), a semi-structured interview is one in which either a) the interviewer refers to a sheet containing key areas to be covered in the interview or b) uses a set of questions but is prepared to insert other questions into the interview in order to capture elaborations.

Direct interviews are useful especially if the population is not known or when the sample is not able to respond to the questionnaire (Salant and Dillman, 1994). Isaac and Michael (1997) believed that face-to-face interview is a flexible tool especially when reading facial gestures and body language. Moreover researchers can elicit other points of the answer provided by observing the body.

Bucher et al. (1956) summarized the advantages of using audio-recording in interviews in a special study on audio-recorded interviews in social research. They said that tape-recording works to maintain all sentences, words and ideas that arise in the interview. On the other hand, there is a chance of losing some of this information when you use the method of writing. Bucher et al. (1956) stated that interview using the tape-recording helps the interviewer to be attentive to talk rather than being preoccupied by writing, which works to deflect the interviewer's focus in the interview.

3.7.2.5. The Research Interviews

Twenty-one respondents were selected: ten of them were Ministers, five were Members of Parliament and six were Heads of sectors. This constitutes a representative sample with respect to status and makes up approximately a third of the total population of 65 MP's and ministers. The Heads of sectors were the same six senior officials targeted in the preliminary interviews: the Secretary-General of the Kuwaiti National Assembly, the Director of Personnel Management, the Director of Documentation and Documents, The Director of Information Department, The Head of Research and Studies and the Director of the Library of the Kuwaiti National Assembly. It should be noted that ministers are Members of the Parliament according to the Kuwaiti Constitution.

These interviews were conducted face-to-face using audio-recording for a period ranging between fifteen minutes to sixty minutes, typically after the questionnaire completion, i.e. in a single session. . The role of the interview tool in this research is a complementary one, and involves identifying the main obstacles and challenges facing the use and the development of the Parliamentary website by Parliamentarians. Most Ministers filled in the

questionnaire in the Council Hall and the special lounges of the Members of Parliament and Minister in Parliament sessions.

It was difficult to access many of the Members of Parliament and Ministers due to them not being present outside of the National Assembly on most days of the week. Therefore, a special permit was issued by the General Secretariat of the Kuwaiti National Assembly allowing the researcher to enter the building of the Chamber and the lounges for both Ministers and Members of Parliament. This happened during the National Assembly's sessions. Notably there were signs of surprise and questions asked at the presence of a woman, where the majority of Members, Ministers and the staff are male, the only women being one Member of Parliament and one Minister.

Some studies focused on elite populations, particularly Parliamentarians, have emphasized that one of the key challenges that have been faced was access (Atkinson et al., 2003; Smith, 2005). Other studies describe how access was a difficult issue in interviewing politicians (Ross, 2001 and Rhodes et al., 2007).

The interviews were completed in May 2014. The main criteria for selecting the interviewees were their experiences; they needed to be involved in several projects in the Parliament as a Heads of sectors or departments. These interviews took place in MPs' Parliamentary offices during sitting times and in their rest rooms between the sessions over one month.

Times were chosen to hold interviews with Members of Parliament in the days of the establishment of formal sessions of the Parliament and voting times inside the hall. This choice was based on the proposal of the Secretary General of the Kuwaiti Parliament, where he believes that most of the Members of Parliament will be present at the Parliament in these days

proposed. The researcher actually found it difficult to access for most Members of Parliament because of their presence outside the Parliament in most days of the week by virtue of their presence in various government bodies to resolve the outstanding problems of their constituents with those bodies.

Researcher stopped in front of the voting hall and at the same time between the rest rooms, the first one belonging to the Members of Parliament while the second belonged to Members of the government. The researcher was present from early morning until four o'clock in the afternoon, because of the difficulty of meeting with some of Members of Parliament, some of whom welcomed the meeting while others refused it.

Some Members of Parliament was not being able to participate in the study because of time constraints. Some of them informed the researcher of his unwillingness to participate without providing any reason. It was notable that most of Ministers welcomed to make an interview and to fill the questionnaire with them while it was most difficult to do it with some of Members of Parliament.

It was not allowed for employees to enter the area leading to the hall to vote and which also contains the rest rooms for both the Members of either the government or Parliament. Therefore only senior staffs who are Heads of departments are allowed to enter the area. It is noted that none of the Heads of departments was a woman. The only women who were allowed in that area are three: woman as a Minister of Transportation, woman as a Member of Parliament and a woman who is the researcher of this study. So it was surprising the presence of the researcher as a woman between halls and between all this huge number of men of Members of Parliament and Members

of Government Council with their own private secretarial in that area of the Parliament.

The time of the interview was dictated by the availability of the MP as well as that of the researcher with the length ranged from around fifteen minutes to an hour. Some of the Members of Parliament who were less busy had time to talk and express their views on politics generally. However, the interviews were interrupted by the ringing of the voting bells where the Members of Parliament should go back to the voting hall immediately or the interviews were interrupted by answering phone calls or met with someone else during the interview.

In addition, interviews were taped on audio-tape, but some interviewees expressed their desire to speak more openly if interviews were not recorded. Five of the interviews were recorded, while sixteen of the participants in the interviews refused the interviews recording. The participants who refused the recording of their interviews were Ministers and Members of Parliament.

3.8. Data Analysis

Several quantitative statistical techniques were employed for questionnaire data analyses; at all times, the collected data type (i.e. nominal, ordinal or continuous) and sample size were used to inform selection of the most suitable statistical approach, with all analyses undertaken using the IBM Statistical Package for the Social Sciences (SPSS Statistics Premium 22). The following sections outline the techniques employed for analysis of the UTAUT model questionnaire (Section 3.8.1.), SUS questionnaire (Section 3.8.2).

3.8.1. UTAUT Model Survey Analysis

In order to gain an understanding of the user acceptance of websites among Parliamentarians, descriptive analysis was applied to collected respondent demographic information. Developed study hypotheses were tested via analyses of respondent completed questionnaires, which were created and populated with items validated by prior research, and adapted to the specific technologies and organizations studied. TRA scales were adapted from Davis et al. (1989); TAM scales were adapted from Davis (1989), Davis et al. (1989), and Venkatesh and Davis (2000); MM scales were adapted from Davis et al. (1992); TPB/DTPB scales were adapted from Taylor and Todd (1995a, 1995b); MPCU scales were adapted from Thompson et al. (1991); DOI scales were adapted from Moore and Benbasat (1991), while SCT scales were adapted from Compeau and Higgins (1995a, 1995b) and Compeau et al. (1999). Behavioural Intention to use the system was measured using a three-item scale adapted from Davis et al. (1989); this scale has been extensively employed in much of the prior individual acceptance research. Results have been assessed via the use of two appropriate statistical approaches, namely Spearman's rank order correlation coefficient (Spearman's rho) and moderated regression analyses. The use of Structural Equation Modelling (SEM) was also considered for testing moderator variable effects, however, based upon current best practise it was not employed due to the total sample number being <200.

Spearman's rank order correlation (rsp) is a method of bivariate analysis that measures the strength of an association between two variables, with the value of the correlation coefficient varying between +1 and -1. Spearman rank correlation is a non-parametric (i.e. non-linear) test which does not comprise any prior assumptions pertaining to the distribution of the data and is the most appropriate approach to correlational analyses when variables are measured

on an ordinal scale, as is the case in the current study. In terms of test assumptions, as mentioned, no assumption is made with respect to data distribution, however it is assumed that data are at least ordinal and scores on one variable must be monotonically related to the other variable. With respect to the strength of association, and thus the coefficient interpretation, typically rsp 0.1 – 0.29 is regarded as a small association, 0.3 – 0.49 is a moderate/medium association and >0.5 is a large association (Tharenou et al. 2007). The following equation is used to calculate Spearman's rank correlation:

$$\rho = 1 - \frac{6\sum d_i^2}{n(n^2 - 1)}$$

where,

P = Spearman rank correlation

di = difference between ranks of corresponding values Xi and Yi

n = number of values in each dataset

Moderated regression analyses (also known as moderator analysis within multiple regression) are typically used to test for moderation effects within a particular dataset (Fairchild and McKinnon, 2010). Moderation may be defined as a relationship or association between two variables that affected or moderated by a third (moderator) variable (McKinnon et al., 2000). This effect is statistically characterised as an interaction that affects either the strength or direction of the association between the dependant and independent variables. Moderated regression analyses are undertaken via development of a new interaction predictor or term (x1x2); in order to avoid

guaranteed multicollinearity within the analyses due to the use of an interaction term, mean centring (i.e. subtraction of raw scores from their associated mean) is employed. Summarily, moderation effects are tested via multiple regression, where all independent variables (including the potential moderator) and their interaction term are centred and hierarchically entered for model estimation in order that moderation can be effectively interpreted from the resulting regression coefficients. Excellent reviews of moderated regression analyses have been previously provided by Jaccard and Turrisi (2003), Aguinis (2004) and Jose (2013). As previously stated by Fairchild and McKinnon (2010), a single regression equation may be used to represent the basic moderation model, as follows:

$$Y = i_5 + \beta_1 X + \beta_2 Z + \beta_3 XZ + e_5$$

where,

$\beta 1$ = coefficient relating the independent variable, X, to the outcome, Y, when Z = 0,

$\beta 2$ = coefficient relating the moderator variable, Z, to the outcome when X = 0,

$\beta 3$ = coefficient relating to the intercept variable, XZ

i5 = equation intercept

e5 =equation residual

The regression coefficient for the interaction term, $\beta 3$, provides an estimate of the moderation effect. If $\beta 3$ is statistically different from zero, there is significant moderation of the X-Y relation in the data.

3.8.2. SUS Analysis

In order to analyse the results of the SUS questionnaire, the research adopted a scoring system created by the SUS developer (Brooke, 1996).

The statements alternate between positive and negative statements about usability. System Usability Testing Scores have a range of 0 - 100. For calculating the System Usability Testing Score:

1. First sum the score contributions from each item.
2. Each item's score contribution will range from 0 to 4.
3. For items 1, 3, 5, 7, and 9 the score contribution is the scale position minus 1.
4. For items 2,4,6,8 and 10, the contribution is 5 minus the scale position.
5. Multiply the sum of the scores by 2.5 to obtain the overall value.

Sauro (2011, p. 3) observes that "the alternation of positive and negative items also provides protection against serial extreme responder participants who provide all high or all low ratings, a situation that could be especially problematic for remote usability testing".

The system usability survey has been used in some previous studies as an indicator of the effectiveness of the systems used by the public or of a product in the market. Bangor et al. (2008) collected data on the use of System Usability Testing over more than a decade with a variety of different systems and technologies, generating more than 3,500 System Usability Testing results. These researchers suggest that it is possible to take the System Usability Testing Score for a particular product and give it a grading score. They reached this conclusion after they found that there was a close correlation between System Usability Testing Scores and people’s ratings of

systems in terms of adjectives such as “good,” “poor,” or “excellent” (Figure 3.6).It is important to note that the resulting figure is not a percentage (Sauro, 2011).In practice, a SUS score above a 68 would be considered above average and anything below 68 is below average.

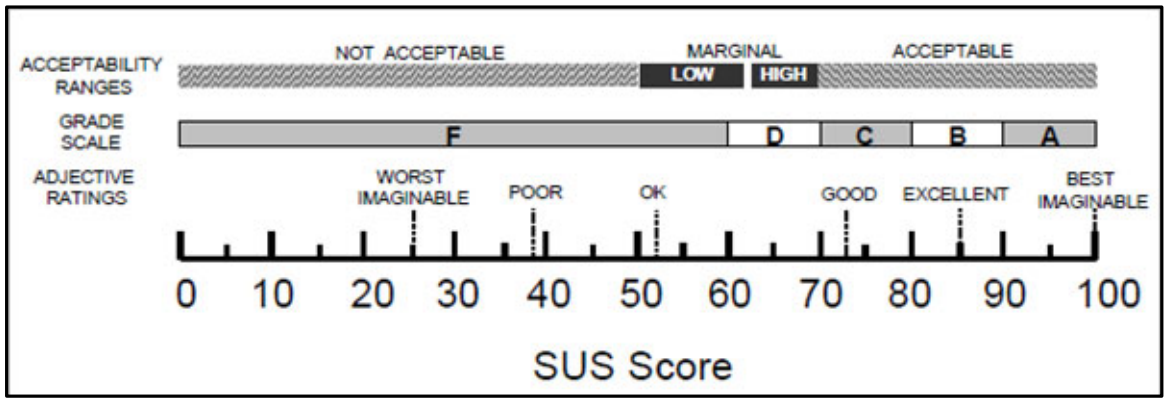


Figure 3.6: Grade rankings of SUS scores
(Source: Brooke, 2013)

3.9. Reliability and Validity

When designing a questionnaire to collect quantitative data it is important to pay attention to the issues of reliability and validity. Reliability “is about repeatability of what the questionnaire measures whereas validity is concerned with whether or not the questionnaire measures what it is supposed to measure" (Jordan, 1998, p. 66). Reliability is achieved by using research instruments that produce the same results on repeated or on different occasions (Cavana et al., 2001).

3.9.1. UTAUT Model Questionnaire Reliability and Validity

The questions in the survey in this research were based on the standard scale of the UTAUT model which are based on earlier established work, and had acceptable loadings of greater than 0.7 for its Cronbach’s Alpha (Venkatesh et al., 2003).

3.9.2. SUS Reliability and Validity

By using coefficient alpha (a measure of internal consistency often used to estimate reliability of multi-item scales) Bangor et al. (2008) found the reliability for SUS to be equal to 0.91 when he used 2,324 cases as a sample. Lewis and Sauro (2009) found the reliability for SUS to be equal to 0.92 when he used 324 cases as a sample.

Tullis and Stetson (2004) have shown that SUS is reliable with a small sample compared to other usability scales such as the Questionnaire for User Interface Satisfaction (QUIS) and the Computer System Usability Questionnaire (CSUQ). See Figure 3.7.

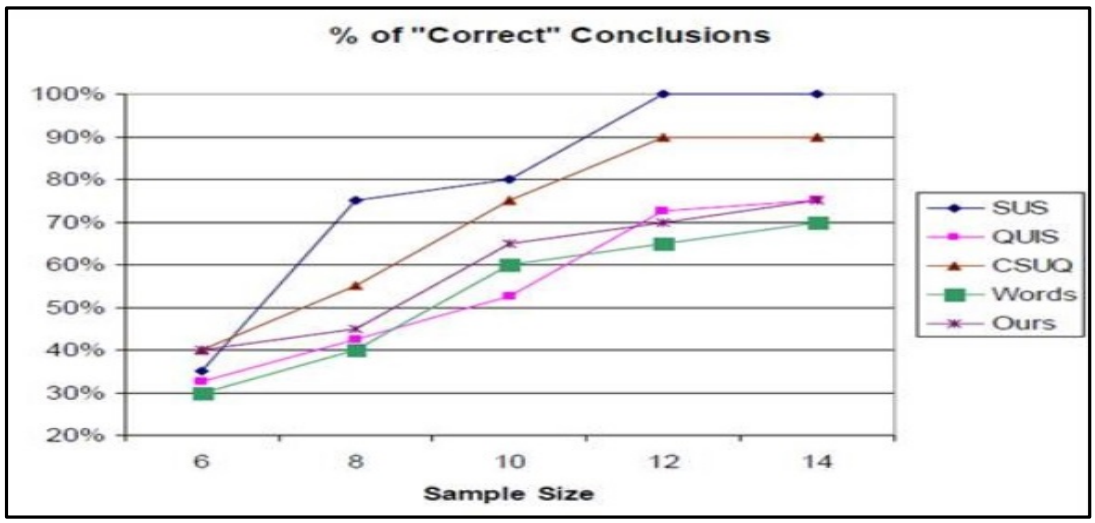


Figure 3.7: A comparison of Questionnaires for Assessing Website Usability (Tullisand Stetson, 2004)

3.9.3. Interview Reliability

The reliability of the qualitative methods was strengthened by informing the person to be interviewed of the interview protocol and the questions prior to the interview. Furthermore, to correct any misunderstanding, the interviewer

might repeat the information relayed by the interviewee. The next section discusses the ethical issues that were addressed in the research.

3.10. Ethical Issues

Ethical issues must be considered throughout the entire process in order to ensure that the results and the final report of a study really represent all of the data and related conditions (McPhail, 2000). Ethical behaviour should be observed in the conduct of researchers who are conducting the investigation, by participants who provide the data, as well as by analysts who provide results and interpret of the results. Therefore, ethical behaviour should permeate every step of the research process, including data collection, data analysis and reporting (Sekaran, 2000). To maintain the confidentiality and privacy of the respondents, the researcher should provide a promise of confidentiality to all respondents and should not use the information for any other purposes than those related to the research (Zikmund, 1997). Furthermore, participants should be given full details on the topic and purpose of the survey (Cooper and Schindler, 1998).

In this study the purposes of the research were explained to respondents in the covering letter of the questionnaire, and in face-to-face interviews. Furthermore, in order to increase respondent confidence and to motivate them to answer questions, the names and contact addresses of the researcher and her academic advisors were given to the respondents. The research was undertaken in conformity with the University of Brighton Code of Practice, and had appropriate ethical approval from the researcher's supervisors. Respondents to both the survey and interviews were informed, face to face and in the covering letter of the questionnaire, of their right to not take part in the study, and that participation was voluntary. A promise of confidentiality was made to all respondents and the researcher was obligated not to use any

information other than for purposes related to this research. To maintain the confidentiality and privacy of the respondents, only aggregate results were used and individual results would not be identifiable with anyone personally. The survey contained no personal details and anonymity was guaranteed for all participants.

3.11. Summary

This chapter explains the techniques, methods and approaches employed in this research including the questionnaire and the data sampling and collection procedure. It provides an overview of the mixed methods strategy employed in this study, which uses quantitative and qualitative methods. It discusses the fact that the study used a questionnaire survey, interviews, and open-ended questions; with the survey consisting of two parts: the UTAUT model questionnaire and the usability testing (SUS) questionnaire. The chapter also explains the sampling techniques for all methods, and discusses how the usability of the Kuwaiti National Assembly's website was investigated using usability instruments, to collect evidence to determine whether there exists a defect in the usability of the Kuwaiti Parliamentary website, or not. Furthermore, the chapter introduces the methods of analysis, and presents an outline of the constructs of the modified model and the research hypotheses. Finally, it discusses the ethical considerations that were taken into account in the research approach. The data analysis and discussions of the results are provided in Chapters Four and Five. The next chapter presents the results of the data analysis.

CHAPTER 4 : RESULTS AND ANALYSIS

4.1 Introduction

The purpose of this chapter is to present the data collected by the methods described in Chapter Three. The chapter starts by presenting descriptive information pertaining to participant demographics (4.2) and their self-reported use of the Parliamentary website (4.3). It moves on to present data gathered about respondents' attitudes towards the Parliamentary website using results from the previously outlined UTAUT model (4.4), with a section devoted to reading (4.5). The results of the questionnaire were subjected to statistical analysis in order to test hypotheses regarding Behavioural Intention to use the Parliamentary website (4.6). The findings of the usability test are the presented (4.7). The last part of this chapter presents the qualitative data derived from interview responses (4.8). These help to complement and explain the quantitative data.

Results from the data analysis outlined in this chapter are used to provide answers to the following research questions:

1. How do Parliamentarians in Kuwait use ICT? In particular:

- For what goals and tasks do Parliamentarians in Kuwait use the Parliamentary website? How frequently do they use it?

- What other applications are most heavily used by Parliamentarians in Kuwait?

2. To what extent do demographic factors (age, gender, and education) influence Parliamentarians' perceptions and behaviours with regards to ICT in Parliament?

3. What other factors influence Parliamentarians' Intention to use the Parliamentary website in Kuwait?

4. To what extent does the additional of cultural factors to the UTAUT model expand its explanatory power?

These correspond to objectives 2, 3, 4, and 5, as stated in Chapter One.

4.2 The Survey Sample

This section presents demographic information about the survey participants.

