PREDICTORS OF LEGISLATORS’ ICT ACCEPTANCE AND USE IN THE PERFORMANCE OF LEGISLATIVE FUNCTIONS AT THE NIGERIAN NATIONAL ASSEMBLY

OLASINA, GBOLAHAN
BA, MLIS, OCA

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Supervisor: Prof Stephen Mutula

Submitted: January 2014
DECLARATION

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ABSTRACT

This study was conducted to determine the predictors of legislators’ acceptance and use of Information and Communication Technology (ICT) in the performance of legislative functions in the Nigerian National Assembly (NASS), Abuja, Nigeria. A dominantly positivist paradigm using quantitative and qualitative approaches was used. The survey methodology was used and the questionnaire was distributed to all the 469 federal legislators of NASS. An in-depth interview was conducted on five principal officers of the NASS, namely the Chairs of House Committees on ICT and Education; the Chair of Senate Committee on Communication; Director of ICT; and the Clerk of NASS. The data collected through a survey questionnaire was analyzed using the statistical Package for Social Sciences (SPSS) to generate summary and descriptive statistics, Pearson Multiple Correlation, Analysis of Variance, Stepwise Multiple Regression and Path Regression Analysis; while qualitative data was analyzed using content analysis and thematic analyses. The theoretical framework used for the study was an extension of the Unified Theory of Acceptance and Use of Technology (UTAUT) by Venkatesh, Morris, Davis and Davis (2003). A test-retest reliability method of two weeks interval using Cronbach Alpha was conducted on 24 state legislators. The expected reliability stood at $r=0.92$, which was adequate for the study. Ethical considerations were taken into account with informed consent forms, approval seeking, permission and confidentiality.

The findings showed that culture, academic qualification, attitude, behavioural intention, age and organizational impact were the most important predictors of ICT acceptance and use among legislators in NASS. The findings affirmed the ease of use of ICT of the legislators and suggested that legislators have a positive attitude towards ICT use. The findings showed that the legislators perceived ICT as useful and relevant to legislative work. The ICT usage level by legislators was generally low. The inhibitors of ICT acceptance and use that were found in the present study include: lack of exposure to e-parliament systems and fear of technology manipulation and political alienation. The findings on the relationships between independent and dependent variables (culture, ICT availability, facilitating conditions, effort expectancy, social influence, and performance expectancy) and the dependent
variable (ICT acceptance and use) by legislators revealed that culture, facilitating conditions, effort expectancy, social influence and performance expectancy were positively correlated with ICT acceptance and use. ICT availability and performance of legislative functions, behavioural intention and gender were found to be negatively correlated with ICT acceptance and use. The findings of the tested hypothesis showed that independent variables (ICT skills, gender, age and level of education) were positively related. Findings revealed that independent variables (culture, ICT availability, facilitating conditions, effort expectancy, social influence and performance expectancy) jointly contributed 7.1% and 32% to the total variance in behavioural intention and user behaviour (moderator variables), respectively.

The findings of the study contribute towards creating awareness of the potentials of ICT to support representative democracy in Nigeria. The study made recommendations that have the potentials to improve policy and practice of e-parliament by recommending the provision of ICT for legislators to fit cultural contexts in Nigeria and theoretical interventions to the model of technology adoption by using culture to extend the UTAUT to better explain the phenomenon in Nigeria. The overall conclusion in this regard was that variables such as trust, security, accessibility, power supply, motivation, ICT policy, often used to extend technology adoption models such as UTAUT in studies in Asia and South America, were not found relevant in the context of legislators in Nigeria. The study recommended the need for ICT change agents from among the legislators to support members to become truly mobile workers.
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In all thy ways acknowledge Him, and He shall direct thy paths. Proverbs 3:6.

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DEDICATION

This work is dedicated to the glory of the Almighty God.
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<td>Facilitating Conditions</td>
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<td>HCI</td>
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<td>University of KwaZulu-Natal, South Africa</td>
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<td>UN</td>
<td>United Nations</td>
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<td>UTAUT</td>
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CHAPTER ONE

INTRODUCTION

1.1 Context of the study

The purpose of this study was to investigate the predictors of ICT acceptance and use in the performance of legislative functions by legislators in Nigeria. This chapter provides the context of the study, through discussion of the following aspects: role of legislature from global perspectives; the legislature in Nigeria; use of ICT in legislative functions; statement of the problem; research objectives; research questions; hypotheses; delimitations and definitions of the study. The theories and research methods will be discussed. The purpose of this chapter is to discuss both the general and specific subject area of technology adoption to a particular field of e-parliament research. The chapter is aimed at isolating key variables from the literature, as well as theories which are discussed in detail in Chapter Two (theoretical framework) and Chapter Three (literature review), respectively.

1.2 A Global Perspective of the Legislature

The legislature is a global phenomenon. Some examples of this global phenomenon are the Houses of Parliament in London, the Congress in Washington D.C and the National Assembly (NASS) in Abuja, Nigeria. There are unicameral legislatures such as in Greece and China and bi-cameral legislatures such as in Germany and Nigeria (Aiyede, 2005). The unicameral legislatures have a single house and the bi-cameral legislatures have two houses. Elected representatives are known by various nomenclatures such as; lawmakers, legislators (in Nigeria), MPs (Britain), congressmen, senators (US) and so on.

Legislators across the world perform the key role of law making, representation and oversight (Coleman, 2006). Legislators assist citizens in respect of civil rights, primary health and education. In addition, the legislators also approve or veto executive bills. They also perform supervision of ministries and departments of
government in their oversight functions. The oversight role of legislators in most countries is to scrutinize and authorize revenues and expenditures and to ensure that the national budget is properly implemented. Most of the legislative functions and tasks involve communication (Norton, 2007). The form of communication used is based on traditional or verbal methods on the floor of the house, in plenary, committees and correspondences, public speeches and through the Internet and other ICT tools. The legislators have a constitutional role to communicate or dialogue with their constituents, citizens, political parties and executive.

Several studies have addressed the role of legislature (Fleming and Glenn, 1997; White, 1989), in the evolution of the functions of legislatures and the premise of the decline of parliament (Atkinson and Jackson, 1980; Schaffer, 1998). Some studies have covered areas of performance of legislators. These studies have answered questions about the confidence of the public in representatives, politicians, governments and even democracy (Mancuso, Atkinson, Blaise, Greene, Nevitte, 1998). Fleming and Glenn, (1997), Franks (1985) and Atkinson and Jackson (1980) have reported on the functions of legislators and how their performance can be enhanced through the use of ICT in such areas as law-making, representation, oversight, supervision and consultation with electorates.

White (1989) reported that the function of the legislators includes representation of the electorate. They debate issues of local and national importance and translate these debates into policies. In representative democracy, effective representation requires legislators to engage their constituents in dialogue. The aim is in order to understand the views and perspectives of the public on national issues. The legislators utilize the powers vested in their office (legislation, participating in debates and authoring questions), to voice the needs of their people. In many countries, legislators are expected to lobby on behalf of their constituencies for specific projects and/or financial needs. The representative role of the legislators requires them to demonstrate their accomplishments to the people. Overall, the legislators are required to demonstrate what they have accomplished. This is part of the requirement of the representative role. In addition, the involvement of the citizens in
the legislative process may dictate the effectiveness of the representative role of the legislators (White, 1989).

Several studies, such as those of Aiyede (2005) and Kefas-Dore (2009), describe the legislature as very fundamental to democracy and good governance. These studies examine the effectiveness of the legislature in carrying out its constitutional role.

1.2.1 The Nigerian National Assembly (NASS)

Aiyede (2005) provided an insight into Nigeria’s national legislature in strengthening and consolidating democracy through representation, transparency, accountability, communication with constituents and citizens’ participation in legislative matters. Literature on the expectations of the Nigerian public identified that citizens are expected to dialogue with their elected representatives and participate in legislative matters on the floor of the house (Adegun, 2007).

The federal legislator under the 1999 Nigerian Constitution is a member of the bicameral legislature, called the Nigerian National Assembly (NASS) and consisting of a 360-seat house of representatives and a 109-seat senate. All federal legislators are elected for a four-year term. Nigeria has legislators at the federal, state and local government levels. The present study focuses on the federal legislators. The country is divided into 36 states and a federal capital territory run on the six geopolitical zones of North East, North West, North Central, South West, South East and South South (Oyewo, 2007). The federal legislator is a representative of a constituency made up of senatorial wards and federal constituencies. Because of the military rule that characterized the past in Nigeria, the legislature or the Nigerian National Assembly (NASS) does not have much of a history. The military disbanded the NASS each time it struck. Therefore, on return to civilian rule in recent time, the National Assembly in the new dispensation convened for the first time in Abuja in August, 1999 at the National Assembly Complex in Abuja, Nigeria. The legislature in Nigeria has been disrupted by military interruptions, and also from issues such as poor representation, corruption, inefficiency, lack of transparency and accountability,
and limited involvement of citizens in decisions made by the elected representatives. As a result, the public has become disenchanted with legislators and representative democracy.

Chikwana, Sithole and Bratton (2004) explored the concept of democracy and evaluated governance, accountability of political and traditional leaderships in twelve African countries including Nigeria. The method used involved face-to-face interviews, national probability samples and random selection (Nigeria: 2324 sample size). The results indicated evidence of serious political conflicts based on corruption and citizens’ distrust. This was evident in the following countries: Nigeria, Uganda and Zimbabwe. In the Nigerian context it was evident that the citizens were dissatisfied with the democratic process. There was also a general dissatisfaction with elected representatives of the people. The mitigating factors were corruption, lack of engagement with citizens in their role of representation and absence of transparency and accountability in governance.

The public often complains about the insensitivity of legislators to the plight of the masses (Adegun, 2007). They accuse legislators of being inefficient, corrupt, self-serving, and invisible and not engaging their constituents (Okanlawon, 2012). This study examined performance of legislators. It is considered important from the perspectives of awareness creation and recommendations for policy drafting and interventions. The study can improve the practice of e-parliament by devising strategies to fit ICT applications to cultural contexts and realities in Nigeria and theory by extending the model of technology adoption (UTAUT), with a variable such as culture to better predict ICT adoption by legislators in Nigeria.

1.2.2 Use of ICT in Legislative Functions

The term ICT is used in this study to refer to the convergence of electronic, computing and telecommunication technologies. Consequently, many organizations, including companies, educational institutions, industries, government institutions and ministries are tapping the opportunities provided by ICT to improve their efficiency, fight corruption and enhance transparency, accountability and productivity (Unwin,
ICT is supportive of political institutions across the globe as reported by the United Nations (UN) World e-parliament reports (2008; 2009; 2010; 2012). The reports highlight initiatives by legislators to use information and communication technologies (ICT) to enhance their performance and good governance. The 2012 report was conducted in 2007 on 156 legislatures across the world. These legislatures represent a membership of 28,613 individual legislators. The reports indicated that legislators (MPs) in the countries such as the UK, Portugal, Sweden, Norway, Korea, Switzerland and the USA accept and use ICT for oversight, providing services, education and training, systems and research services and communication. ICT has widened the scope of applications in legislature to include the legislative information exchange through emails, blogs, mailing lists, word-processing, auditing and accounting software, legislative databases, websites, handheld devices, such as mobile phones, and more (Enzing, Deuten, Rijnders-Nagle and Van, 2012). Multimedia and hypermedia applications, blogs, e-voting systems, Web 2.0 tools, social networking tools, instant messaging (IM), voice-over internet protocol (VOIP) and personal training are being widely used to support legislative functions, especially in developed countries (Francoli and Ward, 2007).

Despite the evidence of progress cited above, the UN World e-parliament report (2012) showed that there were major persistent gaps in the state of ICT in many parliaments across the world, such that at least 35% of legislatures do not connect legislators to any LAN (local area network); inadequate number of PCs to support lawmaking; budget and oversight; a knowledge gap for legislators to use ICT; many libraries in legislatures lack adequate technical infrastructure, reliable electrical power supply is a major obstacle for 15% of legislatures (developing countries) and nearly two-thirds of legislatures do not have a written vision statement for ICT, whilst 40% do not have a regularly updated strategic plan.

Meikle (2002) and Pickerill (2004, p. 200) suggested that “an increasing body of knowledge points to the capacity of the ICT to revive political representation and citizen engagement and enhance the fair representation of citizens’ interests and opinions in Australia”. Ward, Lusoli and Gibson (2007) suggested that Australian MPs were avoiding the numerous demands on them to cope with large volumes of
email correspondences they received from the public as a result of the digital age. Despite the increasing adoption of ICT by legislators to support their legislative functions, Nigerian legislators seem to be trailing their counterparts in the developed world (Adegun, 2007 and Okanlawon, 2012).

The UN World e-parliament report (2012) highlighted the wide use of ICT by 44 800 legislators in about 200 countries. The survey showed that 85% of legislators reported an increase in communication with citizens using ICT-supported methods. The UN survey reports have been criticized for not addressing ICT acceptance and use, which are important variables in ICT diffusion among a group of people (Thompson, 2004; Bagozzi, 2007; Li and Kishore, 2006). Bagozzi (2007), Bouwman and van de Wijngaert (2009) have criticized technology adoption models (TAM and UTAUT) as not suitable to explain technology adoption outside the developed countries where they originated.

Castells (2001), Coleman and Nathanson (2005) explain that ICT is being used by members of parliament in Norway, Denmark, the United Kingdom, Portugal, Sweden and Switzerland, among other countries in Europe, for oversight through monitoring budget implementation, executive expenses, and ensuring compliance by government ministry with budgetary provisions. In Greece, Tzortopoulos (2002) reported that legislators use the Internet to conduct research and for information-gathering thus improving performance of their legislative functions. The use of ICT by legislators to improve the efficiency and performance of legislative functions need not be over-emphasized. The citizens in countries where ICT is deployed to support legislative functions view their elected representatives as efficient, since they engage the public in dialogue, participation and good governance, using the e-parliament platform (Norton, 2007).

Heitshusen, Young and Wood (2005) suggested that MPs' functions have improved in a number of respects in New Zealand, Canada, Ireland and Australia, that the survey covered. The use of ICT offers increased possibilities for individual MPs to campaign around selected issues. MPs make information available to citizens on the parliamentary matters networking sites and websites. Heitshusen et al. (2005) stated
that ICT is not a “fix-all” solution, but can drive change to realize democratic benefits. The authors concluded that the future realization of e-parliament may be hinged on the social factors such as peer pressure and attitude.

Smith and Webster (2004), in their study of the newly created Scottish Parliament, reported how ICT was being integrated into the legislative function of legislators. This involved the design of the parliament and democratic practice, which was informed by the capabilities offered by ICT. The study investigated whether or not members of the new Scottish parliament made use of ICT. It revealed that legislators expressed more positive opinions on the democratic potential of technology than their counterparts in more established democracies.

Several studies have therefore been undertaken on the predictors, impact of perceptions, attitude and behaviour of use of ICT on performance in governance, legislature, law-making, representation, budgeting, oversight and democracy, mostly in the developed countries and to a certain extent, in Asia and Africa (Young and Chen, 2005; Jackson, 2003). The studies have revealed relationships between variables such as the use of ICT and efficiency in the performance of legislative functions, adoption of legislative information systems and dissemination of legislative information to citizens using chat rooms, emails, e-consultation tools, blogs and wikis. However, it would seem there is little emphasis given to acceptance and use of ICT in developing countries such as Nigeria. There are few studies on the use of technology by elected representatives for good governance.

Predictor studies are common in information science (IS) research and they generally determine the factors that predict technology adoption and use either in the context of the individuals or organizations and indicate the prediction relationships between the independent and dependent variables. Technology adoption research has identified in broad terms, sixty-seven independent variables that have been used to predict ICT adoption and use by individuals and organizations (Jeyaraj, Rottman and Lacity, 2006). These predictors include variables such as perceived usefulness, ease of use, attitude, perception, relative advantage, ease of use, age, facilitating conditions, ICT skills, computer experience, education, government, competition,
satisfaction, scope, relationships, professionalism, career ladder, uncertainty, perceived barriers, slack resources, vertical coordination and industry type (Jeyaraj et al., 2006). The present study investigated some of these predictors in the context of legislators in their performance of legislative functions in the NASS.

1.3 Statement of the Problem

The use of ICT in legislature in Britain, South Africa, Portugal, Brazil and the USA has impacted positively on the performance of legislative functions in strengthening participation of citizens in governance; engendering growth of democracy; enhancing dialogue with constituents, representation and oversight of executive functions (Goodhue, 2007; Norton, 2007; Gulati, 2004; Nyambe, 2007; UN World e-parliament reports 2008, 2009, 2010 and 2012). While legislators in the countries mentioned are leveraging ICT to improve their legislative functions, the reverse is the case in Nigeria. Hard copies of sheaves of papers are still distributed on the floor of the National Assembly in Nigeria (NASS), with legislators having to read through hundreds of pages to access, draft or sponsor bills (Adegun, 2007). Several legislative work hours are wasted when hard copies of draft bills or sponsored bills are not made available to legislators for them to digest before parliamentary debates, leading to cancellations or postponements of plenary sessions. Sharing and distributing the draft bills in e-copies of relevant and up-to-date information to each legislator prior to debate in parliament would significantly improve the quality of legislators’ representation of the people. The Nigerian National Assembly is made up of elected representatives (from both the Senate and House of Representatives). Three senators are drawn from senatorial districts of each of the 36 states of Nigeria and one senator represents the Federal Capital Territory, Abuja. The House of Representatives is made up of six or more members from federal constituencies from each of the 36 states of Nigeria, depending on the size of the federal constituency. The seat of the Nigerian National Assembly (NASS) is Abuja, Nigeria. The people in remote and rural Nigeria have often expressed dissatisfaction with legislators in Abuja and want more involvement in making decisions that affect them especially with regard to service delivery. At present, participation of citizens in
legislative matters on the floor of parliament is poor, as ICT is not used to facilitate input and feedback from the public (Adegun, 2007).

Studies in previous literature from around the world have highlighted the positive contributions of the use of ICT to improve communication amongst legislators and externally with their constituents (Norton, 2007; UN World e-parliament reports 2008, 2009, 2010 and 2012; Malloy, 2003). The main purpose of the present study was to investigate the predictors of legislators’ ICT acceptance and use in the performance of legislative functions in the Nigerian National Assembly (NASS). A developing country context of the use of ICT in legislative functions would provide a comparative picture with developed countries and help address gaps in literature and also suggest improvements in policy, practice and theory.

1.4 Objectives of the Study

The main objective of this study was to investigate the predictors of legislators’ ICT acceptance and use in the performance of legislative functions in the Nigerian National Assembly (NASS). The main objective and the specific objectives focus on the predictors of ICT acceptance and use. The specific objectives were to:

1.4.1 Assess the predictors of legislators’ ICT acceptance and use;
1.4.2 Examine the attitudes and perceptions of legislators towards ICT;
1.4.3 Assess legislators’ ICT usage level in the performance of legislative functions;
1.4.4 Determine the inhibitors of acceptance and use of ICT; and
1.4.5 Investigate the relationships between independent variables and dependent variables of the study
1.5 Research Questions

This study investigated the predictors of legislators’ ICT acceptance and use in the performance of legislative functions in the Nigerian National Assembly (NASS). In particular, the following research questions were investigated:

1.5.1 What are the predictors of legislators’ ICT acceptance and use?
1.5.2 What are the attitudes and perceptions of legislators towards ICT?
1.5.3 What is legislators’ ICT usage level in performing legislative functions?
1.5.4 What are the inhibitors to the use of ICT by legislators?
1.5.5 What relationships exist between independent variables (culture, ICT availability, facilitating conditions, effort expectancy, social influences, performance expectancy) and dependent variables (ICT acceptance and use)?

1.6 Research Hypotheses

The following null hypotheses were tested in the study:

1.6.1 There is no significant relationship between legislators’ ICT skills, age, sex, level of education, culture and acceptance and use of ICT in performance of legislative functions.
1.6.2 There is no significant relationship between the attitudes of legislators to the benefits of use of ICT, actual use and performance of legislative functions.

1.7 Delimitation of the Study

This study was conducted as only one case study and hence its results cannot be generalized. The choice of population of the study was limited to federal legislators (members of the House of Representatives and Senators). The implication is that the citizens are left out. The need for the legislators to engage the public by use of ICT and citizens’ adoption and use of ICT may be crucial. The issue of evaluation apprehension effects (such as participants behaving in a way as to please the researcher) cannot be ruled out in the self-reported in-depth interviews, leading to
possible potential sources of bias. The study was constrained by the busy nature of the legislators and the very short time allocated to the researcher in the conduct of in-depth interviews for the political leadership of the NASS. As a result, multiple methods such as observations and document analyses were used. There were limitations arising from the fact that much of the literature on technology adoption is in the context of countries in Europe, North America and to some extent, Asia, thus limiting knowledge of technology adoption in the context of culture in Africa that could have enriched this study. Lastly, technology adoption models (Technology Acceptance Model, TAM and the Unified Theory of Acceptance and Use of Technology, UTAUT) and research originate in the developed world. Their application in Africa may generate different results that may require the design of new technology adoption models for Africa.

1.8 Significance of the Study

This study is significant in four strategic ways of policy: it recommends policy interventions which will develop, drive and grow the adoption and use of ICT by legislators and their constituents. It makes recommendations for an e-parliament strategy that will improve legislative functions in the NASS. It tested and extended UTAUT in the context of a developing country such as Nigeria and finally it provided additional variables of adoption of technology.

1.9 Theories and Models of ICT Acceptance and Use

This study adapted UTAUT (Unified Technology Acceptance and Use of Technology model) by Venkatesh, Morris, Davis and Davis (2003), which is a more recent instrument synthesized from eight existing models of use of technology that include Technology Acceptance Model (TAM); Theory of Reasoned Action; Motivational Model; Theory of Planned Behaviour (TPB), a combination of Technology Acceptance Model (TAM) and TPB Model; Model of PC Utilization; Innovation Diffusion Theory; and Social Cognition Theory (Oshlyansky, Cairns & Thimbleby, 2007). A number of theoretical models (such as the TAM, TRA, TPB) have been proposed (Davis, 1989; Chau, 1996; Venkatesh and Davis, 2000) to facilitate the
understanding of factors impacting on the acceptance of information technologies. The original UTAUT model is modified in the present study to focus only on those variables relevant to the research problem and sub-problems of the study.

The original UTAUT targeted populations in USA and other developed countries. This feature is retained in the adapted UTAUT, Venkatesh et al. (2003) originated the Unified Theory of Acceptance and Use of Technology (UTAUT). Performance expectancy and effort expectancy are used to integrate variables such as perceived usefulness and ease of use. The model suggested that the Effort Expectancy construct can be significant in determining user acceptance of information technology. The model explains that individual differences influence technology use. Venkatesh et al. (2003) cited in Marchewka, Liu and Kostiwa (2007, p. 95) reported that the UTAUT “accounted for 70 percent of the variance in usage intention, better than any of the TAM studies alone”. The UTAUT is useful in enhancing the understanding of technology acceptance (Venkatesh et al, 2003). AlAwadhi and Morris (2008) adapted UTAUT to determine the adoption of e-government services in Kuwait, using a survey of 880 students. Table 1 presents the mapping of the research questions onto UTAUT attributes.

<table>
<thead>
<tr>
<th>Question No.</th>
<th>Objectives</th>
<th>Research Question</th>
<th>UTAUT attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Assess the predictors of legislators’ ICT usage</td>
<td>What are the predictors of legislators’ ICT acceptance and use?</td>
<td>Performance expectancy (perceived usefulness, outcome expectations); effort expectancy (perceived ease of use and complexity); social influence (subjective norm, social factors, image and attitude); facilitating conditions (government policy, organizational and technical support), gender, age, experience, voluntariness of use</td>
</tr>
<tr>
<td>Question No.</td>
<td>Objectives</td>
<td>Research Question</td>
<td>UTAUT attributes</td>
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<tr>
<td>2.</td>
<td>Examine the attitude and perceptions of legislators to the use of ICT</td>
<td>What are the attitudes and perceptions of legislators towards the use of ICT?</td>
<td>User behaviour, attitude, perception</td>
</tr>
<tr>
<td>3.</td>
<td>Assess legislators' ICT usage level in the performance of legislative functions</td>
<td>What is legislators' ICT usage level in performance of legislative functions?</td>
<td>Behavioural intention, usage behaviour</td>
</tr>
<tr>
<td>4.</td>
<td>Determine the inhibitors to use of ICT by legislators of NASS</td>
<td>What are the inhibitors to use of ICT by legislators of the NASS?</td>
<td>Facilitating conditions (government policy, organizational and technical support), intention to use</td>
</tr>
<tr>
<td>5.</td>
<td>Investigate the relationships existing between independent variables (culture, ICT availability, facilitating conditions, effort expectancy, social influence and performance expectancy) and dependent variables (ICT acceptance and use)?</td>
<td>What relationships exist between independent variables (culture, ICT availability, facilitating conditions, effort expectancy, social influence and performance expectancy) and dependent variables (ICT acceptance and use)?</td>
<td>Facilitating conditions ((government policy, organizational and technical support), effort expectancy, social influence (subjective norm, social factors, image and attitude) and performance expectancy (perceived usefulness, outcome expectations))</td>
</tr>
</tbody>
</table>

### 1.10 Methods

The research paradigm adopted was dominantly positivism. The study combined both quantitative and qualitative approaches appropriately. Both methods are used in understanding social phenomena as suggested by Punch (2005). A survey questionnaire alongside in-depth interviews, observation and document analyses were used (see the full details in Chapter Four).
1.11 Summary

This chapter has provided the context of the study through the discussion of the role of legislators, the legislature in Nigeria, use of ICT in legislative functions, statement of the problem, research objectives, research questions, hypotheses, delimitations and definitions of the study. The theories and methods are discussed. The purpose of this chapter is to position the study in the current debate on ICT acceptance and use in legislative functions. The chapter is aimed at isolating key variables which are discussed in detail in Chapter Two (theoretical framework) and Chapter Three (literature review), respectively.
CHAPTER TWO

THEORETICAL FRAMEWORK

2.1 Introduction

The central theme of the study was to investigate the predictors of legislators’ acceptance and use of ICT in the performance of legislative functions in the Nigerian National Assembly. A theoretical framework of a study is a structure that presents the theory which explains why the problem under study exists (Chinn and Kramer, 1999). The purpose of the theoretical framework in research is the lens through which the hypothesis is examined to determine its validity (Creswell, 1994). The separation of the theoretical framework section from the literature review is based on the argument of (Creswell, 1994, 1998 and 2000) that the theoretical framework be separated from the literature review. Kerlinger (1979), Labovitz and Hagedorn (1971) explain that a theoretical framework bridges the independent and dependent variables in a study, by tying together the variables and providing an overarching explanation of how and why one would expect the independent variable to predict the dependent variable. This study reviews theoretical frames relevant to the moderating factors, independent and dependent variables on predictors of ICT acceptance and use by legislators in performance of legislative functions. The UTAUT model (Venkatesh, Morris, Davis and Davis, 2003), is made up of eight models of acceptance and use of technology and is the main underpinning framework for the study. The other eight relevant models are discussed below, because they make up UTAUT. However, the models (with exception of UTAUT) have failed to explain ICT adoption and use in respect of the intrinsic characteristics (at the level of the individual as, opposed to the organization) of the information system.

There are several models of technology adoption. For a long time the Technology Acceptance Model (TAM) has emerged as the predominant model of choice, though other models such as the motivation theory, combined TAM and Theory of Planned Behaviour and the Model of PC Utilization have been developed as extensions of
TAM. Unified Technology Acceptance and Use of Technology model (UTAUT) by Venkatesh, Morris, Davis and Davis (2003) is a more recent instrument, synthesized from eight existing models of use of technology that include Technology Acceptance Model (TAM); Theory of Reasoned Action (TRA); Motivational Model (MM); Theory of Planned Behaviour (TPB); a combination of Technology Acceptance Model (TAM) and TPB model (CTAM & TPB); Model of PC Utilization (MPCU); Innovation Diffusion Theory (IDT); and Social Cognition Theory (Oshlyansky, Cairns and Thimbleby, 2007).

The organization of this chapter is informed by Creswell (1994). He provides guidelines on how the theoretical framework chapter should be presented. The framework demonstrates the relationships between the issues and reviewed literature on independent and dependent variables and on scholarly literature that relates to the dependent and independent variables. This chapter is therefore divided into a number of sections. Section 2.2 discusses TAM. This is followed by Section 2.3 which elaborates on TRA. Section 2.4 discusses the Motivational Model (MM). Section 2.5 explains TPB. Section 2.6 describes a combined TAM and TPB models (CTAM & TPB). Section 2.7 discusses MPCU and Section 2.8 IDT. The next section, 2.9 explains SCT. The last section, 2.10, details the UTAUT model and justification of its choice as the theoretical frame for this study.