4.2.1 Overview of Respondents

A total of 182 responses (sample population) from a total potential population of 763 (total number of staff of the Parliament is 698 employees and the number of Members of Parliament and Ministers is 65), were received over a three week period. In order to select the relevant data for advanced statistical analysis, several procedures have been gone through to screen the data. Consequently, three questionnaires were dropped for the data analysis because the respondents had never used the Parliamentary website and could not have answered any questions meaningfully. These three respondents were high ranking, specifically one Minister and two Members of Parliament. Unfortunately it was not possible to interview these members in order to follow up their non-usage, as they stated they did not have time. Additionally,

six questionnaires were discarded after outlier testing. Therefore, 173 usable responses from 763 delivered questionnaires result in a response rate of 22.67%. In the specific circumstances, this is a good response when compared to a previous study carried out by a member of staff of Parliament which collected only 30 questionnaires (as reported by the Head of the Public Relations sector in the Kuwaiti National Assembly). This percentage was expected. The sampling target category is the category of a special nature in terms of location and career position. Similarly, a previous study in British Parliament has an overall response rate was 23% (Goodchild et al., 2007). Some studies in technology acceptance show similar response rates, e.g. 26% (Khalil and AlNasrallah, 2014) and some have a much lower rate, e.g. 5% (Thomas et al., 2013).

Table 4.1shows the number of male and female respondents stratified by their professional position in the Kuwaiti National Assembly. In the Kuwaiti Parliament the percentage of job positions, in terms of the 173 responses, are as follows: employees (60.7 %), Members of Parliament (16.18%), Heads of Section (15%), Ministers (6%), and Members of Parliament office (1.73%). It is clear from Table 4.1that the highest level of participation was that of Ministers, as 11 Ministers out of 16 (68.75%) participated, compared to 31 MPs out of 48 (64.6%), and 105 employees out of 698 (15%). There may have been several reasons for the relatively low response from employees: some took the questionnaires but did not return them.

Position	Gender	Number	Representation for Population
Member of Parliament Office	Female	0	0
	Male	3	0.39
Minister	Female	1	0.13
	Male	10	1.31
Member of Parliament	Female	1	0.13
	Male	27	3.54
Head of Sector	Female	10	1.31
	Male	16	2.1
Employee	Female	32	4.19
	Male	73	9.57
Total	Female	44	5.77
	Male	129	16.9

Table 4.1: Number of Responses in terms of Occupation and Gender

4.2.2 Gender

Gender is the first moderator employed in the research model. Figure 4.1shows that 44 (25.4%) of the respondents who provided information about their gender were female and 129 (74.6%) were male.

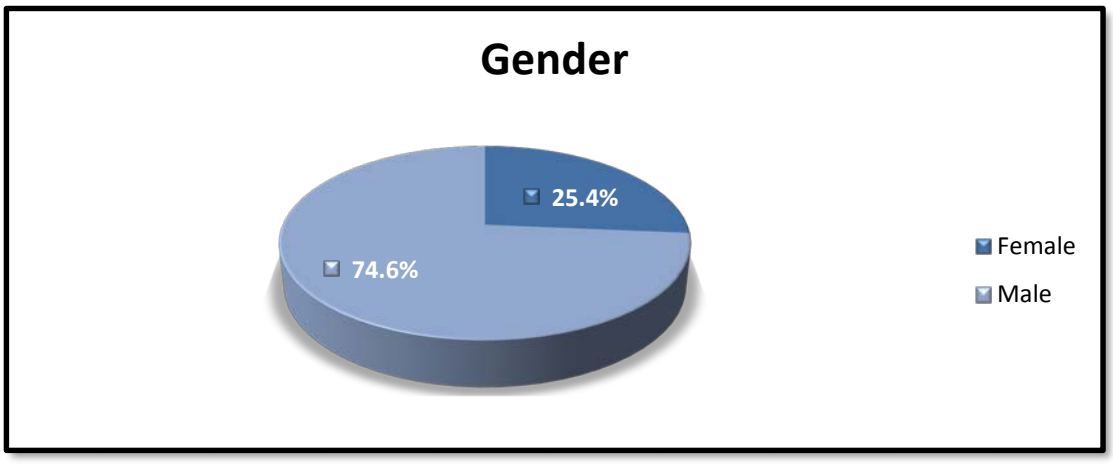


Figure 4.1: Percentage of responses in terms of gender.

4.2.3 Age

The second moderator of the research model is age. All the respondents provided information about their age. The overall age distributions are shown in Table 4.2. The largest category of respondents was 30 years of age or younger (29%), followed by those in the 41 to 50 age range (25.3%). There were only 8 respondents who were 60 or over. Most of the female participants were 30 years of age or less.

Age	Gender	Number	Representation for Population
< 30	Female	24	3.15
	Male	29	3.8
31 - 40	Female	9	1.18
	Male	34	4.46
41 - 50	Female	7	0.92
	Male	34	4.46
51 - 60	Female	4	0.52
	Male	24	3.15
>60	Female	0	0
	Male	8	1.05

Table 4.2: Number of Responses in terms of Age

4.2.4 Education

Education is the third moderator of the research model. Table 4.3shows the educational background of the participants. The majority graduated at university degree level (56%), compared to high school degree level (15%), Master degree level (11.6%), PhD degree level (4.6%), and Diploma degree level (4%).

Education	Gender	Number
Elementary School	Female	4
	Male	11
High School	Female	5
	Male	21
Diploma	Female	1
	Male	6
University	Female	29
	Male	68
Master	Female	4
	Male	16
PhD	Female	1
	Male	7
Total	Female	44
	Male	129

Table 4.3: Number of Responses in terms of Level of Education

4.3 Background of Parliamentary Website Use

This section describes the respondents' self-reported use of the Parliamentary website, the number of active years of usage, and the adequacy of their usage. This section describes the respondents' self-assessment of their experience, and shows in detail the information and communication technologies and applications that respondents use most frequently.

4.3.1 Actual Use of Parliamentary Website

Figure 4.2shows that 179 (98.35%) of respondents who answered the survey use the Parliamentary website, compared to three (1.65%) who do not use it.

The three respondents who do not use the Parliamentary website consisted of one Minister and two Members of Parliament. As discussed in section 4.2.1, these three questionnaires were dropped for the data analysis and six questionnaires were discarded from 179 during outlier testing.

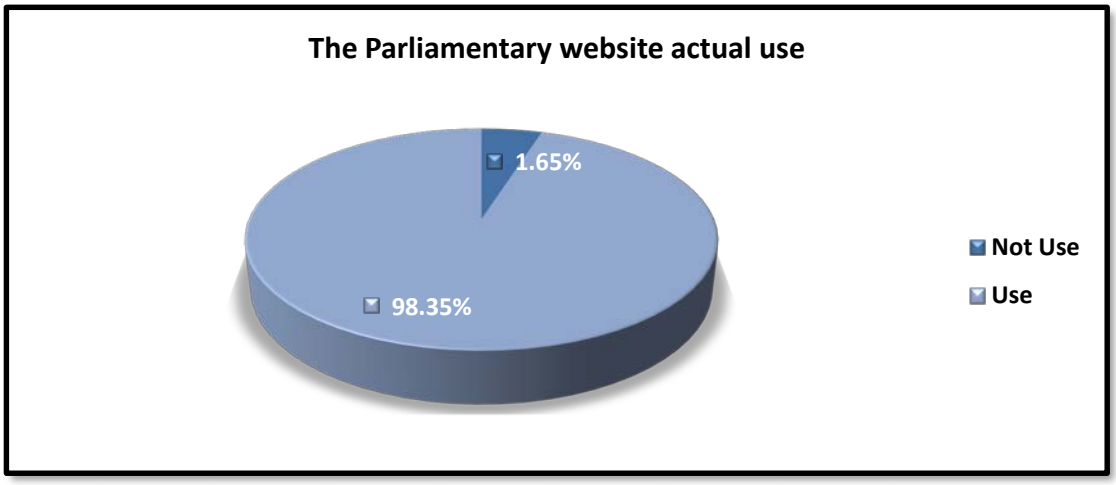


Figure 4.2: Actual use of Parliamentary website

4.3.2 Years of Use

As may be seen from Figure 4.3, respondents who had used the Parliamentary website for 1-5 years represented the majority (41%), compared to those who had used the Parliamentary website for<1 year (31%), 5-10 years (18%), and >10 years (10%). This indicates that 72% of the respondents had used the Parliamentary website for less than 5 years. The main reason for this is that the Parliamentary assembly changes regularly and this is accompanied by a change of Members of Parliament and their employees.

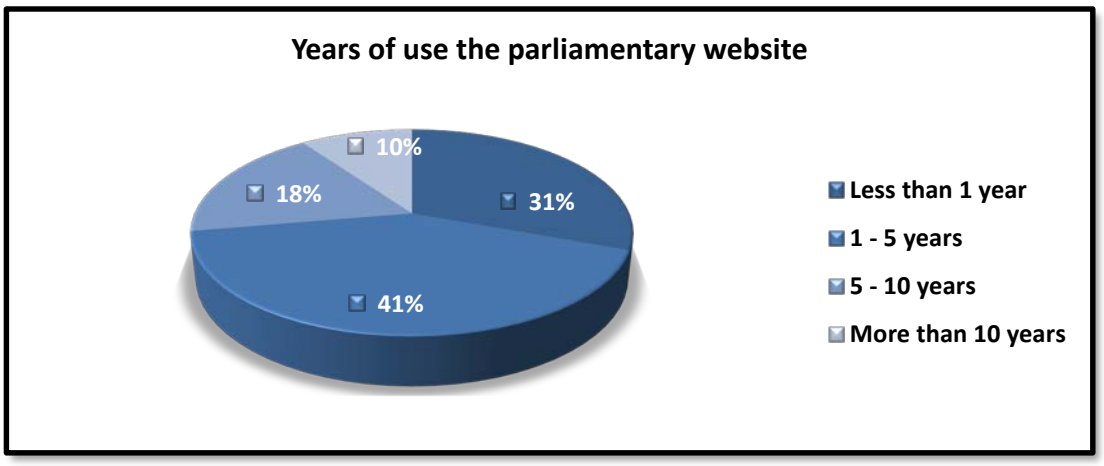


Figure 4.3: Years of use the Parliamentary website

4.3.3 Frequency of Use of Parliamentary Website

This question relates to the frequency of use of the Parliamentary website. As shown in Figure 4.4, 17.34% of respondents reported using the Parliamentary website several times a day, 8.67% of respondents use the website several times per week, while a further 17.34% use the website several times per month. Overall, 15% use the website once a day, 13.3% use the site once a week and 9.24% use the site once a month.

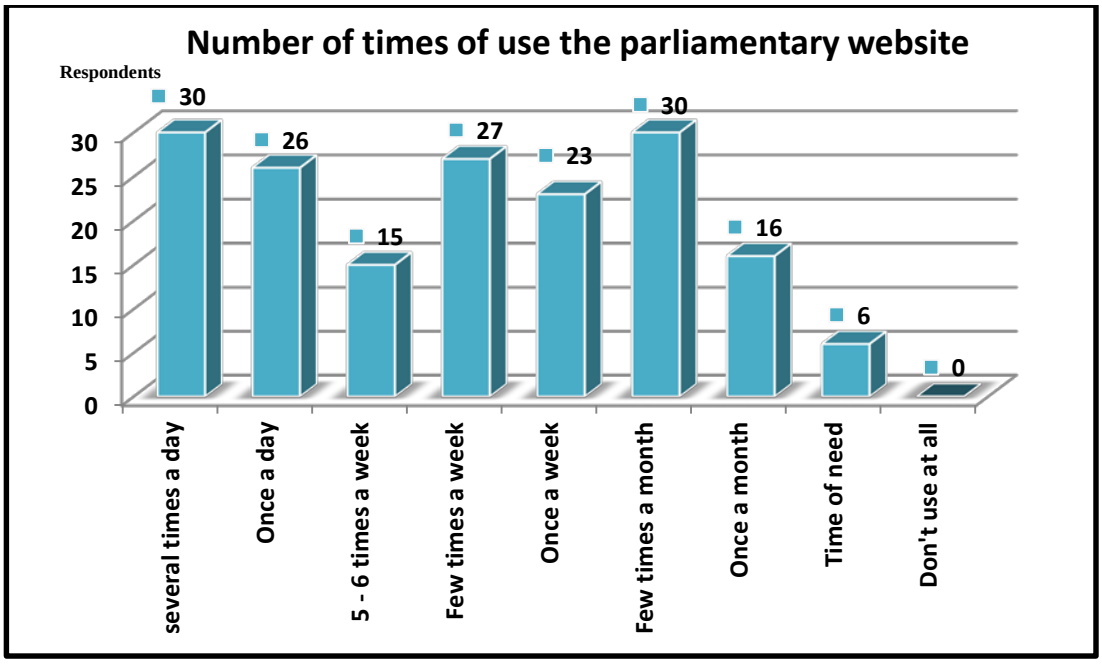


Figure 4.4: Frequency of uses of the Parliamentary website

4.3.4 Adequacy of Use

Most of respondents said that they used the Parliamentary website enough (according to the respondent's self-assessment) (60%), compared to those who thought that they did not use the Parliamentary website enough (29%). 11% of the respondents said that they used the Parliamentary website too much (See Figure 4.5).

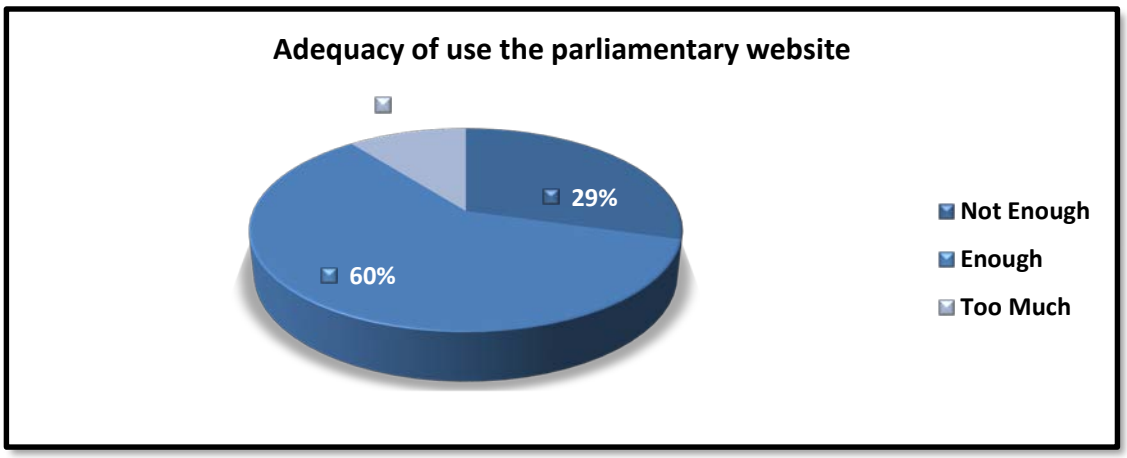


Figure 4.5: Adequacy of use the Parliamentary website

4.3.5 Self-Assessment of Experience

In Figure 4.6, 49% of respondents assessed themselves as having moderate Parliamentary website experience. 38% of respondents assessed themselves as low experience, and 13% assessed themselves as high experience.

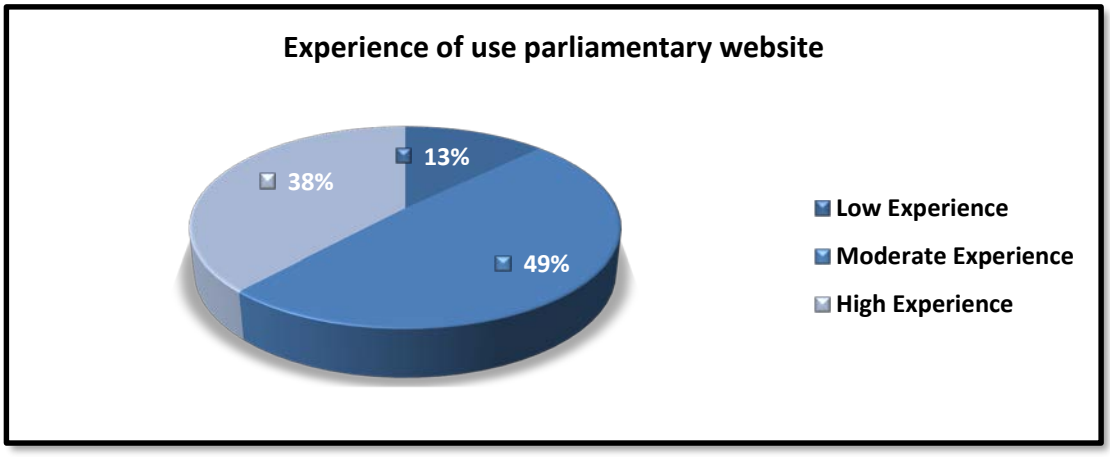


Figure 4.6: Experience of use Parliamentary website

4.4 Other Information and Communication Technologies

This section explores the other technologies that respondents use. As shown in Table 4.4, office software is the most frequently used technology (47.8%),

compared to social networks at 46%, browsing websites at 45%, e-Mail at 43.9%, and other technological applications, such as SMS, WhatsApp and Fax at 13.2%. These results show a majority of enthusiastic users (in the 80's), a relatively large band of non-users (in the 50's), with a mixed picture in between.

	Office software	Social Networks	Websites	E-Mail	Others
Often	87	84	82	80	24
Usually	15	19	17	15	11
Some Times	14	23	23	23	9
Rarely	12	11	10	9	4
Never	54	45	50	55	134

Table 4.4: The number of participants who use other technologies

Table 4.5 shows that 33% of the respondents use office software for Parliamentary work, 71.4% of them use the same technology for other work, and 20.3% of respondents use office software for both Parliamentary work and other work. The same table show that 51% of respondents use social networks for Parliamentary work. Of these respondents 47.8% use the same technology for other work, and 19.2% use social networks for both Parliamentary work and other work. Overall, 44% of the respondents reported website browsing for Parliamentary work, 54.4% of them use the same technology for other work, and 19.8% of respondents browse websites for both Parliamentary work and other work. Furthermore, 48.4% of the respondents use e-Mail for Parliamentary work, and 51% of them use the same technology for other work, and 21.4% of respondents use e-Mail for both Parliamentary work and other work. The percentages of respondents who use the other technologies for Parliamentary work are similar to those who use the other technologies for other work (78%).

	Office software	Social Networks	Websites	E-Mail	Others
Parliamentary work	60	93	80	88	142
Others	130	87	99	93	144
Both	37	35	36	39	126
Not Use	24	33	33	36	17

Table 4.5: Participants who use other technologies in terms of purpose (multiple replies possible)

Table 4.6 shows that respondents mostly use office software, social networking apps and email in the chamber and in cafés. Respondents browse websites in the Parliamentary chamber itself, in cafés and at home. It is clear that respondents take advantage of the mobility of their personal devices to use them ubiquitously, including, perhaps surprisingly, in Parliament.

	Office software	Social Networks	Websites	E-Mail	Others
Office	45	70	62	55	140
Chamber	153	150	153	151	164
Cafe	155	131	139	142	160
Home	121	82	100	93	143
Do Not Use	10	19	17	19	13

Table 4.6: Participants who use other technologies in terms of place (multiple replies possible)

4.5 Self-reported Reading and Writing Habits

This section aims to explore the reading and writing habits of respondents, and the extent to which this affects usage of the Parliamentary website. The Kuwaiti Constitution states that one of the conditions to be a candidate for a

position as Member of Parliament, or to be appointed as a Minister in the Kuwaiti government is to be able to read and write, however using keyboard and screen poses new challenges and the questions in this section explore this digital literacy..

As shown in Table 4.7, 71.7% of respondents like (strongly agree, quite agree and slightly agree) to read from the screen for any technology, TVs, PCs, mobile, etc., whereas19.7% do not like to read from the screen (strongly disagree, quite disagree and slightly disagree). Likewise, 72.8% of respondents like (strongly agree, quite agree and slightly agree) to read in general, from books, newspapers, etc., compared to 11.6% who do not like to read in general (strongly disagree, quite disagree and slightly disagree).