2.2 Technology Acceptance Model (TAM)

The Technology Acceptance Model (Davis, Bagozzi and Warshaw, 1989) is drawn from the Theory of Reasoned Action (TRA) model (Ajzen and Fishbein, 1980). The TRA and the Theory of Planned Behaviour (TPB) (Ajzen, 1985) are well discussed in IS literature (Ajzen and Fishbein, 1980). The TRA and the TAM state “that a behaviour is determined by the intention to perform the behaviour” (Ajzen and Fishbein, 1980 cited in Moon and Kim, 2001, p. 218). Actual behaviour and intention have been found to be highly correlated (Davis, 1989; Fishbein and Ajzen, 1975). Davis (1989) cited in Moon and Kim (2001, p. 219) reported that “intention is determined by attitude towards the behaviour”. He examined the external variables that influenced attitude towards IT use. The TAM identifies “perceived ease of use
and perceived usefulness as key independent variables” (Davis, 1989 cited in Moon and Kim, 2001, p. 218). He found that “perceived ease of use (PEOU) influences perceived usefulness. The TAM includes the assumption that the behaviour is volitional”. Adams, Nelson and Todd (1992), Davis et al. (1989), Mathieson (1991), Straub, Keil and Brennan (1997) validated and tested the UTAUT in several related studies. The constructs of “TAM, such as intentions to use a technology, usage behaviour, perceived usefulness (PU), perceived ease of use (PEOU) make the TAM overlap and better explain the effects of attitude and subjective norms in the TRA and the TPB, which are synthesized in the extension of the TAM, which is called UTAUT” (Kortemann, 2005 cited in King and He, 2006, p. 743). These constructs of PU and PEOU are independent variables in this study. They relate directly to this study’s research question 2, seeking to determine the attitude and perceptions of legislators towards the use of ICT (see section 1.5).

Technology Acceptance Model (TAM) was developed to find out the factors that influence computer adoption and “to provide a parsimonious theoretical explanatory model” (Davis, Bagozzi and Warshaw, 1989 cited in Hu, Chau, Sheng and Tam, 1999, p. 94). The TAM draws largely from Fishbein and Ajzen (1975) in their model of TRA which has its origin largely in social psychology. What the theory posits “is that the intent to produce a certain behaviour depends on two basic determinants”. (Roca, Chiu and Martínez, 2006, p. 1071). These are the attitude toward behaviour and subjective norms. Attitude is, “an individual’s positive or negative feelings (evaluative affect which refers to a person’s liking of a behaviour) about performing the target behaviour” (Fishbein and Ajzen, 1975, p. 216). The subjective norm, “is the person’s perception that most people who are important to him/her think he/she should or should not perform the behavior in question” (Fishbein and Ajzen, 1975, p. 302). The attitude of legislators to the use of ICT is one of the independent variables of this present study to determine how attitude predicts usage behaviour of technology in legislative work.

Legris, Ingham and Collerette (2003) made use of twenty-two studies that tested the TAM. The conclusions were similar to King et al. (2006) cited in Bertrand and Bouchard (2008, p. 201) that indicated that “TAM is a theoretical model used in
different contexts to help understand and explain the use of technology”. Park (2009) found that self efficacy was the most important construct, followed by subjective norm in explicating the causal processes in the TAM. Zakour (2004, p. 158) “integrated six cultural value-dimensions well established in the literature pertaining to comparative and cross-cultural management and showing a high variability between countries, which are individualism or collectivism, power distance, masculinity or femininity and uncertainty avoidance” (Hofstede, 1997 cited in Zakour, 2004, p. 157; Trompenaars and Hampden-Turner, 1998; Hall, 1989 cited in Zakour, 2004) and high context or low context (Hall, 1989 cited in Zakour, 2004).

Schepers and Wetzels (2007) cited in Bertrand and Bouchard (2008) highlighted over fifty studies that used attitude, intention of use, real use, subjective norms, perceived usefulness and perceived ease of use. Fifteen of the studies reported a significant relationship between perceived usefulness and attitude, varying “from 0.29 to 0.84, 15 out of 16 discovered a significant relationship between perceived ease of use and attitude, varying from 0.05 to 0.73 and 14 noted that there was a significant relationship between attitude and intention to use, varying from 0.11 to 0.75”. Sun and Zhang (2006) cited in Bertrand and Bouchard (2008, p. 201), explored the relationships among the constructs of the TAM. The findings confirmed a positive correlation between attitude and intention. Further findings confirmed a positive correlation between intention and perceived usefulness and intention of use and real use. The findings suggested a positive correlation between perceived usefulness and attitude; intention of use and perceived ease of use and attitude and intention of use.

Moon and Kim (2001, p. 218) adopted the TAM to user studies of acceptance of World-Wide-Web. The study presented a model using, a variable, perceived playfulness to extend the knowledge of the acceptance behaviour of the Web by assessing the impact of a person’s intrinsic and extrinsic motivational elements on eventual technology adoption behaviour. Lin, Shih and Sher (2007) used the TAM to study e-stock users’ behavioural intention. Chen and Chen (2009) employed the TAM to explain users’ usage intention of automotive telematics. Stern, Royne, Stafford and Bienstock (2008) investigated the consumers’ acceptance of online
auctions. Serenko, Bontis, Detlor (2007, p. 119) assessed user acceptance of interface agents using the TAM.

Behrens, Jamieson, Jones and Cranston (2005, p. 2) reported a study to “determine what makes an information system (IS) successful, an area of concern for both researchers and practitioners”. Despite the difficulties, system use has become more accepted as a measure of system success. Behrens et al. (2005) was underpinned theoretically by the TAM to provide the factors for the success of an online assessment system. The findings (Behrens et al., 2005, p. 2) suggested that “the TAM measures of perceived usefulness and perceived ease of use are effective predictors of systems success”.

Despite the wide applicability of the TAM, there are several criticisms of the model. Venkatesh (2000, p. 344) suggested that the TAM is robust across time, settings, populations, and technologies but “does not help understand and explain the acceptance of technology in a way that promotes the development of a strategy having a real impact on the usability and acceptance of the technology”. Venkatesh, Morris, Davis and Davis (2003) thus proposed a modified TAM using perceived ease of use, computer self-efficacy, perception of external control, anxiety towards computers, and computer playfulness.

Davis and Venkatesh (1996) cited in Venkatesh and Davis (2000, p. 20) suggested that attitude in turn is determined by two specific beliefs, perceived usefulness, the user’s perception of the “degree to which using a particular system will improve her / his performance and perceived ease of use, the user’s perception of the extent to which using a particular system will be free of effort”. The TAM proposed that attitude would have a positive contribution to the intention to use technology that may predict the use of the technology. Mathieson (1991, p. 96) also identified a major limitation of the TAM, “as been nonspecific, with individual cases not assigned as much value as the far-reaching generic facts that allow the prediction of generic outcomes”. The TAM is a predictive tool but is seldom inadequate to investigate target behaviours. The assumption of the TAM, “is that beliefs concerning the ease of use and
usefulness are always the principal determinants of any use decision” (Mathieson, 1991, p. 100).

Straub, Keil and Brennan (1997) and Szajna (1996) criticized the TAM as being inadequate in measuring system usage. Bagozzi (2007, p. 244) stated “that weaknesses of the TAM stem also from its main strength which is its parsimony”. Bagozzi (2007, p. 245) contended that, “there are two critical gaps in the framework of the TAM and reliance on oversimplified notions. It is unreasonable to expect that one basic model such as the TAM would explain decisions” across a wide spectrum of technology adoption in multiple contexts. Bagozzi (2007, p. 249) added “that several researchers have attempted to extend TAM to broaden the model’s lapses by explaining the PU and the PEOU such as the UTAUT”. Bagozzi (2007) maintained that there are five shortcomings of the TAM. These are over reliance on a solely resolute framework, naivety and simplicity, isolation of socio-cultural elements related to management. The last shortcoming of the TAM has to do with its lack of application of methodologies, methods and techniques to predict the factors that positively correlate with the PU and PEOU.

In summary, the TAM is limited in explaining technology adoption, as it fails to account for information system process design ramifications and disregards the societal forces that dictate technology adoption. Grounded adoption cannot only be investigated from the ‘individual user’ perspective (Bagozzi, 2007). Current understanding is that the TAM can be referenced in trying to explain an individual’s motivation to use technology but not ‘adoption’. There are collective intentions other than individuals’ motivations, to use technology. Adoption is influenced by the context, cultural setting and socio-economic standing of individuals in an area where technology is introduced. These several criticisms and shortcomings of the model aforementioned make the TAM inappropriate for this study, as the TAM on its own cannot adequately predict the adoption of ICT by legislators for legislative work, which is the focus of this study.
2.3 Theory of Reasoned Action (TRA)

Ajzen and Fishbein (1980) and Fishbein and Ajzen (1975) reported that the TRA is hinged on the premise that individuals are rational and make thematic use of information available to them. The TRA explores “the attitudes toward differences and the social sources of attitude”, the relationships amongst constructs such as attitude and behaviour (Xu, 2000, p. 512). Armitage and Conner (2001, p. 472) indicated that the TRA determines behaviours that are considered non-volitional. The dissimilarity between the duo of the TAM and the TRA is that the former left out social influences. Whereas, Behrens, Jamieson, Jones and Cranston (2005) indicated that social norms and perceived critical mass dominated users’ behaviours and is crucial to technology adoption.

Belleau, Summers, Xu and Pinel (2007) found that intention to purchase an item is volitional and very few constraints exist. The study used the theory of reasoned action because it would result in a valid prediction of purchase intention in the clothing and textile industry which was the focus of the TRA in that study. Shim, Morris and Morgan (1989) highlighted that with the use of the TRA, one’s behavioural intention is based on two factors, attitude towards the behaviour and the perception of social pressures to perform or not perform the behaviour. The constructs of the TRA such as perception, attitude and behaviour are represented in the UTAUT model adopted for the present study. The relationships between these predictors or variables are directly related to research questions 2, 3 and 4 of this study (see section 1.5). The questions seek to determine the attitude and perceptions of legislators towards the use of ICT, legislators’ ICT usage levels in performance of legislative functions and the inhibitors to the use of ICT by legislators. Hence, the TRA attributes are relevant as they show the relationships among the independent variables and how they affect the performance of legislative functions which is the dependent variable in this study.

Rossi and Armstrong (1999, p. 41) suggested that the TRA has added to knowledge on attitude measurement and behaviour prediction by concluding that the TRA is a better model to use when addressing natural resource-related that are not entirely
under the control of the individual”. The TRA has been applied to studies in clinical sciences and behavioural sciences (Ajzen and Madden, 1986; Fishbein and Manfredo, 1992). The theory of reasoned action (Fishbein and Ajzen, 1975 cited in Chang, 1998, p. 1826) “is based on the proposition that an individual’s behaviour is determined by the individual’s behavioural intention to perform that behaviour, which provides the most accurate prediction of behaviour”. The present study also views critically the role of user behaviour, as well as demographics as moderating variables of legislators’ ICT acceptance and use. This study also assumed that these external factors may well predict the use of ICT by the legislators. The TRA takes into account the influence of sex, age, income and other social behaviour, all of which are directly related to the five research questions in the present study.

Bagozzi, Wong, Abe, and Bergami (2000), Bunce and Birdi (1998), Shim, Morris and Morgan (1989) reveal that additional variables such as prior behaviour and experience may be included in the model to help predict behaviour. Foxall, Goldsmith and Brown, (1998), O’Cass (2000), Zaichkowsky (1985) with the latter defining involvement as “a person’s perceived relevance of the object based on inherent needs, values, and interests” (p. 342). Foxall et al. (1998) revealed that involvement has been recognized as vital to predict consumer behaviour, attitude formation. These extensions of TRA suggest inadequacies of the model.

Rossi and Armstrong (1999) highlighted the main concerns for the TRA to be the individual’s intention to model some behaviour. The study postulated two external factors that contribute to intention namely attitude towards the act and subjective norm. There is the assumption that behavioural intentions engulf the sentiments that predict subsequent behaviour. Therefore, the critical issue becomes what people want to attempt or explore and to what extent would people be ready to exhibit such behaviour. People’s attitude toward the act is measured either globally through the use of Osgood, Suci and Tannenbaum (1957) that adopted differential measurement scales that focused on a specific belief which integrated a concept of scales of strength of critical beliefs about the results of exercising a particular behaviour or event (Ajzen, 1991). Similarly, the variable, subjective norm is representative of an individual who has a perception of an action in respect of salient social events. This
initiates a reflection of the accuracy of that individual that is manipulated to express certain behaviour by friends, neighbours, family and co-workers that would be influenced by such behaviour. Ajzen (1991) revealed that attitude towards a behaviour is measurable by ritualized and routinized beliefs and habits.

Several other studies have shown the inadequacies of the TRA to include issues such as the moderating factors (demographics), which are not directly addressed. Meanwhile, in the present study, the moderating roles of demographics were investigated. The modifying factors such as demographics may indirectly affect other factors that are not specifically integrated into the TRA. The limitation of the TRA presented by Ajzen (1991) showed that individuals possessing a minimum of control over their beliefs are not provided for in the model. Consequently, the author included another factor to the original TRA which he termed, perceived behavioural control. Eagly and Chaiken (1993) criticized this for the potential confusion between attitude towards a behaviour and normative beliefs since many use these concepts interchangeably. The TRA was also criticized based on its false conclusions that the individual’s intention formation to act a behaviour means that they can go overboard, which is to act a behaviour beyond control. In practice, constraints such as limited ability, time, environmental or organizational limits and unconscious habits will limit the freedom to act. The theory of planned behaviour (TPB) was a measure to overcome the errors of the TRA (Eagly et al., 1993). These criticisms of the TRA have made this model inappropriate for this study but the constructs of the TRA such as behavioural intention, attitude, perception and the modifying factors such as demographics that are relevant to this study are synthesized alongside the adapted model for the present study.

2.4 Motivational Model

Igbaria (1993, p. 78) described the motivational model “in two streams of extrinsic motivation and intrinsic motivation”. These models explain the origin of behaviour initiated by the individual’s desire for exterior gains and the appropriateness of the technology. The term intrinsic motivation “involves activities such that there is no apparent reward except the activity itself” (Benware and Deci, 1984, p. 760).
Mathieson (1991), Thompson, Higgins and Howell (1991), Igbaria (1993) explored variables like cognitive style, locus of control, math anxiety, computer anxiety, and unfavourable attitudes toward computers. Other factors highlighted are training and organizational support, as determinants of computer usage. Previous research conducted in this area focused on the utility or perceived usefulness of microcomputers as the principal motivating factor in using them. Attitudinal variables and organizational factors such as training, facilitating conditions are variables being investigated in this study. The constructs of the model relate directly to the research question 4 (section 1.5) of this study that seeks to determine the inhibitors to the use of ICT by legislators.

Van der Heijden (2004, p. 697) in the design of a motivational model of microcomputer usage supports a combined theoretical perspective. He states “that one can expect extrinsic motivation to be the dominant predictor of intentions to use the system at the expense of intrinsic motivation”. These motivators are hypothesized to have a direct influence on ICT use. The model also proposed that the motivational factors influence the effects of antecedent individual and group variables on ICT use. The model further state that skills, organizational support, and social factors are expected to influence ICT use through their effects on perceived complexity and through perceived usefulness, perceived enjoyment and social pressure. The three motivational factors and sub factor highlighted by Igbaria et al. (1996) are variables investigated in this study.

Igbaria et al. (1996) in developing the motivational model of microcomputer use, established the theoretical frameworks such as the TRA by Fishbein and Ajzen (1975). This study suggested that behaviour is determined by individuals' perceptions and attitudes toward the behaviour and social factors. The study reported the difference between the internal and external motivational factors of behaviour. These include the probability that the people could derive motivation to adopt ICT as a result of internal and personal factors such as satisfaction or reward as a result of their perception of usefulness of ICT (Deci, 1975). These constructs are directly relevant to performance expectancy and effort expectancy. This is evident in the present study which, revolves round perceived benefits of adoption
and the use of ICT. These motivational model constructs encapsulated in the UTAUT relate directly to research question 1 (section 1.5) that addresses the predictors of legislators’ ICT acceptance and use. These constructs of the motivational model relate to the variables in this study which are also UTAUT attributes synthesized from the motivational model and later extended by Venkatesh, Speier and Morris (2002).

Janis and Mann (1977), Ross (1981), Mann, Harmoni and Power (1989), Stewart (1989) have found that, although the impact of motivational factors on successful decision making has been recognized, most decision-making models focused on the reasoning exercises involved in decision-making activities. These exercises included identifying, analyzing and evaluating information, recognizing various viewpoints and revising decisions when necessary (Stewart, 1989). These models pay little or no attention to the motivational side of decision-making (Ormond, Luszcz, Mann and Beswick, 1991). Ormond et al. (1991, p. 289) stated that, “It is clear that the contribution of metacognitive knowledge is not only for competent decision making, but also for decisional self-esteem”. Armitage and Conner (2001) distinguished the three types of social cognitive models, motivational models, behavioural enaction models and multi-stage models.

Keller (1987, p. 2) presented an influential ARCS Model of Motivational Design. This “is a method for improving motivational appeal of instructional materials. The design focuses on four essential conditions namely attention, relevance, confidence and satisfaction”. Attention refers to arousing and maintaining curiosity and interest, at the beginning and throughout the instruction. Relevance is the connection between content and methods of instruction and learners’ personal reasoning of their value and interpretations whereas confidence builds on “the learners’ perceptions of capability for and/or certainty about learning or accomplishing a given task” (Keller, 1987, p.4). Lastly, satisfaction provides a direct link between the successful achievement of a task and learner effort and ability. The present study has user satisfaction as one of its variables and this relates directly to the extension of the motivational model of Keller (1987).
Vallerand’s (2001) motivation model stressed that motivation must be viewed from different angles. He made five recommendations. The first indicated that all three motivational factors which are crucial to peoples’ emotions must be included in the measurement scales of motivation. The second identified that motivational factors remain at the level of the individual. The third highlighted the presence of social and environmental factors and the existence of inter-relations between the two factors. Vallerand (2001) based these recommendations on the assumption that the outcome of the social factors is leveraged by the perceptions of competence, autonomy, and relatedness. He indicated that the prevalence of a repetition identified that motivational factors lead to crucial emotional, rational and social tendencies “by looking at the effect of rewards on situational intrinsic motivation” (Vallerand, 2004, p. 431). This study explores the relationship between motivation and the acceptance and use of ICT by legislators in the NASS.

Venkatesh, Brown, Maruping, and Bala (2008) and Vallerand (2001) indicated that the motivational model is intricate and is reliant on many influences. They reported that generally the model is difficult to offer any simple predictive application in organizational practice. They criticized the model for not initiating a robust framework for IS research. The assumptions of motivational model are limiting, constricted, too individualistic rather than organizational contexts and do not take into cognizance wider spectrum of external variables in large organizations. Venkatesh et al. (2008) highlighted that motivational model did not address theory and methods, low organizational output and mediocrity. These factors that motivational model did not address can be influenced by structures in the workplaces. The variables addressed by the motivational model are relevant to the present study. The shortcomings of the motivational model were also addressed by the model adopted for the study.

2.5 Theory of Planned Behaviour (TPB)

The limitations of the TRA led to the emergence of the Theory of Planned Behaviour (Ajzen and Fishbein, 1980; Fishbein and Ajzen, 1975). The assumptions of the TPB are based on the individuals’ intention to perform a given behaviour and the need to apprehend the factors of motivation that determine behaviour (Ajzen, 1991). The
areas covered by the TPB include the task attempted by individuals and the extent of the willingness to complete such task. Ajzen (1991) further stated that a strong behavioural intention most likely would result in the behaviour been performed. The caveat is that behaviour under this circumstance should not be imposed but must be voluntary. Ajzen (1985) stated that this pre-requisite may be met but the act of the behaviour is underpinned by factors such as time, cooperation and collaboration of others, peer influence that may have little to do with motivation. Ajzen (1991) reported that these factors demonstrate the individuals' regulation of behaviour. The individuals' intention to perform the behaviour may suggest the level of success in performing the behaviour. In contrast to the preceding TRA model, the TPB reports the aspects of individual behaviour that may not require voluntary regulation of that individual. The difference between the TPB and the TRA is in the latter's extension using a variable, the perceived behavioural control (PBC).

Ajzen (1991) described the intricacies of human behaviour from different levels of approaches ranging from the functional to social organizational elements. Other studies present mid-way understanding of people and their understanding of both their organic and ecological environments on intention to behave in a particular manner. Ajzen (1988), Sherman and Fazio (1983) explored the elements of behaviour and its characteristics such as social attitude and personality trait that have been instrumental in attempting to predict and explain human behavioural tendencies.

Ajzen and Fishbein (1980) identified the proximal determinant of behaviour as the force behind behaviour characterization. These are drawn from a person’s mental activities such as reasoning and attitudes of behaviour, normative behaviour and the individual attitudes drawn from values that underpin the beliefs. Another construct of the TPB is behavioural norm which is comprised of two elements, motivation of compliance with demands and evaluation of the probability that peer pressure and social influence will be exerted on the individual towards a particular behaviour. Ajzen and Fishbein (1980) reported that intentions may predict behaviour if this is not outside of the person's regulation. Ajzen (1985) and Ajzen and Madden (1986) integrated yet another element into the TRA, perceived behavioural control. Ajzen
(1991) reported that this underpinned prior knowledge such as projected inhibitions, problems, properties and prospects that determine execution of a behaviour or action. These elements have been synthesized from the TPB into the UTAUT model’s attributes such as facilitating conditions and intentions to use technology which are directly related to research questions 1 and 4 (see section 1.5) in this study, asking the questions, what are the predictors of legislators’ ICT acceptance and use? What are the inhibitors to the use of ICT by legislators?

Abadi and Gharibpoor (2012), Tang, Luo and Xiao (2011) used the TPB to investigate consumers’ purchasing intention. These researches have a common point that the TPB can predict purchasing behaviours. Abadi and Gharibpoor (2012) considered the product or services in a virtual online service. The results prove that TPB can predict and explain human behaviour across various services, especially e-services such as online ticket buying. Abadi and Gharibpoor (2012) used a descriptive-empirical study to investigate the re-use of e-service. They used the TPB model and the structural equation modeling method (SEM) to evaluate the attitudes and intentions towards consumers’ purchasing intention. Part of this survey sample included the buyers of electronic ticket who have used electronic services which online ticket vendors offered. The results indicated that the nature of service delivery strongly affects intentions and attitudes towards the re-use of e-services. This study examined the perceptions and attitudes of the legislators to the output quality of their use of ICT in the performance of legislative function in the NASS.

The predictive power of the TPB is far from perfect despite the reported empirical evidence. Bagozzi and Kimmel (1995), Bentler and Speckar (1979), Ouellette and Wood (1998) opined that the measures of past behaviour frequently offer superior predictions of behaviour than behavioural intentions. The findings showed that the TPB is problematic in that the studies suggested that the cognitive variables specified in the TPB model are not sufficient to explain behaviours which have been performed frequently in the past (Ajzen, 1991). Orbell, Hodgkins and Sheeran (1997), Verplanken Aarts, van Knippenberg and Moonen (1998) argued that relatively little research has examined the factors that might lessen the relationship between past behaviour and present behaviour.
Baron and Kenny (1986) examined another approach to improving the predictive power of the TPB, by looking at moderator variables. A moderator variable influences the relationships between other variables. A small number of moderators of the intention and behaviour relationship have been examined in the context of the TRA and the TPB. De Groot and Steg (2007, p. 1818) stated that “three factors determine behavioural intention, the first factor is attitudes toward the behaviour, which reflect the overall evaluation of performing the behaviour by the individual”. Conner and McMillan (1999), Sheeran and Orbell (1999), Kashima, Gallois and McCamish (1993) and several other studies have found support for these effects. Verplanken, Aarts, van Knippenberg, and Moonen (1998, p. 113) identified that the TPB includes the “perceived behavioural control and the external incentives that may increase the enactment of intentions, habits set boundary conditions for the applicability of the theory of planned behaviour”.

Eagly and Chaiken (1993) criticized the TPB for not highlighting elements such as habit, perceived moral obligation and self-identity which predict intentions and behaviour that the TRA model covered. The researchers criticized the TPB for not indicating how organizations and planning relate to the phenomenon. The TPB has its limitations. It has been criticized for its controversial assumptions that attitudes are based on cognitive beliefs. This assumption has been challenged by numerous critics and the model has been labelled as “insufficient consideration of affective aspects of attitude” (Arvola, Vassallo, Dean, Lampila, Saba, Lähteenmäki and Shepherd, 2008, p. 444). Taylor and Todd (1995c, p. 152) suggested that “decomposing the belief structures into multi-dimensional constructs improves the understanding of the relationships between the TRA and TPB” in a study of the cross over effects of the TPB but the authors criticized the assumptions of TPB on the grounds that persons must have motivational factors before they perform a behaviour and TPB’s assumptions surrounding identical belief issues in behaviour. The present study investigated adoption behaviour of ICT by legislators, hence the inappropriateness of the TPB as the theoretical base for the present study. The TPB’s variables that may predict intentions and user behaviour are synthesized alongside the UTAUT model. The TPB is criticized for its operationalization of the PBC as a solution to mediate between variables of behaviour in the design of the
model. Beliefs of the PBC were combined to generate a ration aimed at making the model robust but this accumulation has been analyzed for not classifying precise features that might predict behaviour and for the prejudices it may generate. There are several studies and models that have extended the TPB. Taylor et al. (1995c) and the UTAUT by Venkatesh et al. (2003) introduced the decomposed TPB to provide a better understanding of behaviour.

2.6 Combined Technology Acceptance Model and Theory of Planned Behaviour (CTAM & TPB)

Mathieson, Peacock and Chin (2001, p. 88) described the combination of the best of the TAM and the TPB models as “the predictors of the TPB with perceived usefulness from the TAM to provide a hybrid model which is called combined TAM and the TPB”. These consist of four factors, namely attitude, perceived behavioural control, subjective norms and perceived ease of use. Some models of technology acceptance and behaviour have combined different models in different studies. Venkatesh and Davis (2000) cited in Venkatesh et al. (2003, p. 428) developed the “TAM2” model, “a revised model of TAM that explores the antecedents of perceived usefulness by including subjective norm as an additional predictor of intention in the case of mandatory settings”. The study described how perceived usefulness and usage intentions, taking into account social influences and reasoning exercises, affect technology acceptance. It found that contributing factors in the acceptance of technology included social influence processes such as subjective norm, voluntariness and image, as well as cognitive instrumental processes, such as job relevance, output quality, and perceived ease of use. Several studies (Aboelmaged, 2010; Chen, Fan and Farn, 2007; Lee, 2009; Gefen, Karahanna and Straub, 2003; Wu and Chen, 2005) have combined the TAM and the TPB to predict and understand the adoption of online systems.

Several other studies have combined the TAM and the TPB. Chen and Chao (2011, p. 129) included “perceived ease of use and perceived usefulness as the two most important factors to explore for their effects on private vehicle users’ switching intentions with regard to public transit from the perspective of transport technology.
adoption”. The rationale for combining the TAM and the TPB has been empirically applied to “explore factors affecting usage intentions of technology” (Chen and Chao, 2011, p. 129). The approach follows the rationale that the cognitive influences specified by the TAM, that is, the perceived ease of use and perceived usefulness, may serve as important antecedents of attitude in the TPB, which reciprocally may enhance the explanatory power of the TAM (Chau and Hu, 2002). Taylor and Todd (1995a) noted that by combining the TAM and the TPB, the emergent model can adequately define an individual’s behaviour with regard to using new technology. The combined TAM and TPB model was applied to explore the factors affecting usage intention of online service delivery systems in Taiwan by Chen, Fan, and Farn (2007).

Lu, Huang and Lo (2010) combined the predictors of the TPB and the TAM to examine the causes of adoption of on-line tax filing, using a sample size of about 400 taxpayers in Taiwan. The study was based on a survey questionnaire for data collection. The findings showed that attitude was a major element affecting on-line tax filing. The other elements found considerable were PU, PEOU and social norm. The study found evidence to support the combination of the elements of the TAM and the TPB to explain the behaviour in the context of online tax filing.

Alatawi, Dwevedi, Williams and Rana (2012) revealed that using a theory or combination of theories (in this case a combination of the TAM and TPB) cannot serve the purpose of representing various organizational aspects as they are more inclined only to explore the technological context of an organization and not individual behaviour. The present study seeks to determine the predictors of ICT acceptance and use by legislators. This is examined in relation to technological, individual and organizational levels. The combined TAM and TPB is largely inadequate to answer research questions 1, 3 and 4 (section 1.5) of the present study. This is due to the imperfection of predictive power of the TPB and the model’s acknowledgments of other variables such as habit, perceived moral obligation and self-identity that can predict intentions and behaviour. The research questions (1, 3 and 4) probe among other things the facilitating conditions in the legislature that predict the use of ICT.
2.7 Model of PC Utilization (MPCU)

Thompson, Higgins and Howell (1991) adapted and refined Triandis (1980) model for IS contexts and used the model to predict the PC utilization (MPCU). Triandis (1980) cited by Thompson, Higgins and Howell (1991, p. 126) has proposed “a theory that incorporates many of the same concepts and constructs but also modifies and redefines them”. The model is underpinned by theories of attitude, behaviour and interpersonal relationship theory. The MPCU implies that “the utilization of a PC by a knowledge worker in an optional use environment would be influenced by the individual's feelings (affect) toward using PCs” (Thompson et al., 1991, p. 126). The relevance of the MPCU to the present study is solely on the social factors such as affect (which refers to a person’s liking of a behavior) which has to do with variables such as user satisfaction, user feelings, user behaviour and perception. The social factors are variables in the present study. The MPCU modified, transformed and refined the Triandis (1980) model for IS contexts to predict PC utilization as used to predict Internet and Web usage at work by Cheung, Chang and Lai (2000).