The table also shows that 69.9% of respondents like (strongly agree, quite agree and slightly agree) to use the keyboard for writing, compared to 16.8% who do not like (strongly disagree, quite disagree and slightly disagree) to use the keyboard for writing. Furthermore, 66.5% of respondents like (strongly agree, quite agree and slightly agree) to write in general (articles, speeches, etc.), compared to 17.9% who do not like (strongly disagree, quite disagree and slightly disagree) to write in general. 63.6% of respondents like (strongly agree, quite agree and slightly agree) to read from the screen or in general, and to write by keyboard or in general, compared to 15.6% of respondents who do not like (strongly disagree, quite disagree and slightly disagree) to read from the screen or in general, and do not like to write by keyboard or in general.

	Read from screen	Read in general	Use keyboards	Like Writing	All
Strongly Disagree	11	9	7	9	6
Quite Disagree	10	3	6	8	12
Slightly Disagree	13	8	16	14	9
Neutral	15	27	23	27	36
Slightly Agree	38	32	33	29	41
Quite Agree	46	36	37	40	25
Strongly Agree	40	58	51	46	44

Table 4.7: The number of responses in terms of reading and writing habits

Figure 4.7shows that 72.3% of respondents agreed (strongly agree, quite agree and slightly agree) that reading and writing habits were an obstacle to using the Parliamentary website, compared to 15% of them disagreed (strongly disagree, quite disagree and slightly disagree). 12.7% of respondents were neutral.

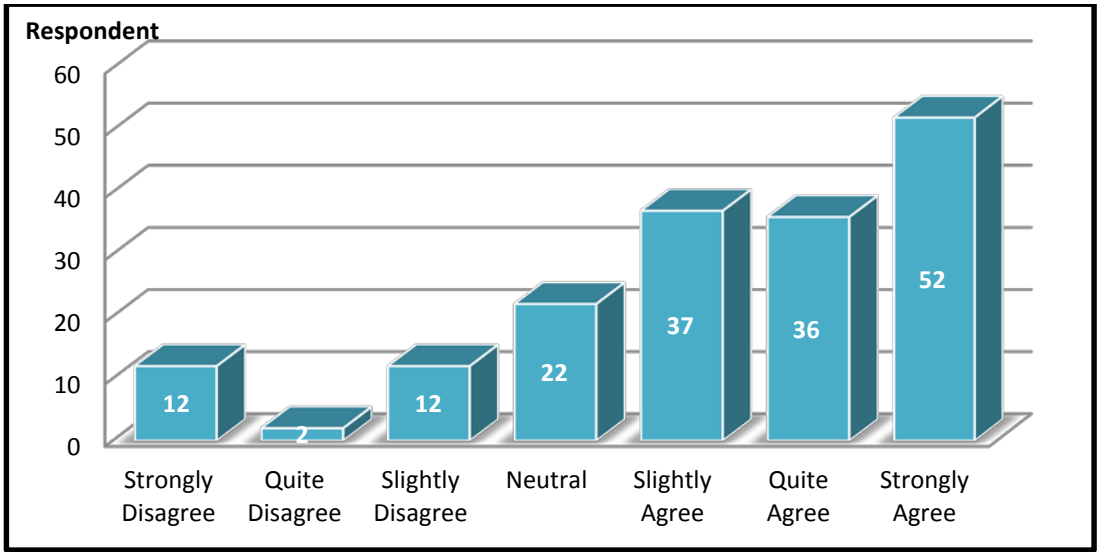


Figure 4.7: Reading and writing habits as an obstacle

In the survey, the language question was used to investigate whether knowledge of only the Arabic language was an obstacle in using the Parliamentary website. Parliamentarians need to seek information on the websites and databases, which is typically provided in English.

The results indicated that the majority of respondents who answered the survey (46.8%) thought that the Arabic language was not an obstacle in information seeking from websites while 33.5% thought that Arabic language was an obstacle in information seeking from websites (see Table 4.8). The Table shows also that 43.9% of the respondents thought that the Arabic language was not an obstacle when reading from databases while 33.5% thought that the Arabic language was an obstacle when reading from databases. In using e-Mails, the results indicate that (54.3%) of respondents thought that the Arabic language was not an obstacle in using their e-Mail while 28.3% thought that the Arabic language was an obstacle in using their e-Mail.

	Information seeking	**Read from Databases**	**Using E-Mails**
Strongly Disagree	43	39	44
Quite Disagree	26	28	29
Slightly Disagree	12	9	21
Neutral	34	39	30
Slightly Agree	22	17	17
Quite Agree	17	24	15
Strongly Agree	19	17	17

Table 4.8: Participants considered whether their Arabic language is an obstacle

4.6 Results Relating Directly to UTAUT Model

In all survey responses to 173 questionnaires comprised the primary investigative database. Three of the study's research objectives are directly referenced in this section, as follows:

> *Objective 2*: Analyze the current situation in Kuwait to provide a reflection of ICT adoption in the Kuwaiti government;
>
> *Objective 3*: Investigate the extent to which Parliamentarians in Kuwait use and intend to use the Parliamentary website;
>
> *Objective 4*: Investigate the influence of cultural factors on Parliamentarians in Kuwait with regard to ICT use

With regard to addressing these objectives, several explicit research hypotheses and associated relationships have been developed for examination (Chapter Three). The variables used to measure each construct are detailed in Appendix V, Part A: Attitudes and Motivations. The hypotheses are individually addressed in the statistical analysis below. All analyses have been undertaken using IBM SPSS Statistics 22; all statistical tests employed are outlined, including inherent assumptions and interpretative limitations (if any), in addition to simple outcome interpretation. At all times, the simplest appropriate statistical test has been employed, with a two-tailed level of statistical significance $\alpha = 0.05$ employed throughout. Where applicable, missing data have been excluded on a pair wise basis.

Where Spearman rank correlation analyses have been employed, monotonicity has been assessed and satisfied via scatter plot matrices, both at

the individual variable level and ordinal sum level (i.e. sum of ordinal rankings within specific group e.g. Performance Expectancy (PE), behavioral Intention (BI), etc.).

Where moderated multiple regression analysis has been employed, all test assumptions and required criteria have been satisfied as follows:

1. Dependent variable measured on a continuous scale: Ordinal sums have been developed based upon the ordinal rankings within group's e.g. Behavioural Intention group comprised 4 ordinal questions, all measured on a 7-point Likert scale. Accordingly, a "BI-Sum" variable has been developed for analyses with a range of 0 – 28, based upon individual responses to questions within this group;
2. At least one independent variable measured on continuous scale: As for assumption 1 above, ordinal sums have been developed and employed for all independent variables;
3. Independence of residuals: The Durban-Watson statistic has been calculated and is presented for all moderator analyses;
4. Presence of a linear relationship between dependent and independent variables: This has been satisfied via transformation (variable centering) and subsequent Q-Q plotting;
5. Data homoscedasticity: Assessed using Studentized residual vs. unstandardized residual plots;
6. Absence of multicollinearity: Assured via data centering and variance inflation factor (VIF) tests;
7. Absence of significant outliers: Satisfied via Q-Q plots.

Hypothesis H1: Performance Expectancy (PE) will have a positive influence on Behavioural Intention (BI) to use Parliamentary website

As shown (Table 4.9), a Spearman rank-order matrix was constructed comprising all individual PE and BI variables. As shown, a significant existed between all PE variables on an individual respondent basis i.e. All responses within the PE were rank correlated at the $p < 0.05$ level of significance (respondents exhibiting a specific level of (dis)agreement to any question/statement within the PE section were highly likely to exhibit similar levels of (dis)agreement to all questions/statements within the BI section). Specifically, respondents noting that the website permitted them to complete tasks more quickly were more likely to use the website in the next year ($r_S = 0.214$, $p = 0.007$) and respondents noting that the website increased personal productivity more likely planned to use the website over the next year ($r_S = 0.210$, $p = 0.01$).Due to the aforementioned nonparametric associations between survey sections(PE, BI), it is statistically justifiable to examine the total sum of the sections (i.e. sum of ordinal codes for each individual). As shown (Table 4.10), this resulted in a moderate positive relationship ($r_S = 0.39$, $p = 0.002$), thus the overall PE vs. BI trend is more powerful than the individual components. Accordingly, the overall research hypothesis (H1) is generally adjudged true, albeit not for all individual components.

			PE1	PE2	PE3	PE4	BI1	BI2	BI3
Spearman's rho	PE1	Correlation Coefficient	1.000	.806**	.815**	.465**	.153	.187*	.164*
		Sig. (2-tailed)	.	.000	.000	.000	.056	.019	.041
	PE2	Correlation Coefficient	.806**	1.000	.770**	.489**	.172*	.191*	.214**
		Sig. (2-tailed)	.000	.	.000	.000	.031	.017	.007
	PE3	Correlation Coefficient	.815**	.770**	1.000	.593**	.168*	.136	.210**
		Sig. (2-tailed)	.000	.000	.	.000	.040	.096	.010
	PE4	Correlation Coefficient	.465**	.489**	.593**	1.000	.048	.071	.164*
		Sig. (2-tailed)	.000	.000	.000	.	.556	.387	.043
	BI1	Correlation Coefficient	.153	.172*	.168*	.048	1.000	.818**	.781**
		Sig. (2-tailed)	.056	.031	.040	.556	.	.000	.000
	BI2	Correlation Coefficient	.187*	.191*	.136	.071	.818**	1.000	.844**
		Sig. (2-tailed)	.019	.017	.096	.387	.000	.	.000
	BI3	Correlation Coefficient	.164*	.214**	.210**	.164*	.781**	.844**	1.000
		Sig. (2-tailed)	.041	.007	.010	.043	.000	.000	.

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

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

Table 4.9: Spearman's Correlations between BI items and PE items for n=173

			PE_Sum	BI_Sum
Spearman's rho	PE_Sum	Correlation Coefficient	1.000	.390**
		Sig. (2-tailed)	.	.002
	BI_Sum	Correlation Coefficient	.390**	1.000
		Sig. (2-tailed)	.002	.

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

Table 4.10: Spearman's Correlations between BI and PE for n=173

Hypothesis H1a: Gender will moderate the influence of Performance Expectancy (PE) on Behavioural Intention (BI) to use Parliamentary website

In order to examine the moderating effect of gender on the influence of PE on BI, an analogous Spearman rank order correlation to that undertaken for testing Hypothesis 1 was undertaken with filtering of female respondents. As shown (Table 4.11), a Spearman rank-order matrix was constructed comprising all individual PE and BI variables in the absence of female respondents. Numerous significant positive relationships were exhibited, including PE1/BI1 :(r_S= 0.248, p = 0.009), PE2/BI1 (r_S= 0.270, p = 0.004), and PE2/BI2 (r_S= 0.264, p = 0.005). In terms of the overarching research hypothesis (H1a), the group sums of PE and BI were found to exhibit a moderately significant level of correlation (r_S= 0.356, p = 0.015), however, when all PE and BI components are summed and correlated, a lower level of correlation is apparent among male respondents than the total sample population(r_S = 0.39, p = 0.002. Thus, results indicate that gender does moderate PE; however, it does not moderate overall/general PE among males more than it does within the entire population.

			PE1	PE2	PE3	PE4	BI1	BI2	BI3
Spearman's rho	PE1	Correlation Coefficient	1.000	.796**	.812**	.431**	.231*	.248**	.194*
		Sig. (2-tailed)	.	.000	.000	.000	.015	.009	.042
	PE2	Correlation Coefficient	.796**	1.000	.748**	.447**	.270**	.264**	.247**
		Sig. (2-tailed)	.000	.	.000	.000	.004	.005	.009
	PE3	Correlation Coefficient	.812**	.748**	1.000	.550**	.234*	.221*	.268**
		Sig. (2-tailed)	.000	.000	.	.000	.016	.024	.005
	PE4	Correlation Coefficient	.431**	.447**	.550**	1.000	.111	.134	.240*
		Sig. (2-tailed)	.000	.000	.000	.	.255	.171	.013
	BI1	Correlation Coefficient	.231*	.270**	.234*	.111	1.000	.839**	.809**
		Sig. (2-tailed)	.015	.004	.016	.255	.	.000	.000
	BI2	Correlation Coefficient	.248**	.264**	.221*	.134	.839**	1.000	.865**
		Sig. (2-tailed)	.009	.005	.024	.171	.000	.	.000
	BI3	Correlation Coefficient	.194*	.247**	.268**	.240*	.809**	.865**	1.000
		Sig. (2-tailed)	.042	.009	.005	.013	.000	.000	.

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

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

Table 4.11: Spearman's Correlations between BI items and PE items for n=173

Hypothesis H1b: Age will moderate the influence of Performance Expectancy (PE) onBehavioural Intention (BI) to use the Parliamentary website

As the potentially moderating variable in question was measured at >2 levels (Age Group), multiple regression with a linear interaction term (PExAge_Interaction) and hierarchical variable entry was used to test the hypothesis i.e. first multiple regression hierarchy included age group (nominal) and the centered sum of PE variables (continuous), while the second regression hierarchy included the aforementioned interaction term. Summarily, if the second regression hierarchy improves the overall regression model significance and the interaction term is significant ($p < 0.05$) within the model, the potentially moderating variable exhibits a statistically significant moderating effect.

Based upon the model summary, ANOVA results and Regression Coefficients (Tables 4.12, 4.13, and 4.14), results indicate that respondent age does moderate the influence of PE on BI. As shown in the model summary table, the 2nd regression model which includes the interaction (moderator) term PE_Age_Interact has a higher R^2 value than the regression model which does not include this term. Moreover, this term is a significant coefficient within the overall model ($p = 0.018$) (Coefficients Table 4.13) Interpretation of the F-values (ANOVA) and β values (Coefficients Table 4.14) indicates that age has a negative effect on the influence of PE on BI i.e. decreased age resulting in increased influence. Accordingly, the hypothesis H1b should be accepted.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.498[a]	.248	.222	4.526	.248	9.398	2	57	.000	
2	.566[b]	.321	.284	4.340	.073	5.994	1	56	.018	1.830

a. Predictors: (Constant), PE_Sum, Age

b. Predictors: (Constant), PE_Sum, Age, PE_Age_Interact

c. Dependent Variable: BI_Sum

Table 4.12: Model summary BI, PE, and Age

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	385.116	2	192.558	9.398	.000[b]
	Residual	1167.867	57	20.489		
	Total	1552.983	59			
2	Regression	498.041	3	166.014	8.813	.000[c]
	Residual	1054.942	56	18.838		
	Total	1552.983	59			

a. Dependent Variable: BI_Sum

b. Predictors: (Constant), PE_Sum, Age

c. Predictors: (Constant), PE_Sum, Age, PE_Age_Interact

Table 4.13: ANOVA results for BI, PE, and Age

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	11.340	2.264		5.010	.000	6.808	15.873		
	Age	-1.177	.488	-.277	-2.410	.019	-2.155	-.199	1.000	1.000
	PE_Sum	.340	.095	.410	3.568	.001	.149	.530	1.000	1.000
2	(Constant)	11.489	2.171		5.291	.000	7.139	15.838		
	Age	-1.049	.471	-.247	-2.226	.030	-1.993	-.105	.987	1.013
	PE_Sum	.322	.092	.389	3.518	.001	.139	.505	.994	1.006
	PE_Age_Interact	-.089	.036	-.272	-2.448	.018	-.161	-.016	.981	1.019

a. Dependent Variable: BI_Sum

Table 4.14: Regression Coefficients for BI, PE, and Age

Hypothesis H2: Effort Expectancy (EE) will have a positive influence on Behavioural Intention (BI) to use the Parliamentary website

As shown (Table 4.15), all individual components of EE were significantly positively correlated with all BI constituents at the 95% level of statistical significance, with highest correlations occurring among the following constituent pairs: EE1/BI1(r_S= 0.357, p <0.001), EE1/BI3(r_S= 0.339, p <0.001), EE2/BI1(r_S= 0.444, p <0.001), EE2/BI2(r_S= 0.382, p <0.001), and EE2/BI3(r_S= 0.341, p <0.001).

In order to test the overall hypothesis, the total sum of the EE and BI sections (i.e. sum of ordinal codes for each individual) were tested. As shown (Table 4.16),a statistically significant positive association was exhibited between the groups (r_S= 0.342, p <0.001), thus it may be concluded that a higher level of EE is associated with respondent's Intention to use the website over the coming yearand the overall research hypothesis (H2) is statistically proven and accepted.

			EE1	EE2	EE3	EE4	BI1	BI2	BI3
Spearman's rho	EE1	Correlation Coefficient	1.000	.527**	.458**	.433**	.357**	.323**	.339**
		Sig. (2-tailed)	.	.000	.000	.000	.000	.000	.000
	EE2	Correlation Coefficient	.527**	1.000	.586**	.692**	.444**	.382**	.341**
		Sig. (2-tailed)	.000	.	.000	.000	.000	.000	.000
	EE3	Correlation Coefficient	.458**	.586**	1.000	.651**	.175*	.193*	.187*
		Sig. (2-tailed)	.000	.000	.	.000	.030	.016	.019
	EE4	Correlation Coefficient	.433**	.692**	.651**	1.000	.276**	.240**	.187*
		Sig. (2-tailed)	.000	.000	.000	.	.000	.002	.019
	BI1	Correlation Coefficient	.357**	.444**	.175*	.276**	1.000	.818**	.781**
		Sig. (2-tailed)	.000	.000	.030	.000	.	.000	.000
	BI2	Correlation Coefficient	.323**	.382**	.193*	.240**	.818**	1.000	.844**
		Sig. (2-tailed)	.000	.000	.016	.002	.000	.	.000
								157	
	BI3	Correlation Coefficient	.339**	.341**	.187*	.187*	.781**	.844**	1.000
		Sig. (2-tailed)	.000	.000	.019	.019	.000	.000	.

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

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

Table 4.15: Spearman's Correlations between BI items and EE items for n=173

			EE_Sum	BI_Sum
Spearman's rho	EE_Sum	Correlation Coefficient	1.000	.342**
		Sig. (2-tailed)	.	.000
	BI_Sum	Correlation Coefficient	.342**	1.000
		Sig. (2-tailed)	.000	.

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

Table 4.16: Spearman's Correlations between BI and EE for n=173

Hypothesis H2a: Gender will moderate the influence of Effort Expectancy (EE) on Behavioural Intention (BI) to use Parliamentary website.

As for testing of Hypothesis H2a, due to the dichotomous nature of the potentially moderating variable (i.e. gender), a Spearman rank order correlation matrix was developed comprising all EE and BI constituent variables subsequent to filtering of female respondents from the dataset. As shown (Tables4.17 and 4.18), all individual EE variables were non-parametrically correlated with all individual BI variables apart from EE3/BI1 and EE3/BI3. Where significant correlations remained, these were of the same magnitude or slightly higher than those found within the unfiltered dataset i.e. EE1/BI1 (r_S= 0.403, p <0.001), EE1/BI2 (r_S= 0.369, p <0.001), EE2/BI1 (r_S= 0.433, p <0.001). Accordingly, it may be concluded that gender moderates the influence of both EE1 and EE2 on BI, however the effect is slight. Conversely, it may be concluded that gender also moderates for the influence of EE3 on BI, however the moderating effect is extremely small and negative. In terms of the overall hypothesis, the sum of EE1, EE2, EE3 and EE4 exhibited a positive rank correlation with BI(r_S = 0.346, p <0.001), however, when considered in concurrence with results from the total sample population, results indicate that gender does not positively moderate overall EE influence on BI and thus the hypotheses is not proven.

			EE1	EE2	EE3	EE4	BI1	BI2	BI3
Spearman's rho	EE1	Correlation Coefficient	1.000	.512**	.449**	.414**	.403**	.369**	.366**
		Sig. (2-tailed)	.	.000	.000	.000	.000	.000	.000
	EE2	Correlation Coefficient	.512**	1.000	.539**	.701**	.433**	.333**	.309**
		Sig. (2-tailed)	.000	.	.000	.000	.000	.000	.001
	EE3	Correlation Coefficient	.449**	.539**	1.000	.658**	.168	.191*	.169
		Sig. (2-tailed)	.000	.000	.	.000	.080	.047	.078
	EE4	Correlation Coefficient	.414**	.701**	.658**	1.000	.255**	.273**	.230*
		Sig. (2-tailed)	.000	.000	.000	.	.007	.004	.015
					124				
	BI1	Correlation Coefficient	.403**	.433**	.168	.255**	1.000	.839**	.809**
		Sig. (2-tailed)	.000	.000	.080	.007	.	.000	.000
	BI2	Correlation Coefficient	.369**	.333**	.191*	.273**	.839**	1.000	.865**
		Sig. (2-tailed)	.000	.000	.047	.004	.000	.	.000
	BI3	Correlation Coefficient	.366**	.309**	.169	.230*	.809**	.865**	1.000
		Sig. (2-tailed)	.000	.001	.078	.015	.000	.000	.

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

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

Table 4.17: Spearman's Correlations between BI items and EE items for n=173

			EE_Sum	BI_Sum
Spearman's rho	EE_Sum	Correlation Coefficient	1.000	.346**
		Sig. (2-tailed)	.	.000
	BI_Sum	Correlation Coefficient	.346**	1.000
		Sig. (2-tailed)	.000	.

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

Table 4.18: Spearman's Correlations between BI and EE for n=173

Hypothesis H2b: Age will moderate the influence of Effort Expectancy (EE) on Behavioural Intention (BI) to use the Parliamentary website

As for testing of Hypothesis 1b, due to the ordinal nature of the potentially moderating variable (i.e. age group), multiple regression with a linear interaction term (EE x Age_Interaction) and hierarchical variable entry was used to test Hypothesis 2b. As shown in both the model summary and model coefficients tables below (Tables4.19 and 4.20), addition of the interaction term (Model 2) did not significantly improve (or affect) overall model efficacy (p = 0.734). Thus, it may be stated that in this case, age has been shown to not have any significant moderating effect on EE over BI. Thus, the hypothesis is not proven and therefore rejected.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.315[a]	.099	.088	4.916	.099	8.545	2	155	.000	
2	.316[b]	.100	.082	4.930	.001	.116	1	154	.734	1.946

a. Predictors: (Constant), Age, EE_Sum

b. Predictors: (Constant), Age, EE_Sum, EE_Age_Interact

c. Dependent Variable: BI_Sum

Table 4.19: Model summary BI, EE, and Age

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	11.004	1.640		6.711	.000
	EE_Sum	.254	.067	.290	3.804	.000
	Age	-.554	.349	-.121	-1.586	.115
2	(Constant)	11.888	3.072		3.869	.000
	EE_Sum	.210	.147	.239	1.425	.156
	Age	-.559	.351	-.122	-1.595	.113
	EE_Age_Interact	.020	.058	.057	.340	.734

Table 4.20: Regression Coefficients for BI, EE, and Age

Hypothesis H2c: Education level will not moderate the influence of Effort Expectancy (EE) on Behavioural Intention (BI) to use the Parliamentary website

As for the previous hypothesis (Hypothesis 2b), the potentially moderating variable comprised >2 levels of measurement, thus multiple regression with a linear interaction term (EE x Education_Interaction) and hierarchical variable entry was used. As shown in both the model summary and model coefficients tables below (Tables4.21 and 4.22), addition of the interaction term (Model 2) did not significantly improve (or affect) overall model efficacy ($p = 0.934$). Thus, it may be stated that in this case, self-reported level of education has been shown to not have any significant moderating effect on EE over BI(nor does it exert any univariate effect within the 1st model hierarchy). Thus, the hypothesis is proven and may be accepted.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.290[a]	.084	.072	4.950	.084	6.955	2	152	.001	
2	.290[b]	.084	.066	4.967	.000	.007	1	151	.934	1.907

a. Predictors: (Constant), Education, EE_Sum

b. Predictors: (Constant), Education, EE_Sum, EE_Education_Inter

c. Dependent Variable: BI_Sum

Table 4.21: Model summary BI, EE, and Education

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	11.697	2.129		5.495	.000
	EE_Sum	.254	.069	.288	3.680	.000
	Education	-.616	.576	-.084	-1.069	.287
2	(Constant)	11.227	6.094		1.842	.067
	EE_Sum	.277	.290	.314	.954	.342
	Education	-.609	.585	-.083	-1.042	.299
	EE_Education_Inter	-.008	.097	-.027	-.082	.934

a. Dependent Variable: BI_Sum

Table 4.22: Regression Coefficients for BI, EE, and Education

Hypothesis 3: Social Influence (SI) will exhibit a positive influence on Behavioural Intention (BI) to use the Parliamentary website

A Spearman rank order correlation matrix was developed and is presented below (Table 4.23). As shown, no statistically significant associations were found with regard to SI1, SI2 or SI3, however, statistically relevant associations were exhibited between SI4 and all BI individual constituent variables as follows: SI4/BI1 (r_S= 0.290, p <0.001), SI4/BI2 (r_S= 0.308, p <0.001), SI4/BI3 (r_S= 0.352, p <0.001). Overall, as shown in Table 4.24, SI (sum) did not exhibit any meaningful association or influence on BI (sum);

however, it would appear that in terms of Social Influence, while individual people do not influence respondents levels of BI, the level of support attributed to the Parliament would seem to have a significant positive influence on respondent Intentions. The stated hypothesis is rejected for SI1, SI2 and SI3, and may be tentatively accepted with respect to SI4.

			SI1	SI2	SI3	SI4	BI1	BI2	BI3
Spearman's rho	SI1	Correlation Coefficient	1.000	.800**	.458**	.186*	.054	.060	.130
		Sig. (2-tailed)	.	.000	.000	.014	.501	.459	.107
	SI2	Correlation Coefficient	.800**	1.000	.576**	.377**	.037	.076	.151
		Sig. (2-tailed)	.000	.	.000	.000	.651	.350	.061
	SI3	Correlation Coefficient	.458**	.576**	1.000	.471**	.067	.031	.115
		Sig. (2-tailed)	.000	.000	.	.000	.412	.707	.158
	SI4	Correlation Coefficient	.186*	.377**	.471**	1.000	.290**	.308**	.352**
		Sig. (2-tailed)	.014	.000	.000	.	.000	.000	.000
	BI1	Correlation Coefficient	.054	.037	.067	.290**	1.000	.818**	.781**
		Sig. (2-tailed)	.501	.651	.412	.000	.	.000	.000
								156	
	BI2	Correlation Coefficient	.060	.076	.031	.308**	.818**	1.000	.844**
		Sig. (2-tailed)	.459	.350	.707	.000	.000	.	.000
	BI3	Correlation Coefficient	.130	.151	.115	.352**	.781**	.844**	1.000
		Sig. (2-tailed)	.107	.061	.158	.000	.000	.000	.

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

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

Table 4.23: Spearman's Correlations between BI items and SI items for n=173

			SI_Sum	BI_Sum
Spearman's rho	SI_Sum	Correlation Coefficient	1.000	.101
		Sig. (2-tailed)	.	.204
	BI_Sum	Correlation Coefficient	.101	1.000
		Sig. (2-tailed)	.204	.

Table 4.24: Spearman's Correlations between BI and SI for n=173

Hypothesis H3a: Gender will moderate the influence of Social Influence (SI) on Behavioural Intention (BI) to use Parliamentary website

As for Hypothesis 3, no statistically significant correlations were found with regard to SI1, SI2 or SI3, apart from a moderately significant relationship between SI3 and BI3 (r_S= 0.21, p = 0.03). Significant relationships were however found with regard to SI4 and all BI constituent variables (SI4/BI1: r_S= 0.394, p <0.001; SI4/BI2: r_S= 0.449, p <0.001; SI4/BI3: r_S= 0.456, p <0.001). Overall, analytical results to H3a are broadly similar to those of H3 in that three of four SI variables were not found to exhibit a statistically (p <0.01) high level of influence on BI, however, both SI2/BI3 and SI3/BI were significant at a more moderate level of confidence (p <0.05). Overall, the stated hypothesis is accepted for SI2, SI3, and SI4, however, the gender-based influence only leads to statistically significant levels of influence in some cases (e.g. SI2/BI3, SI3/BI3, and All SI4 cases) and therefore the level of moderation is extremely slight. Summarily, male respondents exhibited very slightly higher overall levels of Social Influence both at the individual and Parliamentary level, as shown in Tables 4.25 and 4.26.

			SI1	SI2	SI3	SI4	BI1	BI2	BI3
Spearman's rho	SI1	Correlation Coefficient	1.000	.794**	.535**	.215*	.071	.080	.175
		Sig. (2-tailed)	.	.000	.000	.016	.461	.409	.068
	SI2	Correlation Coefficient	.794**	1.000	.641**	.467**	.057	.096	.206*
		Sig. (2-tailed)	.000	.	.000	.000	.553	.321	.032
	SI3	Correlation Coefficient	.535**	.641**	1.000	.417**	.147	.135	.210*
		Sig. (2-tailed)	.000	.000	.	.000	.130	.165	.030
	SI4	Correlation Coefficient	.215*	.467**	.417**	1.000	.394**	.449**	.456**
		Sig. (2-tailed)	.016	.000	.000	.	.000	.000	.000
	BI1	Correlation Coefficient	.071	.057	.147	.394**	1.000	.839**	.809**
		Sig. (2-tailed)	.461	.553	.130	.000	.	.000	.000
	BI2	Correlation Coefficient	.080	.096	.135	.449**	.839**	1.000	.865**
		Sig. (2-tailed)	.409	.321	.165	.000	.000	.	.000
	BI3	Correlation Coefficient	.175	.206*	.210*	.456**	.809**	.865**	1.000
		Sig. (2-tailed)	.068	.032	.030	.000	.000	.000	.

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

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

Table 4.25: Spearman's Correlations between BI items and SI items for n=173

			SI_Sum	BI_Sum
Spearman's rho	SI_Sum	Correlation Coefficient	1.000	.172
		Sig. (2-tailed)	.	.069
	BI_Sum	Correlation Coefficient	.172	1.000
		Sig. (2-tailed)	.069	.

Table 4.26: Spearman's Correlations between BI and SI for n=173

Hypothesis H3b: Age will moderate the influence of Social Influence (SI) on Behavioural Intention (BI) to use the Parliamentary website

Multiple regression with a linear interaction term (EE x Age_Interaction) and hierarchical variable entry was used. As shown in both the model summary and model coefficients tables below (Tables4.27 and4.28), addition of the interaction term (Model 2) did not significantly improve (or affect) overall model efficacy (p = 0.293). Thus, it may be stated that in this case, membership of a particular age group has been shown to not have any significant moderating effect on EE over BI(although it was extremely close to exerting a univariate effect within the 1st model hierarchy; p = 0.054). Ultimately, the hypothesis is not proven and is therefore rejected.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.221[a]	.049	.037	5.052	.049	3.983	2	155	.021	
2	.236[b]	.056	.037	5.050	.007	1.112	1	154	.293	2.071

a. Predictors: (Constant), SI_Sum, Age

b. Predictors: (Constant), SI_Sum, Age, SI_Age_Interact

c. Dependent Variable: BI_Sum

Table 4.27: Model summary BI, SI, and Age

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	13.701	1.420		9.652	.000
	Age	-.708	.364	-.155	-1.945	.054
	SI_Sum	.169	.072	.186	2.342	.020
2	(Constant)	11.183	2.778		4.026	.000
	Age	-.694	.364	-.151	-1.905	.059
	SI_Sum	.323	.163	.355	1.984	.049
	SI_Age_Interact	-.073	.069	-.189	-1.055	.293

a. Dependent Variable: BI_Sum

Table 4.28: Regression Coefficients for BI, SI, and Age

Hypothesis H3c: Education level will not moderate the influence of Social Influence (SI) on Behavioural Intention (BI) to use the Parliamentary website

Multiple regression with a linear interaction term (SI x Education_Interaction) and hierarchical variable entry was used. As shown in both the model summary and model coefficients tables below (Tables4.29 and 4.30), addition of the interaction term (Model 2) did not significantly improve (or affect) overall model efficacy (p = 0.168). Thus, it may be stated that in this case, self-reported level of education has been shown to not have any significant moderating effect on SI over BI(nor does it exert any univariate effect within the 1st model hierarchy). Thus, the hypothesis is proven and therefore accepted.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.172[a]	.030	.017	5.095	.030	2.314	2	152	.102	
2	.204[b]	.042	.023	5.080	.012	1.915	1	151	.168	1.988

a. Predictors: (Constant), Education, SI_Sum

b. Predictors: (Constant), Education, SI_Sum, SI_Educat_Interact

c. Dependent Variable: BI_Sum

Table 4.29: Model summary BI, SI, and Education

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	13.605	2.175		6.255	.000
	SI_Sum	.148	.072	.165	2.069	.040
	Education	-.361	.588	-.049	-.614	.540
2	(Constant)	21.651	6.205		3.489	.001
	SI_Sum	-.325	.349	-.363	-.931	.353
	Education	-.413	.588	-.056	-.702	.484
	SI_Educat_Interact	.162	.117	.540	1.384	.168

a. Dependent Variable: BI_Sum

Table 4.30: Regression Coefficients for BI, SI, and Education

Hypothesis H4: Facilitating Conditions (FC) will not have influence on Behavioural Intention (BI) to use Parliamentary website

As shown in the non-parametric correlation matrix below (Table 4.31), all components of the FC survey section (FC1, FC2, FC3, and FC4) were found to be positively associated with all components of the BI survey section at the confidence level $p < 0.01$, with the majority of individual constituents significantly correlated at the $p < 0.01$ level. Moreover, in Table 4.32, the ordinal sums of FC and BI were also found to be significantly correlated ($r_S = 0.461$, $p < 0.001$).Accordingly, the higher levels of facilitation (network connection, device access, knowledge, and assistance) directly result in a higher likelihood of the respondent using the Parliamentary website over the next year. Therefore, the hypothesis remains unproven and is rejected.

			FC1	FC2	FC3	FC4	BI1	BI2	BI3
Spearman's rho	FC1	Correlation Coefficient	1.000	.499**	.412**	.449**	.447**	.398**	.378**
		Sig. (2-tailed)	.	.000	.000	.000	.000	.000	.000
	FC2	Correlation Coefficient	.499**	1.000	.664**	.336**	.345**	.347**	.237**
		Sig. (2-tailed)	.000	.	.000	.000	.000	.000	.003
	FC3	Correlation Coefficient	.412**	.664**	1.000	.311**	.390**	.416**	.327**
		Sig. (2-tailed)	.000	.000	.	.000	.000	.000	.000
	FC4	Correlation Coefficient	.449**	.336**	.311**	1.000	.241**	.199*	.210**
		Sig. (2-tailed)	.000	.000	.000	.	.002	.012	.008
	BI1	Correlation Coefficient	.447**	.345**	.390**	.241**	1.000	.818**	.781**
		Sig. (2-tailed)	.000	.000	.000	.002	.	.000	.000
	BI2	Correlation Coefficient	.398**	.347**	.416**	.199*	.818**	1.000	.844**
		Sig. (2-tailed)	.000	.000	.000	.012	.000	.	.000
	BI3	Correlation Coefficient	.378**	.237**	.327**	.210**	.781**	.844**	1.000
		Sig. (2-tailed)	.000	.003	.000	.008	.000	.000	.

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

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

Table 4.31: Spearman's Correlations between BI items and FC items for n=173

			FC_Sum	BI_Sum
Spearman's rho	FC_Sum	Correlation Coefficient	1.000	.461**
		Sig. (2-tailed)	.	.000
	BI_Sum	Correlation Coefficient	.461**	1.000
		Sig. (2-tailed)	.000	.

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

Table 4.32: Spearman's Correlations between BI and FC for n=173

Hypothesis H4a: Age will moderate the influence of Facilitating Conditions (FC) on Behavioural Intention (BI) to use the Parliamentary website

As shown in both the model summary and model coefficients tables (Tables4.33 and 4.34), no statistically significant model improvement directly resulted from addition of the interaction term. Similarly, the overall F statistic

is shown to decrease upon its inclusion (ANOVA). Accordingly, the hypothesis remains unproven and is rejected.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.449[a]	.201	.191	4.629	.201	19.534	2	155	.000	
2	.454[b]	.206	.191	4.629	.005	.997	1	154	.320	2.106

a. Predictors: (Constant), Age, FC_Sum

b. Predictors: (Constant), Age, FC_Sum, FC_Age_Interaction

c. Dependent Variable: BI_Sum

Table 4.33: Model summary BI, FC, and Age

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.778	1.933		2.990	.003
	FC_Sum	.466	.078	.431	6.009	.000
	Age	-.533	.329	-.116	-1.621	.107
2	(Constant)	2.151	4.115		.523	.602
	FC_Sum	.631	.183	.584	3.454	.001
	Age	-.474	.334	-.104	-1.420	.158
	FC_Age_Interaction	-.072	.072	-.169	-.998	.320

a. Dependent Variable: BI_Sum

Table 4.34: Regression Coefficients for BI, FC, and Age

Hypothesis H4b: Education level will not moderate the influence of Facilitating Conditions (FC) on Behavioural Intention (BI) to use the Parliamentary website

As shown in both tables below (Tables4.35 and 4.36), self-reported educational level was found to be neither univariately nor multivariately associated with FC on BI ($p = 0.266$). Moreover, as shown in the coefficients

table, the interaction term is not significant within the final model. Accordingly, the hypothesis is proven and therefore accepted.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.445[a]	.198	.188	4.631	.198	18.770	2	152	.000	
2	.452[b]	.205	.189	4.628	.007	1.247	1	151	.266	1.981

a. Predictors: (Constant), Education, FC_Sum

b. Predictors: (Constant), Education, FC_Sum, FC_Education_Inter

c. Dependent Variable: BI_Sum

Table 4.35: Model summary BI, FC, and Education

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.186	2.434		2.131	.035
	FC_Sum	.476	.078	.443	6.093	.000
	Education	-.244	.535	-.033	-.456	.649
2	(Constant)	14.124	8.365		1.688	.093
	FC_Sum	.074	.369	.069	.200	.842
	Education	-.388	.550	-.053	-.705	.482
	FC_Education_Inter	.133	.120	.383	1.117	.266

a. Dependent Variable: BI_Sum

Table 4.36: Regression Coefficients for BI, FC, and Education

Hypothesis H5: Anxiety (AX) will exhibit a negative influence on Behavioural Intention (BI) to use Parliamentary website

Based on results from the two non-parametric correlation matrices below (Tables4.37 and 4.38), data indicate that no statistically significant association exists between respondent's self-reported levels of anxiety and their

Behavioural Intention with respect to future use of the Parliamentary website. Accordingly, this research hypothesis is disproven and rejected.

			AX1	AX2	AX3	AX4	BI1	BI2	BI3
Spearman's rho	AX1	Correlation Coefficient	1.000	.445**	.535**	.503**	-.090	.011	.001
		Sig. (2-tailed)	.	.000	.000	.000	.270	.890	.988
	AX2	Correlation Coefficient	.445**	1.000	.741**	.672**	.062	.071	.112
		Sig. (2-tailed)	.000	.	.000	.000	.447	.378	.166
	AX3	Correlation Coefficient	.535**	.741**	1.000	.736**	-.144	-.058	-.029
		Sig. (2-tailed)	.000	.000	.	.000	.071	.471	.715
	AX4	Correlation Coefficient	.503**	.672**	.736**	1.000	-.028	.056	.078
		Sig. (2-tailed)	.000	.000	.000	.	.730	.488	.334
	BI1	Correlation Coefficient	-.090	.062	-.144	-.028	1.000	.818**	.781**
		Sig. (2-tailed)	.270	.447	.071	.730	.	.000	.000
	BI2	Correlation Coefficient	.011	.071	-.058	.056	.818**	1.000	.844**
		Sig. (2-tailed)	.890	.378	.471	.488	.000	.	.000
	BI3	Correlation Coefficient	.001	.112	-.029	.078	.781**	.844**	1.000
		Sig. (2-tailed)	.988	.166	.715	.334	.000	.000	.