Al-Queisi (2009) explored Thompson et al. (1991) and examined the impact of the six factors of the MPCU on behaviour. Behavioural intentions were excluded because actual and not predictive use was of interest. User habits were also excluded from the model because of measurement issues. The population of study was at a workplace. This included a sample of professional managers who use PCs in their jobs without restriction. The findings showed “that social factors, complexity, job fit, and long-term consequences had a significant effect on PC use, while affect (individual’s feeling factor) and facilitating conditions have showed no such influence” (Al-Queisi, 2009, p. 102). The author explaining the results indicated that PCs are seen as tools by managers so the affect aspect does not apply here; as for the facilitating conditions, the results indicated a measurement issue. Thompson, Higgins and Howell (1994) cited in Al-Queisi (2009) extended an earlier work of 1991 by considering the role of experience with personal computer usage whereby experience “was modeled with direct, indirect, and moderating influences” (Al-Queisi, 2009, p. 145). The relevance of these to the present study is in the relationships
among the moderating and social factors of technology adoption which is the research question 5 of this study.

Thompson et al. (1991 and 1994) cited in Al-Queisi (2009) provided support of prior research, that showed (i) the direct influence of experience with PCs, (ii) social factors influencing PC use, (iii) affect (a person’s liking of a behaviour) toward PC, (iv) use complexity of PC use, (v) job fit with PC use, (vi) long-term consequences of PC use, (vii) facilitating conditions for PC use, (viii) utilization of PCs and experience were both statistically and substantively significant, confirming beliefs that past use would be expected to directly influence current use. The findings from that survey revealed that inexperienced respondents were strongly influenced by social factors and affect. The unexpected result was that both inexperienced and experienced users showed the same affect (individual feelings) of job fit construct on PC utilization.

Alatawi, Dwevedi, Williams and Rana (2012) revealed that facilitating conditions and habit are also good predictors of behaviour. The study observed a major limitation of the MPCU stating that the model is best used to understand and explain computer usage behaviour only in a voluntary environment. Mawhinney and Lederer (1990) stated that “the MPCU has become an important concern due to the PC’s widespread and rapid implementation in the work place” (Mawhinney and Lederer, 1990, p. 248). The study adopted a quantitative approach using the Pearson Product Moment Correlation Analysis. The evidence from the study suggested that the user satisfaction was highly correlated to the contribution of the PC to performance on the job and the ICT skills. The results of the study were moderated by perceived costs and benefits of PC utilization. The present study covered a wider scope of ICT tools rather than computers that were addressed by Alatawi et al. (2012).

2.8 Innovation Diffusion Theory (IDT)

The approach taken by the Innovation Diffusion Theory (IDT) is perhaps radically different when compared to those of other theories of change. The reason is that, instead of focusing on persuading individuals to change, “IDT sees change as being
primarily about the evolution of products and behaviours so they fit better into the needs of individuals and groups" (Rogers, 1995 cited in Agarwal and Prasad, 1997). The assumption of IDT is that people do not change, but the innovations themselves. The theory explains the adoption of innovative practices by a group or organizations. IDT postulates that “many different outcomes are of interest in technology adoption, including the initial decision to use the system and the continued or sustained use of the innovation” (Agarwal and Prasad, 1997, p. 558). It assumes that innovation is an idea, behaviour, or object that is perceived as new by its audience (Rogers, 1995).

Rogers (1995) observed that the main issues behind growth in the Diffusion of Innovation research stems from the difficulty of adopting new innovation (Rogers, 1995). The emphasis of the IDT research is on the adoption rates of the model. Rogers (1995) stated there are four main elements of diffusion: innovation, time, communication and social system. This explains the four main elements that Rogers (1995) defined as the processes by which an innovation is communicated through certain channels over time among the members of a social system (Rogers, 1995, p. 5).

Rogers (1995) cited in Agarwal and Prasad (1997) explained that even though innovation usually present its adopters new ways of addressing routines and daily chores, the uncertainty as to whether the innovations will be superior to existing ones presents a considerable obstacle to the high rates of adoption. Several studies (Tornatzky and Klein, 1982; Rogers, 1983; Brancheau and Wetherbe, 1990; Moore and Benbasat, 1991; Taylor and Todd, 1995b) have shown that the IDT consists of six major components: innovation characteristics, individual user characteristics, adopter distribution over time, diffusion networks, innovativeness and adopter categories, and the individual adoption process. The relevance of the Innovation Diffusion Theory to the present study relates to the model factors such as innovation and individual user characteristics. These factors address research question 2 (see section 1.5) of the present study to determine the acceptance and the use of ICT by legislators in their parliamentary work. The model investigated the rate of adoption of technology and innovation. These factors of adoption and user characteristics
(Innovation Diffusion Theory) are relevant to the present study and have been synthesized alongside the UTAUT.

Brown (1999) stated that the purpose of the IDT is the provision of a conceptual paradigm to persons from any discipline interested in the diffusion of an innovation. It provides the understanding of the process of diffusion and social change. The IDT provides properly developed concepts and showed evidence of technology evaluation, adoption and implementation, as well as tools. There are both the quantitative and qualitative methods, for assessing the likely rate of diffusion of a technology that identifies numerous factors which either enhance or inhibit technology adoption (Fichman, 1992). The factors include the innovation decision process, attributions of the innovation and characteristics of innovation.

Rogers (1995) used the IDT to study innovations based on five attributes of an innovation that impact on adoption and acceptance behaviour. The characteristics of the IDT include “relative advantage, complexity, compatibility, trialability, and observability” (Agarwal and Prasad, 1997, p. 562). Agarwal and Prasad (1997) expanded these attributes set to study information technology acceptance to include: relative advantage, ease of use, image, results and voluntariness of use. Agarwal and Prasad (1997), Karahanna Straub and Chervany (1999) and Plouffe, Hulland and Vandenbosch (2001) have applied the innovation diffusion theory to studies relating to individuals’ perceptions regarding the characteristics of information technology. This is seen as an important factor in influencing an individual’s acceptance behaviour. Rogers (1995) summarized the roles of the Innovation and Diffusion Theory as suitable to IS research. The IDT research cuts across a wide spectrum of multi-disciplinary, inter-disciplinary and cross-disciplinary studies. The IDT underpins all form of social interchange in many countries of the world and Rogers (1995) reported that the model has a strong application. Despite the IDT’s applicability to the pure and applied sciences, the model remains much in the social sciences domain as the approaches and techniques of the model are easily adapted by non-social scientists and un-skilled researchers.
Several studies have used the Innovation Diffusion Theory. Chew, Grant and Tote (2004), in a study of family physicians and the use of the Internet adopted the IDT to identify strategies for increasing Internet use by family physicians. This was “carried out by a mail survey of 53 family physicians in a midsized, northeastern metropolitan area in the United States” to review Internet use and identify sources from which family doctors attain medical information (Chew et al., 2004, p. 645). The study used the IDT to describe the procedure by which physicians make use of the Internet. The findings revealed that the doctors’ use of the Internet was initiated by a drop in patient rates that resulted in doctors’ devoting time to improve their ICT skills. It was as a result of the time spent using the Internet that the doctors experienced familiarity with Internet features and their online search skills developed. They were able to explore further the Internet as a tool. Chew et al. (2004) concluded that the innovation attributes of the DIT influence the adoption and use of ICT among the family physicians user group. Evidence from the study suggests that the rate of Internet adoption and use by doctors may increase if more time is provided for the doctors to use the technology. The study recommended regular Internet training to allow the family doctors to increase their level of familiarity and for advanced applications on the Internet. This is separate to the basic online searching that they presently use. The study proposed a revised timetable for the doctors to accommodate Internet skills’ training. Lastly, the study observed that gender and recent Internet training are not predictors of Internet use by this group of professionals.

Folorunso, Vincent, Adekoya and Ogunde (2010) tested the attributes of the IDT using social networking sites (SNS) as the innovative practice. The study comprised of over 100 students of the University of Agriculture, Abeokuta, Nigeria. The tools for data analysis included the Principal Factor Analysis and Multiple Regression. On the one hand the results suggested that the constructs of relative advantage, complexity, and observability of SNS do not positively correlate with attitude towards using the technology. While on the other hand, it indicated that the compatibility and trialability of SNS positively correlate with the attitude towards using the technology.
Olatokun and Igbinedion, (2009) presented work on the adoption of automatic teller machines (ATM) in Nigeria by applying the Theory of Diffusion of Innovation as theoretical framework for the study. The study tested the attributes of the theory of diffusion of innovation empirically, using ATMs as the target innovation. The study was conducted in Jos, Plateau State, Nigeria. The population comprised ATM users in Jos. The sampling frame technique was applied, and 14 banks that had deployed ATMs were selected. Cluster sampling was employed to select respondents for the study. The data collection instrument was “a structured questionnaire administered to 600 respondents of whom 428 were returned, giving a response rate of 71.3%”. The methods of data analysis included: Principal Factor Analysis and Multiple Regression. The demographic characteristics of the respondents comprised mostly of students and youths. The factor analysis revealed that the respondents believed (i) in their safety of using the ATM, (ii) that ATMs were quite easy to use and fit in with their way of life, (iii) that what they observed about ATMs convinced them to use them and (iv) that the ATM was checked out before they used it. Zhenghao, Liu and Chuan (2009) focused “on the 3G mobile phone usage in china: viewpoint from innovation diffusion theory and technology acceptance model”. The study analyzed the reasons behind the Innovation Diffusion Theory (IDT) and the Technology Acceptance Model (TAM) perspectives.

The IDT has been criticized despite the attempts by the reported successes of the theory to explain the innovation decision process based on the factors determining the rate of adoption and categories of adopters. The limitations of Innovation Diffusion Theory are similar to those of the TAM such as inclination for only technological aspects of technology adoption (Chen, 2002). The study reported that extensions of the IDT found new ideas acceptable among individuals to improve on the shortcomings of the model.

Stephenson (2003) examined the IDT in the context of agricultural outreach programmes. The assumptions of the IDT were that an innovation will initially be adopted by a small group of innovative farmers and later diffused to other farmers. The study employed an adoption curve to measure the rate of innovation diffusion. The author stated that over the past 30 years, the theory has been criticized for
favoring large wealthy farmers and increasing the inequities in rural areas. He criticized the model for doing more damage than any suggestion of extending knowledge boundaries. The IDT wrongly “assumed that benefits resulting from the adoption of innovations spread and became homogeneous” (Stephenson, 2003, p. 114). The research questions of the study included: why have we not kept up with the developments and evolution of the theory, given that the theory influenced approach to outreach? What can be done to change and make the application of this theory consistent with current knowledge of innovation adoption?

Several studies have applied the IDT, ranging from social sciences, agriculture and clinical sciences. The model seemed to have addressed the issues of technology adoption such as cost and availability. It covers innovation attributes and characteristics. It seems well-developed with concepts and has a large body of empirical evidence of the predictors of technology adoption. The major problem of the model is that there is no evidence to support the evolution of attitude to adoption and the use of technology.

2.9 The Social Cognitive Theory

Bandura (1986) cited in Bandura (1991, p. 58) reported that with the Social Cognitive Theory (SCT), “cognitive development is analyzed in terms of the sets of cognitive competencies governing given domains of functioning rather than discrete uniform ways of thinking”. In contrast to the models discussed the SCT has multi-directional causal relationships among the model’s major variables. The SCT incorporates environmental factors, personal elements and behaviours. Compeau, Higgins and Huff (1999) stated that a person’s reasoning abilities affect their adoption of technology and that technology engagement determines their reasoning capabilities. The person’s reasoning capabilities were illustrated in the study by moderating factors such as the educational and ICT skills levels. These are variables of the present study.

The SCT highlights the concept of self-efficacy (Compeau, Higgins and Huff, 1999). Compeau and Higgins (1995b, p. 131) defined self-efficacy “as the judgment of one's
ability to use a technology to accomplish a particular job or task, outcome expectations, including personal and performance-related ones, are major cognitive factors in influencing users’ behaviour”. The model described personal related outcome expectations to be concerned with persons having esteem and sense of accomplishment and these actions and activities result in specific results. The SCT “recognizes pre-existing conceptions and affective states that can lead to bias of one's actions and the instigators for it are perceived and cognitively processed” (Bandura, 1991, p. 64). The model illustrates affect and anxiety as affective factors. Anxiety refers to a person’s emotions in the performance of behaviour such as the use of ICT (Compeau and Higgins, 1995b).

The SCT offers a variation on cognitive theory that addresses the effects that others have on our behaviour. According to the principles of social cognitive theory, people learn not only through their own experiences, but also by watching others. Whether or not we act on what we have learned depends on many factors. These include, how strongly we identify with the model, our perception of the consequences of the behaviour, and our beliefs about our own ability to change old patterns. The SCT may help to explain the origins of many phobias and social attitudes (Campbell, 1963). It can also be used to help treat phobias.

The SCT encompasses a large set of factors that operate as regulators and motivators of established reasoning, social, and behavioural skills. The key factors of the SCT are shared. This means that human behaviour is the result of a set of activities that are dynamic and reciprocal interaction of environment, personal factors and behaviour. Bandura (2005) argued that some origins of control are more powerful, and the interaction between the three factors would differ based on the person, the particular behaviour being examined and the specific situation in which the behaviour occurred (Pajares, 2002). Bandura (2006) explained that the SCT acknowledges that personal factors such as behaviour interaction involve the influence of the individual’s thoughts and emotions, gender, ethnicity and dispositions. Bandura (2005) reasoned that a person’s expectations, beliefs, self-perceptions, goals, and intentions shape and direct that person’s behaviour. The SCT has an element known as the vicarious capacity, which is the ability of human
beings to learn from hands-on experience as well as from observing others. Through observational learning, individuals can develop ideas about formation of behaviours without the need to perform them. These observations result in gaining knowledge while saving time, resources and mobility. The factors of SCT, such as user behaviour and vicarious capacity, are directly related to the present study’s variables such as user behaviour, external factors and facilitating conditions. These relevant variables of the SCT have been synthesized alongside the UTAUT which is the theoretical framework underpinning the present study.

Bandura (2005) emphasized the successes of social cognitive theory by focusing on the concepts of the model such as self-efficacy, outcome expectations and affect (this refers to a person’s liking or feelings of a behaviour). The SCT has been used in scientific research and determinants of behaviour. However, there are criticisms of the theory. Dombeck (2008) criticized the behavioural and social cognitive theories and said that they gave little focus to reasoning, place too much emphasis on environmental determinants and gave little attention to developmental changes. The model seems too mechanical with little consideration for the spontaneity and creativity of human beings.

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

Venkatesh, Morris, Davis and Davis (2003) claimed to address the weaknesses of the earlier models by developing the Unified Theory of Acceptance and Use of Technology (UTAUT). This model empirically combined the eight models: the TRA, TAM, combined TRA and TAM, the motivational model, TPB, the model of PC utilization, Diffusion of Innovation and the social cognitive theory. To formulate the UTAUT, they reviewed all the constructs in eight models and theorized that performance expectancy, effort expectancy, social influence and facilitating conditions can be significant in the determination of moderators as age, gender, experience and voluntariness of use which are thought to be crucial.

The UTAUT began with Venkatesh, Morris, Davis and Davis (2003) empirically comparing the eight existing models. The authors formulated the UTAUT based on
the constructs/attributes (shown in Table 1) from the existing theories and empirically tested it. The results reflected very positively on the new theory and were able to explain the user intentions of new technology. It must be noted that the UTAUT predicts human behaviour (Venkatesh et al., 2003).

Venkatesh et al. (2003) described some of the constructs of the UTAUT as follows: Performance expectancy is defined as “the degree to which the user expects that using the system will help him or her attain gains in job performance” (p. 447). This new construct has five root constructs: perceived usefulness (from the TAM/TAM2, Combined TAM and TPB), extrinsic motivation (from the Motivational Model), relative advantage (from the Innovation Diffusion Theory), and outcome expectations (from the Social Cognitive Theory). Effort expectancy is defined as “the degree of ease associated with the use of the system” (p. 450). Social influence is “the degree to which an individual perceives that important individuals believe that he or she should use the new system” (p. 451); Perceived ease of use is correlated to perceived usefulness, behaviour attitude intention and actual use (Davis, 1989; Mathieson, 1991; Moore and Benbasat, 1991). On the relationship between perceived ease of use and perceived usefulness, Davis (1989) stated that “from a causal perspective, the regression results suggested that ease of use may be an antecedent of usefulness, rather than a parallel, direct determinant of usage” (p. 334). In UTAUT, Venkatesh, et al. (2003) used the construct of effort expectancy to capture the concepts of perceived ease of use (TAM/TAM2), complexity and ease of use. Lastly, facilitating conditions which are defined as the degree to which an individual believes that an organizational and technical infrastructure exists to support the use of the system. The four constructs of UTAUT, namely performance expectancy, effort expectancy (and their offshoots such as perceived usefulness, relative advantage, outcome expectations, perceived ease of use), social influence and facilitating conditions (and their offshoots such as behaviour, attitude, intention, actual use and technical support) have been retained as variables in the present study (see Table 1 in Chapter One) that mapped research questions to the UTAUT attributes. These constructs/attributes are reflected in the present study’s questionnaire (Appendix 5).
An analysis of different models synthesized to constitute the UTAUT model is used as the guiding model of the research. This is due to the fact that this framework not only covers the technological aspects of analyzing the acceptance and use of ICT but, more importantly, it also explores their organizational and environmental contexts. The UTAUT model thus provides a complete analysis of the possible aspects to be considered for ICT or e-parliament adoption and use in NASS. The available theoretical foundation justifying the constructs included, with empirical validation, allowed this study to formulate two hypotheses describing the overall acceptance and use of ICT by legislators (see hypotheses in section 1.6).

Venkatesh et al. (2003) reviewed and compared the eight dominant models (the TAM, TRA, TPB, a combined TAM and TPB, the MM, MCPU, SCI and the IDT) that have been used to explain technology acceptance behaviour. The authors in their review reported five limitations of prior model tests and comparisons and addressed them in their work. These included: (1) the technologies studied were simple and individual oriented, as opposed to complex and sophisticated organizational technology; (2) most participants in these studies were students, except for a few studies; (3) time of measurement was general and in most studies well after acceptance or rejection of the usage decisions so individuals’ reactions were retrospective; (4) the nature of measurement was in general cross-sectional; (5) most of the studies were conducted in voluntary usage contexts, making it rather difficult to generalize the results to mandatory settings.

Venkatesh et al. (2003) empirically compared the eight models in longitudinal field studies carried out in four different organizations among individuals that were introduced to a new technology in their workplaces. The measurement was carried out at three different points in time that is, during post-training, one month after implementation and three months after implementation. Actual usage behaviour was measured over the six-month post-training period. The data was divided into two samples for the eight models, according to the mandatory and voluntary settings. Venkatesh et al. (2003) studied the effect of some moderating variables that have been reported in previous research to affect the usage decision. These were experience, voluntariness, age, and gender. The results showed that, with the
exception of the motivation model (MM) and the SCT, the predictive validity of the models increased after including the moderators. The authors then examined commonalities among models and found seven constructs to be significant direct determinants of intention or usage in one or more of the individual models. Venkatesh et al. (2003) hypothesized that four of them played a significant role as direct determinants of user acceptance and usage behaviour. Based on user acceptance literature and the results of models’ comparison, attitude, computer self-efficacy and anxiety were hypothesized not to have a direct effect on behavioural intention. The constructs that do have a direct effect on behavioural intention and usage are performance expectancy, effort expectancy, social influences and facilitating conditions.

The UTAUT has been used in several similar studies. Marchewka, Liu and Kostiwa (2007), in an empirical study of student perceptions in terms of applying the Unified Theory of Acceptance and Use of Technology (UTAUT) model maintained that the UTAUT model consolidates previous TAM-related studies. However, Marchewka et al. (2007) generated mixed support in terms of the reliability of the scale items representing the UTAUT constructs and the hypothesized relationships. Although students tend to agree that Blackboard (e-learning platform) is a good idea that they frequently use, most of the features of Blackboard are not being used to their fullest capability. Marchewka et al. (2007) reported that e-government initiatives are in their infancy in many developing countries. The success of these initiatives is dependent on government support, as well as citizens’ adoption of e-government services. The UTAUT model therefore provides a complete analysis of the possible aspects to be considered for ICT or e-parliament adoption and use in the NASS.

Park, Yang and Lehto (2007) conducted a survey of 221 Chinese nationals in order to attain a better understanding of China as a potentially highly valuable mobile communication technology market, by testing a proposed conceptual framework based on UTAUT with moderating variables. The results from the Structural Equation Modeling (SEM) using multi-group analysis, indicated that gender and education level are significant moderating factors, while Internet usage experience was
insignificant. The results of this research suggested the necessity to take cultural background and disposition into consideration for the application of the UTAUT. Li and Kishore (2006) tested whether or not the key constructs in the UTAUT model were invariant across different population subgroups. The area of application for their study was Web log system users. The difference occasioned was based on the following demographic characteristics such as the person’s gender, the general computing knowledge, the person’s specific Web log-related knowledge, the person’s experience with Web logs and the person’s usage frequency of Web logs. Based on previous literature, Li and Kishore (2006) therefore hypothesized that the four key constructs of the UTAUT would remain invariant across male and female groups: (1) low and high computing general knowledge users, (2) users with or without particular Web log knowledge/ experience, (3) and users with low and high frequency use of Web logs. The findings indicated that users with different experience and knowledge in computing and Web log use have the same interpretation of the instruments of performance expectancy and effort expectancy. Social influence is not interpreted similarly among the users with high or low frequency of Web log usage. The authors recommended caution in interpreting the findings, since the instrument pertaining to the UTAUT constructs has invariant (an expression whose value does not change during programme execution) true scores across most subgroups in the context of acceptance of online community Web log systems (Li and Kishore, 2006). The researchers stressed the need for more invariant studies about the UTAUT constructs which were not found to be invariant in that study.

Zhang, Li and Sun (2006) in another study based on the UTAUT, identified 10 moderating factors and categorized these into three groups: organizational factors, technological factors and individual factors. Zhang et al. (2006) examined the moderating effects in user technology acceptance and it can be argued that one should take into account the individual and contextual factors in technology acceptance (Igbaria, 1993). A variety of models from different perspectives and at various levels have been developed by Ajzen and Fishbein (1980) and Davis, Bagozzi and Warshaw (1989) to explain IT acceptance perceptions and behaviours, Computer Self-Efficacy (Compeau and Higgins, 1995a) and Task–Technology Fit
(Goodhue, 1995; Goodhue and Thompson, 1995). These models have been recognized in the information science discipline.

Venkatesh et al. (2003) found that the influence of facilitating conditions on usage was moderated by age and experience of the individual involved. The authors defined facilitating conditions as “the degree to which an individual believes that an organizational and technical infrastructure exists to support use of the system” (p. 453). As a survey instrument incorporating the most influential constructs from the eight technology acceptance theories and models, UTAUT shares other technology acceptance models’ major assumptions. The unification of the eight existing models provides UTAUT with eight constructs: (i) performance expectancy, (ii) effort expectancy, (iii) attitude towards using technology, (iv) social influence, (v) facilitating conditions, (vi) self-efficacy, (vii) anxiety and (viii) behavioural intention to use the system (Baker-Eveleth and Stone, 2008; Venkatesh et al., 2003).

Carlsson, Hyvonen, Repo and Walden (2005) criticized the UTAUT and the other models of technology acceptance of operating at the organizational levels for which the models were originally created and not at the level of individuals. Williams, Rana, Dwevedi and Lal (2011) revealed that current research on the UTAUT constructs are impacted upon by many external variables across different studies. A similar pattern was shown by Lee, Kozar and Larsen (2003) in relation to the TAM. This is a relatively surprising outcome because the UTAUT purports to be a unified theory, being created by the mapping together of numerous variables from eight established theories and models. This suggests further work may be needed in the selection processes when integrating constructs from other theories. The following salient points emerged from the findings and discussion presented by Williams, Rana, Dwevedi and Lal (2011). The majority of articles that cited the UTAUT have done so as a basis for supporting an argument, or for criticizing the theory, rather than actually using the theory; second, many studies reported as using the UTAUT actually made only partial use of it, often utilizing only a small number of constructs; third, a number of cited articles made use of the UTAUT with all constructs but without considering the use of moderating factors; and last, there appears to be an
increasing trend towards using external variables and external theories together with the UTAUT.

The justification for using the UTAUT in the technological (and supply sense) context of an e-parliament framework is due to four factors: (i) it is the most widely utilized IS/IT adoption-based theory after the TAM. (ii) it has been used consistently when investigating organizational adoption (Marchewka, Liu and Kostiwa, 2007; Uzoka, 2008; Alatawi, Dwevedi, Williams and Rana, 2012). (iii) It is a unified theory mapped onto the constructs of eight individual theories of adoption and diffusion (the TRA, TAM, TPB, C-TAM-TPB, MM, SCT, MPCU and the IDT) and was found to outperform all of them with a variance of up to 70%. (iv) It has been suggested that a synthesis can be accomplished when the strength of some of the most widely used theories in adoption research for explaining individual behaviour (such as TAM, TAM2, TPB) and UTAUT could be combined with the strength of the e-parliament framework to predict legislators’ ICT acceptance and use behaviour (Baker, 2011).

As far as the analysis of the environmental context and organizational factors are concerned, they have been found to predict adoption of technology in private businesses, small and medium scale industries (SMEs) and even the legislature may not be immune to these factors (Oliveira and Martins, 2011). Therefore, the present study has modified the UTAUT by adding external factors and some additional constructs, such as culture, trust, security, power supply, motivation and ICT policy, which were deemed relevant for this research based on their past empirical performances across contemporary adoption literature at the individual and organizational levels. The theoretical framework was thus based on the extension of the UTAUT, with the full complements of the eight models that are synthesized to make UTAUT discussed in the earlier sections of this Chapter.

Oshlyansky, Cairns and Thimbleby (2007) revealed that the UTAUT tool is robust enough to withstand translation and to be used cross culturally in the context of a developing country. The model is therefore appropriate for this study. The current investigation extends the UTAUT model to study end-users’ acceptance and use of
ICT in the legislative context in Nigeria. The study was structured using the mapping of the research questions to UTAUT attributes (see Table 1).

The extension of the UTAUT to address the legislative functions and peculiarities of the Nigerian legislature necessitated the additions of the variables such as culture, power supply, trust, security, motivation and ICT policy. This study has hypothesized that there is no significant relationship between legislators’ ICT skills, age, sex, level of education and acceptance and use of ICT in the performance of legislative functions (see section 1.6 on the hypothesis in Chapter One). Several studies have also hypothesized that there is a relationship between effort expectancy and performance expectancy behavioural intention and use behaviour to be moderated by age, gender and experience (Venkatesh et al., 2003; Li and Kishore, 2006). The study tested the moderating role of demographics on the predictors of use of ICT by the legislators. The modification of the UTAUT provides a useful tool for this study to assess the likelihood of success for new technology introductions and to help understand four moderators of key relationships between the use of ICT and effective performance of legislative functions. This focus on legislators is different from the original model which was targeted on populations of users that may be less inclined to adopt and use new systems and this is retained in the modification of the UTAUT.

Several studies have modified the TPB, TAM (such as TAM2 and TAM3) and the UTAUT to explain the adoption and use of technology. For instance, several models have been used to explain factors determining consumer acceptance of Internet banking (Straub, Keil and Brennan, 1997; Liao and Cheung, 2001; Sathye, 1999; Tan and Teo, 2000; Pavlou, 2003; Suh and Han, 2002; Brown and Venkatesh, 2005; Venkatesh et al., 2003). The UTAUT model proposes two moderators of relationships. These are the behavioural intention and user behaviour (of the use of ICT) as correlating with the performance of legislative functions. It is these two constructs that relate directly to the dependent variable of performance of legislative functions.
The UTAUT extension in the present study specified the causal relationships between the system design features, effort expectancy, performance expectancy, social influence and facilitating conditions, alongside other variables such as culture and accessibility, to provide the rationale for the hypothesized model relationships and measures that were used to operationalize model variables. The reasons for extending the original UTAUT was to examine the major factors that affected the legislators’ acceptance and use of ICT in their legislative work in Nigeria. The extended UTAUT model is designed to test the effects of awareness, culture, accessibility, trust and security and reliability, together with performance expectancy, effort expectancy, social influence, facilitating conditions and the moderating factors of age, sex, ICT skills to further make the model robust enough for this study.

Several studies have used extensions of the UTAUT model to explain technology acceptance and use such as (Cody-Allen and Kishore, 2006; Chiemeke and Evwiekpaefe, 2011). Chiemeke and Evwiekpaefe (2011) modified the UTAUT to study Internet utilization in Nigeria in the past. The study found insufficient research in e-commerce on developing countries like Nigeria and limited understanding of the underlying factors that affected technology adoption. The researchers proposed a conceptual framework of a modified UTAUT model, with additional factors towards user adoption of e-commerce in Nigeria. The modification of the UTAUT was a result of the need to use additional variables such as trust, security, language, cost, reliability and power supply, in order to make the study more robust and focused (Chiemeke et al., 2011; Adeninkinju, 2005).