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

Table 4.37: Spearman's Correlations between BI items and AX items for n=173

			AX_Sum	BI_Sum
Spearman's rho	AX_Sum	Correlation Coefficient	1.000	.046
		Sig. (2-tailed)	.	.563
	BI_Sum	Correlation Coefficient	.046	1.000
		Sig. (2-tailed)	.563	.

Table 4.38: Spearman's Correlations between BI and AX for n=173

Hypothesis H6: Self-Efficacy (SE) will exhibit a positive influence on Behavioural Intention (BI) to use Parliamentary website

As shown in the correlation matrix below (Table 4.39), several Self-Efficacy constituents exhibited significant positive non-parametric correlations with BI components, including SE2/BI1 (r_S= 0.292, p <0.001), SE3/BI2 (r_S= 0.317, p <0.001), and SE4/BI2 (r_S= 0.303, p <0.001). Respondents' level of self-reported Self-Efficacy was therefore positively associated with BI, particularly with respect to SE1, SE3, and SE4. A somewhat lower level of statistical significance was associated with SE2; however, a positive relationship was found at the p <0.01 level of significance. More generally, correlational analysis of the ordinal sums of SE and BI exhibited a significant correlation (r_S= 0.336, p <0.001) as shown in Table 4.40. Accordingly, based on statistical results, research hypothesis 6 is accepted.

			SE1	SE2	SE3	SE4	BI1	BI2	BI3
Spearman's rho	SE1	Correlation Coefficient	1.000	.103	.371**	-.029	.292**	.268**	.183*
		Sig. (2-tailed)	.	.182	.000	.709	.000	.001	.023
	SE2	Correlation Coefficient	.103	1.000	.450**	.415**	.179*	.207*	.185*
		Sig. (2-tailed)	.182	.	.000	.000	.026	.010	.022
	SE3	Correlation Coefficient	.371**	.450**	1.000	.229**	.276**	.317**	.260**
		Sig. (2-tailed)	.000	.000	.	.003	.000	.000	.001
	SE4	Correlation Coefficient	-.029	.415**	.229**	1.000	.282**	.303**	.267**
		Sig. (2-tailed)	.709	.000	.003	.	.000	.000	.001
	BI1	Correlation Coefficient	.292**	.179*	.276**	.282**	1.000	.818**	.781**
		Sig. (2-tailed)	.000	.026	.000	.000	.	.000	.000
	BI2	Correlation Coefficient	.268**	.207*	.317**	.303**	.818**	1.000	.844**
		Sig. (2-tailed)	.001	.010	.000	.000	.000	.	.000
	BI3	Correlation Coefficient	.183*	.185*	.260**	.267**	.781**	.844**	1.000
		Sig. (2-tailed)	.023	.022	.001	.001	.000	.000	.

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

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

Table 4.39: Spearman's Correlations between BI items and SE items for n=173

			SE_Sum	BI_Sum
Spearman's rho	SE_Sum	Correlation Coefficient	1.000	.336**
		Sig. (2-tailed)	.	.000
	BI_Sum	Correlation Coefficient	.336**	1.000
		Sig. (2-tailed)	.000	.

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

Table 4.40: Spearman's Correlations between BI and SE for n=173

Hypothesis H7: Attitude (AT) will have a positive effect on the Performance Expectancy of Parliamentarians to use the Parliamentary website.

As shown in (Tables 4.41 and 4.42), all individual AT and PE components apart from AT1/PE4 were positively associated at the p <0.001 level of significance. Moreover, correlational analysis of the ordinal sums of AT and

BI exhibited a significant correlation (r_S= 0.0.524, p <0.001). Accordingly, based on statistical results, a research hypothesis 7 is accepted.

			AT1	AT2	AT3	AT4	PE1	PE2	PE3	PE4
Spearman's rho	AT1	Correlation Coefficient	1.000	.542**	.481**	.497**	.444**	.413**	.377**	.117
		Sig. (2-tailed)	.	.000	.000	.000	.000	.000	.000	.133
	AT2	Correlation Coefficient	.542**	1.000	.798**	.679**	.609**	.604**	.655**	.474**
		Sig. (2-tailed)	.000	.	.000	.000	.000	.000	.000	.000
	AT3	Correlation Coefficient	.481**	.798**	1.000	.798**	.603**	.516**	.668**	.441**
		Sig. (2-tailed)	.000	.000	.	.000	.000	.000	.000	.000
	AT4	Correlation Coefficient	.497**	.679**	.798**	1.000	.497**	.423**	.596**	.330**
		Sig. (2-tailed)	.000	.000	.000	.	.000	.000	.000	.000
	PE1	Correlation Coefficient	.444**	.609**	.603**	.497**	1.000	.806**	.815**	.465**
		Sig. (2-tailed)	.000	.000	.000	.000	.	.000	.000	.000
	PE2	Correlation Coefficient	.413**	.604**	.516**	.423**	.806**	1.000	.770**	.489**
		Sig. (2-tailed)	.000	.000	.000	.000	.000	.	.000	.000
	PE3	Correlation Coefficient	.377**	.655**	.668**	.596**	.815**	.770**	1.000	.593**
		Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.	.000
	PE4	Correlation Coefficient	.117	.474**	.441**	.330**	.465**	.489**	.593**	1.000
		Sig. (2-tailed)	.133	.000	.000	.000	.000	.000	.000	.

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

Table 4.41: Spearman's Correlations between BI items and AT items for n=173

			AT_Sum	PE_Sum
Spearman's rho	AT_Sum	Correlation Coefficient	1.000	.524**
		Sig. (2-tailed)	.	.000
	PE_Sum	Correlation Coefficient	.524**	1.000
		Sig. (2-tailed)	.000	.

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

Table 4.42: Spearman's Correlations between BI and AT for n=173

In Table 4.43, we summarize the findings regarding the research hypotheses. The analysis proved eight hypotheses to be supported and nine hypotheses not supported.

Hypothesis		Result
H1	Performance Expectancy (PE) will have a positive influence on Behavioural Intention (BI) to use Parliamentary website.	Supported
H1a	Gender will moderate the influence of Performance Expectancy (PE) on Behavioural Intention (BI) to use Parliamentary website for men.	Not-Supported
H1b	Age will moderate the influence of Performance Expectancy (PE) onBehavioural Intention (BI) to use the Parliamentary website.	Supported
H2	Effort Expectancy (EE) will have a positive influence on Behavioural Intention (BI) to use the Parliamentary website.	Supported
H2a	Gender will positively moderate the influence of Effort Expectancy (EE) on Behavioural Intention (BI) to use Parliamentary website.	Not-Supported
H2b	Age will moderate the influence of Effort Expectancy (EE) on Behavioural Intention (BI) to use the Parliamentary website.	Not-Supported
H2c	Education level will not moderate the influence of Effort Expectancy (EE) on Behavioural Intention (BI) to use the Parliamentary website.	Supported
H3	Social Influence (SI) will exhibit a positive influence on Behavioural Intention (BI) to use the Parliamentary website.	Not-Supported
H3a	Gender will positively moderate the influence of Social Influence (SI) on Behavioural Intention (BI) to use Parliamentary website.	Not-Supported
H3b	Age will moderate the influence of Social Influence (SI) on Behavioural Intention (BI) to use the Parliamentary website.	Not-Supported
H3c	Education level will not moderate the influence of Social Influence (SI) on Behavioural Intention (BI) to use the Parliamentary website.	Supported
H4	Facilitating Conditions (FC) will not have influence on Behavioural Intention (BI) to use Parliamentary website.	Not-Supported
H4a	Age will moderate the influence of Facilitating Conditions (FC) on Behavioural Intention (BI) to use the Parliamentary website.	Not-Supported
H4b	Education level will not moderate the influence of Facilitating Conditions (FC) on Behavioural Intention (BI) to use the Parliamentary website.	Supported
H5	Anxiety (AX) will exhibit a negative influence on Behavioural Intention (BI) to use Parliamentary website.	Not-Supported
H6	Self-Efficacy (SE) will exhibit a positive influence on Behavioural Intention (BI) to use Parliamentary website.	Supported
H7	Attitude (AT) will have a positive effect on the Performance Expectancy of Parliamentarians to use the Parliamentary website.	Supported

Table 4.43: The summary of the hypotheses testing

For ease of reference, Table 4.44 also shows only accepted hypotheses and Table 4.45 rejected hypotheses.

Hypothesis		**Result**
H1	Performance Expectancy (PE) will have a positive influence on Behavioural Intention (BI) to use Parliamentary website.	Supported
H1b	Age will moderate the influence of Performance Expectancy (PE) onBehavioural Intention (BI) to use the Parliamentary website.	Supported
H2	Effort Expectancy (EE) will have a positive influence on Behavioural Intention (BI) to use the Parliamentary website.	Supported
H2c	Education level will not moderate the influence of Effort Expectancy (EE) on Behavioural Intention (BI) to use the Parliamentary website.	Supported
H3c	Education level will not moderate the influence of Social Influence (SI) on Behavioural Intention (BI) to use the Parliamentary website.	Supported
H4b	Education level will not moderate the influence of Facilitating Conditions (FC) on Behavioural Intention (BI) to use the Parliamentary website.	Supported
H6	Self-Efficacy (SE) will exhibit a positive influence on Behavioural Intention (BI) to use Parliamentary website.	Supported
H7	Attitude (AT) will have a positive effect on the Performance Expectancy of Parliamentarians to use the Parliamentary website.	Supported

Table 4.44: Supported hypotheses

Hypothesis		Result
H1a	Gender will moderate the influence of Performance Expectancy (PE) on Behavioural Intention (BI) to use Parliamentary website for men.	Not-Supported
H2a	Gender will positively moderate the influence of Effort Expectancy (EE) on Behavioural Intention (BI) to use Parliamentary website.	Not-Supported
H2b	Age will moderate the influence of Effort Expectancy (EE) on Behavioural Intention (BI) to use the Parliamentary website.	Not-Supported
H3	Social Influence (SI) will exhibit a positive influence on Behavioural Intention (BI) to use the Parliamentary website.	Not-Supported
H3a	Gender will positively moderate the influence of Social Influence (SI) on Behavioural Intention (BI) to use Parliamentary website.	Not-Supported
H3b	Age will moderate the influence of Social Influence (SI) on Behavioural Intention (BI) to use the Parliamentary website.	Not-Supported
H4	Facilitating Conditions (FC) will not have influence on Behavioural Intention (BI) to use Parliamentary website.	Not-Supported
H4a	Age will moderate the influence of Facilitating Conditions (FC) on Behavioural Intention (BI) to use the Parliamentary website.	Not-Supported
H5	Anxiety (AX) will exhibit a negative influence on Behavioural Intention (BI) to use Parliamentary website.	Not-Supported

Table 4.45: Non-supported hypotheses

The implications of these results will be discussed in Chapter Five.

4.7 **Usability Testing**

This section discusses the results from the usability testing questionnaire in order to elucidate the extent to which Parliamentarians perceive the Parliamentary website for the Kuwaiti National Assembly as usable. This may contribute to a positive or negative shift in their Intention to use the Parliamentary website. This study used the System Usability Scale (SUS) with 10 items, adapting the questions by replacing "system" with "Parliamentary website". No further modifications were necessary.

As previously outlined (Chapter Three, 3.7.2.1), System Usability Testing Scores have a range of 0 – 100, with a score of 68 regarded as average. The ten SUS questions are reproduced in Figure 4.8 for ease of reference:

1. I think that I would like to use this system frequently.
2. I found the system unnecessarily complex.
3. I thought the system was easy to use.
4. I think that I would need the support of a technical person to be able to use this system.
5. I found the various functions in this system were well integrated.
6. I thought there was too much inconsistency in this system.
7. I would imagine that most people would learn to use this system very quickly.
8. I found the system very cumbersome to use.
9. I felt very confident using the system.
10. I needed to learn a lot of things before I could get going with this system.

Figure 4.8: The SUS questions

Table 4.46shows the overall responses for participants in the Kuwaiti Parliament (Members of Parliament, Ministers, and the employees), who answered the SUS part of the questionnaire.

	US1	US2	US3	US4	US5	US6	US7	US8	US9	US10
Strongly Disagree	38	46	23	44	25	41	15	51	22	38
Disagree	31	44	19	36	32	35	14	49	26	31
Neutral	38	30	27	41	43	42	53	23	37	39
Agree	35	28	55	28	47	27	66	23	47	35
Strongly Agree	31	25	49	24	26	28	25	27	41	30

Table 4.46: The number of responses for the System Usability Testing N=173

As shown in Table 4.46, statement number 8, “I found this Parliamentary website very cumbersome to use”, has the highest rate of disagreement. The Table indicates that 57.8% of respondents did not agree (strongly disagree and

disagree) with this statement, compared to 29% of respondents who did agree (strongly agree and agree) with it.

Statement number 2, "I found this Parliamentary website unnecessarily complex", comes after statement number 8 in the high rate of disagreement. In Table 4.46, 52% of respondents did not agree (strongly disagree and disagree) with this statement, compared to 30.6% of respondents who did agree (strongly agree and agree) with it.

Conversely, the statement number 3, “I thought this Parliamentary website was easy to use”, encountered the highest rate of agreement. The Table indicates that 60.1% of respondents agreed (strongly agree and agree) with this statement, compared to 24.3% of respondents who did not agree (strongly disagree and disagree) (Table 4.46).

Statement number 7, "I would imagine that most people would learn to use this Parliamentary website very quickly", comes after statement number 3 in the high rate of agreement. In Table 4.46, 52.6% of respondents were agree (strongly agree and agree) with this statement, compared to 16.7% of respondents did not agree (strongly disagree and disagree) with it.

Based on the evaluation in Chapter 3 section (3.7.2), Table 4.47 presents the final evaluation of the Parliamentary website for the Kuwaiti National Assembly, based on the responses of the participants for the System Usability Testing. The result of the SUS test gives an average score = 56.53179, thus below acceptable for a web site.

Acceptability Ranges	Not Acceptable (0-49)	Low Marginal (50-61)	High Marginal (62-69)	Acceptable (70-100)
SUS Score	48	41	22	62

Grade Scale	F (0-59)	D (60-69)	C (70-79)	B (80-89)	A (90-100)
SUS Score	84	27	30	12	20

Adjective Ratings	Worst (0-25)	Poor (26-38)	Ok (39-52)	Good (53-73)	Excellent (74-85)	Best (86-100)
SUS Score	17	16	31	64	22	23

Table 4.47: Responses for the System Usability Testing

In the Acceptability Ranges classification, 35.8% of respondents evaluated the Parliamentary website as “acceptable” and 12.7% of them evaluated the website as “high marginal”, compared to the respondents who evaluated the Parliamentary website in Adjective Ratings (17.9%) (37%) (12.7%) (13.3%) as (Ok, Good, Excellent, and Best) respectively.

On the other hand, the respondents who evaluated the Parliamentary website in Grade scales are (15.6%) (17.3%) (7%) (11.6%) as (D, C, B, and A) respectively, compared to the respondents who evaluated the Parliamentary website as (F) (48.6%).

The findings of the usability survey show that overall respondents gave the Parliamentary website a “good” adjectival rating. The website was evaluated by the respondents according to the criteria provided as an acceptable website.

4.8 Qualitative Data

This section aims to analyze the supplementary qualitative data which were obtained from two sources, namely the open-ended question in the main questionnaire and the interview study with MP.s, ministers and officials. The open-ended question aimed to identify any other factors and issues affecting

the acceptance and use of the Parliamentary website usage which had been not covered by UTAUT model.

The interviews were conducted to further explore the findings of the quantitative analysis of the UTAUT model presented in previous sections, typically immediately after the participants answered the questionnaire.

4.8.1 Open-Ended Question

The survey collected qualitative data through an open-ended question to which respondents could provide general comments pertaining to the matters that were raised in the survey and in the hope of gathering rich additional descriptive information. The open-ended question was targeted at getting Parliamentarians' suggestions on the Parliamentary website and other information could help in explaining some results from the quantitative data, in a mode allowing free communication and revealing insights. The open-ended question format allowed participants to answer in their own words and further explain their choice of answers.

The question used at the end of the survey is "Would you like to make any other comments about the use of Parliamentary website in Parliament?"

The total number of participants who answered this question was 22 participants from the 173 who answered the whole survey. The answers fell into three major themes. Firstly, some respondents were unhappy with aspects of the current system:

- Website of the Parliament does not allow us to accomplish the tasks of the Parliament which still depends on the paperwork routine.
- No privacy and confidentiality in dealing with the website.

A second set of answers made suggestions for extended functionality for the site and beyond:

- Provide a database for Parliamentary legislation in all countries of the world in order to benefit from the vast expertise.
- Provide an electronic link between the different sectors of Parliament and external sectors.

Thirdly, respondents made suggestions about the processes involved in developing and implementing the site:

- Start using electronic correspondence.
- Provide intensive courses for employees in the Parliament.
- Involve employees in the development of electronic programs.
- Increase awareness among staff and Members of Parliament on the importance of the use of website.

This last set of contributions in particular have implications for the acceptance of the site, with their implication that the lack of active use of digital facilities, the failure to involve staff in system development and the lack of adequate training have all been obstacles to acceptance and use of the site.

4.8.2 The Interviews

Twenty one interviews were conducted with six senior officials in the Kuwaiti National Assembly, five Members of Parliament, and ten ministers as shown in Table 4.48.

Participant	Position
1	Secretary-General of the Kuwaiti National Assembly
2	Director of Personnel Management
3	Director of Documentation and Documents
4	Director of Information Department
5	Head of Research and Studies
6	Director of the Library from the Kuwaiti National Assembly
7	Member of Parliament
8	Member of Parliament
9	Member of Parliament
10	Member of Parliament
11	Member of Parliament
12	Minister of Education and Higher Education
13	Minister of Oil and Minister of State for National Assembly Affairs
14	Minister of Social Affairs and Labor and Minister of State for Planning and Development Affairs
15	Minister of State for Housing Affairs
16	Minister of Finance
17	Minister of Information and Minister of State for Municipality Affairs
18	Minister of State for Cabinet Affairs
19	Minister of Information and Minister of State for Youth Affairs
20	Minister of Electricity and Water and Minister of Public Works
21	Deputy Prime Minister and Minister of Commerce and Industry

Table 4.48: Interview participants

Although it was difficult to conduct interviews with MPs and the Heads of departments at the Kuwaiti Parliament, the researcher had access to the Parliament through a personal connection with an MP who was a friend of the researcher's family. This contact, who is a Member of Parliament, provided a written entry permit to the Kuwaiti National Assembly for one month.

The interview questions were conducted to further explore the findings of the quantitative analysis of the UTAUT model presented in previous sections. A

semi-structured interview schedule was used, so that although the interviewer had a list of pre-determined questions to cover during the interview, she was free to decide on whether or not to probe further into the respondent's answers by asking additional related questions that were not originally included.

Interview questions have been divided into three main sections: role of ICT in the Kuwaiti Parliament, factors influencing use of the Parliamentary website use of the Parliamentary website, and cultural influence on Kuwaiti Parliamentarians. Each section has an objective as shown in Table 4.49.

Section	Objective	Interview Questions
SECTION 1: Role of ICT in Kuwaiti Parliament	Reviewing the ways in which ICT is harnessed for use in Parliament	**123**
SECTION 2: Factors influencing further development of the Parliamentary website	Investigating the potential barriers to further development of the Parliamentary website	**456**
SECTION 3: Cultural Influence on Kuwaiti Parliamentarians	Investigating the influence of cultural factors on Parliamentarians in Kuwait with regards to ICT use	**78**

Table 4.49: Summary of interview questions and their objectives

The next section presents the responses of the participants to the first part of the interview, which discusses the role of ICTs in Kuwaiti Parliament.

Section 1: Role of ICT in Kuwaiti Parliament

The most common theme arising from the data in response to the first question, "Do you think that the Parliamentary website affects the way it Parliament works?" was that most of the participants assert that the presence of the Parliamentary website of the Kuwait National Assembly was significant.

The majority of MP's and Ministers answered the question affirmatively but briefly, for example:

> Mr. O1, Senior Official in the Parliament: “The site matches the level of ambition (set out for it) and provides information related to the work: I personally take from it the information I need, even if I'm at home.”
>
> Same respondent: "Often, the General Secretariat or the Speaker of the Parliament asks me for information and by using the Parliamentary website I am able to locate the answer. They were surprised when I sent them the answers by phone quickly."
>
> Mr. M10, a Minister in the Kuwait government: “I believe that the Parliamentary website helps in the work of Parliament by using it as a reference for the laws which have been approved by the Parliament.”
> Mr. O5, Senior Official in the Parliament: “I see the Parliamentary website as only a political and social interface.”

When asked the second question, “What is the plan for informing Parliamentarians about the benefits of the Parliamentary website?” 81% of the participants who could not answer this question were ministers and Members of Parliament. They stated that they do not have any idea how to answer this question and the reason behind this is that these issues do not relate to the nature of their work. Four of the participants who are senior officials in the Parliament provided a range of answers as follows:

1. By using the formal announcement letter to all the offices of members and employees in Parliament,
2. Distribution of manuals,
3. Publishing on the screens in the corridors and main halls,
4. Send SMS messages and What’s up in mobiles, or

5. Invite each sector to attend a short course for the definition of the services offered on the Parliamentary website.

Training is again addressed by the response of Mr. O1, Senior Official in the Parliament: "Each Assistant Secretary- General (ASG) covers his sector and he is responsible for staff within the sector where we are giving them an overview of the work from time to time. As a result, I have a brochure on my sector, and on the last page, I put a link of the information on the sector in the Parliamentary website."

"The problem is in the process of frequently changing personnel, which makes us once again work to train new employees."

Because all participants recognized the importance of the Parliamentary website in the Parliament, it is interesting to know what services that they want to see in the Parliamentary website. When asked the third question, "What are the main online services that you would like to provide on the Parliamentary website?" five participants said they wanted the Parliamentary website to provide the Parliament sessions online. Four participants want the Parliamentary website to provide the committees works, attendance, and times. Three participants want to develop programs to educate the community, a tracking function for complaints or proposals, and search engines for the website. The following statements are their feedback:

Mr. MP2, Member of Parliament: "I hope to see online sessions on the site, so I can personally follow what might have been missed."

Mr. O1, Senior Official in the Parliament: "There was an old idea before I worked in the sector, which is submitting the questions and suggestions via the website, but unfortunately that did not take place until this moment. I suggested that if a Member of Parliament submitted his proposal or the Parliamentary question online, even if he

> is outside the country, we will present it to legal advisers to make sure that it matches Parliamentary regulations, and when the MP returns from his holiday, 70% of the work required could have been accomplished."
>
> Mr. M7, Minister: "I do not have time to search for information on the site, so I wish I could add a search engine to facilitate the task."

The rest of the participants were not confident about suggesting extra services on the Parliamentary website: they considered that existing services in the Parliamentary website were adequate at present.

In general, it can be concluded that there is a consensus on the value of ICT's in Parliamentary work and especially the Parliamentary website. However, there is a shortage of services provided at the site, especially the Parliamentary services that serve Members of Parliament directly. The next section will discuss the factors that could help to develop the Parliamentary website.

Section 2: Factors Influencing Further Development of the Parliamentary Website

As mentioned in the above section, participants agreed that there was a role for the website in the Parliament. However, there was a perceived need to add more services on that website. It is therefore, interesting to see how those Parliamentarians in high positions in the Kuwaiti Parliament view the barriers that may hinder adding such services in the Parliamentary website.

When asked the question "Did you think that there is a direct correlation between the Parliament budget and the development of its website?" all of the

interviewees agreed that there is a direct correlation between the Parliament budget and the development of its website. The majority of the participants commented that the Parliament budget was open. However, a senior official in the Parliament, Mr. O4, commented: “there is a budget for the IT sector but the problem is the distribution of this budget.”

When asked the question, “Are there any barriers that hinder the development of the Parliamentary website?” twelve participants answered the question in the negative. However, three of the officials listed barriers that hinder the further development of the Parliamentary website:

- weakness in the software used
- Internet speed
- over-centralised processes

> Mr. O1, Senior Official in the Parliament:“The Parliament uses IT companies with a modest level. It is considered as a slow company in providing programs required of them.”
>
> Same participant: “also we suffer from slower Internet.”
>
> Mr. O4, Senior Official in the Parliament: “We must start from the employee, he cannot access the site, and amend his information by himself. Moreover, there is no special page for each sector so that the sector is responsible for what is in this page.”

When asked the sixth question, "Do you share people’s concern about privacy and security?” thirteen participants answered in the negative. One participant, Mr. O5 a Senior Official in the Parliament, supported their view by saying: "the website has the ISO certificate in information privacy and security. On reflection this question was phrased in a rather leading fashion, and it is

surprising that so many respondents answered negatively, i.e. suggested they were not worried about privacy and security. However, five participants stated that they did not know. Two participants asserted that they had fears in this respect. The following statements are their feedback:

> Mr. O1, a Senior Official in the Parliament: "sometimes the computer was exposed to a virus attack, which forced me to keep copies of the important information in an external storage unit."
> Moreover, Mr. O3, Senior Official in the Parliament: "in the past, the Kuwaiti Parliamentary website has been hacked, which caused a personal information leak for one of the Members of Parliament."

In their answers in this section, the participants expressed the opinion that there was enough funding for the Parliament to spend on the technology sector, even if they were concerned about the way it was spent. However the Parliamentary officials in particular identified issues in performance, outsourced software development, centralization of processes and uncertain security as obstacles to the success of the site and its further development.

The next section will discuss the cultural influence on Kuwaiti Parliamentarians.

Section 3: Cultural Influence on Kuwaiti Parliamentarians

The aim of this section is to investigate the influence of cultural factors on Parliamentarians in Kuwait with regards to ICT use. This section moves another step towards finding out the factors that might affect the Intention of Parliamentarians in Kuwaiti Parliament to use the Parliamentary website. The

researcher used culture as a central factor to drive the direction of the interview session.

When asked the seventh question, “to what extent are different cultures considered as an element in the design of the Parliament website?” All participants confirmed that in their view in Kuwait there was one homogeneous culture and the website was designed for Kuwaiti people's use.

The eighth question in the interview was: "In what way do you think the social life in Kuwait would influence the use of the Parliamentary website?” All participants agreed that there is a positive influence from the Kuwaiti society on the use of the Parliamentary website because they see that the electronic culture is very highly developed in Kuwait.

In summary, the interviews provided some insight into responses to the variables used in the amended UTAUT model. A number of suggestions were made by respondents that would improve the Parliamentary website in particular and ICT in Kuwait National Assembly in general. The results will be discussed in more detail in Chapter Five.

4.9 Summary

This chapter contains the results of the analysis of data collected in the survey. The results from data analysis in this chapter provide answers to the research questions: 1, 2, and 3, and meet the study objectives: 1, 3, and 5, as stated in Chapter 1.

The major part of the chapter details the analysis of data from the survey, which tested the hypotheses set out in Chapter Three. This is complemented

by a brief discussion of the qualitative data gathered in the study, via free text and interviews.

In the next chapter, we present a discussion and summary of the main study findings.

CHAPTER 5 : DISCUSSION

5.1 Introduction

This chapter discusses results presented in Chapter Four and the overall contributions that this study aims to make, as previously discussed in Chapter One. Sections 5.2, 5.3 and 5.4 answer the major research questions, which represent the primary foci of data collection in this study. They aim to shed light on current and future use of the Parliamentary website in Kuwait by investigating the following:

- current website usage (RQ1)
- demographic and other factors influencing Intention to use the website from UTAUT (RQ2 and 3)
- the effect of Kuwait-specific cultural aspects on website usage and Behavioural Intention(RQ4)

Section 5.5explores the further question of the implications of this study forth original UTAUT model

5.2 Current Website Usage

This section explores results for the first research question, i.e.

RQ1. How do Parliamentarians in Kuwait use ICT? In particular:

- ***For what goals and tasks do Parliamentarians in Kuwait use the Parliamentary website? How frequently?***

- ***What other applications are most heavily used by Parliamentarians in Kuwait?***

Current website usage behaviour and attitudes were examined through the questions in the demographic section of the survey, through the System Usability Survey and through the interviews. 72 % of respondents reported using the Parliamentary website has used the website for 5 years or less. 17.34% of respondents use the Parliamentary website several times a day; the others use the website less frequently. Most of the respondents felt that they used the Parliamentary website enough, but there was a relatively high number (29%) who thought they did not use it enough, and 11% of the respondents said that they used the Parliamentary website too much. 49% of respondents assessed themselves as having a moderate Parliamentary website experience. 38% of respondents assessed themselves as low experience, and 13% assessed themselves as high experience. Of these the younger Parliamentarians were more likely to assess themselves as high experience than the older Parliamentarians. Furthermore, the younger Parliamentarians tended to use the Parliamentary website most frequently (several times a day or once a day).

Other technologies used by the respondents include office software (47.8%), social networks (46%), browsing websites (45%), e-Mail (43.9%), and other technologies applications (13.2%) such as SMS, WhatsApp, and Fax. A high percentage of respondents use the other technologies for Parliamentary work. The respondents mostly used office software, social networks and e-Mails in

the chamber and cafe, whereas those who browse websites do this at home as well. Thus it is clear that the habit of ubiquitous computing, made possible by personal devices such as mobile phones and iPads, is well accepted by respondents. It might have been expected that use of mobile technology in the Parliamentary chamber while Parliament was in session would have aroused disapproval, as taking members' attention away from Parliamentary business, but this is clearly not the case: those respondents who embrace ICT also embrace ubiquitous usage.

The survey gives details of the elements of a website that are important in making it an enhancement to Parliamentary functioning, which, one may anticipate, therefore contribute to facilitating its successful adoption. All studies and recommendations on the Parliamentary website agree on the basics to which the site must adhere, including usability (Griffith, 2008). This guides the decision to include system usability testing in this study as a form of determining evaluative perceptions of the website. This study used the System Usability Scale as a usability test for the Kuwaiti National Assembly website.

Usability testing provides information to supplement other results found through the questionnaire survey and interviews.The results of the usability testing, supported by qualitative data, suggest that the website is still at an early stage and the web instruments need to be improved in various areas. Regarding accessibility features, the weaknesses of the website lies in particular areas, such as some small fonts, no English language facilities, and disabled people not being considered in the design.These results provide a useful baseline for planning improvements in usability.

Specific improvements were suggested in the interviews, which provide insight into the current usage of the website, and existing attitudes towards it. One interview question asks "Are there any barriers that hinder the development of the Parliamentary website?”Twelve of the participants answered the question in the negative but the other three participants answered as follows:

1. Internet speed is slow.
2. Weakness in the software used.
3. Individual users do not have permission to edit the web site, which is frustrating
4. Weakness in the ability of the staff in their use of the Internet and the website.

Another question elicited ides for functionality: "What are the main online services that you would like to provide on the Parliamentary website?”. Participants answered this question as the following:

- Five participants want the Parliamentary website to provide the Parliament sessions online
- One participant wants to develop programs to educate the community
- Four of participants want the Parliamentary website to provide a committees works, attendance, and times
- One participant wants a tracking for complaints or proposals
- One participant wants a search engines for the website.

Here the quantitative data reinforces the qualitative information: All of the services suggested by the participants can be related to Performance Expectancy, and as mentioned above, this construct has been shown to

influence Behavioural Intention to use the Parliamentary website. These are, therefore, important suggestions to take note of. Other answers provided ideas for the preferred funding and dissemination models for the web site. To the question "Did you think that there is a direct correlation between the Parliament budget and the development of its website?" all the participants were in agreement that there is a direct correlation between the Parliament budget and the development of its website. One participant said that there should be an open budget for the Parliament but the problem is the distribution of this budget.

To the question "What should be the plan for informing the Parliamentarians about the benefits of the Parliamentary website?" four of the participants answered the question, with the following:

- By using the formal announcement letter to all the offices of Members and employees in Parliament;
- Distribution of manuals;
- Publishing on the screens in the corridors and main halls, and
- Send SMS messages and Whatsapp in mobiles, or invite each sector to attend a short course for the definition of the services offered on the Parliamentary website.

This broadens the information from quantitative analysis, and suggests that future usage will also depend on Parliamentarians being informed of the existence and benefits of the website, since this will enhance Performance Expectancy, which as the quantitative analysis has shown, will positively influence Behavioural Intention of Kuwaiti Parliamentarians to use the Parliamentary website.

The interviews provided information on ways in which the efficacy and adoption of the website can be improved, from the perspective of the Parliamentarians who are currently using the existing site.

5.3 Demographic and other Factors Influencing Intention to Use the Parliamentary Website

This section explores the second and third research questions:

RQ2. To what extent do demographic factors (age, gender, and education) influence Parliamentarians' perceptions and behaviours with regards to ICT in Parliament?

RQ3. What other factors influence Parliamentarians' Intention to use the Parliamentary website in Kuwait?

5.3.1 Demographic and personal factors

This section will discuss the impact of moderators on the relationships between the UTAUT constructs. These moderators are age, gender, education, and attitude. The discussion is presented as follows:

5.3.1.1 Age Impact

With respect to the moderating effect of age, in this study age moderated the relationship between Performance Expectancy (PE) and Behavioural Intention to use Parliamentary website (BI). More specifically, age works as a negative mediator on the influence of Performance Expectancy on Behavioural Intention to use the Parliamentary website, where decreased age resulted in increased influence. The results of this study therefore show that the

hypothesis by Venkatesh et al. (2003) that this construct is modified by younger age is applicable for the specific context of the Kuwaiti Parliament. There were several possible explanations for this result. For instance, older users, as late adopters of computers technology, are less familiar with the Internet and technology benefits compared with the younger generation who has grown up in the Internet age and technological revolution and therefore less inclined to take on new technologies, even when they could see their potential.

None of the other age moderating hypotheses were supported, confirming that age is not an important moderator in the Kuwait context. The analysis showed that age does not moderate the influence of Effort Expectancy on Behavioural Intention to use Parliamentary website. Age does not moderate the influence of Social Influence (SI) on Behavioural Intention (BI). This departs from the observations by Algahtani et al. (2007) and Alharby (2010), who found that the effect of Social Influence on Behavioural Intentionis diminished by increasing age. Our results also show that age will not moderate the influence of Facilitating Conditions on Behavioural Intention to use Parliamentary website.

5.3.1.2 Gender Impact

In our study, gender does not play a significant moderating role for Social Influence (SI), Performance Expectancy (PE), and Effort Expectancy (EE) towards Behavioural Intention to use Parliamentary website (BI). Male respondents exhibited very slightly higher overall levels of Social Influence both at the individual and Parliament level. This contradicts the hypothesis of Venkatesh et al. (2003), which said that Social Influence is stronger for women, and particularly older women. However it accords with Gupta et al.

(2008) and Kim et al. (2009) who found that gender does not moderate the influence of Social Influence on Intention to use e-Government services.

In this study, the 44 of the female participants, and 121 of the male participants were in middle age range. The sample is, therefore, suitable for assessing whether there is in fact a tendency for the influence of Performance Expectancy on Behavioural Intention to be moderated by gender. The results of the questionnaire show that - whilst male respondents who rated the Performance Expectancy statements positively were also likely to rate the Behavioural Intentions statements positively, in particular for the statement "using the Parliamentary website enables me to accomplish tasks more quickly" – gender does not moderate the influence of overall Performance Expectancy on Behavioural Intention to use the Parliamentary website. It must be noted though that the research population comprised considerably more males more than females. Demographic characteristics of the Parliamentarians sample revealed that the number of males is almost twice the number of female (male = 74.6% and female = 25.4%). The most important reason for the absence of women from the Kuwaiti Parliament is lack of access to the political arena and because women are new to this field.

On the other hand, in terms of Effort Expectancy, the results of this survey showed that in the case of the statement, "my interaction with the Parliamentary website is clear and understandable", gender does moderate the influence of EE on BI. However the effect is slight; and the converse is true for the statement "it is easy for me to become skilful at using the Parliamentary website. The results from this study indicate that in general gender does not positively moderate EE influence on BI. Therefore, the results of this study show that the hypotheses by Venkatesh et al. (2003) that

this PE construct and EE construct are modified by gender are not applicable for the specific context of the Kuwaiti Parliament.

5.3.1.3 Education Impact

In this study, education does not moderate the relationship between Effort Expectancy (EE), Social Influence (SI), and Facilitating Conditions (FC) on Behavioural Intention to use Parliamentary website (BI). According to the findings of this study, all education-moderating hypotheses were supported, confirming that education is not an important moderator in the Kuwaiti context. Educational level was shown not to have any significant moderating effect on the influence of EE, SI, and FC on BI.

5.3.1.4 Attitude Impact

Attitude (AT) contributes significantly to Parliamentarians' adoption of the Parliamentary website and directly affects the Performance Expectancy (PE) construct which affects the Behavioural Intention to use the Parliamentary website in Kuwait.

5.3.2 Further Factors

This section discusses the results that have been obtained after applying the amended UTAUT model in order to identify the constructs that determine Parliamentarians' Intention to use the website of Kuwaiti National Assembly and the effects of moderators on the relationship between determinants and outcomes.

5.3.2.1 Behavioural Intention to Use the Parliamentary Website

Behavioural Intentionis measured using statements with varying degrees of certainty such as "intend to use", "plan to use", and "predict I would use".

These statements express the level of commitment and the time frame, i.e. “I intend to use the Parliamentary website in the next year”. The results indicate that 61.3% of Parliamentarians are *intending* to use the Parliamentary website, compared with 60.7% of Parliamentarians are *predicting* they will use the Parliamentary website, and 59.5% of them are *planning* to use the Parliamentary website.

5.3.2.2 Performance Expectancy

The majority of the participants showed positive responses towards the expected benefits from using the Parliamentary website. The literature survey in Chapter Two details the many benefits that result from Parliamentarians using the Parliamentary website. It must be borne in mind that not all of the benefits which e-Parliament provides are directly related to Parliamentary work. In particular, a very important benefit is an improvement in relations between Parliamentarians and public.

In the survey, respondents exhibiting a specific level of agreement to one statement within the questionnaire section on Performance Expectancy were highly likely to exhibit similar levels of agreement to all statements. The same is true among all the statements relating to Behavioural Intention.

Respondents noting that the website permitted them to complete tasks more quickly were also more likely to predict website usage in the next year. Respondents noting that the website increased personal productivity were more likely plan to use the website over the next year. However, Hypothesis 1 - which states that Performance Expectancy will have a positive influence on Behavioural Intention to use Parliamentary website – is not true for all individual components. Nevertheless, when the total sum of the sections is examined it was found that the overall PE vs. BI trend is more powerful than

the individual components and H1 istherefore generally true. The study also shows that there is little doubt that respondents' attitude towards using technology – as expressed in the statements, "using the Parliamentary website is a good idea", "the Parliamentary website makes work more interesting", "working with the Parliamentary website is fun", and "I like working with the Parliamentary website" - positively affects individual Performance Expectancy.

Since the results confirm that Performance Expectancy will have a positive influence on Behavioural Intention to use the Parliamentary website, it is important, in the context of the Kuwaiti Parliament, to display the advantages of the Parliamentary website, and to emphasize the features and services which will benefit the users. This is likely to encourage the intended users to accept the Parliamentary website and to motivate them to make use of it in their work.