Kijsanayotin, Pannarunothai and Speedie (2009) provided further evidence for the basic validity of the UTAUT model, in their study that confirmed the relationships among the variables in the model proposed by Venkatesh et al. (2003). The relationships between performance expectancy, effort expectancy, social influence and intention to use IT were confirmed as existing, and in the same direction, as the UTAUT model. They also identified a positive though weak relationship between intentions to use and reported IT use. Kijsanayotin, Pannarunothai and Speedie (2009) demonstrated the direct effects of effort expectancy, social influence and facilitating condition, which are the core constructs of the UTAUT model whereas the
original UTAUT model demonstrated that these three main constructs have an effect through the three-way interaction in terms of age, gender, experience and voluntariness. Although Kijsanayotin et al. (2009) do not explain IT use to the same extent as the original UTAUT model, they expanded the UTAUT model and provided a better understanding of technology adoption in a developing country’s healthcare system such as Thailand where the modified UTAUT model is used to understand factors that influence health IT acceptance and use in community health centres.

Kijsanayotin et al. (2009) reported that intention to use health IT is a function of various concepts including the perception that health IT is useful, it is not too difficult to use, important persons/others believed that he/she should use health IT and the perception of free will to use IT influence the intention to use. Among these factors, performance expectancy exerted the strongest effect. ICT use by people in community health centres was influenced by past IT experience, the personnel’s intention to use the system, and the belief that an organization and technical support exists to support the use of health IT. Past IT experience and facilitating conditions were prominent in predicting IT use. The study confirms the validity of the UTAUT model in the field context of a developing country’s healthcare system. The study has implications for the development of health IT in developing countries and health/biomedical informatics research. Knowledge gained from the study is beneficial to both health IT policy-makers and people who work with health IT development and implementation projects.

Cody-Allen and Kishore (2006) extended the UTAUT to study the acceptance and the use of ICT services. The conceptual model used by Cody-Allen et al. (2006) was a modification of the UTAUT excluded variables such as effort expectancy and voluntariness which were reported as not relevant in the context of e-library acceptance and use. The review of the literature suggested the need to integrate the modified UTAUT model with constructs such as relevance and awareness that seemed suitable to the phenomenon of that study. The modified model was strengthened with the introduction of a specialized measurement scale to factor in the newly introduced variables and reduce potential bias and in-accuracy of items. The reported study findings in previous literature (Cody-Allen and Kishore, 2006)
suggest that performance expectancy positively contributed to behavioural intention and the use of technology. The findings provided evidence of the appropriateness of the assumptions of the UTAUT to predict technology adoption and use.

Cody-Allen et al. (2006) used constructs such as e-quality, trust and satisfaction constructs to extend the UTAUT in the context of e-business model. Heerik, Krose, Wielinga and Evers (2006) also employed a number of external variables such as social factors and individual control to examine the social capabilities of old people using experimental research. The study applied a survey questionnaire similar to after the experiment, participants were interviewed using a questionnaire related to that used by Venkatesh et al. (2003) that generated data from robotized human computer interactions in a nursing facility for the aged. The generated data was instrumental to IS research for the aged, social welfare and related fields. Several studies (Zhang, Li and Sun, 2006; Wang and Yang, 2005; Engebretsen, 2005) have used extensions of the UTAUT model to validate and test the UTAUT’s assumptions and measurement scales in the context of health across developing countries in Africa including South Africa and Uganda.

Jahangir and Begum (2008) recommended that future studies must add variables to the models used in the study to make the future studies more robust since it is not practically possible to incorporate all the variables in a single study. The authors proposed a conceptual framework that will investigate the effects of perceived usefulness, ease of use, security and privacy on customer adaptation mediated through customer attitude in the context of e-banking. To test the framework, structural equation modelling techniques were applied to data collected from 227 customers of private commercial banks in Bangladesh. The summaries of the models are given in Table 2.
Table 2: Summaries of Models

<table>
<thead>
<tr>
<th>Name of Model</th>
<th>Aspects Covered</th>
<th>Strengths of Model i.e. Predictive Power</th>
<th>Weaknesses of the Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology Acceptance Model (TAM)</td>
<td>PU and PEOU</td>
<td>Wide applicability, robustness, power and validity</td>
<td>Non-specificity, inadequacy in measuring system usage, absence of sound theory/method for measuring PU &amp; PEOU, disregard for societal factors that affect predictors of adoption</td>
</tr>
<tr>
<td>Theory of Reasoned Action (TRA)</td>
<td>Individuals’ perceptions, attitudes towards the behaviour, social influences</td>
<td>Explains relationships between attitude and behaviour. Caters for social influences omitted by TAM</td>
<td>Assumption that human behaviour is under voluntary control, demographic factors of age, etc, not addressed at all.</td>
</tr>
<tr>
<td>Motivation Model (MM)</td>
<td>Intrinsic motivation (enjoyment and fun), perceived benefits (PU), external pressure i.e., social pressure (Igbaria, 1996)</td>
<td>Motivation leads to important behavioural, cognitive, and affective consequences</td>
<td>Intention-behaviour gap, difficult to offer any simple predictive application in management practice</td>
</tr>
<tr>
<td>Theory of Planned Behaviour (TPB)</td>
<td>Attitude toward behaviour, subjective norms, perceived behavioural control (PBC)</td>
<td>Individual’s intention to perform a given behaviour, extension of TRA, predicting and explaining human behaviour</td>
<td>Imperfection of predictive power of TPB, acknowledgment of other variables such as habit, perceived moral obligation and self identity that may predict intentions and behaviour</td>
</tr>
<tr>
<td>Combined TAM &amp; TPB</td>
<td>Attitude decomposed to relative advantage (perceived usefulness), complexity (ease of use) and compatibility, subjective norms, PBC decomposed to</td>
<td>Adequate to define individual’s behaviour to the use of technology</td>
<td>Cannot represent organizational aspects, inclination for only technological aspects</td>
</tr>
<tr>
<td>Name of Model</td>
<td>Aspects Covered</td>
<td>Strengths of Model i.e. Predictive Power</td>
<td>Weaknesses of the Model</td>
</tr>
<tr>
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</tr>
<tr>
<td>Model of PC Utilization (MPCU)</td>
<td>Peoples' beliefs, affect (feelings), social norms, perceived consequences, habit and facilitating conditions.</td>
<td>Explain people’s behaviours toward others in a complicated social environment</td>
<td>Explain computer usage behaviour in only a voluntary environment, ignores facilitating conditions &amp; habit as predictors</td>
</tr>
<tr>
<td>Information Diffusion Theory (IDT)</td>
<td>Innovation attributes and innovators’ characteristics</td>
<td>Well-developed concepts and a large body of empirical results; innovation attributes act as predictors</td>
<td>No evidence on how attitude evolves to acceptance, other shortcomings similar to TAM</td>
</tr>
<tr>
<td>Social Cognitive Theory (SCT)</td>
<td>Self-efficacy, outcome expectations and affect (Venkatesh, 1999)</td>
<td>Scientific research, environmental determinants of behaviour, observational learning (Bandura, 1986) Person and cognitive factors (social cognitive theory), report multi-directional causal relationships among the model’s major variables</td>
<td>Too much emphasis on cognition, environmental predictors and too little attention to developmental changes, too mechanical</td>
</tr>
<tr>
<td>Unified Theory of Acceptance and Use of Technology (UTAUT)</td>
<td>Effort expectancy, performance expectancy, social influence and facilitating conditions</td>
<td>A dominant theory of adoption and diffusion research, most recent, utilizes the strengths of the other eight models</td>
<td>Most tests were carried out in voluntary usage contexts, external variables, purported unification of different models &amp; theories</td>
</tr>
</tbody>
</table>

### 2.11 Summary of the Theoretical Framework

Models of technology acceptance have been reviewed extensively. The study has examined attributes and constructs or variables, which included performance expectancy, effort expectancy (and their offshoots such as perceived usefulness, relative advantage, outcome expectations and perceived ease of use). The others
are social influence and facilitating conditions (and their offshoots such as behaviour, attitude, intention, actual use and technical support). The moderating factors examined included age, gender, ICT skills, educational qualifications, other elements or determinants of the use of technology such as culture, language and accessibility. An entire chapter has been devoted to this, to highlight relevant models and their key attributes. The purpose of this chapter was to critically evaluate existing knowledge of the phenomenon of the study, to articulate the theoretical assumptions of the study and to highlight the key constructs of the study. These attributes or constructs have largely informed discussion in the next chapter, which is the review of the literature.
CHAPTER THREE

LITERATURE REVIEW

3.1 Introduction

The purpose of this study was to determine the predictors of legislators’ ICT acceptance and use in the performance of legislative functions in the Nigerian National Assembly (NASS). The study addressed the following research questions: (1) What are the predictors of legislators’ ICT acceptance and use? (2) What are the attitudes and perceptions of legislators towards ICT? (3) What is the legislators’ ICT usage level in performing legislative functions? (4) What are the inhibitors to the use of ICT by legislators of the NASS? (5) What relationships exist between independent variables such as culture, ICT availability, facilitating conditions, effort expectancy, social influences, performance expectancy and dependent variables such as ICT acceptance and use? The lens used to review the literature was the theoretical framework that underpinned the study, namely the Unified Theory of Acceptance and Use of Technology model, UTAUT (Venkatesh, Morris, Davis and Davis, 2003).

The literature reviewed theoretical and empirical literature on the independent and dependent variables of the study, such as predictors of legislators’ ICT acceptance and use, legislators’ attitude and perceptions towards ICT and constructs of the UTAUT. Literature covered issues of paradigm and methodology (Creswell, 1994; Greene, Caracelli and Graham, 1989; Salomon, 1991). The scope of the review covered scholarly journals, monographs, textbooks, conference proceedings, peer-reviewed books of abstracts essays, non-empirical works, research synthesis and major computerized databases such as ERIC, Social Science Citation Index, ProQuest and Google Scholar. The geographic coverage of the review covered the world view, Africa and then Nigeria, in that order.

The literature covered the issue of public demand for greater participation in representative democracy and improved efficiency in the performance of their
elected representatives. Legislators in many developed countries and some developing countries have accepted and used technology to engage themselves and their constituents in the legislative roles of representation, legislation and even oversight (Cardoso, Cunha and Nascimento, 2004 and 2006). The review addressed the issue of applicability and suitability of commonly used technology adoption models such as TAM and UTAUT in the context of developing countries such as Nigeria (Bagozzi, 2007; Bouwman and van de Wijngaert, 2009). In the geographical scope, literature covered studies on predictors of adoption in Europe, North America and Asia on small and medium scale businesses (SMEs), managers, higher education and even the judiciary. There is little focus on predictors of adoption and use of ICT by elected representatives in Africa.

Chapter Three is organized by themes based on the attributes of the UTAUT which includes: Performance Expectancy- Perceived Usefulness (PU), Relative Advantages, Attitude and Perceptions, Effort Expectancy–Perceived Ease of Use (PEOU), User Behaviour, Behavioural Intention (BI), Usage Behaviour and Social Influence (Subjective norm, Social factors, Image), Actual Use, Moderating Factors of Predictors (e.g. age, sex), Inhibiting Factors to Acceptance and Use of Technology and Facilitating Conditions (e.g. culture, language, infrastructure, cost, accessibility, reliability, trust, security, privacy, government policy, compatibility, organizational and technical support and perceived behavioural control).

The UTAUT variables outlined above were appropriately linked to related research questions of this study to provide the framework for the literature reviewed in this chapter. Kothari (2004, p.12) suggested that there were two types of literature – the conceptual literature concerning the concepts and theories and the empirical literature which discuss related studies. Both conceptual and empirical literatures were reviewed in an integrated manner, to avoid splitting related literature. In relation to the themes examined, the international, regional and Nigerian contexts were also examined.
3.2 Predictors of Legislators’ ICT Acceptance and Use

The first research question examined the predictors of legislators’ ICT acceptance and use. The UTAUT theoretical model variables linked to this question include: Performance Expectancy - Perceived Usefulness (PU), Relative Advantages, extrinsic motivation, job fit, outcome expectations, effort expectancy or perceived ease of use, social influence, facilitating conditions, accessibility, culture, language, security and behavioural intentions.

Kingham (2003, p.1) theorized that if the application of ICT to parliaments seemed nowadays inevitable, this will change as technology will impact on the functioning of parliamentary institutions in the future. He theorized that the development of e-parliaments will transform both the ways in which parliaments operate as well as their representative functions in the future. Kingham (2003) further illustrated that the countries with enormous resources made adequate allocations to support the application of ICT to governance. This commonly predicted the performance of legislative functions in legislature. Kingham (2003) stated that the high cost of deploying a robust ICT infrastructure in the legislature was difficult for developing economies of African, Caribbean, Central American, Central Asian, South American and Southern Asian regions.

Wright (2006) identified three main schools of thought on the technology–democracy discourse. First are the ‘revolutionaries’ who argue that ‘the Internet can and will transform democratic systems across the world. This group theorizes that information and communication technology allows a direct form of democracy where large numbers of citizens can participate directly in policy making; they predict that the new technology will ultimately render representative democracy obsolete. However, since these revolutionary ideas were articulated in the late 1990s, it has not resulted in the kind of democracy that was anticipated.

Wright (2006) referred to the second school as the ‘reformers’ who maintain that technology can reinvigorate democracy. This can be done by providing technical solutions to problems identified within the current representative system. The
reformers believe that technology can be used to strengthen traditional practices or support representative democracy through computer-aided participatory and deliberative tools. Wright (2006) referred to the third groups as the ‘regulators’ who assert that political institutions will normalize information and communication technology into already established structures and thus that the technology will have limited impact. This position is based on empirical studies showing that mainstream political actors are quick to adopt new technology and integrate it into the traditional political world. The regulators (third group) argue that established and powerful institutional arrangements not only shape, but also resist, change, particularly if it results in the loss of institutional power or control. They paint the pessimistic view that the institutions that are driving technological change are doing so in pursuit of their own interests, with the aim of asserting control over technology to ‘neutralize any pluralist tendencies of the new media.

Wright’s (2006) suggested that the current use of information and communication technology may undermine representative structures and practices as the revolutionaries predicted. However, the question of whether the reforming potential of the technology is being realized by the British House committees, or whether the technology is being used, rather, to reinforce and regulate existing power structures, remains unanswered. The determination of whether House committees are technological regulators or reformers will depend on which technologies House committees are empowered to use and how they choose to use them. In conclusion, Wright (2006) theorized that the use of ICT by elected representatives for effective performance of representative democracy is premised on the adoption and use of appropriate ICT tools by the legislature.

The analyses of the predictors that shape the adoption of a product (such as ICT) can provide valuable information to increase the use of the product (Farquhar and Surry, 1994). A study on the predictors of legislators’ technology acceptance and use might thus increase the use of technology for representative democracy in Nigeria, because understanding these factors can lead to creating strategies necessary for a successful technology adoption by legislators, citizens and other stakeholders.
Technology adoption is an innovation to many endeavours as revealed by Muinde (2009) whose findings corroborated several other studies such as Mutula (2001); Odero-Musakali and Mutula (2007) and Rogers’ (2003) that recommended the need for awareness and training for early adopters of ICT. Many studies (Smallbone, North, Vickers and Roper, 2001; Chen, Gillenson and Sherrel, 2002; Dawn, Podonik and Dhaliwal, 2002; Lawson, Alcock, Cooper, Burgess, 2003; Ashrafi and Murtaza, 2008; Temtime, Chinyoka and Shunda, 2003; Mutula and van Brakel, 2006; Yeh, Quey-Chen and Chang, 2007; Chang and Cheung, 2001; Ssewanyana and Busler, 2007; Kapurubandara and Lawanson, 2006) have shown that there was a low adoption of ICT in developing countries as a result of low levels of acceptance of new innovations. Oyelaran-Oyeyinka and Lal (2005) reported a cross country analysis of Internet diffusion in sub-Saharan Africa showing a steady growth in countries like Ghana and Nigeria but that overall, Internet penetration remained low.

Lucchetti and Sterlacchini (2004) identified funding and technical needs as significant contributors to the high rates of IT adoption and use, in the context of organizations and workplaces. This is corroborated by Seyal and Abd Rahman (2003) they examined about 100 small and medium size firms that provided evidence of the predictors of e-commerce adoption as relative advantages, compatibility, trialability and observability. The study reported that management support, government support and perceived benefits positively correlated to high rates of IT adoption in Brunei. Lin (2006) reported similar findings that the following: organizational size, CEOs’ characteristics, CEOs’ perception of relative advantage, compatibility, and complexity, influenced IT adoption in a related study.

Kurnia, Alzougool, Ali, Saadat and Alhashmi (2009) and Norton (2007) historicized that by the 1990s, MPs in the British parliament had developed a policy in response to an emerging public interest in ICT adoption and use in the performance of parliamentary functions. Apparently, citizens’ demand predicted the adoption and use of ICT by MPs. This was aroused by the revolutionary impact of emailing and other online forms of communication in the UK. MPs as early as 1995, had concerns about digital exclusion of members of the public who chose not to go online. And by 1996 as a result of policy interventions the British parliament launched its own
website and included the Hansard (parliamentary record) for internal and public access by MPs and citizens, respectively.

Kurnia et al. (2009) reported a need for a better understanding of the potential and relevance of predictors of ICT adoption in developing countries. He posits that there is the need for a holistic view of how various widely known factors at the organization, industry and national levels such as government institutions, politicians and citizens predict technology adoption. It was revealed that predictors of technology adoption by business organizations and industry could be similar to other institutions of state. The present study aims to determine the predictors of ICT adoption by legislators of the Nigerian National Assembly (NASS), which is an institution of the state, by looking at predictors of adoption and use of ICT by federal legislators in the performance of legislative functions of an organ of government, the legislature.

Daniel and Wilson (2002), Dasgupta (2000), Lai and Hsieh (2007) and Scupola (2003) addressed a broader perspective of Internet adoption by key government players. The researchers found that social influence and facilitating conditions such as government intervention, public administration and external pressure from competitors, suppliers and buyers played key roles in the adoption and implementation of IT. This was evident in the area of ecommerce administration of government. Hashim (2007) focused on organizational factors, such as organization support and management support for ICT by using a survey instrument developed from the constructs used in the diffusion of innovation theory. The findings (Hashim, 2007) showed that the level of ICT skills possessed by managers of organizations in Malaysia was poor, that their use of ICT was low, and that their adoption of ICT was slow and late, primarily because they thought that ICT adoption was difficult. This present study focused on predictors of legislators’ use of ICT in their legislative work. This is a clear departure from earlier studies, such as those of Lin (2006) and Hashim (2007) that looked at managers of business organizations and political office-holders of an executive nature and not elected representatives in the legislature. The focus of the studies of Hashim and Lin included key government players. The legislators are part of the three arms of government - the executive, judiciary and parliament. Even where there are no representative democracies there
exist law-making processes or non-elected legislators, as found in autocratic states and one party democracies. Hashim (2007) concluded that very little is understood about the acceptance of technology by organizations, including the various arms of government. The present study makes a contribution toward bridging this gap.

Schaupp and Carter (2005) studied the intention of the citizens in the USA to adopt electronic voting. This is a very complex transaction-type service of e-government. They found that variables like perceived usefulness, compatibility and, trust are factors that influence the adoption of electronic voting. E-participation has the potential to establish more transparency in government by allowing citizens to use new channels of influence which reduce perceived access barriers to public participation in policy-making (Porter and Donthu, 2006). Strategies such as e-government, e-consultation, e-participation, e-parliaments, e-petitions, e-citizens and e-governments have been introduced, suggesting a relationship amongst the concepts (Schaupp and Carter, 2005). Lee-Kelley and Kolsaker (2004) compared E-Government adoption between countries in different continents. They examined the adoption of government online services in the UK and Singapore, in an attempt to improve the understanding of the factors increasing their demand for E-Government. The authors proposed that progress should be evaluated in terms of provision and usage and suggested that prior studies have been largely inadequate. The authors examined this by contrasting the critical factors influencing ICT adoption in two countries. They highlighted factors such as human elements, sociological factors, attitudinal orientations, political cynicism and philosophical preferences as predictors of technology adoption. They concluded that societal and social issues may be keys to the truly successful use of ICT by political players in government, with a need for shift of emphasis from deployment of ICT to adoption and use. The need for a shift of emphasis, indicated by Lee-Kelley and Kolsaker (2004), was the basis for the present study. The aim was not to explore ICT deployment in the government as a whole, but instead to look at predictors of adoption of technology by legislators who constitute a crucial arm of the government.

Al-Omari (2006), Abu-Samaha and Abdel Samad (2007) observed that adoption of technology by people in government in Jordan was affected by predictors such as
low level of Internet penetration, infrastructure constraints, the digital divide, limited information technology (IT) skills, limited public sector reform efforts, lack of an enabling legal framework and lack of awareness, education, preparedness, public sector reform, organizational and technical change management. The lack of readiness of citizens, business organizations and government institutions such as parliament still represented a big barrier for e-participation success (Al-Omari, 2006; Al-Omari and Al-Omari, 2006).

Frick (2005), in a survey of e-parliaments in Latin America, found evidence that user-friendliness was a dimension within development and use of ICT in parliaments. The researcher reported that information provision constituted the most emphasized aspect regarding online parliamentary initiatives. The researcher reported that electronic parliaments were still at the initial phases and their development was focused on online presence, without stressing interaction applications or implementation of transactions with citizens. Frick’s research methodology used documentary analysis, statistical information, and data from websites of members of the parliament in Lithuania. He discussed the e-Parliament development model, highlighting issues such as ICT knowledge and usefulness as variables. The study concluded by indicating that use of ICT helped to build a relationship among the members of parliament and between democratic institutions and citizens in Lithuania, a country that had a communist past. Frick (2003) stated that territorial expansion may influence communication and relationship with government institutions such as the executive, judiciary and legislature. Frick (2003) highlighted that in those parliaments in Latin America, simplification of communication and massive reach provided new applications that enhanced innovation. Frick (2005) observed that parliaments that had a higher level of online development were those belonging to countries with the highest demographic density within the region, such as Brazil, Mexico, Colombia, Argentina, Chile, Venezuela and Peru. The key finding from Frick (2005) that is relevant to the present study was the fact that governments of Latin America were using e-parliaments to conduct parliamentary functions and to reach out to citizens across their territories. The finding is significant to the Nigerian situation as a result of its large population size that is similar to that of Brazil.
Tan and Teo (2000) developed and tested a framework that identified factors which may influence the adoption of technology. The factors based on the banking sector were relative advantage (Taylor and Todd, 1995a), compatibility, complexity, trialability, needs, risks, Internet experience and facilitating conditions. Tan and Teo (2000) extended commonly used technology adoption models to provide evidence of predictors of acceptance and use of technology.

Cabral, Lucas and Gordon (2009) built models for technology adoption, using theories of behavioural change. They attempted to understand what motivated and influenced the adoption of new technologies. They suggested that the key influences on whether or not a new technology was adopted depended on perceived usefulness of the technology; ease of use; social influences (including social norms) and facilitating conditions. This includes external resource availability, perceived and actual control and compatibility with normal work patterns). These predictors are the same as the attributes of the UTAUT model, the theoretical framework underpinning this present study. Cabral et al. (2009) provided important moderating influence factors (which affect the degree of adoption). These included voluntariness of use (whether adoption of the new technology is voluntary, or compulsory, as it may be for professionals within a work context), experience (using the technology), gender and age. Cabral et al. (2009) submitted that there were few empirical studies of technology adoption models in developing countries that reported empirical evidence to support the role of major influences. Some of the available evidence for the role of voluntariness and experiences are the moderating factors. The present study attempted to fill this gap in the literature in the context of a developing country, Nigeria. The study provides empirical data on the moderating factors and relationship with predictors of adoption and use of technology. Several studies carried out in developing countries emphasize the important role of facilitating conditions based on the multiple restrictions on material, human, infrastructure and institutional resources that form common barriers of technology adoption. To date, published research has tended to focus on specific ICT applications and, in particular, parliamentarians’ use of websites and blogging platforms. There are many studies on predictors of parliamentarians’ adoption and use of technology in Europe and North America (Smith and Webster, 2008). The present study was limited to a
range of ICT tools that are available in Nigeria, which were described in Chapter One.

Hasan and Ahmed (2010) and Potosky (2002) observed that a user’s past ICT experience has been consistent in reports in the literature as having a positive relationship with their self-efficacy beliefs. The relationship that past experience has on an individual’s self-efficacy has been highlighted in social cognitive theory, which states that prior experience represents the most accurate and reliable source of self-efficacy information about similar tasks (Hasan and Ahmed, 2010).

In 2002, a group of European researchers, under the auspices of COST A14, a European research network on “Government and Democracy in the Information Age”, undertook a comparative study of the use of ICT by members of parliament. A survey questionnaire was administered to all MPs in Austria, Norway, Portugal, the Netherlands, Denmark, Scotland and Germany. The results showed that ICT tools were mostly used for internal communication amongst parliamentarians/parliamentary staff/party rather than for external communication. However, usage of these tools for external communication was on the rise and use of ICT tools positively influenced appropriation of ICT by MPs.

Zittel (2003) reported that MPs in the USA, Germany and Sweden used the Internet for internal and external communication, but the researcher built his theory on two models of political representation in a networked society, the technological and the constitutional. Centeno, van Bavel and Burgelman (2005) report on the prospective future of e-government in Europe as an initiative. The technological initiatives referred to the transformative opportunities of the Internet, helping create an electronic democracy and redefining the relationship between legislators and electors, whilst the latter would be more gradual and stemming from the Constitution of many European countries in the recent future.

Coroli and Tutunari (2006), reporting ICT skills of parliamentarians in Moldova, collected data from a questionnaire developed to assess the computer literacy of the staff and MPs. The questionnaire contained over 40 questions related to basic
knowledge of informational technology, ranging from general ICT knowledge to use of applications such as MS Word, Excel and so on. The findings of Coroli and Tutunari (2006) suggested that computer literacy skills of staff and MPs were predictors of their use of ICT. The present study looked at a wider spectrum of computer literacy skills such as general computer skills, file management skills, processing skills, online communication skills, hardware and security skills.

Rasheed and Shiratuddin (2009) reported a study on the moderating effect of gender on the iris authentication in the use of ATM banking in Nigeria. This was anchored on six dimensions of behavioural intentions and gender did not impact on any of the dimensions. Previous studies have shown that predictors of acceptance and use of technology can be divided into social and technological factors. The social factors are poverty, low literacy, cultural contexts, reliability, trust, cost, social influence, behaviour, attitude, perceived ease of use and perceived usefulness. The technological factors are accessibility, infrastructure and facilitating conditions. The moderating factors of the relationships are age, gender, education, previous experience and ICT skills. The UTAUT model that underpinned the present study is very particular about the moderating factors such as gender and age. The review of the literature thus runs along the lines of the moderating factors of age, gender and ICT skills. There are suggestions that the predictors of legislators' ICT acceptance and use may vary depending on whether the country of focus is developed or developing, rich or poor and/or has infrastructural development. Some of the predictors of technology adoption have been used to extend and further make the UTAUT more robust in predicting legislators' use of ICT in the performance of legislative functions in Nigeria. The proposed extension to UTAUT was presented earlier, in Chapter Two. Equally, several studies (Lee and Lin, 2008; Debashish and Robert, 2012), have extended the UTAUT to reflect local and environmental factors peculiar to the contexts in which the study was carried out.
3.2.1 Performance Expectancy

The first research question of this study attempted to answer the broad issue of predictors of legislators’ ICT acceptance and use in performance of legislative functions. These included factors such as performance expectancy or perceived usefulness, effort expectancy, extrinsic motivation, job fit, relative advantage, outcome expectations and use of ICT. The variable, performance expectancy, is drawn from the UTAUT model.

The analyses of performance expectancy (or perceived usefulness, PU) and related variables of outcome expectations usefulness (PU) of ICT by legislators addressed the research question one (see section 1.5) of this study. Much literature is available about the perceived usefulness of ICT in performance of legislative functions. For instance, the Speaker of the U.S. House of Representatives emphasized in her opening speech at the World e-Parliament Conference 2009, “…technology provides opportunities for discussion and engagement; it strengthens accountability; ultimately it makes democracies more democratic” (Pelosi, 2009, p. 1). The president of the Chamber of Deputies of the Dominican Republic suggested that the expected outcomes of use of ICT in that Chamber included greater efficiency and productivity, improved quality of legislation, better parliament-to-citizens interaction and greater service to constituents. Transparency was seen as the critical and crosscutting value in connecting all of the outcome expectations and the Chamber’s website played a key role in achieving those purposes (Valentin, 2009). The UN e-parliament Report (2008, 2010) stipulated that use of ICT enhances legislative work in five characterizations: representativeness, transparency, accessibility, accountability and effectiveness.

Kanthawongs (2008), in a study of success factors of e-parliament systems in the Thai parliament, reported that PU was the second critical success factor among the four predictor variables on the engagement of members of parliament (MP) with ICT systems. The author’s findings indicated that MPs who were users of the systems were more engaged in using e-parliament systems if these systems were believed to enhance the MPs’ performance. Kanthawongs (2008) used an analysis of the
requirement specification phase derived from MPs’ perspectives in the field of Human-Computer Interaction (HCI), the roles and needs of MPs were assessed. Kanthawongs (2008) reported that the systems might allow the MPs to make sure that correspondence was replied to promptly and that information concerning existing cases could be accessed instantly by MPs and their administrative and support staff. Kanthawongs (2008) corroborated the report of Campbell, Harrop and Thompson (1999), that e-parliament systems may help with handling and organizing constituency casework and mailbags and seek better cross-referencing with other databases such as electoral registers. Kanthawongs (2008) further concluded, that the system may offer MPs a well-organized office in order to work efficiently and communicate effectively with their colleagues and staff, with political interests and actors, with government, with the media and, above all, with their constituents. This related directly to research question three (see section 1.5) in the present study. Question three sought to determine legislators’ ICT usage level in performing legislative functions at the NASS.

Folstad, Krogstie, Risan and Moser (2007) emphasized that Thai MPs played many roles and functions within parliamentary democracy and e-parliament technologies were perceived as useful by MPs in Thailand. Folstad et al. (2007), in the context of Thailand, found that MPs used ICT in their constituency work, party and parliament to engage the citizens. Kanthawongs and Lee (2008) posit that in order to be effective, MPs need the support that e-parliament technologies can offer. However, these technologies were not just means for enhancing the performance of legislative functions, but also presented opportunities for e-participation in democracy and governance (Kanthawongs, 2004; Evans and Yen, 2006; Kanthawongs, 2005; Kanthawongs and Polatoglu, 2005; Lee, Tan and Trimi, 2005; Scholl, 2005). The authors observed that the use of ICT by MPs had relative advantages for effective administration, efficient communications and comprehensive information management, both in terms of information gathering (research) and dissemination (publishing) (Campbell, Harrop and Thompson, 1999). The reviews revolve around performance expectancy or perceived usefulness. This is relevant to research question one of the present study.
Smith and Webster (2004) suggested that the factors that affect perceived usefulness of ICT by members of the Scottish parliament (MSPs) included enhancing parliamentary democracy and increasing accountability and openness, thereby serving to reinforce the legitimacy of these new parliamentary institutions and the role of representatives in the democratic arrangements. Smith and Webster (2011) reported that relatively little has been published on parliamentarians’ response to communications technologies. The researchers report that there is limited knowledge on how the wider range of technologies are perceived and used and what are the motivation, outcome expectations and relative advantages of acceptance and use of ICT. These factors are relevant to research question one of this study. The study fills this gap by focusing on the Nigerian federal legislators’ perceived usefulness of ICT in performance of their legislative functions.

Shim and Eom (2009) reported a study on the anti-corruption effects of information communication and technology social capital by examining the argument that ICT and social capital serve as major factors to reduce corruption. The study suggested that ICT has the potential to reduce unnecessary human intervention in government work processes including those of the legislature. This reduces the need to monitor corrupt behaviour in legislature and in government. The study highlighted the fact that the citizens living in a society with a high level of social capital (informed public) are more likely to become actively involved in the political decision-making process, increasing the likelihood that public employees’ corrupt behaviours will be exposed to the densely connected public. The study revealed that ICT can be an effective tool for reducing corruption and systemic inefficiencies.

The concepts of good governance, efficiency of politicians and overall representative democracy presented by Shim and Eom (2009) are further discussed by Albert (2009) who explored the state of e-governance in Africa from the supply and demand perspectives. The supply phase is the readiness of African countries to practice e-governance and the demand phase involves the capacity and ability of citizens to demand e-governance from their elected representatives. Albert (2009) revealed that media houses and the non-governmental organizations put pressure on the federal legislators to pass a draft freedom of information (FOI) bill in Nigeria. This bill was
eventually passed into law but the former president, Olusegun Obasanjo, refused to sign it into law, initially on the ground that it would undermine Nigeria’s national security. Such opposition for the FOI bill stemmed from the argument that the title of the bill ought to have been “Right to information” rather than “Freedom of information bill (Michener, 2011; Okugo, Akpan and Mboho, 2010; Eegunlusi and Omilusi, 2013).

Albert (2009, p. 135) reported that expectations are high in the citizenry in Nigeria for the success of representative democracy and that the democratic potentials of the acceptance and use of ICT by elected representatives may be worth considering. The author presented the challenges to include new evidence that suggested that the argument that the lack of infrastructure is not “as weighty in the explanation of the problem of corruption and lack of the political will to support e-democracy.” The study suggested that Nigerians under the harsh social, economic and political environments under which they live may not be keen on e-parliament. The author reported that the efforts made by non-governmental organizations to open websites to promote deliberative democracy have led to different types of problems. Albert (2009) recommended the integration of the e-democracy processes within broader constitutional structures. The present study focuses on the acceptance and the use of ICT by the legislators, the performance expectancy (outcome expectations) of the phenomenon given the background of Nigeria in the context of freedom of information (FOI), right to information (RTI), legislation and social, economic and political realities. The issues raised here are addressed in the research question two of the present study.

The survey data of Smith and Webster (2011) suggested that MSPs (Members of the Scottish Parliament) had moved away from maintaining personal websites/blogs themselves or having one maintained by their party. Approximately 62.7% of MSPs had a website or a blog that was maintained by their constituency office, while 22.7% had a personally maintained website or blog and only 7.4% had a website or a blog that was maintained by their political party. Most MSPs had positive perceptions of use of ICT and their adoption of ICT was their personal initiative. These findings are related to this study, as they address research question one (see section 1.5) of this study on perceived usefulness and outcome expectations of the use of ICT by
legislators (MSPs). The MSPs’ perceptions of usefulness of ICT to legislative work showed patterns of distinction in line with the three cardinal functions of the legislature – legislation, representation and oversight. The MSPs reported that ICT was essential and very useful. Based on this finding it was assumed that MSPs’ perceptions and attitudes towards ICT had a relationship with perceived usefulness.

Smith and Webster (2011) revealed the influence of ICT experiences, skills and other moderating factors critical to moderating the influence of demographic factors on the predictors of technology adoption. The study further revealed that MSPs indicated that they were skilled users of ICTs, from 53.8% in 2002, to 59.4% in 2006 and 74.2% in 2009, and that fewer regarded themselves as having ‘little’ or ‘no’ competence. In 2009 the proportion of MSPs who reported that they had little or no competence in using ICTs fell to just 1.5% and 0.0%, respectively. The implication of this finding by Smith and Webster (2011) to the present study is based on the fact that it was assumed that moderating factors influence the predictors of ICT adoption and use.

Cardoso, Cunha and Nascimento (2004 and 2006) found that MPs in Portugal and Scotland perceived ICT as useful in supporting ‘internal’ communications relationships between representatives and party and parliamentary staff, which in many cases exceeded the use of ICTs to support ‘external’ communications with voters and lobbyists. This finding suggested that parliamentarians perceived ICT useful for communication purposes (Cardoso et al., 2004; Filzmaier, Stainer-Hammerle and Snellen, 2004).

Coleman and Nathanson (2005) stated that ICTs impacted on the core representative, party actor and legislative roles of the parliamentarian in different ways. The authors pointed out that much of the existing literature on parliamentarians and the Internet had either failed to distinguish between these roles and purposes, or only examined certain roles and particular purposes. The study suggested that the main area of benefit was for their role as legislators, where ICT had made it easier to carry out research and collect evidence. The authors noted however, that there were worries about the quality of use of ICT. Chadwick and May (2003) indicated that countries in the EU and the US in particular used Internet
based interactions for communication between states and citizens but that these needed to be investigated by future research. The relevance of these findings to this study is on outcome expectations of legislators' use of ICT, which is an attribute of the UTAUT model that addressed research question one of this study.

Perceived ease of use and complexity have been shown to be important factors in studies of information technology acceptance, with the Internet, World Wide Web and ICT adoption being no exceptions. Valid measurement scales for predicting user acceptance of computers are in short supply. Most subjective measures used in practice are not validated and their relationship to system usage is largely unknown. The present research developed and validated new scales for variables such as perceived ease of use and complexity, which are hypothesized to be fundamental determinants of user acceptance. Many previous studies have looked at perceived ease of use and complexity in commercial organizations, e-governments' environments mostly, in developed countries, and in developing Asian countries. This present study was aimed at extending knowledge by examining the perceived ease of use and other pertinent variables of acceptance and use of ICT in a democratic or representative institution in the context of a developing country.

3.3 Attitudes and Perceptions of Legislators towards Adoption and Use of ICT

The second research question of the present study examined the attitude and perceptions of legislators towards acceptance and use of ICT in Nigeria. The UTAUT attributes dealt with by research question two were attitudes and perceptions towards the use of ICT. Williamson, Miller, Allen, Desai and Goodstone (2009) reported that there was only very limited research available on MPs' attitudes to digital media and their perceptions of its use and value. Hoff (2004a) looked at the attitudes of European MPs towards the importance of ICT for the future of their democracies by drawing on data from a comparative survey of MPs' use of ICT carried out in seven European countries in 2001/2002. The countries chosen for the study were Denmark, Norway, Austria and Portugal. The results indicated a very big and homogeneous belief in the positive democratic potentials of ICT across the countries. The results further stated that the degree of involvement with ICT was of
greater importance for the evaluation of the democratic potentials of ICT, than other more conventional background factors such as age, gender and party affiliation.

Hoff (2004a) revealed that MPs in the four countries had great faith in the positive democratic potentials of ICT. The findings indicated that culture and environmental factors influenced MPs' attitude towards ICT. The relevance of this to the present study is that peculiar social, cultural and environmental factors such as culture, language and accessibility issues suggested by Hoff (2004a) may explain variations of perception across MPs in Europe and also have an influence on the attitudes of federal legislators in Nigeria regarding acceptance and use of ICT. Hoff (2004a) reported that other factors influencing MPs' attitudes towards adoption innovation were current use of ICT, competence concerning ICT, experience with ICT, gender, age, party affiliation and size of the party. In general terms, the degree of involvement with ICT (use of, competence in, and experience with) was of greater importance for the evaluation of the democratic potential of ICT than the other factors. The results revealed that the MPs who often used ICT, were those who had great personal competence concerning ICT and who were quite experienced concerning ICT, had positive attitudes towards the use of ICT for their legislative work. Hoff (2004b) noted that there was a relationship between intensive use of ICT and a positive evaluation of its effects. These issues raised by Hoff (2004a) are relevant to research questions two and three of the present study which focus on attitudes, perceptions, use behaviour, behavioural intention and usage of ICT by legislators in the context of Nigeria. Hoff (1995, 2004b) concluded that the more a person was affected by new technology (ICT) in the person's daily work, the more positive the person was when it came to evaluating the effects of the technology.

In a study done in Canada, Malloy (2003) covered the impact of ICT on the relationship among the MPs and between them and the public in Canada and proffered insights on how technology was positively transforming the relationship among MPs, between parliamentarians and the public. Kenzie, Delecourt, and Power (1994), Coleman (2004), Mansell (2002), Kahlí (1997), La Porte, de Jong, and Demchak (1999), Welch and Wong (2001), Di Maggio and Powell (1983), Strang and Meyer (1993), Norton (2007), examined the issue of ICT skills of
parliamentarians and how positive attitudes towards ICT and the use have helped to foster legislator-citizen communication in many European states. Overall, the studies highlighted the potentials of ICT acceptance and use by legislators in the performance of their legislative functions.

The tendency towards ICT use has been primarily ascertained by measuring the attitudes of individual users in terms of the tasks for which it is used, the frequency of use, and perceived ease and comfort of use. A positive attitude towards technology acceptance (Mahmood, Burn, Gemoets and Jacquez, 2000) allows the user to believe that using the ICT would enhance his or her performance (Davis et al., 1989). The premise of measuring attitudes stems from the theory of reasoned action which describes attitude as a “predisposition to respond favourably or unfavourably to an object, person, event, institution, or another discriminable aspect of the individual’s world” (Ajzen, 1988). Mahmood et al. (2000) felt that attitude towards behaviour is a direct determinant of the behavioural intention to perform the behaviour. The extent to which information or advice is accessed in terms of usefulness, quality and speed are critical to the performance of individuals in knowledge-intensive work. Constant, Kiesler and Sproull (1994) have reported how communication technology has extended information reach and enabled the acquisition of useful information for individuals and occupational communities (Pickering and King, 1995).

Smith and Webster (2004, 2008) in a survey investigated MSPs’ views of the democratic potential of new ICTs. The study carried out in 2002, 2006 and 2009, reported that they had a very positive opinion concerning the democratic potential offered by new communication technologies. The authors revealed that the MSPs did not only show positive attitudes about use of ICT for legislation and oversight purposes, but also in their legislative function of representation. These are relevant to the present study as research questions two and three seek to discover the attitude and perceptions of legislators in Nigeria towards the adoption and use of ICTs to interact, communicate and dialogue with legislators’ constituents, citizens and among themselves. The findings of Smith and Webster (2008) are also relevant to research question three of the present study. Question three investigates the
usage levels, behavioural intentions and usage behaviour of ICT by legislators in Nigeria. The present study is a departure from that of Smith and Webster (2008), in that the latter was completed mostly by aides to MSPs. The survey in this study however targeted legislators. The latter has a smaller sample but the present study surveyed all 469 federal legislators in Nigeria.

Czaja, Charness, Fisk, Hertzog, Nair, Rogers and Sharit (2006) reported findings from the Center for Research and Education on Aging and Technology Enhancement (CREATE) on the use of technology among community-dwelling adults in the age group of 18-91 years. They found that older adults were less likely than younger adults to use technology in general, computers and the World Wide Web. The study by Czaja et al. (2006) is relevant to this present study which hypothesized a relationship between age and attitude/perception of legislators to use of ICT. However, other than those used by Czaja et al. (2006), ethnicity, gender and ICT skills level, were used to test for the mediating role between the moderating factors and technology adoption. The present study examined the influence of moderating factors such as age, prior experience on the predictors of legislators’ ICT adoption and use. The moderating factors are the focus of the UTAUT model. The results of Czaja et al. (2006) indicated that computer anxiety, fluid intelligence and crystallized intelligence were important predictors in the use of technology. The relationship between age and adoption of technology was mediated by cognitive abilities, computer self-efficacy and computer anxiety. These findings were discussed in terms of training strategies to promote technology adoption. Data on the adoption and use of technology such as computers have generally shown that a number of factors, such as education, socioeconomic status, attitudes toward the technology, the perceived benefits of technology, and access to technology, influence the technology adoption of technology.

Wright and Coleman (2008) criticized previous research on the attitude of MPs in the UK to the adoption of technology. The nature of their criticism was that literature was over concentrated on adoption of the Internet, as both a communication tool and for political campaigning. Wright and Coleman (2008) identified that majority of the research available focused on external analyses of digital media resources, thereby
limiting research on MPs' attitudes and perception to digital media only. The population for Wright and Coleman (2008) consisted of 168 MPs and parliamentary staff using a questionnaire survey and focus group to collect data. The authors reported that adoption of the Internet is largely down to personal attitudes to technology. This was further affected by how confident that MP was about his elected parliamentary seat. The MPs are cautious about engagement of citizens with the use of networking sites and Web 2.0 tools, such as Twitter, websites, emailing and e-petition platforms. Evidence from the focus group suggested that there are factors that reflect a traditional range from early adopters (with no interest in technology) and those with individual contexts that make them adopt technology than any e-parliament initiative, strategy, legislation or attitude.

Williamson (2009) reported that the Internet holds potentials to re-align the structure of communication between MPs and citizens. The author presented evidence that the Internet has resulted in motivation for MPs to communicate online with constituents. Williamson (2009) conducted a survey of 168 MPs and followed up with focus group interviews of MPs and their support staff. The results indicated that emailing had become a tool of choice for most MPs and that the evidence suggested that the MPs perceived the Internet as a tool for communication with the electorate. Williamson (2009) reported a sharp increase in the adoption and user rates of social networking and the caution of MPs to adopt blogging in digital space. The results showed that with the adoption of Internet and Web tools, new relationships were been created by the elected representatives and the electorates. Williamson (2009) reported that the MPs indicated high perception and positive attitudes to the adoption and the use of Internet tools for parliamentary communication with their constituents

Kim, Chun and Song (2009) observed that the attitude construct has often been omitted in research on IT acceptance. The authors highlighted the role of attitude in explaining technology acceptance behaviour. Empirical examination of the research hypotheses of Kim et al. (2009, p. 68) indicated “that a favorable attitude toward using a certain technology an individual may adopt and continuously use the technology”. A person's attitude towards system use fully mediated the effects of salient beliefs on behavioural intention when attitude was strong, whereas it partially
mediated the effects when attitude was weak. Kim et al. (2009) provided additional insights in predicting technology-acceptance behaviour. The findings of Kim et al. (2009) were mixed in terms of their conclusions regarding the mediating role of attitude in IT acceptance. The researchers stated that attitude was fully mediated between behavioural beliefs and behavioural intention. Attitude in other studies has been found to partially mediate the relationship between salient beliefs and behavioural intention or actual usage. The accumulated empirical findings about the inconsistent role of attitude toward system use might be considered evidence for assigning attitude a minimal role in studies of IT acceptance. A key theme in relevant literature was the examination of dynamic causal relationships among various individual and other elements considered to make attitude formidable.

Kim et al. (2009) predicted that the moderating effect of the strength of attitude on behaviour may result into strength. The strength of attitude toward system use may positively moderate the relationship between attitude and behavioural intention. The positive relation between attitude and behavioural intention is likely to be more pronounced when the attitude is strong than when it is weak (Kim et al., 2009). The authors by investigating the role of attitude-strength provided a different perspective to understanding technology adoption characterizations. The results of the study suggest that attitude is a major factor in determining the behavioural intention to technology use. Similarly, the results imply the need for a redirection of technology adoption research to factors affecting attitude-strength. The importance of this is to avoid situations where technology is accepted but not put to actual use. The measure used in the study remains one of many factors explaining attitude-strength in the context of technology adoption and use. Overall, Kim et al. (2009) suggested further investigation into other antecedents of attitude-strength, in combination with the technology acceptance model, to better explain the use of information technologies. The present study addressed this by hypothesizing and testing the relationship between attitude and the use of ICT by legislators in Nigeria. This was done to test the strength of the construct’s predictability of acceptance and use of ICT by elected representatives.
Kim et al. (2009) reported that there was a clear perception amongst MPs that email was a valuable tool for keeping in touch with constituents. The authors found that overall, the perception of the MPs remained positive. The analysis by Kim et al. (2009) across party lines revealed that Liberal Democrat MPs in Northern Ireland were more positive about the digital media they use than their more conservative colleagues. The authors reported that Welsh MPs were, on the whole, more positive about ICTs than their colleagues in other countries; this was particularly the case for two of the most rapidly emerging media application, social networking and uploading of rich media. MPs from Scotland and Northern Ireland saw the least value in the technology that they use, actually rating web-based campaigning as being of negative value. The authors in their detailed analysis reported that blogging was perceived as being of negative value by more MPs born in the post 1960 period. Kim et al. (2009) reported that age and length of time served as an MP had little impact on how an MP valued technology. Based on these findings, the present study included demography such as age and prior ICT-related experience as moderating factors that are related to the predictors of legislators’ use of ICT.

3.4 Effort Expectancy

A major variable from UTAUT is effort expectancy, which earlier models such as the TAM called perceived ease of use (PEOU). Other related attributes of effort expectancy are complexity and ease of use. Perceived ease of use and complexity have been shown to be important factors in studies of the Internet, World Wide Web and ICT acceptance. Legris, Ingham and Collerette (2003) and Venkatesh, Morris, Davis and Davis (2003) conducted extensive empirical studies that showed that perceived ease of use is significantly related to ICT use intention. Andersen and Henriksen (2006) described many empirical findings on perceived ease of use of ICT by public office holders and governments as mostly subjective. The present study developed and validated new scales for variables such as perceived ease of use and complexity, which are hypothesized in this study as predictors of user acceptance of ICT.
Agarwal and Prasad (1999); Hu et al. (1999) and Venkatesh and Davis (2000) revealed that the level of perceived ease of use of ICT is moderate. Davis (1989) suggested that perceived usefulness towards ICT usage can occur when a person believes that utilizing a certain technology will assist him/her to increase or double his or her job performance. ICT users will prefer to utilize an application if it will aid them to intensify their task performance (Davis, 1989). For elected representatives in Nigeria, ICT is considered to be useful when it helps them to perform their legislative functions such as legislation, representation (dialogue and communication with constituents) and oversight of executive decision. Meso, Musa and Mbarika (2005) reported that perceived usefulness and perceive ease of use, greater reliability of the technology and easier access to ICT create a better usage of ICT. When users perceive that ICT is useful, it will create ICT usage continuance. Rogers (2003) and Ongori (2009) reported that if ICT acquisition is affordable and if perceived usefulness is persistent there will be a stronger impact on ICT usage.

Marcella, Baxter and Moore (2003) reported on the impact of new technology on parliamentary communication and found that in the House of Commons in Northern Ireland the use of emails increased by 53% compared to correspondences by post, emphasizing improved frequency of communication between the House and the public. Electronic publications such as guides to the parliament, information packs, bulletins or briefings were used in the House of Commons in Wales to increase outreach activities. The study found that the effort expectancy, which is the degree of ease use of ICT by the MPs, was highly correlated to ICT usage. The study explored the effort expectancy of the members of parliament (MPs) to the use of ICT and found that MPs had a high degree of ease of use of ICT in relation to their legislative work. This report on impact of new technology on parliamentary communication stated that 68 of the 79 participants in the survey believed that the Scottish parliamentary website was a useful information source and served a useful purpose. The kind of data discussed above is rare in IS literature in the context of legislators in Nigeria. The present study collected data on the effort expectancy (perceived ease of use, complexity and ease of use) of legislators in Nigeria in their acceptance and the use of ICT for the performance of legislative functions.
Ferguson (2008) stated that MPs in the UK have been innovative and effective with use of ICT as its facilitator. The author reported that the United Kingdom Parliament’s Defence Select Committee in 2006 held an online forum as part of its inquiry into the education of children in military families. Ferguson (2008) reported that 90% of the public users of the parliamentary online forum had never participated in a parliamentary consultation previously and that 75% had never contacted their MPs before, a development that led MPs to make better and crucial decisions. The study found that the use of ICT also saves British MPs’ time and makes them more visible and less remote. The study also indicated that ease of use of ICT was a factor that influenced the MPs’ decisions to accept and use ICT. Ferguson (2008) concluded that in the present day the MP who uses ICT is considered an effective and relevant representative of the people. The present study explored the ease of use of ICT by elected representatives in the context of Nigeria.

Kanthawongs (2011) presented critical success factors of e-parliament systems in Thailand. The author reported that members of the Thai parliament had a high level of ease of use of ICT which was influenced by trust and determined their use of ICT. Kanthawongs (2011) further revealed that parliamentarians’ level of perceived ease of use, attitude, subjective norm and self-efficacy were moderate. Attitude, perceived ease of use, subjective norm and self-efficacy were important factors in explaining variation of perceived usefulness towards ICT usage. Based on these arguments, the present study explains the impact of perceived ease of use on the predictors of adoption and use of ICT by legislators in Nigeria.

Frick (2005) gave a framework of incipient electronic governance by exploring the ways in which Latin American parliamentarians, administrators, citizens and other stakeholders use new technologies. The study outlined the positive role that perceived ease of use played in the adoption and actual use of ICT by elected representatives in the countries of Latin America.

Williams (2009) confirmed that ICT is now a part of the daily routine of the majority of MPs in the UK. The MPs indicated that the ease of use of email and the Internet are the factors that influence the adoption by the parliamentarians. MPs restate
perceived ease of use of digital applications positively, as this supports their communication with constituents, particularly emails and websites. The MPs also indicated their ease of use of multimedia, including photographs and video. The ease of use of social networking sites and Web 2.0 tools is lower than expected, but there is evidence suggesting the potential for greater involvement of ICT in the near future. The findings suggest that primary motivations for adoption relate to a number of factors, including MP’s perceived ease of use, usefulness of specific ICT tools and issues revolving around complexity of technology.

Jackson (2008) reported that there is little substantive data existing on how the use of email and the Internet impact on perceived ease of use and the workload of MPs and their offices. The author described that since 2002 the House of Commons Information Committee (UK) suggested that between 10% and 20% of correspondence was electronic and informal communication with MPs suggested that this figure may now be much higher. Jackson (2008) and Wright (2008) suggested that the decision to adopt online technologies, particularly more interactive or higher-activity ICT such as blogs, can be based on the availability of resources and high perception of MPs of the ease of use of ICT tools. He concluded that as ICT potentials begin to spread amongst MPs, ease of use of ICT will improve to result in prevalence amongst the MPs. Similarly, the present study examined the ease of use of ICT and peer influence by legislators in Nigeria. The study by Jackson (2008) focused on the Internet and emailing, but the present study included more ICT tools to further broaden the scope of ICT tools covered.

3.5 Social Influence

Social influence as a variable was drawn from the UTAUT model. Social influence, alongside facilitating conditions addressed research question four of the present study. The social side of computing has culminated in various innovative uses of technology in more recent times, such as e-governance, e-democracy, formation of community, communication and the delivery of “democratic goods” to the members of the public (Wright, 2012). Vannoy and Palvia (2010) examined the adoption of ICT in the context of social computing and suggested that a new perspective on adoption
may be necessary to fully capture the nature of technology and its acceptance in social computing situations. Where the technology is embraced rather than simply accepted by the user, and where the action made possible by technology is seen as a behaviour embedded in society. Few studies have investigated technology adoption targeting the individual at the level of society, community or lifestyle experience. There is little research that approaches adoption in the context of social computing and, to the knowledge of Vannoy and Palvia (2010), no models have been developed to investigate this phenomenon. This present study addressed this gap by developing social constructs based on the UTAUT model to explain the adoption of ICT by federal legislators in Nigeria. The Social Influence Model (SIM) of Technology Adoption incorporated the use of social influence construct as the corollary to technology adoption. The SIM model is composed of variables such as perceived ease of use, perceived usefulness, behaviour, attitude, intention to use technology and actual use of technology, all of which are integrated into the UTAUT model. Vannoy et al. (2010) criticized prior technology adoption studies, “accusing them of using narrow theoretical viewpoints”. The SIM model relied upon the TRA, wherein the subjective norm construct plays a central role. Subjective norm incorporates the idea of the influence that others in one’s social environment have over one’s behaviour, this is also integrated into the UTAUT, the theoretical model underpinning the present study. Baron, Patterson and Harris (2006) described the subjective norm as the extent to which others believe an individual should adopt or use ICT. As in many areas of technology adoption research, Schepers and Wetzels (2007) found varied and inconclusive results on the use of subjective norm.

Several studies have also criticized the adequacy of subjective norm as a social influence in technology adoption (Wilska, 2003; Dholakia, Bagozzi and Pearo, 2004). For instance, in a study of mobile phone usage, results indicated that the current use of the social influence construct is likely to be inadequate in the near future, when the use of technology becomes embedded in the psyche and daily routine of the future user. Overall, the SIM model attempts to improve understanding of technology adoption in the context of a social influence. Social influence includes four elements. These are: social computing action, or actions performed through the use of technology (Web browsers, mobile phones and file sharing software), social
computing consensus (agreement from all people that it is right to carry out the action), social computing co-operation (participating in a way that is in the best interests of the group). The last element is social computing authority (recognizing that the authority imposed by the group supersedes traditional authority). The present study addressed the predictors of legislators’ ICT acceptance and use by focusing on social influences such as subjective norms, image and other social factors that may predict technology adoption.

De Silva, Ratnadiwakara and Zainudeen (2009) attempted to empirically measure social influence on mobile phone adoption in a number of Asian countries - Bangladesh, Pakistan, India, Sri Lanka, the Philippines and Thailand. Evidence from their study supports the importance of social influence on technology adoption by exerting pressure on individuals to adopt. Social influence was found to be an important factor in increasing the probability of technology adoption. These results indicate that adoption is influenced by elements such as the level of perception of benefits and social and economic factors, resulting in higher adoption rates. De Silva et al. (2009) showed that social influence plays a key role in technology adoption with user peer influence very critical to the likelihood of adoption in workplaces and organizations. The implication of this is that technology users tend to get connected in groups. The present study tested the predictive ability of social influence on legislators’ acceptance and the use of ICT in the NASS.

Previous studies (ten Kate, Haerkamp, Mahmood and Feldberg, 2010; Pickering and King, 1995; Haythornthwaite and Wellman, 1998; Lee and Baskerville, 2003; Constant et al., 1996) have examined the relationship between social influence and technology adoption in contexts such as inter-organizational communication and electronic interchange. A very limited number of studies have been conducted on the influence of social influence and technology acceptance (Constant et al., 1996). Freeman (1989) described the Social Network Theory as the study of social networks and their influence on the social structure of relationships around a person, group, or organization, which can affect peoples’ beliefs or behaviours. These correlations may involve the feelings people have for each other, the exchange of information and people’s influence on one another. Haythornthwaite (1996)
suggested that social networks can influence subjective norms. For instance, ICT users who have strong ties are more likely to trust one another, thus exchanging knowledge more frequently and influencing each other to accept and use ICT. In conclusion, ten Kate, Haverkamp, Mahmood and Feldberg (2010) presented an enhanced theoretical understanding of people's social networks and their influence on technology acceptance decisions, for a better understanding of the predictors of individual acceptance and use of technology in a social context. These arguments have guided the present study to examine correlations between social influence and acceptance and use of ICT by elected representatives in the NASS. The present study adapted a modified UTAUT model, whereas the previous studies used TAM and TAM2 as theoretical viewpoints. The UTAUT is more robust to investigate the predictability of social influence on acceptance and use of ICT by legislators in Nigeria (Bagozzi, 2007).