5.3.2.3Effort Expectancy

The statements "my interaction with the Parliamentary website is clear and understandable"; "I find the Parliamentary website easy to use"; and "learning to operate the Parliamentary website is easy for me" are strongly correlated with respondents' Behavioural Intention to use the website. This allowed us to conclude that Hypothesis 2, Effort Expectancy will have a positive influence on Behavioural Intention to use Parliamentary website, is true.

The majority of the participants showed positive responses (strongly agree, quite agree and slightly agree) towards the ease of use of the Parliamentary website. The website is therefore perceived by its users as easy to use. This result from the questionnaire is reinforced by, and in turn reinforces, the

results of the SUS test. The confirmation of Hypothesis 2 indicates that people who work in the Kuwaiti National Assembly (Ministers, Members of Parliament, and employees) prefer to deal with technologies and websites that do not require effort from them. They also perceive that the Kuwaiti Parliamentary website is well designed for ease of use.

Contrary to what Venkatesh et al. (2003) expected, Effort Expectancy has become less salient because of the growth of use of computers in general, and because of the effort to make computers more familiar and accessible for the user. This has increased the confidence of users in general.

Since the Parliamentary assembly changes regularly and this is accompanied by a change of Members of Parliament and their employees, 72% of the respondents have used the Parliamentary website for five years and less. Therefore, in the context of Parliament, it is particularly important that the website be easy to learn to use, and EE should be low, i.e. not much effort required to get up to scratch.

5.3.2.4 Social Influence

In terms of Social Influence, the results of the questionnaire analysis show that individual people do not influence respondents BI. However, the level of support attributed to the Parliament has a significant positive influence on respondent Intention. Thus, Hypothesis3: Social Influence will exhibit a positive influence on Behavioural Intention to use Parliamentary website is rejected for the statements “people who influence my behaviour think that I should use the Parliamentary website”, “people who are important to me think that I should use the Parliamentary website”, and “the Parliamentary speaker has been helpful in the use of the Parliamentary website”. The hypothesis

may be accepted with respect to the statement “in general the Parliament has supported the use of the Parliamentary website”.

These results do not accord with those by Gupta et al. (2008) and Kim et al. (2009) who found that Social Influence positively affects Intention to use the e-Government services. Nor do they accord with the findings of Taylor and Todd (1995a) that a subjective norm is significant for Behavioural Intention in the early stages of the system's implementation. However, they reinforce the findings reported by Zhan et al. (2011) and Mathieson (1991), that Social Influence and subjective norm do not have any significant effect on Behavioural Intention.

It must be noted that participants also had some difficulty with the items in this construct. For example, "people who are important to me" should be more explicit. Participants thought that this phrase refers to their families or just their co-workers more generally. These statements should be articulated more specifically. Variables referring to professional identity and professional relationships may increase the correlation of Social Influence with Behavioural Intention and usage.

Strengthening the notion that the SI effect is collective, in the interviews, one question asks "In what way do you think the social life in Kuwait would influence the use of the Parliamentary website?” All participants agree that Kuwaiti society exerts a positive influence on the use of the Parliamentary website, because it is a culture that enjoys electronic goods.

5.3.2.5 Facilitating Conditions

The results showed that higher levels of facilitation (network connection, device access, knowledge, assistance) result in a higher likelihood of the respondent using the Parliamentary website over the next year. Furthermore,

most of the respondents indicated that the Facilitating Conditions for using the Parliamentary website are available. They also indicated that they prefer a specific person or group available for assistance with Parliamentary website difficulties. This departs from Venkatesh et al. (2003), who found that Facilitating Conditions have no significant influence on Behavioural Intention.

5.3.2.6 Self-Efficacy

Self-Efficacy is a person's mastery experience, or the "interpreted results of one's previous performance," which serves as an indication of their present and future capabilities (Pajares, 2002, p. 7). It is related to perceived ability and it is anticipated that higher levels of Self-Efficacy will lead to higher levels of Behavioural Intention and IT usage (Compeau and Higgins 1991).

Venkatesh et al. (2003) hypothesize that this construct will not have a significant influence on Behavioural Intention. However, in accordance with Compeau and Higgins (1991), the results of this study show that respondents' level of self-reported Self-Efficacy was positively associated with Behavioural Intention to use the Parliamentary website, particularly with respect to the statements: "I can complete a job or task using the Parliamentary website, if there is no one around to tell me what to do as I go along", "I can complete a job or task using the Parliamentary website, if I have a lot of time to complete the job for which the software is provided", and "I can complete a job or task using the Parliamentary website, if I have just the in-built help facility for assistance".

5.3.2.7 Anxiety

The study showed that there was no statistically significant association between respondents' self-reported anxiety and Behavioural Intention to use the website.

5.4 Cultural Differences

This section explores the effects of Kuwaiti cultural aspects on usage behaviour and Behavioural Intention, in response to the fourth research question.

RQ4. To what extent does the addition of cultural factors to the UTAUT model expand its explanatory power?

As discussed above in Section 2.3, according to Hofstede (2009), Arab societies are considered collectivist in nature; people in these countries have a strong commitment to the group and family. Arab societies also have high uncertainty avoidance; they do not accept new changes. Arabic culture is categorized by the Hofstede (2001) index as a high masculinity-femininity culture; there is gender-based segregation in the workplace, and fewer women are found in senior management jobs. According to Hofstede et al. (2010), the culture of a society, as measured by Hofstede's dimensions can give a good indication of its drivers relative to other world cultures.

Kuwait scores high on the powered distance dimension (score of 90), which means that all individuals in society are not equal, and people accept a hierarchical order. Hierarchy in an organization is seen as reflecting inherent inequalities, and centralization is popular. As discussed in Section 2.1, e-Parliamentattracts citizens to engage in active political participation, develops

interaction and trust between society and Parliament, increases transparency accessibility and accountability of Parliament, empowers people, in all their diversity, to be more engaged in public life, and fosters the development of an equitable and inclusive information society. The Kuwaiti Parliamentary website launched a service on the 16th Dec 2013, enabling a citizen to contribute to the legislative process by putting forward suggestions with regard to the laws examined by committees of the National Assembly. It is therefore possible to speculate that as e-Parliament becomes more dominant in Kuwait it will have the effect of decreasing the power-distance rating of this country.

The second dimension, individualism, addresses the degree of interdependence a society maintains among its members. Kuwait, with a score of 25, is considered a collectivistic society. This is manifest in an affiliation to a group, extended family, or extended relationships. However, the results of the questionnaire analysis are surprising in the respect that the Social Influence of individuals does *not* have an influence on Behavioural Intention to use the Parliamentary website. We should note, however, that, as mentioned in Section 5.4,the statements pertaining to Social Influence were not sufficiently specific in this study, and the results might have been different if reference was made to professional identity and professional relationships.

Kuwait scores 40 on the masculinity dimension and is thus considered a relatively feminine society. In feminine' countries the focus is on "working in order to live". The dominant values in society are caring for others and quality of life. In the masculine society people wanting to be the best; in the feminine society people want to like what they do. As mentioned in 2.3, feminine societies tend to use the Internet for rapport-building whereas masculine societies use the Internet for fact gathering. The Kuwaiti

Parliamentary website attends to both these approaches, in that it allows citizens to contribute to the legislative process, which may be seen as a version of rapport-building; and it contains documents on democratic and Parliamentary life with a search engine for these documents, making it a useful reference resource, as well a number of updates, including a profile page for each MP with resume, information, data, and contact details, all of which satisfies the fact-gathering drive.

According to Hofstede, one of the signs of feminine culture in a society is that many women are in elected political positions. However, this is contrary to what is observed currently in the Kuwait Parliament. Perhaps this is due to the factors that contributed towards the failure of women's attempts to participate in Parliament, which have been mentioned above in 2.3. In Kuwaiti society, administrative positions in government are distributed according to gender. In the most government bodies, it is acceptable for both sexes to work, but a mixed environment of males and females in the workplace is unacceptable to some religious groups. Therefore, the majority of employees in government departments are men. More women are found working in government jobs that tend to be in educational places such as schools and universities, because the mixing ratio is lower compared with other government departments.

On the dimension of uncertainty avoidance, Kuwait scores the high value of 80. Countries exhibiting high uncertainty avoidance maintain rigid codes of belief and behaviour. They are intolerant of unorthodox behaviour and ideas. In these cultures, security is an important element in individual motivation. This dimension of Kuwaiti society will prove most challenging in terms of technology adoption, because such societies are hesitant to embrace new products. However this may be ameliorated by the fact that such societies do have a belief in technical solutions, which may encourage Behavioural

Intention towards use of the Parliamentary website. High uncertainty avoidance cultures, like Kuwait, experience high levels of anxiety. This study shows, however, that anxiety does not influence Behavioural Intention with regards to the website. It is interesting to note in this context that the absence of the requirements to enter personal information before using the website, such as user name and password, makes use of the Parliamentary website more comfortable and safe to such a population, and this contributes towards the acceptable usability rating of the website in the SUS test. The interviews suggest that uncertainty avoidance is not such a big problem in the adoption of the Parliamentary website. The sixth question asks "Do you share people's concerns about privacy and security?" The question has been answered by thirteen of the participants in the negative. One of them explained his answer by saying that the website has the ISO certificate in information privacy and security. Only two of participants complained of this issue, arguing the following: sometimes computers are exposed to virus attack, and so they keep copies of their important information in external storage units; and in the past, the Parliamentary website has been hacked which caused a personal information leak for one of the Members of Parliament.

In terms of respondents' own perceptions on (internal) cultural difference, the seventh question in the interview was "To what extent are different cultures considered as an element in the design of the Parliament' website?" All participants claimed to see no effect on the website design for the different cultures because in Kuwait there is one homogeneous culture and the website are designed for Kuwaiti people's use, though it could be argued that design principles are not really the focus of the participants' expertise.

5.5 Implications on The UTAUT Model

In this section we explore the implications of the study for the original UTAUT model, a further aspect of RQ4.The UTAUT model of this research was closely examined to identify the effect of its constructs on the acceptance and use of the Parliamentary website in Kuwaiti Parliament. It was found that with respect to the main constructs of the UTAUT model, Performance Expectancy (PE), Effort Expectancy (EE), Facilitating Conditions (FC), and Self-Efficacy (SE) contribute significantly to adoption of the Parliamentary website and directly affect the Behavioural Intention to use the Parliamentary website in Kuwait. However the influence of the Social Influence (SI) construct and Anxiety (AX) constructs on Behavioural Intention to use the Parliamentary website were not significant for the respondents in Kuwait, so the Social Influence (SI) construct and Anxiety (AX) construct were removed from the final model.

Moreover, the investigation of the moderating effect in the UTAUT model showed that age had a moderating influence on the Performance Expectancy (PE) construct which affects the Parliamentarians' Behavioural Intention to use the Parliamentary website in Kuwait. However, age does not have a moderating influence on the other constructs.

This study also showed that gender did not have a moderating influence on Social Influence (SI), Performance Expectancy (PE), and Effort Expectancy (EE) constructs which affect the Parliamentarians' Behavioural Intention to use the Parliamentary website in Kuwait.

Similarly, the results of this study reveal that the educational level did not have a moderating influence on Effort Expectancy (EE), Social Influence (SI),

and Facilitating Conditions (FC) on Behavioural Intention to use Parliamentary website (BI) in Kuwaiti context.

Attitude (AT) contributed significantly to Parliamentarians' adoption of the Parliamentary website and directly affects the Performance Expectancy (PE) construct which affects the Behavioural Intention to use the Parliamentary website in Kuwait.

This results in the final model that reflects the relationships of the factors explored in the study that proved to have impact on BI (Figure 5.1):

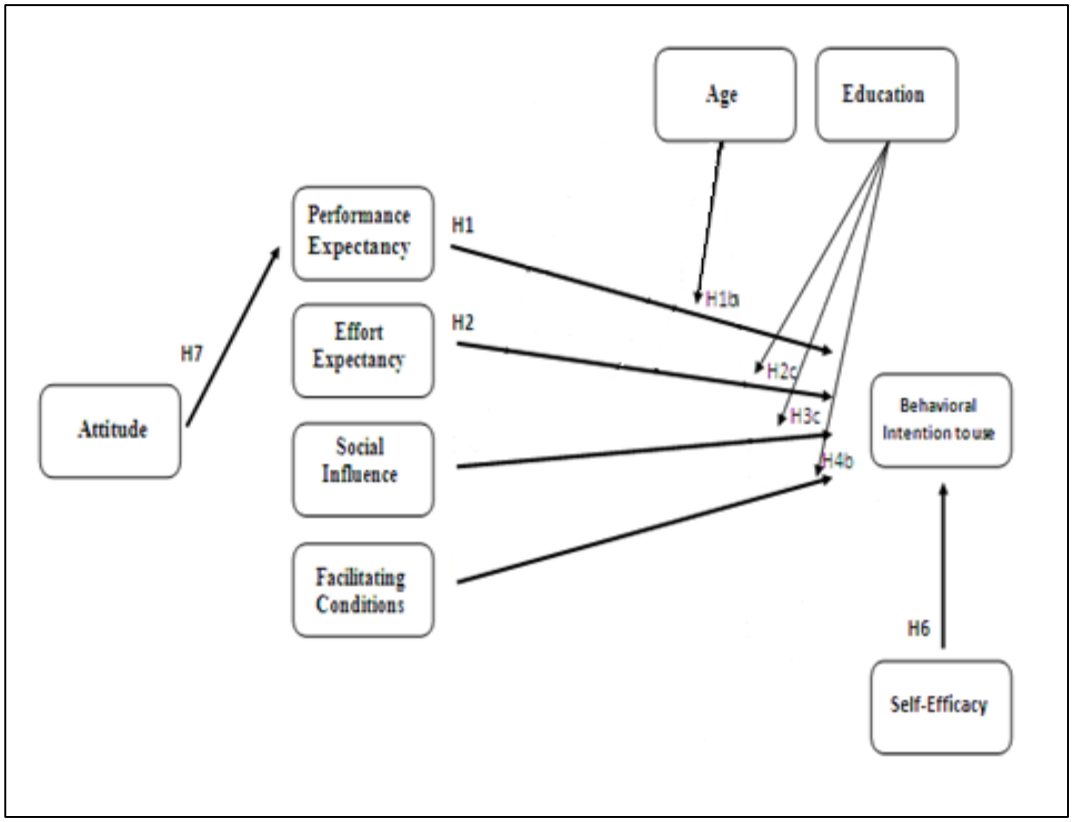


Figure 5.1: Amended UTAUT Model (Final Research Model)

5.6 Summary

The chapter explores the meaning of the results in relation to the original research questions introduced in Chapter One. In the next chapter we conclude the study by reframing the results in terms of their contribution to our knowledge of the issues influencing ICT adoption in the Kuwaiti Parliament.

CHAPTER 6 : CONCLUSION

6.1 Introduction

This final chapter presents the main contributions of this study. It then discusses some limitations of this research, and it provides a number of recommendations regarding technology adoption and improving ICT acceptance in Parliament, as well as suggestions for further research.

6.2 Contribution to Knowledge

This research set out to make contributions to knowledge by responding to the following research questions:

1. How do Parliamentarians in Kuwait use ICT? In particular:

   - For what goals and tasks do Parliamentarians in Kuwait use the Parliamentary website?
   - What other applications are most heavily used by Parliamentarians in Kuwait?

2. To what extent do demographic factors (age, gender, and education) influence Parliamentarians' perceptions and behaviours with regards to ICT in Parliament?

3. What other factors influence Parliamentarians' Intention to use the Parliamentary website in Kuwait?

4. To what extent does the addition of cultural factors to the UTAUT model expand its explanatory power?

The details of the various results have been discussed in Chapters Four and Five: the main thrust of these contributions is described below.

6.2.1 Current Usage of the Kuwaiti Parliamentary Website

Contribution 1: contribute to wider understanding regarding current website usage by Kuwaiti Parliamentarians, particularly in their computer-mediated work.

The literature survey revealed that few studies have been conducted on how Parliamentarians use new technologies and the consequences of that use for their role. This study, therefore, addresses a gap in the current literature.The results in this study provides a picture of the current state of usage of the Kuwaiti Parliamentary website. The web site is integrated into the working practices of all but a handful of the highest ranking officials, such as the three who did not use the web site as reported in Chapter Four. Particularly interesting is the ubiquitous nature of Parliamentarians' use of technology, including use in the Parliamentary chamber itself. Since nothing of the sort has been previously produced, the study may be said to have made a contribution to the field of knowledge. In particular, the researcher has succeeded in gathering information that is very difficult to acquire, considering how hard it is to access Parliamentarians.

This study expands the field of knowledge regarding Members of Parliament in general and in Kuwait in particular. It provides data that can be used in future studies on technology adoption initiatives in Kuwait and elsewhere.

6.2.2 Parliamentarians' Intention to Use the Parliamentary Website

Contribution 2: provide an understanding of Parliamentarians' attitudes towards ICT, particularly their Intention to use the web site.

There is an enormous amount of research on the acceptance of new technologies among organisations that seeks to identify the factors that enhance the acceptance of new technology and decide which technologies are valuable to apply. However, there is a lack of literature on Parliamentary website acceptance, particularly in Middle Eastern countries. This research contributes to the literature on Parliamentary website technology acceptance by utilizing a sample of individuals from the Kuwaiti National Assembly.

The results of the study have been compared with those of Venkatesh et al. (2003) in Chapter Five. This comparison shows that, in the specific context of the Kuwaiti Parliament, Venkatesh et al.'s results do not necessarily apply.

6.2.3 The Effect of Kuwaiti Culture on Usage and Intention to Use the Parliamentary Website

Contribution 3: illustrate the effects of Kuwaiti cultural aspects on usage behaviour and Behavioural Intention.

As has been pointed out by Straub et al., (2003), investigating the role of national and regional culture in the adoption of ICTs in some countries provides a good opportunity for researchers to explore the effect of cultural values on the acceptance of information technology. Furthermore, understanding user acceptance behaviour within a specific culture will

illuminate the important role that culture plays in ICTs adoptions (Han, 2003). Every country and region exerts specific contextual influences. The dissimilarities in the acceptance of technology present an improved explanation of the attitudinal differences in Kuwait and other countries, as described by Hofstede's cultural dimensions. This research is unique due to its cultural environment, and it therefore opens up new directions for further research. This study presents a more accurate understanding of technology acceptance for Parliamentarians in Kuwait than can be deduced from general models. Thus, the findings of this study would be good indicators for other cultural concerns on website technology acceptance.

6.2.4 Provide a modified model of technology acceptance appropriate to the context of the study.

Contribution 4: provide a modified model of the UTAUT appropriate to the context of the study.

The study relies on a modified UTAUT model as a basic theoretical model, which was amended by adding anxiety and Self-Efficacy as independent variables and changing the experience moderator in the original UTAUT model to educational level. It also incorporates attitude toward using technology as a moderator that influences Performance Expectancy. The study validated and confirmed the significant role of Self-Efficacy as a potential factor which affect the acceptance and use the Parliamentary website in Kuwait. This study succeeded in validating the proposed research UTAUT model and the supporting relationships among the key constructs within the Kuwaiti context.

These results support the use of UTAUT as a predictor of Intention to use e-Government services in Kuwaiti context. Therefore, this study contributes to

the literature by examining the UTAUT model, which was established in a western culture, to explain a similar behaviour in a non-western culture.

6.3 Practical Recommendations From The Study

Although this was not a stated objective of the study, a number of practical recommendations did emerge, particularly from the interviews and open text question in the survey, which may be of interest to IT planners in the Kuwaiti Parliament.

6.3.1 Suggestions For Process and Functionality

Answers to the question "What are the main online services that you would like to provide on the Parliamentary website?" and to a question about obstacles to use elicited the following complaints and suggestions:

- Internet speed is slow
- Weakness in the software used (possibly meaning badly designed)
- End users should be centrally involved in the design process
- The Parliamentary website could provide the Parliament sessions online
- Programs to educate the community could be put online
- The Parliamentary website could provide a timetable for committee works, attendance, and times
- A tracker for complaints or proposals could be developed
- A search engines could be added the website.