Glass and Li (2010) empirically investigated the influence of technology acceptance model factors, social influence factors and demographic factors on instant messaging adoption in the workplace. The study investigated the role of social influence factors on new technology adoption. The study used a factor analysis of the data, subjective norm and perceived critical mass loaded on one factor, suggesting that in the workplace the distinction between the influence of subjective norm and critical mass may be blurred. Similarly, social Influence (subjective norm and perceived critical mass combined) was found to be a major factor in determining technology adoption than perceived usefulness and perceived ease of use. The finding revealed that gender and age did not impact technology adoption. The findings suggested that models of technology adoption would benefit by including measures of social influence. Based on these suggestions, social influence is retained in the modified UTAUT model that is used in the study.

### 3.6 Facilitating Conditions of Adoption and Use of ICT

Facilitating condition is a variable of the UTAUT model, which is made up of such factors as ICT awareness, availability of government policy, perceived behavioural control, compatibility, organizational and technical support, culture, language,
infrastructure, anti-corruption, availability of costs for implementation, availability of funds, accessibility, reliability, trust and security and privacy. The variable facilitating conditions addresses the research question four of the present study that examined challenges of using ICT by legislators internationally and in Nigeria.

There have been inconsistencies in the reports from studies on the role of culture in technology adoption and use (Binsbergen, 2004). Colby and Albert (2003) suggested the need to find a definition that serves a specific area of study rather than a very general definition of culture. The present study has adopted the definition of culture (by Arnold, 2006 cited in Tax, Agosin, Aidoo, Menon, Rosca and Sala, 1995, see Appendix 12). The influence of culture in technology adoption is highlighted by Golding (2000), who suggested that culture is a facilitating condition of technology adoption. Binsbergen (2004) revealed that ICT constitutes a central element in everything we call culture. He also reported that ICT is a technological innovation and a driver of globalization, but the phenomenon is faced with cultural tension and particular problems of ownership and identity in respect of African countries. The critical questions the study posed included: (a) What is the place of ICT in Africa? (b) What is the place of Africa in a world increasingly controlled by ICT? The study explored apparent contradictions between Africa and ICT by criticizing African thinkers in the domain of culture and technology adoption (like Mazrui, 1977, 1978; and Gyekye, 1997), who debate the unsuitability of ICT to African culture. Binsbergen (2004) theorized that the relations between the peoples of the West and those of Africa in the adoption of ICT are characterized by material technology in favour of the West. In the Western world, interaction between man and machine consists of social effects, an interference with nature that is explicitly as well as demonstrably effective, may be conducive to some social utilization of natural forces. In contrast, the researcher characterized socio-ritual technology in Africa that produces only a social effect by merely the illusion of an interference with nature. Based on this theory, Binsbergen warned of bias about reading too much positive submission into the adoption by Africans of Western cultural models such as dressing and education, driven by colonialism to reach a conclusion that, given such a conception of the world in the context of Western modernism and postmodernism.
In summary, Binsbergen (2004) posits that ICT would be alien to Africa and that the appropriation of ICT as a means of power must also be seen in this light.

In respect of perspectives of Africans, Binsbergen arrived at the conclusion that ICT adoption may cause harm to the African people if material technology were to occupy a part of African lives, in contrast to the case established in Western culture. Some of the answers to the critical questions showed that the entire world is involved in ICT in Africa, and ICT demonstrates that Africa is indeed part of the wider world, despite increasing challenges. Binsbergen reasoned that ICT is just as much at home in Africa as elsewhere in the world, by pointing at high ICT adoption rates by politicians and citizens of southern Africa (South Africa, Botswana, Swaziland, Lesotho and Zimbabwe), where ICT is expanding faster than elsewhere on the African continent. The author also reported that the African enculturation of ICT is triggered not only by specific technological and career advantages, but also by the desire to explore and appropriate a comprehensive new lifestyle and even new idioms of social and cosmic power, as suggested by research findings from the study in Botswana. Thereafter, Binsbergen theorized on intercultural philosophy, investigating as the central theme inter-culturality, which he described by means of a theoretical reflection on such concepts as culture, cultural differences, cultural diversity, cultural relativism, identity, multiculturality, power, hermeneutics and dialogue. These cultural contexts relate to research question one (1) in this study which sought to investigate the predictors of legislators' acceptance and use of ICT in the performance of legislative functions, and the first hypothesis of the study that stated that there is no significant relationship between legislators’ ICT skills, age, gender, level of education, culture and acceptance and use of ICT in the performance of legislative functions.

Dubois (1972) described and discussed the nature of the cultural factors which affect the rate of diffusion and the rate of adoption of innovations. The study analyzed how, at an advanced level, cultural norms affect the rate of diffusion of innovations and, at a lower level, presented the hypothetical relationship existing between cultural integration and individual adoption of innovation. In conclusion, it suggested that the relationship between culture and diffusion of innovations is two-fold. The results
reveal that the relationship existing between culture and innovation is deeply interactive. The results suggest that both the rates of diffusion and adoption of an innovation within a socio-cultural system are critically dependent upon the nature of the cultural values, contexts and norms existing in that environment. Similarly, the acceptance of an innovation can be such that some elements of the cultural system in which the innovation takes place may be affected, thus generating a cultural change movement. This implies that innovation contributes to the development of a cultural system rather than being affected by it. Dubois (1972) hypothesized that the adoption of an innovation may be accepted with the least degree of resistance, perhaps due to a high compatibility of their attributes with prevailing cultural contexts of a well integrated system. For instance, these are likely to have the less disruptive effects, while high diffusion and adoption of innovation levels, requiring complex innovation skills, will, in the final analysis, if adopted, present the best potential for cultural change. Based on these arguments, the present study explored cultural factors influencing the diffusion and adoption of innovations in this case, ICT usage levels and skills of legislators in Nigeria.

Michiels and Crowder (2001) described local appropriation of ICT as a facilitating process where people/groups select and adopt ICT tools applicable to their different needs and then adapt the ICT to fit into their own social, economic and cultural contexts. This process of technology adoption reflects creativity and freedom of expression and, in some cases, resistance to political and cultural dominance by global media markets. This suggests a need for ICT to be suitable and domesticated for needs based on environment.

Mbeki (1999) reported evidence indicating local appropriation of ICT is a facilitating condition in South Africa, given the potential of ICT today in Africa, despite challenges and criticisms based on technical limitations (weak ICT infrastructure, low ICT penetration, the number of ICT connections, the low quality of the servers available), poor funding as a result of economic elements (such as poverty) and bureaucracy (Akpan-Obong, 2007). Nevertheless, it is evident that ICT could result in a bright future for Africa. This feeling is based on the euphoric widespread
acceptance of ICT, not only among intellectuals but also among members of parliament, government and the political class in South Africa (Mbeki, 1999).

Mao and Palvia (2001) examined the influence of cultural contexts on the acceptance and use of ICT in developing countries by adopting a pilot study to investigate whether or not cultural values and contexts influence users’ attitudes towards and acceptance and use of, ICT. The environments of study were ICT community development projects in the south of India and a replication on a smaller scale in the Netherlands. The results suggest that cultural contexts and values have some degree of influence on the acceptance and use of ICT. The study revealed that actual use in developing countries was found to be related to the age of the users. The study recommended that developers for future ICT implementation should model their ICT projects after those of the Indian and Dutch communities used in the pilot study. These community ICT projects used intentional means of education by targeting the people in close contact with the communities to gain their trust to becoming a success formula for users of ICT to overcome all fears and cultural problems related to their acceptance and use of ICT. Based on these arguments, the present study used cultural contexts, age and other moderating factors to test the predictability of legislators’ ICT acceptance and use.

Several authors (Friedman, 1995; Featherstone, 1995; Jules-Rosette, 1990) explored further the concepts of culture and technology adoption, with each of them using intercultural philosophy to critically analyze the phenomenon. They reported a more empirical argument of the cultural contexts surrounding facilitating conditions of the adoption and use of ICT in Africa and how the phenomenon has taken shape. The authors caution that ICT adoption in Africa is problematic because of cultural factors. Hountondji (1996), in a study in Côte d’Ivoire, enthused that ICT is the answer to Africa’s lagging behind in terms of overall development and that ICT can be relied upon as a means of communication in place of “talking drums” (Hountondji, 1996).

Toure, Diarra, Karsenti and Tchaméni-Ngamo (2008) explored growing debates in academia that the Internet could be another form of cultural imperialism used for
manipulation by capitalist-Western countries to force-feed Western values and worldviews to Africa and the developing world. Culture matters because it is a way in which we connect with others and with our environment and take part in society (Toure et al., 2008). Imperialism is a form of domination that, in the interest of acquiring and preserving privilege and/or influencing global consciousness, can silence voices and crowd out the expression of alternative ways of being and doing. People in and outside Africa convinced that the spread of Internet in Africa will promote democracy and wider circles of belonging, while others warn that as a form of economic and cultural imperialism it will concentrate power in a few hands, particularly those of media giants and multinational companies and shape the way we think and behave (Toure et al., 2008). The study revealed that some others viewed the application of ICT in Africa not as a solution to all problems, but as a panacea or an alternative to overall development in Africa. The study focused on pedagogical opportunities for education and development in Africa by the use of ICT. Toure et al. (2008) concluded that, with suitable appropriation of ICT in reflective and creative ways, ICT can become a tool for affirming African values.

Berry, Kim, Power, Young and Bujaki (1989) identified a major issue in the adoption and use of ICT in Africa namely the presence of two cultural codes - one for the host society (Africa) and that of the technology originating society (Western culture). This creates a cultural tension highlighting a test of strength between the two cultures which may be seen in the domination of Africa by the West. This is why the present study investigates the predictors of ICT acceptance and use by legislators in the context of Nigeria. These arguments by Toure et al. (2008) and Berry et al. (1989) guide the choice of the present study to extricate culture from facilitating conditions and treat it as an external variable to better make the UTAUT robust enough to investigate the predictors of legislators’ acceptance and the use of ICT in Nigeria.

Phau, Teah and Lwin (2009) citing Triandis (1980), described facilitating conditions as elements in an environment that hinder or make an act easier to commit. The study investigated the facilitating conditions predicting downloading behaviour of young consumers of movies and TV series through Peer to Peer (P2P) networks. The study’s methodology involves regression analysis using data collected from 234
respondents. The findings were that facilitating conditions and social factors were significant predictors of attitudes and intentions to download. This implied that marketers and policy-makers needed to be more innovative in their strategies. In conclusion, the results suggested that facilitating conditions and social factors predict downloading movies and TV series through P2P networks. Facilitating conditions positively correlated with other variables of the study, such as social consequences, social factors and attitudes.

Limayem, Khalifa and Chin (2004) cited by Phau et al. (2009), supported the finding which suggested that facilitating conditions have a significant influence on attitudes and intentions. The findings implied that young consumers, with their knowledge of downloading and accessibility to resources, also considered the social consequences of downloading. The study concluded that this knowledge would be insightful for marketers, software designers and other stakeholders. The study suggested further investigations in other contexts, to investigate the relationships between facilitating conditions and variables such as social influence, effort expectancy and behavioural intention. These areas for further research are addressed in the present study.

Several studies have been conducted on the facilitating conditions of technology adoption in organizational contexts, as well as dispositional and situational factors in which a technology is implemented (Pather and Erwin, 2001; Klein and Sorra, 1996; Cronje and Murdoch, 2001). These studies have highlighted technical infrastructure such as networks, software tools and servers as preconditions to ensure that the innovation is reliable and available. Harris (2000) agreed that the individual's ability to utilize technology has evolved alongside the growth in the capability of hardware and software technologies and that organizational adjustments have occurred in response to these changes. However, the facilitating conditions of ICT adoption and use in the developed countries are incomplete to address the phenomenon in a developing country (David, Agbor and Radhakrishnan, 2010). Based on this argument, the present study included peculiar inhibitors of legislators' ICT adoption behaviour in Nigeria, resulting from such factors of the digital divide, differences in culture, language, organizational, technical and other facilitating conditions that may
be lacking and which ultimately may impede the use of ICT (Apulu and Latham, 2009). The present study examined the role of age and other moderating factors such as ICT skills in relation to inhibitors of the use of ICT by the legislators.

Cruz-Castro and Sanz-Menéndez (2005) analysed using an institutional perspective, the emergence, nature and ways in which parliamentary scientific and technological advice activities are carried out in different European countries. The study reported a diffusion based process traceable to the US and observed certain local preconditions that are crucial for the adoption of these practices in Europe and the need for a set of political change agents willing to advance the initiatives within their respective political environments. Cruz-Castro and Sanz-Menéndez (2005) stated that the connection of a technology assessment with the political developments process can only be understood if the former is regarded not only as an input in the decision making process but also as “a legitimising mechanism” (p. 436). Cruz-Castro and Sanz-Menéndez (2005) identified a set of models for the parliamentary changes based on the degree of inclusiveness of the politicians. The models were based on the capacity to gain member support from within and outside the parliament and the capacity of the change agents to access decision makers. The present study addressed the acceptance and use of ICT by the legislators in the NASS from the individual perspective.

Several studies (Mativo, 2005; OECD, 2009; Torero and Braun, 2005; UNECA, 2007; Kwenda, 2009; Kisi, Chang’ach and Sang, 2012) have identified challenges of ICT adoption and use such as un-dynamic ICT policies, cost ineffectiveness, lack of adaptability, and in-differentiation of application of ICT between sectors/organizations, high cost of imported ICT tools, lack of sufficiently trained personnel, scarce resources, corruption and social and economic challenges in many countries. These findings indicate that as adopters of ICT in organizations, education and businesses experience there are various inhibitors to ICT adoption. It is expected that all other e-adopters, such as legislators in use of e-parliament systems cannot, be free from such inhibitors. This was why one of the critical questions in this present study was to determine the inhibitors of ICT adoption and use by legislators.
Kanthawongs and Polatoglu (2005) presented a broad theoretical framework to identify how to enhance MPs' engagement with e-parliament systems, using a set of 13 predictor variables. These are facilitating and 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), facilitating factors (accessibility issues, reliability, culture, organizational and technical support for use of ICT in the Thai parliament). These findings indicate that, in the absence of the facilitating conditions, ICT adoption and use by MPs for effective performance of parliamentary functions would be impossible.

Ni and Ho (2004) described the facilitating factors of e-parliament systems. These system factors included e-communication, e-parliamentary library, and e-report. Nascimento, Martins and Pinto (2004) reported that factors such as the lack of awareness, lack of government policy, perceived behavioural control, compatibility, organizational and technical support, culture, language, infrastructure, corruption and cost of implementation, were inhibitors of adoption and use of e-parliament systems. Nascimento et al. (2004) built XML schemas to generate XML files of law information systems, which would be used to format data for each possible front-end, like PDAs, third generation mobile phones, and desktop personal computers. E-communication technologies that represented facilitating conditions for the parliamentarians to use ICT, highlighted by authors such as Nascimento et al. (2004), Halstead (2002), Hoff (2004b), Kanthawongs (2004), Smith and Webster (2004), Kanthawongs and Polatoglu (2005), included the availability of the Internet (WWW), e-mail, Short Message Service (SMS), parliamentary websites, e-parliamentary library and parliamentary kiosks. Factors such as accessibility, reliability, trust and successful implementation of e-parliament projects were identified as facilitating conditions for the use of ICT (Brian, 2004).

Jawahar (2002) considered time-constraint as an important facilitating condition, because of its potential to inhibit acceptance and therefore performance. Time for training, availability of time to experiment and flexible time to search for information
were identified as factors influencing the adoption strategies for web technology (Sherry, Billig, Tavalin and Gibson, 2000; Saeed, Hwang and Yi, 2003; Cronje and Murdoch, 2001). Training was an essential contributor to the productive use of computer systems and technology (Jawahar, 2002). Training literature reported consensus by trainers that the more complex, ineffective and confusing the training, the more unlikely the user will implement the skill. The present study extended the UTAUT by introducing additional variables such as time and training to better determine predictors of legislators’ acceptance and use of ICT in the performance of legislative functions.

Golding, Donaldson, Tennant and Black (2008) reported that adoption and use of ICT in Africa is indicative of a variation between developed and developing countries, with developing countries adopting ICT at a slower rate. The present study determined inhibitors of adoption and use of ICT by elected representatives. According to Golding et al. (2008) a number of factors such as lack of national ICT policy; infrastructure; dissemination of information and facilitating public-private partnerships capacity building and power supply hindered the adoption and use of ICT in developing countries, including Nigeria. The digital divide is a major constraining factor (Golding et al., 2008) in Nigeria. Ihua (2009) stated that there existed a wide technological gap between the United Kingdom and Nigeria. Developing countries were generally far less advanced than developed countries in the areas of technological environment and infrastructure, in part because developing nations are net importers of technology (Ihua, 2009). Beekhuyzen, von Hellens and Siedle (2005) and Olasina (2011) stated that in developing countries access to ICT continues to be a major problem.

Gershon (2008) acknowledged the varying levels of ICT development in many government institutions across countries. The survey focused on Australia and reported that a ‘one-size-fits-all’ approach may not be appropriate for e-parliaments across countries, but that each country must localize and adapt best e-parliament practices to its own circumstances. The study indicated that MPs reported cases of too many emails sent to them from their constituents, difficulties with screen reading and data overload in their use of e-parliament systems. Many studies in the literature
reviewed have reported similar findings, indicating that there are inhibitors to adoption and use of ICT by legislators.

3.7 Summary of the Literature Review

Literature has been reviewed extensively on performance expectancy; effort expectancy – perceived ease of use, social influence – subjective norm, social factors, image, attitude, behaviour, intention and facilitating conditions such as organizational and technical support, culture, infrastructure and lack of government policies. These variables from literature have determined the predictors of technology adoption and use in a broad sense. The literature review has addressed parts of the research questions one and two of the present study, by highlighting predictors of ICT acceptance, use and the negative and positive attitudes of legislators towards ICT. The outstanding aspects and other research questions were addressed by the empirical section of the present study. In terms of research methodology, the literature has shown that the commonly used method for similar studies to determine predictors of ICT acceptance and use was a survey which was the technique of choice for the present study. The empirical literature has revealed common variables and attributes in ICT adoption and use, such as performance expectancy - perceived usefulness, perceived ease of use, attitude and behaviour. The review of the empirical literature presented in this study has provided extractions and a guide to modify and extend the UTAUT model to determine predictors of adoption and use of ICT. The literature has also shown inconsistencies in findings reported in previous studies in respect of hypothesized relationships among constructs of the UTAUT in various contexts.

The literature showed that due to the citizens’ demands for greater participation in representative democracy and improved efficiency in the performance of their elected representatives, legislators in many developed countries, and some developing countries, have accepted and used technology to engage their constituents in their legislative roles of representation, legislation and oversight. Literature has not shown how federal legislators are seizing these relative advantages of adoption of technology in Nigeria. Mobile telephony, ICT infrastructure
and Internet penetration have improved access in Nigeria in recent times. There is need for more research to reveal the relationships among the variables and any new predictors of technology adoption. Despite the availability of literature on the variables that influence the adoption of technology, many of these claims have not been empirically validated. There appears to be differences in the predictors of e-parliament practice on the basis of whether the country is developed or developing. Many studies have been carried out on predictors of adoption in Europe, North America and Asia on small and medium scale businesses (SMEs), industry, managers, but with little focus on predictors of adoption and use of ICT by elected representatives in Africa. Culture and cultural contexts such as diversity, relativism, identity, multi-culturality, power, hermeneutics and dialogue have also come to the fore. There appears to be inconsistencies reported in the literature on the influence of culture on technology adoption. The variables such as culture, fear, security, trust, motivation, ICT policy and power supply appear in the literature to be peculiar to technology adoption in the developing countries of Africa and Asia. These variables have been used to extend the UTAUT in the present study to assess the predictors of legislators’ ICT acceptance and use in the NASS. The mapping of the research questions of the study to the UTAUT attributes is in Table 1 and further detailed discussion on the UTAUT attributes is in Chapter Two (section 2.10).
CHAPTER FOUR

RESEARCH METHODOLOGY

4.1 Introduction

The purpose of this study was to determine the predictors of legislators’ ICT acceptance and use in the performance of legislative functions in the Nigerian National Assembly (NASS) by extending the UTAUT with variables such as culture, accessibility and trust. The outcome of this study is expected to, among other things, assist the practice of e-parliament, has the potential to inform policy and extend theory on technology acceptance and use by elected representatives in a developing country. The rationale of this study was motivated by the need to improve the conduct of legislative functions and enhance transparency and accountability in governance.

Research in technology adoption has suggested a number of research paradigms, especially works of Mandal and McQueen (2012) and Burrell and Morgan (2003), who used post-positivist and positivist approaches. Creswell (1994, 1998, and 2009) classified paradigms into two, the positivist and the post-positivist or post-modern perspectives. The positivist perspective is the traditional, the experimental or the empiricist paradigm, or the quantitative. In a positivist view of the world, science is seen as the way to get at the truth, to understand the world well enough so that human beings might predict and control it. Therefore, to the positivist researcher, the world is deterministic and is ruled by the laws of cause and effect, very unique to a scientific approach (Holsti, 1989). Positivism uses deductive reasoning to postulate theories that are tested. A positivist researcher believes in empiricism and that the key elements of observation and measurement are at the heart of research. The key approach of the scientific method is the experiment, which is an attempt to discern natural laws through direct manipulation and observation of scenarios (Halfpenny, 1982). Despite the fact that positivism is widely used in social science research, it has been challenged in recent times by post-positivism. The post-positivist is termed the qualitative or constructivist or the naturalist, the interpretative paradigm (Quantz,
The post-positivist asserts the value of values, passion and politics in research. This means that research requires an ability to see the whole picture, to take a distanced view or an overview and does not mean judging from nowhere (Eagleton, 2003, p.135). A post-positivist researcher might begin by recognizing that the ways scientists think and work in everyday life are not distinctly different. For instance, scientific reasoning and common sense reasoning are essentially the same process, indicating no difference in kind between the two, only a fractional difference. Similarly, the post-positivist researcher has principles that emphasize meaning and the creation of new knowledge and are able to support committed social movements that aspire to change the world by way of human rights and social equity. Biersteker (1989) criticized post-positivism as a confusing term. He stated that post-positivism does not represent one school of thought, but includes philosophers and social scientists that have been strongly critical of Comte (the founder of positivism) and logical positivism established over the last half-century.

Several other critics of post-positivism have argued that this perspective transcends the mere issue of intellectual incoherence. For instance, within the mainstream of the post-positivist school of thought, there appears to be neither unity nor consensus. Whilst post-modernism and critical theory are both post-positivist in nature, post-modernism ‘eschews the very goal of critical theory’ and would argue critical theory itself is hegemonic, where ‘all conversation is power, and it is not possible to move beyond a place tainted by power’ (Jackson, 2003, p. 232). There is an internal crisis, with post-positivism criticizing itself (Kurki, 2006), which is the justification for the choice of a positivist paradigm for the present study (Gregor, 2000). Lastly, Kurki (2006) questioned how far post-positivism actually departs from the positivist perspective that it critiques, by reasoning that the Humean concept of cause is present in the work of critical theorists (Cox, 1996; Buzan, 1996). Kurki (2006) concluded that what the post-positivist researchers purport to reject is evident also in their research. Klein and Lyytinen (1984) and Livari (1991) have suggested four paradigms, namely interpretivism, functionalism, radical humanism and radical structuralism. Virtually all these studies have used assumptions to help understand the various paradigms based on ontological, epistemological, axiological, rhetorical
and methodological approaches. The present study adopted a dominant positivist paradigm, but used methods that are both quantitative and qualitative.

The justification for the choice of quantitative and qualitative methods stems from the fact that, in recent times, research has emerged combining both methods (Lather, 2006). Many studies have accommodated the use of both quantitative and qualitative approaches with a single paradigm to explain variables of technology acceptance (Lather, 2006). The rationale behind the combination of research methods under a single paradigm is the situationalist and pragmatist, who oppose the purists' position that assume a paradigm must strictly be aligned to the bipolar positions of either positivism or interpretive and also adopt either quantitative or qualitative approaches, but not a combination of methods (Guba, 1990). The situationalists and pragmatists belong to the school of thought that the situation will determine the use of methods under a particular paradigm (Greene, Caracelli and Graham, 1989; Lancy, 1993). The situationalists and pragmatists believe that different methods can be combined with either positivist or post-positivist paradigms. Punch (2005) reassured that combining both quantitative and qualitative methods is a valid and often used approach in social science research. The author described the widespread use of both quantitative and qualitative methods in recent time highlighting that they can and should be combined as appropriate. The mode of combination would depend on the scope of the study and the need for one method to compliment the other. Salomon (1991) explained that no single method or set of assumptions is necessarily superior to the other. It is important to select what is most clearly a function of the particular aspect or unit of the world one wishes to study. These studies are relevant and underpin the rationale for using quantitative and qualitative approaches within a positivist paradigm. The goal was to identify aspects that predicted and explained user acceptance of ICT.

Based on the reasoning of Burrell and Morgan (2003), the present study has not used a dominant interpretive paradigm (subjective assumptions, neither was it concerned with understanding subjective meanings). The study was informed by the positivist paradigm to be able to test independent variables (the predictors of legislators’ acceptance and use such as performance expectancy, effort expectancy,
social factors and facilitating conditions) and the dependent variable (the performance of legislative functions), in addition to showing relationships amongst the variables of technology acceptance and use. The choice of the positivist approach was based on the need to quantify objective reality through critical questions and testing a set of hypotheses (outlined in Chapter One, see section 1.6).

The researcher has applied interpretivism in some instances for the convergence of results, for complimentary purposes, for the emergence of overlapping factors that influence technology adoption and to add scope and breadth to the study, particularly in respect of research questions two, four (see Table 5) and the multiple views that emerged from the interpretation of the qualitative data. The interpretive inquiry was used to collect data based on the social and behavioural elements such as norms, customs, social factors, attitudes and perceptions that may predict ICT adoption and use by the legislators. The interpretive approach was applied by using the methods that relied on linguistic rather than numerical data, and employed meaning-based rather than statistical forms of data analysis. This was done by distinguishing between measuring data with words and measuring them in numbers as a useful way of characterising a different approach to research. Creswell (2002, 2003) noted that using both positivist and interpretive approaches can complement one another especially where the data are both quantitative and the qualitative. Creswell (2009) stated that both quantitative and qualitative methods can be used developmentally because the first helps inform the second, while the second can provide additional information to support the first. Both methods were used in the present study to enhance the validity of the study findings and to increase the reliability of information gathered from the respondents.

4.2 Research Design

The study adopted a survey research design. Babbie (1990) stated that many texts on survey research design are grounded solidly in the positivistic paradigm and related notions of objectivity and parsimony. Social sciences world is informed by subjectivities and objectivities therefore, the survey research needs not be limited to a tight set of rules. This limits one’s ability to capture life as experienced by the
The survey research design provides a rubric for many types of approaches, ranging from self-administered to interviewer-administered approaches. Babbie (1990, 2004) stated that because we can maintain rigour through strong design, data collection from different perspectives should be encouraged.

Converse (1987) explained that statistics can be generated from surveys. He further stated that text can be analyzed qualitatively from interviews or open-ended survey questions. These methods can be combined by quantifying interview data, by reading codes and data stored in qualitative software programs into statistical software programs. The goal of the survey research may be to generalize to larger populations. Conversely, survey research can and should be conducted from both quantitative and qualitative perspectives (Denzin, 1989).

Several related studies have used a survey research design (the UN E-parliament Survey Reports, 2008, 2010, 2012; Norton, 1994, 2007; Smith and Webster 2004, 2008, 2011; Lyytinen, 1999; Hamilton and Ives, 1992; Lee and Baskerville, 2003). Norton (2007) used a survey design to study the use of ICT by British MPs and parliamentarians from four other European countries. The implication of the above is that the use of a survey method is very common when predicting factors that influence legislators’ acceptance and use of ICT. This informed the choice of the method used in this study.

The survey approach was chosen because it is associated with the philosophical paradigm of positivism (Leston-Bandeira, 2007a). Leston-Bandeira (2007b) used a survey in a brief exploratory analysis of the impact of the Internet in four parliaments of Britain, the European Parliament, Portugal and Sweden.

4.3 Population

A population is any group of individuals that has one or more characteristics in common. This group of individuals is of interest to the researcher (Ezeani, 1998). The target population of this study consisted of all federal legislators who are members of the bi-cameral houses of the NASS. These are the Senate, or the Upper
House, and the House of Representatives, or the Lower House. The members of both houses are known as federal legislators and members of the NASS, respectively.

The profile of the study population consisted of 109 senators, with three each representing senatorial districts from each of the 36 states of the Federation of Nigeria and one from the federal capital territory of Abuja. There are 360 members of the House of Representatives, with an uneven representation based on the size of the federal constituency across the 36 states of the federation. The senators and the members of the House of Representatives together make 469 federal legislators (Office of the Clerk of the NASS, 2012). There are five principal officers of the National Assembly. These are the Clerk of the NASS (1) Director of ICT (1) for the purposes of this study the Director of ICT is regarded as a principal officer of the NASS; the Chairs of House of Representative Committees on ICT and Communication and Education (2) and the Chair of Senate Committee on Education (1). In total, 469 federal legislators were included in the study. A list of members maintained by the Office of the Clerk of the NASS which is also posted at www.nassnig.org/, was used as the sampling frame.

4.4 Sampling Procedures

There are two basic options open to a researcher desiring to obtain information about a population (deMarrais and Lapan, 2004). These are a census or a sample. Babbie (2007) described a sample as any portion of the population less than the total. Brady (2008) defined a census as a study using all available elements (members) of a population. The same author stated that once a population has been identified a decision needs to be made about whether taking a census or selecting a sample will be the more suitable option. In these contexts a census is a survey whose domain is the characteristics of an entire population; a census is any study of the entire population of a particular set of objects.

The present study was conducted to determine the predictors of legislators’ ICT acceptance and use in the performance of legislative functions. A census was
adopted. The census was chosen for the quantitative aspect of the study. The sampling frame for this study was a list containing the names of federal legislators available in the Office of the Clerk of the NASS, which is available at the official website of the NASS (www.nassnig.org/). Gray (2004) highlighted several advantages of using a census to study a population, namely that a census provides a true measure of the population (no sampling error), benchmark data may be obtained for future studies and detailed information about small sub-groups within the population is more likely to be available. The reasons for taking a census were not based on the advantages of a census, as reported by several authors such as Gray (2004) and Miller, Delbert and Salkind (2002), but on the fact that there is a diversity in the composition of the membership of the NASS from various political parties (over 60 political parties are registered in Nigeria - see the website of the Nigerian National Electoral body, INEC at www.inecnigeria.org/).

The federal legislators are drawn from the six geopolitical zones, 36 states and the federal capital city of Abuja. These legislators are from different sectional divides and multiple socio-cultural, ethnic and religious backgrounds (there are over 250 ethnic groupings in Nigeria). Nigeria has a highly volatile and sensitive political space where, as stated in Chapter One, factors such as ethnicity, political distrust, misgivings, ethnic killings, suspicions of ethnic cleansing; religious violence/killings, bigotry and, recently, terrorism are present. For the same reasons, ethnic bigotry and ethnic-based sentiments are often brought to the floor of the NASS (Adegun, 2007).

A census of the population was chosen in an attempt to provide some statistical significance to the study. Consequently, all federal legislators were invited to participate in the survey. To ensure a high degree of accuracy in the collected data it was decided that the total population needed to be enumerated (Creswell, 1994). Malloy (2003), in a similar study, employed total enumeration of parliamentarians in Canada. For the present study, five principal officers of the NASS were part of the study population. The principal officers (see section 4.3) of the NASS were involved in the study in order to address the qualitative aspects of the research.
4.5 Data Collection Procedure

Data was collected from the legislators through a survey questionnaire. The in-depth interview was conducted on the five principal officers of the NASS. The aim of the questionnaire was to ascertain predictors of legislators’ ICT acceptance and use, perceptions of the use of ICT, usage levels and the inhibitors of use. The questionnaire was used to capture the data necessary to determine predictors of ICT acceptance and use in the NASS. The questionnaire was self-administered by the researcher, alongside four research assistants, but the in-depth interviews were conducted personally by the researcher. The purpose of the in-depth interviews, observation and document analysis was to compliment and validate the quantitative data, add scope and breadth to the study based on the interpretations from qualitative data collected from the key informants who are the principal officers of the NASS, observation and document analyses. The principal officers of the NASS were purposefully selected because they hold key political and administrative leadership positions that make them knowledgeable about issues of policy, budgeting, funding, training and the overall management of ICT in the NASS, data which the in-depth interviews would better capture. The survey was conducted over two periods, between 13 November 2012 to 10 December 2012 and 22 April 2013 and 24 May 2013 at the NASS complex in Abuja. The questionnaire was administered to the respondents in their respective offices at the NASS complex in Abuja. Prior arrangements were made through the Office of the Clerk of the NASS for the distribution and collection of the questionnaires. The Office of the Clerk of the NASS agreed to help in the distribution of the questionnaires and their collection after they were completed. This approach was deemed appropriate to enhance the response rate. A staff member of the Library and Statistics department of the NASS was designated by the Clerk of the NASS to assist the researchers. The researcher only made follow ups in person on each legislator in his/her office. In the case of the in-depth interviews administered to the five principal officers of the NASS, the researcher and designated staff of the NASS scheduled meetings for interviews with the principal officers. In almost all the cases, respondents granted interview sessions not lasting more than 25 minutes. It was agreed that completing the questionnaire
would not take more than 10 minutes. The Clerk of the NASS did not approve an additional request to use voice recorders in the conduct of the interviews.

In order to maximize the response rate, the present study borrowed from several studies (Aberbach and Rockman, 2002; Becker and Meyers, 1975; Bennis and Nanus, 1985; Odendahl and Shaw, 2002). This involved: (i) securing authorization to access the National Assembly from the Clerk of the National Assembly. (ii) securing approval to visit the offices of each legislator/committee rooms/chambers/live sessions and making personal contact, using library and research facilities and resources at the NASS complex. It was agreed that the Clerk of the NASS would be responsible for the distribution and collection of the questionnaires. Whenever the Clerk did not have time to make follow-ups, it was agreed that the researcher would contact each federal legislator. The researcher had the sole responsibility of conducting the in-depth interviews on key informants who are federal legislators.

4.6 Validity and Reliability of Instruments

Studies (Czaja and Blair, 2005; Jick, 1979; Mertens, 2005) have highlighted the impeccability of ensuring that reliable and valid data are collected in research. These studies stress issues such as appropriateness of data collection tools, test-retest reliability and piloting. The present study adhered to these procedures by following a structured research methodology stipulated by Creswell (1994).

Instrument validity is the extent to which a test instrument measures what it is meant to measure (Crocker and Algina, 1986), or the limits to which a research instrument maximally captures the underlying, unobservable construct it is meant to measure (Cambell and Fiske, 1959). The test-retest reliability discussed above was used and led to a review of the questionnaire. This exercise ensured the face and content validity of the instrument. Since all the questions in the questionnaire were adapted from other pre-tested tools, this, in a way, enhanced the validity of the instruments.

Goldstein, Zedeck and Schneider (1993) and the Society for Industrial and Organizational Psychology, Inc. (1987) described content validity, face validity and
quantitative face validly as related concepts critical to empirical studies. The authors stated that the questionnaire should consider all aspects of the constructs by generating items that exhaust the domain. The present study provided an extension of the UTAUT to determine the predictors of technology adoption (performance expectancy, effort expectancy, social factors and facilitating conditions) underlying the issues of technology acceptance and use construct in an attempt to ensure content validity. These variables were drawn from a review of related literature, the UTAUT model and research questions of the present study.

The instrument reliability is the degree of consistency of an instrument to measure what it is expected to measure (Best and Khan, 1998; 2006). To ensure the reliability of the questionnaire used in this study, a test-retest reliability method of two weeks interval using Cronbach Alpha was adopted to determine internal consistency, reliability and overall reliability of each of the factors or variables identified in the study. The questionnaire and interview questions for the study were tested on 24 state legislators. Nigeria has legislators at the local, state and federal levels. The test-retest was to ensure that consistency and clarity of the questions which resulted in the questionnaires and interview items was refined and rephrased. The refinements concentrated on clarity and language. The correlation co-efficient of 0.76 and above suggests the questionnaire is highly reliable and can be recommended for future use (Marsh and Hocevar, 1988). Before testing the reliability of the questionnaire used in this study, it was assumed, that if the reliability co-efficient fell below this figure, the study would rely on in-depth interviews of key informants for the study. The results demonstrated that all variables displayed similar results for internal consistency reliability as the original form of the instruments where the items were adapted. Reliability in this study was achieved by examining whether the same patterns or thematic constructs were replicated in different settings. This was ensured, by the conduct of a test-retest reliability and subjection of the results obtained to a Cronbach Alpha to determine the level of the instruments and the reliability of the sub-parts of the instruments. The expected reliability stood at \( r=0.92 \), which was high enough (see Tables 3 and 4). These procedures suggested that the questionnaire had a strong content validity. Reliability was evaluated by assessing the internal consistency of the items representing each factor. The 30 preliminary
and 30 main items of the questionnaire had a reliability of 0.92. Nunnally and Bernstein (1994) have provided guidance in the interpretation of the reliability coefficient by stating that a value of 0.70 is sufficient for early stages of research, but that basic research should require test scores to have a reliability coefficient of 0.80 or higher. When important decisions are to be made with test scores, a reliability coefficient of 0.90 is the minimum, with 0.95 or higher a desirable standard (Nunnally and Bernstein, 1994). Table 3 shows the summary of the test.

Table 3: Reliability Processing Summary (N=24)

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid Cases</td>
<td>24</td>
<td>100.0</td>
</tr>
<tr>
<td>Excluded a</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>24</td>
<td>100.0</td>
</tr>
</tbody>
</table>

a. Listwise deletion based on all variables in the procedure.

Table 4: Reliability Statistics (N=24)

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cronbach Alpha</td>
<td>N of Items</td>
<td>0.924</td>
</tr>
<tr>
<td></td>
<td>146</td>
<td></td>
</tr>
</tbody>
</table>

4.7 Data Collection Instruments

The survey questionnaire tool was used to gather data for this study. The questionnaire items were adapted from various previous predictor and adoption of technology studies (UN World E-government surveys, 2008, 2010, 2012; Norton, 2007, Malloy, 2003). Care was taken not to replicate difficulties encountered in previous studies, such as low response rates. This was done through contacting gate-keepers ahead of time, use of formal and informal communication and application of multiple data collection techniques. The terminologies used were familiar and the questions were as concise as possible. This was due to the busy nature of the legislators. The survey questionnaire contained mainly closed-ended questions. Cox (1996) and Czaja and Blair (2005) emphasize the importance of closed ended questionnaire. The questionnaire contained 13 preliminary items and 13 main items.
The justification for the choice of a questionnaire for the collection of data was based on the fact that most studies on predictors and acceptance and use of technology have always adopted the questionnaire (Floyd, Harding, Paddle, Rasali, Subedi and Subedi, 1999; Orlikowski and Baroudi, 1991; Venkatesh, Morris, Davis and Davis, 2003; Choudrie and Dwivedi, 2005). The combination of a number of approaches for data collection was underpinned on the fact that aspects from different paradigms can be combined in one research design (Wildermuth, 1993). Previous studies have been carried out using likert or semantic differential scales (Godoe and Johansen, 2012; Legris, Ingham and Collerette, 2003; Lin, Shih and Sher, 2007; Venkatesh, 2000; Yi and Hwang, 2003; Alqahtani and Fosso, 2012; Rogers and Wallace, 2011). The use of likert scales was adopted for the present study.

The following domain constructs were included in the survey questionnaire (see Appendix 5): performance expectancy, system use, social influence, perceived usefulness, attitude, effort expectancy, outcome expectations, individual/organizational impact, system quality, output quality, behavioural intention and inhibitors to use.

The items in the questionnaire were rated on a 3 point likert scale, with end points of “3 Disagree”, and “1 Agree”; the midpoint was ‘2 Undecided’. The choice of a 3-point likert scale is a well-accepted practice in this type of research. Several similar studies (Lokshin, Mohnen and Worter, 2013; Neves and Amaro, 2012; Alarima Kolawole, Sodiya, Oladele, Masunaga and Wakatsuki, 2011; Nadolny, 2008; Gulbahar and Guven, 2008; Demetriadis, Barbas, Molohides, Palaigeorgiou, Psillos, Vlahavas, Tsoukalas and Pombortsis, 2003; Smeets, 2005; Usun, 2004; Spanos, Prastacos and Poulomenakou, 2002) have used 3-point likert scale measurements, with renowned success.

The survey questionnaire consisted of 13 preliminary and 13 main sub-items. The questionnaire was made up of two sections, with Section A (preliminary items i-xiii, see Appendix 5) requiring the demographic information of the respondents and their ICT skills proficiency. These included 13 items such as status, gender, age, academic qualification, political party affiliation, terms served as legislator, name of
constituency represented and ICT proficiency. Section B (main items 1-13, see Appendix 5) contained the 13 main items broken down into tables with each containing items on each of the constructs in this study.

A breakdown of the items in Section B includes:

- performance expectancy, actual use, system use and ICT tools and services;
- adoption and use of ICT;
- social influence and perceived relevance of use;
- perceived usefulness (PU);
- attitude;
- facilitating conditions – culture;
- effort expectancy (PEOU);
- outcome expectations – individual impact;
- outcome expectations - organizational impact;
- system quality;
- output quality;
- behavioural intention (BI);
- behavioural intention – motivation;
- the issue of ICT policy and inhibitors to the use of ICT.

All items from section A-xii were close-ended items, while the sections B-1 and B-13b had an additional comments column (see details in Appendix 5).

4.7.1. Interview Questions

In addition to the use of a questionnaire, an in-depth interview was carried out to gather detailed information from five principal officers of the NASS. This information was on the administration of ICT tools and services, ICT funding and infrastructure, policy and perceptions of use of ICT by legislators in performance of legislative functions at the NASS. The purpose of the interview was to contribute to the body of knowledge in respect of concept and theory based on the meanings that life experience of ICT acceptance and use holds for the legislators. The in-depth
interviews were conducted with the key informants who are the principal officers of the NASS. This was done in order to co-create meaning with interviewees by reconstructing perceptions, attitudes and experiences related to ICT acceptance and use. These interviews were able to inform a wide range of questions including research questions, two and four of the study. There were different interview questions, one specifically for the two chairs of committees of ICT and communication and another for the other four principal officers of the NASS. The interview questions for the group that consisted of the Senate President, Speaker of the House of Representatives, Clerk of the NASS and Director of ICT are given in Appendices 6 and 7. They covered:

- ICT policy framework;
- the use of ICT by members of the NASS;
- perceptions;
- cultural contexts – language, cultural relativism, identity, dialogue;
- availability of ICT tools such as PCs, printers, laptops;
- budgetary allocations and funding for ICT;
- ICT capacity-building programme;
- ICT infrastructure and services available at the NASS;
- the inhibitors to use of ICT.

The set of interview questions for the chairs of senate and house committees on ICT and communication (see Appendix 2) included the following themes:

- functions of the committee;
- use of ICT by members of NASS;
- cultural contexts – language, cultural relativism, identity, dialogue;
- availability of ICT tools such as PCs, printers and laptops for work at committee level;
- availability of ICT applications such as Internet access.

Some interview questions were asked to complement or validate the survey questionnaire items. Some interview questions were aimed at primarily collecting data for the research questions (2 and 4, see section 1.5) concerning attitudes and
perceptions of legislators towards ICT and the determination of inhibitors to use of ICT.

4.7.2 Observation Themes

Observation is described as structured and relatively unstructured by Easterby-Smith, Thorpe and Lowe (2002) used the observation tool to generate qualitative and quantitative data. The participant observation method requires that the observer participates to varying degrees in the situation being observed to describe what goes on, who or what is involved, when and where things happen, how they occur and why (Jorgensen, 1989, p.12). The participants were aware of the presence of the researcher. The researcher was guided by the following themes in the observation checklist (see Appendix 9):

- Availability of ICT;
- Use of ICT by legislators in plenary and house committee meetings;
- Key stakeholders regarding the use of ICT
- Inhibitors to use of ICT.

Data was collected via observations by the researcher of plenary and committee sessions over a period of six weeks and notes were taken for document analysis.

4.7.3 Document Analysis Themes

Document analysis is a method of qualitative research in which documents are interpreted by the researcher to give meaning to the phenomenon being studied (Schuh and Upcraft, 2001). The analyses of documents incorporate coding content into themes, which are thereafter analyzed. The primary types of document analyzed in the study are Hansards, the parliamentary website and documents. The documents are coded into themes listed below (see Appendix 10 for document analysis schedule):
• Organizational background of NASS;
• ICT policy;
• Availability and accessibility to ICT tools in the NASS;
• Legislators’ ICT qualifications;
• Technical support for ICT;
• Inhibitors of use of ICT.

The information gathered was used to strengthen information collected by other methods of data collection.

4.8 Data Analysis

The analysis of data collected through a survey questionnaire adopted quantitative methods, in line with the positivist paradigm. Quantitative data collected was subjected to descriptive analysis involving mean, standard deviation and frequency count, the use of the Statistical Package for Social Science (SPSS) version 19 for windows 7. The study used path regression analysis to evaluate the relationships amongst the variables or concepts of the study. Inferential statistical analysis, such as ANOVA, Stepwise Multiple Regression, PPMC, Path Regression Analysis and Beta, was also undertaken to determine the predictive capabilities of the variables, as shown in Table 5. Analysis of qualitative data involved reading through the interview transcripts and other data, developing codes, coding the data and developing themes.

Table 5: Research Questions, Sources of Data and Data Analysis

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Approach</th>
<th>Source of Data</th>
<th>Method of Data Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. What are the predictors of legislators’ ICT acceptance and use?</td>
<td>Quantitative</td>
<td>Survey questionnaire, interview, literature review</td>
<td>Multiple Regression Analysis and Stepwise Multiple Regression Analysis</td>
</tr>
<tr>
<td>2. What are the attitudes and perceptions of legislators towards ICT?</td>
<td>Quantitative &amp; Qualitative</td>
<td>Survey questionnaire, interview</td>
<td>Descriptive statistics – frequency, percentage, mean, standard deviation,</td>
</tr>
</tbody>
</table>

109
<table>
<thead>
<tr>
<th>Research Question</th>
<th>Approach</th>
<th>Source of Data</th>
<th>Method of Data Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. What is legislators’ ICT usage level in performance of legislative functions?</td>
<td>Quantitative</td>
<td>Survey questionnaire, document analysis, parliamentary website, observation</td>
<td>weighted mean, expected mean</td>
</tr>
<tr>
<td>4. What are the inhibitors to use of ICT by legislators of NASS?</td>
<td>Quantitative &amp; Qualitative</td>
<td>Survey questionnaire, document analysis, Hansards, interview</td>
<td>Descriptive statistics – frequency, percentage, mean, standard deviation, weighted mean, expected mean</td>
</tr>
<tr>
<td>5. What relationships exist between independent variables (culture, ICT availability, facilitating conditions, effort expectancy, social influence and performance expectancy) and dependent variables (ICT acceptance and use)?</td>
<td>Quantitative</td>
<td>Survey questionnaire</td>
<td>Pearson Product Moment Correlation, PPMC and Path Regression Analysis</td>
</tr>
</tbody>
</table>

### 4.9 Ethical Issues

Levine (1979) stressed that ethical issues are very important for social researchers. Authors such as Ford and Reuter (1990) observed that ethical considerations must be adhered to in the conduct of research. The respondents are informed of the importance of the study and are appraised on the objectives of the study. In accordance with this, a short introductory letter itemizing the purpose of the survey and reiterating confidentiality of the data given was made available to each respondent. The respondents were given a voluntary choice of participation in the survey. The information given by the respondents was labelled as anonymous. Permission was sought and approval obtained from the management of the NASS through the Office of the Clerk of the NASS to conduct the study. All ethical
procedures of UKZN were followed, culminating in the issuance of an ethical clearance certificate prior to embarking on the conduct of the study.

4.10. Summary

Chapter Four presented the methodology adopted for the study. The study employed a positivist paradigm, but combined quantitative and qualitative approaches, in agreement with the conventional practice of researchers (Mandal and McQueen, 2012; Creswell, 1994, 2009). A survey research design was adopted, which is consistent with the positivist paradigm. The population of the study was the 469 federal legislators in the NASS. A census was chosen and the sampling frame was a list of legislators in the Office of the Clerk of the NASS and online at the NASS website (www.nassnig.org). Data was collected by a survey questionnaire, in-depth interviews, observation and document analysis based on the situationalist philosophy that quantitative and qualitative methods can both be applied to a study that is positivist (Lancy, 1993; Creswell, 1994, 1998, 2002, 2003, 2009). All ethical rules laid down by UKZN were adhered to and high standards of data collection procedures were followed, such as official communication, schedules, permission to access individual legislators and NASS resources. The researcher sought approvals from the Office of the Clerk of the NASS and senior staff member of the NASS was designated to assist. A test-retest reliability was conducted on 24 state legislators with data obtained subjected to a Cronbach Alpha to test for reliability and validity of the instrument. The results returned was $r=0.92$, indicating reliability. The presentation of the results was through descriptive and summary statistics, Pearson Multiple Correlation and Stepwise Multiple Regression, PPMC and Path Regression Analysis, as presented in the next chapter.
CHAPTER FIVE

DATA ANALYSIS AND PRESENTATION OF FINDINGS

5.1 Introduction

The purpose of this study was to determine the predictors of legislators’ ICT acceptance and use in the performance of legislative functions in the Nigerian National Assembly. The previous chapter presented the research methodology used in this study. It discussed a description of the research procedures, including the selection of the population, the instruments, the data collection procedure and the methods of data analysis. Chapter Five analyzes the data that was collected on legislators’ acceptance and use of ICT. The overall aim of the survey was to collect data from the elected representatives on their acceptance and use of ICT in the performance of legislative functions at the NASS. The results of the survey are presented in descriptive and inferential format, using tables and statistics.

All the 469 members of the NASS were invited to participate in the survey, out of which 346 completed and returned the questionnaire, giving a response rate of 74%. Of the eight principal officers of the NASS who were key informants for the in-depth interviews, five were interviewed, giving a response rate of 63%. These two response rates of 74% (questionnaire) and 63% (interview) are appropriate for a survey of this nature (Nathan, 1999; American Association for Public Opinion Research, 2000). The high response rate was a result of the support of the Office of the Clerk of the NASS, which was responsible for the publicity, distribution and collection of the questionnaire. The management of the NASS designated a senior staff member of the library and statistics unit of the NASS who assisted the researchers in following up on each legislators in completion of the survey. The elected representatives from the constituencies of the researchers informed their colleagues in the NASS to complete and return the questionnaire. The questionnaire was accompanied by a copy of the approval letter to conduct the study, issued by the management of the NASS. The approval enabled the researcher to access every legislator and resource at the NASS complex. Besides the approval letter, an internal
memo issued by the Office of the Clerk of the NASS requested the co-operation of the elected representatives in participating in the survey. The initial survey period had to be extended to enable more legislators to participate in the survey and to complete and return the questionnaire. The researchers had to personally follow up on the legislators. The overall duration of the study was eight weeks. The data were analyzed using SPSS and is presented below, using both descriptive and inferential statistics.

The framework for the organization of this chapter is one provided by Fowler (2002). The framework assumes that quantitative research is conceptually made up of three sections: (1) a section based completely on verbal discourse; (2) a section based on numerical or quantitative discourse; (3) a section based on verbal discourse. Some aspects of the three sections have been carried out in earlier parts of this study. In the present section (2), the research variables, concepts and constructs/attributes of the theoretical framework are replaced and presented with numbers. This was done so that the resulting quantification with a score or normative qualification represented the variables, concepts or construct validly. In summary, the data analysis and interpretation are presented as a series of steps, with one step leading to the next for a complete discussion of the data analysis process (Creswell, 2008). The presentation is guided by the research questions of the study.

5.2 Demographic Data Analysis

This section provides a summary of the demographic distribution of the members of the NASS that participated in the survey. The demographic information sought from the legislators included issues such as status of the member of NASS (senator, house of representative member), gender, age, academic qualification, number of terms served as legislator and the ICT skills’ level. The demographic data about the respondents are presented in Tables 6-12.
**Table 6: Keys**

<table>
<thead>
<tr>
<th>Key</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HoR</td>
<td>Member, House of Representatives (Lower House)</td>
</tr>
<tr>
<td>Senator</td>
<td>Member of Senate (Upper House)</td>
</tr>
<tr>
<td>Other</td>
<td>Senior Legislative Aide, Legislative Aide, Personal Assistant to Legislators</td>
</tr>
</tbody>
</table>

**5.2.1 Distribution of Legislators by Status**

Data collected were analyzed to determine the distribution of legislators in the NASS by status. The results are presented in Table 7.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td>HoR</td>
<td>275</td>
<td>79.5</td>
</tr>
<tr>
<td>Senator</td>
<td>60</td>
<td>17.3</td>
<td>17.3</td>
</tr>
<tr>
<td>Other</td>
<td>11</td>
<td>3.2</td>
<td>3.2</td>
</tr>
<tr>
<td>Total</td>
<td>346</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The distribution of respondents on the basis of their status at the NASS in Tables 6 and 7 showed that 79.5% were members of the house of representatives (lower house), 17.3% of respondents were senators (upper house) and 3.2% were senior legislative aides and personal assistants of the legislators (others). The data indicated that the respondents were mostly members of the House of Representatives (lower house) of the NASS.

**5.2.2 Distribution of Legislators by Gender**

The respondents were asked to indicate their gender. The results are found in Table 8.
Table 8: Distribution of Respondents by Gender (N=346)

<table>
<thead>
<tr>
<th>Status in NASS</th>
<th>Gender</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HoR</td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td></td>
<td>Count</td>
<td>262</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>% of Total</td>
<td>75.7%</td>
<td>3.8%</td>
</tr>
<tr>
<td></td>
<td>% of HoR</td>
<td>95.3%</td>
<td>4.7%</td>
</tr>
<tr>
<td>senator</td>
<td>Count</td>
<td>57</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>% of Total</td>
<td>16.5%</td>
<td>0.9%</td>
</tr>
<tr>
<td></td>
<td>% of Senator</td>
<td>95%</td>
<td>5%</td>
</tr>
<tr>
<td>Other</td>
<td>Count</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>% of Total</td>
<td>2.0%</td>
<td>1.2%</td>
</tr>
<tr>
<td></td>
<td>% of Other</td>
<td>63.6%</td>
<td>36.3%</td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td>326</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>% of Total</td>
<td>94.2%</td>
<td>5.8%</td>
</tr>
</tbody>
</table>

The distribution of legislators on the basis of gender revealed, 94.2% male and 5.8% female.

5.2.3 Distribution of Respondents by Age

The respondents were asked to indicate their ages, as shown in Table 9.
Table 9: Distribution of Respondents by Age (N=346)

<table>
<thead>
<tr>
<th>Status in NASS</th>
<th>HoR Count</th>
<th>% of Total</th>
<th>% of HoR</th>
<th>Senator Count</th>
<th>% of Total</th>
<th>% of Senators</th>
<th>Other Count</th>
<th>% of Total</th>
<th>% of Other</th>
<th>Total Count</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>25-35</td>
<td>6</td>
<td>1.7%</td>
<td>2.2%</td>
<td>0</td>
<td>0.0%</td>
<td>0%</td>
<td>0</td>
<td>0.0%</td>
<td>0%</td>
<td>6</td>
<td>1.7%</td>
</tr>
<tr>
<td>36-46</td>
<td>65</td>
<td>18.9%</td>
<td>23.8%</td>
<td>10</td>
<td>2.9%</td>
<td>16.7%</td>
<td>8</td>
<td>2.3%</td>
<td>61.5%</td>
<td>83</td>
<td>24.1%</td>
</tr>
<tr>
<td>47-57</td>
<td>139</td>
<td>40.4%</td>
<td>50.9%</td>
<td>34</td>
<td>9.9%</td>
<td>56.7%</td>
<td>2</td>
<td>0.6%</td>
<td>15.4%</td>
<td>175</td>
<td>50.9%</td>
</tr>
<tr>
<td>58-68</td>
<td>50</td>
<td>14.5%</td>
<td>18.3%</td>
<td>12</td>
<td>3.5%</td>
<td>23.1%</td>
<td>3</td>
<td>0.3%</td>
<td>0%</td>
<td>63</td>
<td>18.3%</td>
</tr>
<tr>
<td>69 and above</td>
<td>13</td>
<td>3.8%</td>
<td>4.8%</td>
<td>4</td>
<td>1.2%</td>
<td>6.7%</td>
<td>0</td>
<td>0.0%</td>
<td>0%</td>
<td>17</td>
<td>4.9%</td>
</tr>
<tr>
<td></td>
<td><strong>273</strong></td>
<td><strong>79.4%</strong></td>
<td><strong>79.4%</strong></td>
<td><strong>60</strong></td>
<td><strong>17.4%</strong></td>
<td><strong>6.7%</strong></td>
<td><strong>13</strong></td>
<td><strong>3.2%</strong></td>
<td><strong>0%</strong></td>
<td><strong>346</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>

The distribution of respondents (Table 9) by age showed that 50.9% were within the age bracket 47-57, 24.1% were between 36-46, 18.3% between 58-68, 4.9% was 69 and above and 1.7% was between ages 25-35. The age distribution on the basis of status of the member of the NASS is given in Table 9.