All of the services suggested by the participants can be related to Performance Expectancy, shown to influence Behavioural Intention to use the

Parliamentary website. These are, therefore, important suggestions to take note of.

6.3.2 Suggestions For Encouraging Take-Up

In response to the question "What should be the plan for informing the Parliamentarians about the benefits of the Parliamentary website?" several ideas were put forward:

- Formal announcement letter to all the offices of Members and employees in Parliament;
- Distribution of manuals;
- Publishing on the screens in the corridors and main halls
- Send SMS and WhatsApp messages in mobiles
- Invite each sector to attend a short course for the definition of the services offered on the Parliamentary website.

The interviews provided information on ways in which the efficacy and adoption of the website can be improved, from the perspective of the Parliamentarians who are currently using the existing site. Sustainable future usage will depend on Parliamentarians being informed of the existence and benefits of the website, since this will enhance Performance Expectancy, and hence influence Behavioural Intention. It is important to display the advantages of the Parliamentary website, and to emphasize the features and services which will benefit the users. This is likely to encourage the intended users to accept the Parliamentary website and to motivate them to make use of it in their work.

Since the Parliamentary assembly changes regularly and this is accompanied by a change of Members of Parliament and their employees, 72% of the respondents have used the Parliamentary website for five years and less.

Therefore, in the context of Parliament, it is particularly important that the website be easy to learn to use, and EE should be low, i.e. not much effort required to get up to scratch.

6.3.3 General Recommendations

At a more general level, the following recommendations can be made, based on participants' responses in the main survey. Those responsible for information services to Parliament should:

1. Provide effective services in the Parliament website in order to be responsive to Parliamentarians' needs.
2. Develop the Parliamentary website services in collaboration and connectivity with other government and non- government bodies.
3. Give a strong commitment to data privacy and security.
4. Increase social awareness about the use of information and communication technology in general and the use of digital transactions between institutions and government agencies.
5. Encourage take up of social networking sites such as Twitter, Facebook and Instagram to provide a link with the Parliamentary website, and establishing compatible applications with the different mobile devices systems, in order to provide a wider spread of the services offered at the website.

6.4 Limitations of the Study

Although the findings of the study provide some interesting insights into how the Parliamentary website are accepted and used by Parliamentarians in

Kuwait, these results need to be treated carefully because they rely on participants' self-reported accounts of their use of Parliamentary website. Many studies, (Huck, 1998; Campbell 1969; Campbell and Stanley, 1963), said that self-reported studies may carry inherent risk of bias due to various adverse factors such as dishonest responses which are a significant threat to internal validity. We may suspect in this case also that positive attitudes to ICT were seen to be more socially desirable than negative attitudes, which may have influenced respondents' responses in the questionnaire. However, the interviews may have provided a counter-balance, as they are obviously face-to-face and arguably allow for more disclosure.

A further limitation in this study is that the items of all constructs were translated from the English language into the Arabic language for the survey. In this process, some subtle but important nuances of the original items may have been lost although all measures were taken to transfer the original meanings to the new language.

For example, in the section on anxiety, statements a, b and d as the follows:

a. I feel apprehensive about using Parliamentary website.

b. It scares me to think that I could lose a lot of information using Parliamentary website by hitting the wrong key.

d. The Parliamentary website is somewhat intimidating to me.

These statements have words that have the same meaning in the Arabic language if we use a literal translation. Therefore, this study sought to translate these words to the meaning that achieved the purpose of these statements.

Another design decision was that the questionnaire was made using a 7-point Likert scale. This may have given respondents too much choice, resulting in misleading answers: it might have had a biasing effect on the responses even though it could not be detected.

Another limitation that affects the reliability and validity of the findings is that the study sample was not quite representative of the whole Parliamentarian population in the Kuwait National assembly. The sample size could also be a limitation in this study. The sample size was less than 200 cases, and was limited by the low return rate of the questionnaire.

In terms of the interview aspect of the study, as we have mentioned, gaining access to this group of subjects was very difficult and is an achievement in itself. However, the short time they felt able to give for interviews did restrict the depth of questioning possible, and in particular it was not possible to delve into the way ICT's were integrated into the actual work practices of the Parliamentarians: a more ethnographically oriented follow up study could fill in this missing piece of the jigsaw.

A final limitation to be mentioned is that, in order to make the subject of the questionnaire clear to respondents, we deliberately focussed solely on the Parliamentary website and did not discuss in great depth any other tools or applications, whether specific to Parliamentary work (e.g. the Parliamentary library system, or general, e.g. email, social media and so on. When the main survey was carried out, the use of these tools in a Parliamentary context was embryonic: however their use has rapidly become normalised and a researcher undertaking a similar project now would be well advised to include them in the scope of the study.

6.5 Recommendations for Future Research

This study has revealed the potential for research in various areas. This study can be replicated in other government bodies to examine effective of this model in measuring of technology acceptance and to determine its predictive validity.

The study sought to explore users' acceptance of technology in a voluntary setting. However, if the setting was a mandatory setting, Behavioural Intention may not be the most appropriate measure as Nah et al. (2004) was suggested. This suggests that Behavioural Intention may not have been the best construct to measure the acceptance of the technology. As a result of this, changing the dependent variable of technology acceptance could be a new area of future research. Rawstorne et al. (1998) and Karahanna (1999) suggest the symbolic adoption as construct instead of Behavioural Intention in a mandatory setting. The symbolic adoption is the user's mental acceptance of an innovation (Klonglan and Coward, 1970).Karahanna (1999) said that symbolic adoption precedes actual adoption and is a necessary but not sufficient condition in voluntary contexts. Rawstorne et al. (1998) saw that people are likely to display differences in symbolic adoption of the new system in a mandatory environment.

Another area of future research is the inclusion of other moderating variables. For example: the differences in the IT experience; occupation; and length of time in the current job.

As we have discussed above, another avenue for research would be a more qualitative approach, possibly using ethnographic methods to explore day to

day detail of Parliamentarians' work and their own conceptualisations of the important constructs in their Parliamentary lives.

6.6 Summary

This chapter summarised the key contributions of the study according to the research questions, together with practical recommendations for further action and research avenues. In terms of the success of this specific study, a multi-method approach to the study of user acceptance of the Parliamentary website and particularly interviews has helped to understand more clearly the influence of specific constructs and variables on acceptance. More broadly, understanding the factors affecting technology acceptance in the Parliament is an important area of research. The proposed model offers decision-makers and other stakeholders within the Parliament, a convenient means of determining which factors they need to pay attention to in order to gain the highest return on their technology investment while ensuring that users accept the technology.

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APPENDICES

APPENDIX I: THE RESEARCH INTERVIEWS QUESTIONS

Question No.	Interview Question
Q1	Do you think that parliamentary website will affect the way it works Parliament?
Q2	What should be the plan for informing the parliamentarians about the benefits of the parliamentary website?
Q3	What are the main online services that you would like to provide on the parliamentary website?
Q4	Are there any barriers that hinder the development of the parliamentary website?
Q5	Did you think that there is a direct correlation between the Parliament budget and the development of its website?
Q6	Do you share people concern about privacy and security?
Q7	To what extent are different cultures considered as an element in the design of the Parliament' website?
Q8	In what way do you think the social life in Kuwait would influence the use of the parliamentary website?

APPENDIX II: QUESTIONNAIRE SURVEY

School of Computing, Engineering and Mathematics
University of Brighton
Watts Building
Lewes road
Brighton BN2 4GJ

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Date----------

Dear Respondent,

I am a PhD student under the supervision of Dr. Lyn Pemberton and Dr. David Horner at School of Computing, Engineering and Mathematics, University of Brighton, Brighton, United Kingdom.

We would like to invite you to be a part of a research study. This research entitled: **Information and communication technologies in the Kuwaiti parliament: a user acceptance and adoption study.** The aim of the study is to explore factors affecting the members of parliament's acceptance of information and communications technology.

Understanding the acceptance of parliamentarians in the Kuwaiti National Assembly for the parliamentary website will make a new contribution to the knowledge. Moreover, it is expected to provide significant information to improve the quality of working life of Members of Parliament,

Members of Council of Ministers and the Parliament's employees. ICT is an abbreviation for Information and communication technology such as: Mobiles, Computers, Internet, Social media networks (For Example: Twitter and Facebook).

This questionnaire addressed to the members of the Kuwaiti National Assembly and members of the Council of Ministers and the staff at the Kuwaiti National Assembly. The questionnaire consists of four parts:

Part A: Attitudes and Motivations,
Part B: Usability Test,
Part C: Background of Your ICT Usage, and
Part D: Demographic Information.

We would appreciate hearing your opinion about the parliamentary website usage. This study will require that you complete a questionnaire survey below (5 pages) along with any additional comments you feel would be helpful. Any information you provide will be kept strictly confidential and will not be attributed to the individual or organization. All responses will be stored in a secure environment. The results of this research would be used for academic purposes only. Your help would be greatly appreciated, thank you very much for your time and cooperation.

Best Regards

……

(Jamella Alotaibi)

If you have any questions about this project please feel free to contact me:

Jamella H. Alotaibi, J.Alotaibi@brighton.ac.uk, UK Mobile: +447435341070, Kuwait Mobile: +96555551579), or my supervisors:

Dr. Lyn Pemberton: Lyn.Pemberton@brighton.ac.ukand

Dr. David Horner: D.S.Horner@brighton.ac.uk

SECTION A: ATTITUDES AND MOTIVATIONS

Please circle the appropriate number to indicate the level of your agreement or disagreement with the following statements on a scale of 1 to 7, where: 1= Strongly Disagree 2= Quite Disagree 3= Slightly Disagree 4= Neutral 5= Slightly Agree 6= Quite Agree 7= Strongly Agree.

ITEMS	Strongly Disagree			Neutral			Strongly Agree
Performance Expectancy (PE)							
a. I find parliamentary website useful in my work.	1	2	3	4	5	6	7
b. Using parliamentary website enables me to accomplish tasks more quickly.	1	2	3	4	5	6	7
c. Using parliamentary website increases my productivity.	1	2	3	4	5	6	7
d. Using parliamentary website increases my chances of getting are elected (For Member of Parliament). are choosed (For Minister). a raise (For Employee).	1	2	3	4	5	6	7
Effort Expectancy (EE)							
a. My interaction with parliamentary website is clear and understandable.	1	2	3	4	5	6	7
b. It is easy for me to become skillful at using parliamentary website.	1	2	3	4	5	6	7
c. I find parliamentary website easy to use.	1	2	3	4	5	6	7
d. Learning to operate parliamentary website is easy for me.	1	2	3	4	5	6	7
Attitude toward Using Technology (AT)							
a. Using parliamentary website is a good idea.	1	2	3	4	5	6	7
b. parliamentary website makes work more interesting.	1	2	3	4	5	6	7
c. Working with parliamentary website is fun.	1	2	3	4	5	6	7

d. I like working with parliamentary website.	1	2	3	4	5	6	7
Social Influence (SI)							
a. People who influence my behavior think that I should use parliamentary website.	1	2	3	4	5	6	7
b. People who are important to me think that I should use parliamentary website.	1	2	3	4	5	6	7
c. Parliament Speaker has been helpful in the use of parliamentary website.	1	2	3	4	5	6	7
d. In general, the Parliament has supported the use of parliamentary website.	1	2	3	4	5	6	7
Facilitating Conditions (FC)							
a. I have network connection to use parliamentary website.	1	2	3	4	5	6	7
b. I have access to devices (PC, website).	1	2	3	4	5	6	7
c. I have the knowledge necessary to use parliamentary website.	1	2	3	4	5	6	7
d. A specific person (or group) is available for assistance with parliamentary website difficulties.	1	2	3	4	5	6	7
Self-Efficacy (SE)							
a. I can complete a job or task using parliamentary website, if there is no one around to tell me what to do as I go.	1	2	3	4	5	6	7
b. I can complete a job or task using parliamentary website, if I can call someone for help if I get stuck.	1	2	3	4	5	6	7
c. I can complete a job or task using parliamentary website, if I have a lot of time to complete the job for which the software is provided.	1	2	3	4	5	6	7
d. I can complete a job or task using parliamentary website, if I have just the built-in help facility for assistance.	1	2	3	4	5	6	7
Anxiety (AX)							
a. I feel apprehensive about using parliamentary website.	1	2	3	4	5	6	7
b. It scares me to think that I could lose a lot of information using parliamentary website by hitting the wrong key.	1	2	3	4	5	6	7
c. I hesitate to use parliamentary website for fear of making mistakes I cannot correct.	1	2	3	4	5	6	7
d. parliamentary website is somewhat intimidating to me.	1	2	3	4	5	6	7

Behavioral Intention to Use parliamentary website (BI)							
a. I intend to use parliamentary website in the next year.	1	2	3	4	5	6	7
b. I predict I will use parliamentary website in the next year.	1	2	3	4	5	6	7
c. I plan to use parliamentary website in the next year.	1	2	3	4	5	6	7

SECTION B: USABILITY TEST FOR PARLIAMENTARY WEBSITE						
1	I think that I would like to use this parliamentary website frequently	1	2	3	4	5
2	I found this parliamentary website unnecessarily complex.	1	2	3	4	5
3	I thought this parliamentary website was easy to use.	1	2	3	4	5
4	I think that I would need assistance to be able to use this parliamentary website.	1	2	3	4	5
5	I found the various functions in this parliamentary website were well integrated	1	2	3	4	5
6	I thought there was too much inconsistency in this parliamentary website.	1	2	3	4	5
7	I would imagine that most people would learn to use this parliamentary website very quickly.	1	2	3	4	5
8	I found this parliamentary website very cumbersome to use.	1	2	3	4	5
9	I felt very confident using this parliamentary website.	1	2	3	4	5
10	I needed to learn a lot of things before I could get going with this parliamentary website.	1	2	3	4	5

SECTION C: BACKGROUND OF YOUR ICT USAGE

Please answer [√] only one answer for the following questions.

C1. How long have you been using the parliamentary website (years)?

1	Less than 1 year	**2**	1-5 years	**3**	6-10 years	**4**	More than 10 years

C2. At present, overall how often do you use the parliamentary website?

1	Don't use at all	**2**	Use about once each month	**3**	Use a few times a month
4	Use about once each week	**5**	Use a few times a week	**6**	Use five to six times a week
7	Use about once a day	**8**	Use several times a day	**9**	Other (please specify)…….

C3. What is your self-assessment about using the parliamentary website?

1	Low experience	**2**	Moderate experience	**3**	High experience

C4. Currently, do you think that you use the parliamentary website enough or not enough or too much?

1	Not enough	**2**	Enough	**3**	Too much

C5. What is/are the application/s of ICT that you use most?

	Often **1**	**Usually** **2**	**Sometimes** **3**	**Rarely** **4**	**Never** **5**
Office					
Social Network					

Websites					
E-mails					
Others					

C6. What do you use these applications for?

	Parliamentary work	**Others**	**Do not Use**
Office			
Social Network			
Websites			
E-mails			
Others			

C7. Where do you use these applications? (Tick as many as applicable)

	My office	**Chamber**	**Café**	**Home**	**Do not use**
Office					
Social Network					
Websites					
E-mails					
Others					

SECTION D: DEMOGRAPHIC INFORMATION

(Please check (√) only one answer)

(D1) Age	(D2) Gender	(D3) Education
☐ <30 ☐ 31-40 ☐ 41-50 ☐ 51-60 ☐ >61	☐ Male ☐ Female	☐ Elementary School ☐ High School ☐ University ☐ Master ☐ PhD

(D4). Position in parliament

1	Member of Parliament Office	**2**	Minister	**3**	Member of Parliament	**4**	Head of Sector	**5**	Employee

(D5). Why do you use the website?

[1] I use the website by my own free will (Voluntary).
[2] I use the website because of the departmental directive (Mandatory).
[3] I do not use website.

Please circle the appropriate number to indicate the level of your agreement or disagreement with the following statements on a scale of 1 to 7, where: 1= Strongly Disagree 2= Quite Disagree 3= Slightly Disagree 4= Neutral 5= Slightly Agree 6= Quite Agree 7= Strongly Agree.

(D6). In general, please rate to the extent to which you agree with each statement below regarding your habit of reading and writing/typing.

a. I like reading from a screen.	1	2	3	4	5	6	7
b. I like reading in general (books)	1	2	3	4	5	6	7
c. I like using a keyboard.	1	2	3	4	5	6	7
d. I like writing.	1	2	3	4	5	6	7
e. I like both reading and writing/typing.	1	2	3	4	5	6	7

(D7). Because using the website needs an effort of reading (e.g. reading when searching the information from the Websites etc.) and writing/typing (e.g. responding to emails etc.). Taking about your answer to D6, do you feel that your attitude to reading and writing is an obstacle to your web use?

a. I think my habit is not an obstacle for me in using the website.	1	2	3	4	5	6	7

(D8). Since the main language of the Internet is English, please rate to what extent you agree with each statement below regarding whether our Arabic National language is an obstacle for you in using websites.

a. I think since Arabic language is national language, so it is an obstacle for me in using websites when I search and read information from English Language Websites.	1	2	3	4	5	6	7
b. I think since Arabic Language is national language, so it is an obstacle for me in using websites when I read information from English Language Data Bases e.g. e-Journals etc.	1	2	3	4	5	6	7
c. I think since Arabic Language is national language, so it is an obstacle for me when I read and respond to emails in the English Language.	1	2	3	4	5	6	7
d. Other (Please specify)……							

If you would like to make any other comments about the use of ICT in Parliament, please use the space below and continue overleaf if necessary.

_____
_____
_____
_____
_____

Thank you for your

APPENDIX III: THE ITEMS THAT MEASURE THE RESEARCH MODEL CONSTRUCTS

The Item used in The questionnaire
BI Behavioural Intention To Use
BI1: I intend to use parliamentary website in the next year.
BI2: I predict I will use parliamentary website in the next year.
BI3: I plan to use parliamentary website in the next year.
PE Performance Expectancy
PE1: I find the parliamentary website useful in my work.
PE2: Using the parliamentary website enables me to accomplish tasks more quickly.
PE3: Using the parliamentary website increases my productivity.
PE4: Using the parliamentary website increases my chances of getting: • Re-elected (For Member of Parliament). • Re-chosen (For Minister). • A raise (For Employee).
EE Effort Expectancy
EE1: My interaction with parliamentary website is clear and understandable.
EE2: It is easy for me to become skilful at using parliamentary website.
EE3: I find parliamentary website easy to use.
EE4: Learning to operate parliamentary website is easy for me.

SI Social Influence

SI1: People who influence my behaviour think that I should use parliamentary website.

SI2: People who are important to me think that I should use parliamentary website.

SI3: Parliament Speaker has been helpful in the use of parliamentary website.

SI4: In general, the Parliament has supported the use of parliamentary website.

FC Facilitating Conditions

FC1: I have network connection to use parliamentary website.

FC2: I have access to devices (PC, website).

FC3: I have the knowledge necessary to use parliamentary website.

FC4: A specific person (or group) is available for assistance with parliamentary website difficulties.

AX Anxiety

AX1: I feel apprehensive about using parliamentary website.

AX2: It scares me to think that I could lose a lot of information using parliamentary website by hitting the wrong key.

AX3: I hesitate to use parliamentary website for fear of making mistakes I cannot correct.

AX4: Parliamentary website is somewhat intimidating to me.

SE Self-Efficacy

SE1: I can complete a job or task using parliamentary website, if there is no one around to tell me what to do as I go.

SE2: I can complete a job or task using parliamentary website, if I can call someone for help if I get stuck.

SE3: I can complete a job or task using parliamentary website, if I have a lot of time to complete the job for which the software is provided.

SE4: I can complete a job or task using parliamentary website, if I have just the built-in help facility for assistance.

AT Attitude Toward Using Parliamentary Website

AT1: Using parliamentary website is a good idea.

AT2: Parliamentary website makes work more interesting.

AT3: Working with parliamentary website is fun.

AT4: I like working with parliamentary website.