### 5.2.4 Academic Qualification of Respondents

Regarding academic qualifications of the legislators, the results are shown in Table 10.
Table 10: Academic Qualification of Respondents (N=346)

<table>
<thead>
<tr>
<th>Status in NASS</th>
<th>Academic Qualification</th>
<th>Count</th>
<th>% of Total</th>
<th>% of HoR</th>
<th>% of Senator</th>
<th>% of Other</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NCE</td>
<td>26</td>
<td>7.5%</td>
<td>9.5%</td>
<td>5.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td></td>
<td>Diploma</td>
<td>40</td>
<td>11.6%</td>
<td>14.6%</td>
<td>13.3%</td>
<td>16.7%</td>
</tr>
<tr>
<td></td>
<td>Degree</td>
<td>131</td>
<td>38.0%</td>
<td>47.8%</td>
<td>61.7%</td>
<td>58.3%</td>
</tr>
<tr>
<td></td>
<td>Higher Degrees</td>
<td>77</td>
<td>22.3%</td>
<td>28.1%</td>
<td>20.0%</td>
<td>25.0%</td>
</tr>
<tr>
<td>HoR</td>
<td>Total</td>
<td>274</td>
<td>79.4%</td>
<td>79.4%</td>
<td>79.4%</td>
<td>79.4%</td>
</tr>
<tr>
<td></td>
<td>Senator</td>
<td>3</td>
<td>0.9%</td>
<td>9.5%</td>
<td>5.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td></td>
<td>Count</td>
<td>8</td>
<td>2.3%</td>
<td>14.6%</td>
<td>13.3%</td>
<td>16.7%</td>
</tr>
<tr>
<td></td>
<td>% of Total</td>
<td>37</td>
<td>10.7%</td>
<td>47.8%</td>
<td>61.7%</td>
<td>58.3%</td>
</tr>
<tr>
<td></td>
<td>% of HoR</td>
<td>12</td>
<td>3.5%</td>
<td>28.1%</td>
<td>20.0%</td>
<td>25.0%</td>
</tr>
<tr>
<td></td>
<td>% of Senator</td>
<td>60</td>
<td>17.4%</td>
<td>28.1%</td>
<td>20.0%</td>
<td>25.0%</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>0</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td></td>
<td>Count</td>
<td>2</td>
<td>0.6%</td>
<td>16.7%</td>
<td>16.7%</td>
<td>16.7%</td>
</tr>
<tr>
<td></td>
<td>% of Total</td>
<td>7</td>
<td>2.0%</td>
<td>58.3%</td>
<td>58.3%</td>
<td>58.3%</td>
</tr>
<tr>
<td></td>
<td>% of HoR</td>
<td>3</td>
<td>0.6%</td>
<td>28.1%</td>
<td>28.1%</td>
<td>28.1%</td>
</tr>
<tr>
<td></td>
<td>% of Senator</td>
<td>12</td>
<td>3.2%</td>
<td>20.0%</td>
<td>20.0%</td>
<td>20.0%</td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td>29</td>
<td>8.4%</td>
<td>8.4%</td>
<td>8.4%</td>
<td>8.4%</td>
</tr>
<tr>
<td></td>
<td>% of Total</td>
<td>50</td>
<td>14.5%</td>
<td>14.5%</td>
<td>14.5%</td>
<td>14.5%</td>
</tr>
<tr>
<td></td>
<td>% of HoR</td>
<td>175</td>
<td>50.7%</td>
<td>50.7%</td>
<td>50.7%</td>
<td>50.7%</td>
</tr>
<tr>
<td></td>
<td>% of Senator</td>
<td>92</td>
<td>26.4%</td>
<td>26.4%</td>
<td>26.4%</td>
<td>26.4%</td>
</tr>
<tr>
<td></td>
<td>% of Other</td>
<td>346</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

The academic qualification of the legislators (Table 10) showed that 50.7% of them had degrees, 26.4% had higher degrees, 14.5% of them had diplomas and 8.4% had the National Certificate in Education (NCE). These results showed that the majority of legislators had a degree (50.7%). The distribution of academic qualification according to the status of the member of NASS can be gleaned in details from Table 10.

5.2.5 Number of Terms Served as Legislator

The legislators were asked to state the number of terms they had served in NASS. The results are provided in Table 11.
Table 11: Number of Terms Served as Legislator in the NASS (N=346)

<table>
<thead>
<tr>
<th>Status in NASS</th>
<th>HoR Count</th>
<th>% of Total</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>one term</td>
<td>two terms</td>
<td>three terms</td>
</tr>
<tr>
<td>HoR</td>
<td>137</td>
<td>105</td>
<td>32</td>
</tr>
<tr>
<td>% of Total</td>
<td>39.6%</td>
<td>30.3%</td>
<td>9.2%</td>
</tr>
<tr>
<td>% of HoR</td>
<td>49.8%</td>
<td>38.2%</td>
<td>11.6%</td>
</tr>
<tr>
<td>Senator Count</td>
<td>16</td>
<td>29</td>
<td>13</td>
</tr>
<tr>
<td>% of Total</td>
<td>4.6%</td>
<td>8.4%</td>
<td>3.8%</td>
</tr>
<tr>
<td>% of Senator</td>
<td>26.7%</td>
<td>48.3%</td>
<td>21.7%</td>
</tr>
<tr>
<td>Other Count</td>
<td>4</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>% of Total</td>
<td>1.2%</td>
<td>1.7%</td>
<td>.3%</td>
</tr>
<tr>
<td>% of Other</td>
<td>36.4%</td>
<td>54.5%</td>
<td>9.1%</td>
</tr>
<tr>
<td>Total Count</td>
<td>157</td>
<td>140</td>
<td>46</td>
</tr>
<tr>
<td>% of Total</td>
<td>45.4%</td>
<td>40.5%</td>
<td>13.3%</td>
</tr>
</tbody>
</table>

The distribution of legislators on the basis of the number of terms served as a legislator (Table 11) showed that 45.4% were serving their first term, 40.5% were serving their second term, 13.3% their third term and 0.9% had served more than three terms as members of the NASS. As can be gleaned from Table 6, most of the legislators were serving their first terms (45.4%). The number of terms served in NASS on the basis of status (or category) is provided in Table 11.

5.2.6 Legislators’ ICT Skills Level

Concerning the legislators’ ICT skills level, the results are shown in Table 12.
Table 12: Legislators’ ICT Skills Level (N=346)

<table>
<thead>
<tr>
<th>Status in NASS</th>
<th>ICT skills’ Level</th>
<th>No skills</th>
<th>Beginner/Lea rner</th>
<th>Skilled user</th>
<th>Advanced user</th>
<th>Expert</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>HoR Count</td>
<td></td>
<td>25</td>
<td>115</td>
<td>122</td>
<td>13</td>
<td>0</td>
<td>275</td>
</tr>
<tr>
<td>% of Total</td>
<td></td>
<td>7.2%</td>
<td>33.2%</td>
<td>35.3%</td>
<td>3.8%</td>
<td>0.0%</td>
<td>79.5%</td>
</tr>
<tr>
<td>% of HoR</td>
<td></td>
<td>9.1%</td>
<td>41.8%</td>
<td>44.4%</td>
<td>4.7%</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>Senator Count</td>
<td></td>
<td>6</td>
<td>19</td>
<td>28</td>
<td>6</td>
<td>1</td>
<td>60</td>
</tr>
<tr>
<td>% of Total</td>
<td></td>
<td>1.7%</td>
<td>5.5%</td>
<td>8.1%</td>
<td>1.7%</td>
<td>0.3%</td>
<td>17.3%</td>
</tr>
<tr>
<td>% of Senator</td>
<td></td>
<td>10%</td>
<td>31.7%</td>
<td>46.7%</td>
<td>10%</td>
<td>1.7%</td>
<td></td>
</tr>
<tr>
<td>Other Count</td>
<td></td>
<td>0</td>
<td>5</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td>% of Total</td>
<td></td>
<td>0.0%</td>
<td>1.4%</td>
<td>1.7%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>3.2%</td>
</tr>
<tr>
<td>% of Other</td>
<td></td>
<td>0%</td>
<td>45.5%</td>
<td>54.5%</td>
<td>0%</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>Total Count</td>
<td></td>
<td>31</td>
<td>139</td>
<td>156</td>
<td>19</td>
<td>1</td>
<td>346</td>
</tr>
<tr>
<td>% of Total</td>
<td></td>
<td>9.0%</td>
<td>40.2%</td>
<td>45.1%</td>
<td>5.5%</td>
<td>0.3%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

The distribution by ICT skills level showed that 45.1% were skilled, 40.2% of the legislators were beginners/learners, 9% had no skill, 5.5% were advanced users and 3% were experts. A close look at the results showed that 45.1% of the legislators were skilled in ICT. A breakdown of the legislators’ ICT skills level by status is also given in Table 12.

5.3 Data Analysis Based on Research Questions

This section presents the results of the survey conducted to determine the predictors of legislators’ ICT acceptance and use. The purpose was to determine how independent variables such as ICT skills, system use, culture and language, perceived relevance, perceived usefulness, attitude, perceived ease of use (PEOU), system quality, output quality, behavioural intention (BI), trust, security, power/electricity, fear, technical support, privacy and moderators (such as age, education and gender) predicted the acceptance and use of ICT by the legislators.
5.3.1 Predictors of Legislators’ ICT Acceptance and Use

The research question sought to determine the predictors of legislators’ ICT acceptance and use in the NASS. The results of the multiple regression analysis showing the relative contributions of independent variables to dependent variables are presented in Tables 13 and 14.

Table 13: Multiple Regression Analysis

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardised Coefficients</th>
<th>Standardised Coefficients</th>
<th>t</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>ICT acceptance and use</td>
<td>1.819</td>
<td>0.317</td>
<td></td>
<td>5.745</td>
</tr>
<tr>
<td>Status in NASS</td>
<td>-0.020</td>
<td>0.058</td>
<td>-0.021</td>
<td>0.346</td>
</tr>
<tr>
<td>Gender</td>
<td>-0.054</td>
<td>0.127</td>
<td>-0.026</td>
<td>0.426</td>
</tr>
<tr>
<td>Age</td>
<td>-0.061</td>
<td>0.033</td>
<td>-0.109</td>
<td>1.888</td>
</tr>
<tr>
<td>Academic qualification</td>
<td>-0.068</td>
<td>0.032</td>
<td>-0.124</td>
<td>2.101</td>
</tr>
<tr>
<td>Motivation</td>
<td>-0.011</td>
<td>0.033</td>
<td>0.019</td>
<td>0.339</td>
</tr>
<tr>
<td>ICT Policy</td>
<td>0.033</td>
<td>0.037</td>
<td>0.053</td>
<td>0.889</td>
</tr>
<tr>
<td>Perceived relevance</td>
<td>0.018</td>
<td>0.043</td>
<td>0.027</td>
<td>0.421</td>
</tr>
<tr>
<td>Perceived usefulness</td>
<td>-0.007</td>
<td>0.048</td>
<td>-0.010</td>
<td>0.150</td>
</tr>
<tr>
<td>Attitude to ICT</td>
<td>0.088</td>
<td>0.056</td>
<td>0.118</td>
<td>1.560</td>
</tr>
<tr>
<td>Perceived ease of use</td>
<td>0.022</td>
<td>0.043</td>
<td>0.034</td>
<td>0.511</td>
</tr>
<tr>
<td>Organizational impact</td>
<td>-0.070</td>
<td>0.041</td>
<td>-0.105</td>
<td>1.712</td>
</tr>
<tr>
<td>System quality</td>
<td>-0.009</td>
<td>0.048</td>
<td>-0.013</td>
<td>0.193</td>
</tr>
<tr>
<td>Output quality</td>
<td>-0.038</td>
<td>0.041</td>
<td>-0.064</td>
<td>0.933</td>
</tr>
<tr>
<td>Behavioural intention</td>
<td>-0.098</td>
<td>0.057</td>
<td>-0.110</td>
<td>1.730</td>
</tr>
<tr>
<td>ICT skills</td>
<td>-0.008</td>
<td>0.044</td>
<td>0.001</td>
<td>0.021</td>
</tr>
<tr>
<td>Trust</td>
<td>0.042</td>
<td>0.054</td>
<td>0.073</td>
<td>0.786</td>
</tr>
<tr>
<td>Security</td>
<td>-0.025</td>
<td>0.051</td>
<td>-0.046</td>
<td>0.497</td>
</tr>
<tr>
<td>Technical support</td>
<td>-0.010</td>
<td>0.037</td>
<td>-0.018</td>
<td>0.276</td>
</tr>
<tr>
<td>Culture</td>
<td>-0.096</td>
<td>0.052</td>
<td>-0.123</td>
<td>1.860</td>
</tr>
<tr>
<td>Individual impact</td>
<td>-0.007</td>
<td>0.048</td>
<td>-0.010</td>
<td>0.147</td>
</tr>
</tbody>
</table>

Level of sig<0.05

The results in Table 13 revealed academic qualification (B = -0.124, t = 2.101), behavioural intention (B = -0.110, t = 1.730), attitude to ICT (B = 0.118, t = 1.560), culture (B = -0.123, t = 1.860), age (B = -0.109, t = 1.88) and organizational impact (B = -0.105, t = 1.712) as the main predictors of ICT acceptance and usage among
legislators in the NASS. However, the prediction relationships of academic qualification, behavioural intention, organizational impact, culture and age with ICT acceptance and use were negative. This means that it can be inferred that legislators with low academic qualifications have high levels of ICT acceptance and use, while legislators with high academic qualifications have low ICT acceptance and use. The findings suggest that the less individual legislators have the behavioural intention to use ICT, the more likely they adopt and use ICT. This can be as a result of organizational pressure, globalization, social factors, trends and external factors. In the present study, attitude was found to have a positive relationship with ICT acceptance and use. This finding suggests that legislators with a positive attitude to ICT would accept and use ICT more than those with a negative attitude towards ICT.

Table 14: Predictors of ICT Acceptance and Usage

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic qualification</td>
<td>0.124</td>
<td>0.015</td>
<td>0.012</td>
<td>0.464</td>
</tr>
<tr>
<td>Behavioural Intention</td>
<td>0.174</td>
<td>0.030</td>
<td>0.024</td>
<td>0.461</td>
</tr>
</tbody>
</table>

The statistical expression $R^2$ in Table 14 is the proportion of variability in the data set that is accounted for by the statistical model. The term variability is defined as the sum of squares (Evans, Hastings and Peacock, 1993). The adjusted $R$-square is a modification of $R$-square that adjusts for the number of terms in a model. $R$-square always increases when a new term is added to the model, but adjusted $R$-square increases only if the new term improves the model more than would be expected by chance. The standard error of a statistic (or estimator) is the (estimated) standard deviation of the statistic. Standard errors mean the statistical fluctuation of estimators. They are important, particularly, when one compares two estimates (for example, whether one quantity is higher than the other in a statistically meaningful way). Based on this is a review of the standard errors of frequently used estimators of the mean, variance and standard deviation (Graham, Knuth and Patashnik, 1994). The results in Table 14 suggest that academic qualification and behavioural intention were the best predictors of ICT acceptance and usage for performance of legislative work. The prediction relationships can be positive or negative. For the purpose of this research it is noted that, the prediction relationships of academic qualification
and behavioural intention with ICT acceptance and use were negative. Academic qualification was found to be the best predictor of ICT acceptance and use, contributing 1.5% to the total variance in ICT acceptance and use by the legislators (Stepwise Regression Analysis 1). The second best predictor of ICT acceptance and usage was behavioural intention, which added 1.5% to the variance in ICT acceptance and usage total contribution (Stepwise Regression Analysis 2). Therefore academic qualification and behavioural intention together contributed 3.0% to the total variance in ICT acceptance and use among legislators.

The research question 1 was addressed by the quantitative data (see Table 5). The findings from the quantitative data analysis show that academic qualification, behavioural intention, culture and organizational support were the predictors of ICT adoption by the legislators. The themes that emerged from the qualitative data analysis show that organizational support, ICT culture (familiarity with ICT applications that are suitable to legislative needs) and user satisfaction were the predictors of legislators' ICT acceptance and use (see details in Appendix 11). This is similar to the finding from the quantitative data analysis. The additional predictors identified from the qualitative data are suitable policy intervention and political will to drive adoption and use of ICT. The results in Tables 15, 16, 17 and 18 provided answers to the specific research questions of the study, as presented below.

### 5.3.2 Attitudes and Perceptions of Legislators Towards ICT

The second research question was to determine the attitudes and perceptions of legislators towards ICT. To answer this research question the researcher relied on the responses of various statements in Tables 15 and 16.

#### 5.3.2.1 Attitudes of Legislators Towards ICT

The respondents were polled on their attitude towards ICT, using several statements outlined in Table 15.
Table 15: Attitude of Legislators Towards ICT

<table>
<thead>
<tr>
<th>Statement</th>
<th>Agree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>I use ICT in lawmaking and it is a good idea</td>
<td>240 (69.4%)</td>
<td>103 (29.8%)</td>
<td>3 (0.9%)</td>
<td>1.60</td>
<td>0.915</td>
</tr>
<tr>
<td>I would prefer paper-based work because of negative impressions I</td>
<td>134 (38.7%)</td>
<td>196 (56.6%)</td>
<td>16 (4.6%)</td>
<td>2.18</td>
<td>0.961</td>
</tr>
<tr>
<td>have about use of ICT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My efficiency as a legislator is enhanced by use of ICT</td>
<td>206 (59.5%)</td>
<td>139 (42.2%)</td>
<td>1 (0.3%)</td>
<td>1.81</td>
<td>0.981</td>
</tr>
<tr>
<td>I think ICT skills training and knowledge should be part of orientation</td>
<td>257 (74.3%)</td>
<td>89 (25.7%)</td>
<td>-</td>
<td>1.51</td>
<td>0.875</td>
</tr>
<tr>
<td>and training for legislators</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I use ICT for information dissemination to constituents and the public</td>
<td>228 (65.9%)</td>
<td>118 (34.1%)</td>
<td>-</td>
<td>1.68</td>
<td>0.949</td>
</tr>
<tr>
<td>I would easily adapt to any changes that use of ICT may cause to my</td>
<td>245 (70.8%)</td>
<td>101 (29.2%)</td>
<td>-</td>
<td>1.58</td>
<td>0.911</td>
</tr>
<tr>
<td>work as a legislator</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Using ICT in work as legislator is pleasant</td>
<td>269 (77.7%)</td>
<td>76 (22.0%)</td>
<td>1 (0.3%)</td>
<td>1.44</td>
<td>0.829</td>
</tr>
<tr>
<td>Using the NASS and other government websites is a good idea</td>
<td>200 (57.8%)</td>
<td>144 (41.6%)</td>
<td>2 (0.6%)</td>
<td>1.84</td>
<td>0.985</td>
</tr>
<tr>
<td>I trust use of Internet</td>
<td>133 (38.4%)</td>
<td>210 (60.7%)</td>
<td>3 (0.3%)</td>
<td>2.22</td>
<td>0.972</td>
</tr>
<tr>
<td>I trust that use of ICT in my legislative work cannot harm me e.g. data</td>
<td>206 (59.5%)</td>
<td>135 (39.0%)</td>
<td>5 (1.4%)</td>
<td>1.79</td>
<td>0.973</td>
</tr>
<tr>
<td>fraud</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am worried about loss of data</td>
<td>204 (59.0%)</td>
<td>136 (39.3%)</td>
<td>8 (1.7%)</td>
<td>1.80</td>
<td>0.973</td>
</tr>
<tr>
<td>Overall, I am satisfied with use of ICT</td>
<td>233 (67.3%)</td>
<td>102 (29.5%)</td>
<td>11 (3.2%)</td>
<td>1.62</td>
<td>0.910</td>
</tr>
<tr>
<td>Average Weighted Mean</td>
<td></td>
<td></td>
<td></td>
<td>1.76</td>
<td></td>
</tr>
</tbody>
</table>

The results in Table 15 on the attitude of respondents towards ICT acceptance and usage reveal a weighted average estimated mean of 1.76, which was greater than the expected mean of 1.50. The results indicate that legislators have a positive attitude towards ICT use. The favourable disposition towards ICT was also reflected through the agreement of the majority of the respondents with the positive statements on attitude towards ICT and disagreement with negative statements on attitude towards ICT. For instance, the majority of the respondents (269 or 77.7%, X = 1.44) agreed with the statement that “using ICT in work as legislator is pleasant”, while the majority of the respondents (196 or 56.6%, X = 2.18) disagreed with statements such as “I would prefer paper-based work because of negative
impressions I have about use of ICT”. Table 16 shows results on the perceived ease of use of ICT by the legislators.

The research question 2 was addressed by the qualitative aspect of the data analysis. The analysis of in-depth interviews shows that the legislators seem to have high perceptions of the use of ICT for legislative work. Despite some worries about technological infrastructure, there appears to be positive attitudes towards ICT adoption for representative democracy in Nigeria. The legislators attach positive values to the use of ICT.

5.3.2.2 Perceived Ease of Use of ICT by Legislators

The respondents were presented with a series of statements to determine their perceived use of ICT. The results are presented in Table 16.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Agree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>My interaction with ICT tools such as laptops, printers, internet, websites, etc, is easy for me to understand</td>
<td>236 (88.2%)</td>
<td>99 (28.6%)</td>
<td>11 (3.2%)</td>
<td>1.60</td>
<td>0.902</td>
</tr>
<tr>
<td>Learning to interact with the ICT – Internet, websites and ICT tools would be easy for me</td>
<td>285 (76.6%)</td>
<td>78 (22.5%)</td>
<td>3 (0.9%)</td>
<td>1.46</td>
<td>0.837</td>
</tr>
<tr>
<td>I believe interacting with ICT – Internet, websites, e-mailing, etc would be a clear and understandable process</td>
<td>253 (73.1%)</td>
<td>9 (26.6%)</td>
<td>1 (0.3%)</td>
<td>1.53</td>
<td>0.885</td>
</tr>
<tr>
<td>I would find ICT difficult to use</td>
<td>168 (48.6%)</td>
<td>177 (51.2%)</td>
<td>1 (0.3%)</td>
<td>1.63</td>
<td>0.912</td>
</tr>
<tr>
<td>I would find the ICT to be flexible to interact with</td>
<td>220 (63.6%)</td>
<td>126 (36.4%)</td>
<td>-</td>
<td>1.73</td>
<td>0.964</td>
</tr>
<tr>
<td>I do not find that using ICT needs high skills</td>
<td>172 (49.7%)</td>
<td>166 (48.0%)</td>
<td>8 (2.3%)</td>
<td>1.98</td>
<td>0.990</td>
</tr>
<tr>
<td><strong>Average Weighted Mean</strong></td>
<td></td>
<td></td>
<td></td>
<td>1.72</td>
<td></td>
</tr>
</tbody>
</table>
legislators affirmed the ease of use of ICT. The ease of use of ICT by legislators was also reflected in the agreement of legislators with statements that supported the ease of use of ICT, as well as their disagreement with statements that do not support the ease of use of ICT. For instance, the majority of the legislators (285 or 76.6%, X = 1.46) agreed with the fact that “learning to interact with the ICT, Internet, websites, and ICT tools would be easy for me”, and the majority of the legislators (177 or 51.2%, X = 1.63) disagreed with statements such as “I would find ICT difficult to use”.

5.3.2.3 Perceived Usefulness of ICT by Legislators

The study sought to investigate the level of perceived usefulness of ICT by legislators. The results are presented in Table 17.

Table 17: Perceived Usefulness of ICT by Legislators (N=346)

<table>
<thead>
<tr>
<th>Statement</th>
<th>Agree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internet is useful in my legislative function and information dissemination to the public</td>
<td>243 (70.2%)</td>
<td>102 (29.5%)</td>
<td>1 (0.3%)</td>
<td>1.59</td>
<td>0.913</td>
</tr>
<tr>
<td>Use of Internet improves the performance of my legislative work and functions</td>
<td>216 (62.4%)</td>
<td>128 (37.0%)</td>
<td>2 (0.6%)</td>
<td>1.75</td>
<td>0.966</td>
</tr>
<tr>
<td>Internet usage increases the productivity of my legislative work</td>
<td>214 (70.5%)</td>
<td>99 (28.6%)</td>
<td>3 (0.9%)</td>
<td>1.58</td>
<td>0.904</td>
</tr>
<tr>
<td>Internet usage enhances the effectiveness of my legislative functions</td>
<td>213 (61.6%)</td>
<td>132 (38.2%)</td>
<td>1 (0.3%)</td>
<td>1.77</td>
<td>0.972</td>
</tr>
<tr>
<td>Internet usage makes my work easier as a legislator</td>
<td>256 (74.0%)</td>
<td>88 (25.4%)</td>
<td>2 (0.6%)</td>
<td>1.51</td>
<td>0.872</td>
</tr>
<tr>
<td>ICT/Internet usage enables me to accomplish tasks more quickly</td>
<td>244 (70.5%)</td>
<td>99 (28.6%)</td>
<td>3 (0.9%)</td>
<td>1.58</td>
<td>0.904</td>
</tr>
<tr>
<td>Use of e-mails help me to interact with constituents</td>
<td>257 (74.3%)</td>
<td>88 (25.4%)</td>
<td>1 (0.3%)</td>
<td>1.51</td>
<td>0.872</td>
</tr>
</tbody>
</table>
### Table 17

<table>
<thead>
<tr>
<th>Statement</th>
<th>Agree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>The use of ICT/Internet for legislative work would be useless to me</td>
<td>170 (49.1%)</td>
<td>173 (50.0%)</td>
<td>3 (0.9%)</td>
<td>2.01</td>
<td>0.997</td>
</tr>
<tr>
<td>I find NASS website, Internet – e-mailing and other ICT tools useful for my legislative work</td>
<td>223 (64.5%)</td>
<td>121 (35.0%)</td>
<td>2 (0.6%)</td>
<td>1.71</td>
<td>0.954</td>
</tr>
</tbody>
</table>

The results in Table 17 revealed a weighted average estimated mean of legislators' perceived usefulness as 1.67, which was greater than the expected mean of 1.51. The inference could be drawn that ICT was perceived as useful by the legislators. The usefulness of ICT to legislative work was affirmed through the agreement of the majority of respondents with statements that emphasized usefulness of ICT and their disagreement with statements that portrayed ICT as not useful for legislative work. For example, the majority of the legislators (244 or 70.5%) agreed with statements such as “Internet usage increases the productivity of my legislative work” and the majority of the legislators (173 or 50.0%) disagreed with statements such as “The use of ICT/Internet for legislative work would be useless to me”. The results in Table 18 showed responses to statements on perceived relevance of ICT by the legislators.

### 5.3.2.4 Perceived Relevance of ICT by Legislators

Respondents were asked to state the relevance of ICT to their legislative role in NASS. The results are given in Table 18.
Table 18: Perceived Relevance of ICT by Legislators

<table>
<thead>
<tr>
<th>Statement</th>
<th>Agree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>In my legislative work, use of the computer/Internet and other ICT tools is very important</td>
<td>213 (61.6%)</td>
<td>131 (37.9%)</td>
<td>2 (0.6%)</td>
<td>1.76</td>
<td>0.970</td>
</tr>
<tr>
<td>My use of ICT has dramatically increased in my legislative productivity</td>
<td>216 (62.4%)</td>
<td>126 (36.4%)</td>
<td>4 (1.2%)</td>
<td>1.74</td>
<td>0.961</td>
</tr>
<tr>
<td>My use of ICT has enhanced my legislative role</td>
<td>228 (65.9%)</td>
<td>115 (33.2%)</td>
<td>3 (0.9%)</td>
<td>1.67</td>
<td>0.952</td>
</tr>
<tr>
<td>Use of ICT provides me with information that is relevant to my legislative job</td>
<td>245 (70.8%)</td>
<td>100 (28.9%)</td>
<td>1 (0.3%)</td>
<td>1.58</td>
<td>0.908</td>
</tr>
<tr>
<td>Use of ICT provides me with up-to-date information</td>
<td>235 (67.9%)</td>
<td>110 (31.8%)</td>
<td>1 (0.3%)</td>
<td>1.64</td>
<td>0.932</td>
</tr>
<tr>
<td>I depend on ICT to carry out my legislative functions</td>
<td>192 (55.5%)</td>
<td>152 (43.9%)</td>
<td>2 (0.6%)</td>
<td>1.88</td>
<td>0.992</td>
</tr>
</tbody>
</table>

Weighted Average Estimated Mean 1.71

The results in Table 18 revealed a weighted average estimated mean of 1.71, which was greater than the expected mean of 1.62. This affirmed the relevance of ICT to legislative work. Further affirmation of the relevance of ICT to legislative work was revealed by the agreement of legislators with statements that supported the relevance of ICT. For example, the majority of the legislators (245 or 70.8%) agreed with statements such as “Use of ICT provides me with information that is relevant to my legislative job”.

5.3.3 Legislators’ ICT Usage Level in Performing Legislative Functions

The third research question (see section 1.5) sought the level of ICT usage (frequency of use and period of use) by the legislators in performing legislative functions. The results are presented Tables 19, 20 and 21.
### Table 19: ICT Usage Level of Legislators (N=346)

<table>
<thead>
<tr>
<th>Statement</th>
<th>Agree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>I use ICT to search online records</td>
<td>149 (43.1%)</td>
<td>188 (54.3%)</td>
<td>9 (2.6%)</td>
<td>2.11</td>
<td>0.982</td>
</tr>
<tr>
<td>I will use ICT tools to interact</td>
<td>172 (49.7%)</td>
<td>159 (46.0%)</td>
<td>15 (4.3%)</td>
<td>1.96</td>
<td>0.979</td>
</tr>
<tr>
<td>I interact online with other arms of government</td>
<td>172 (49.7%)</td>
<td>161 (46.5%)</td>
<td>13 (3.8%)</td>
<td>1.97</td>
<td>0.982</td>
</tr>
<tr>
<td>I use ICT to search for procedural matters drafts</td>
<td>173 (50.0%)</td>
<td>166 (48.0%)</td>
<td>7 (2.0%)</td>
<td>1.98</td>
<td>0.991</td>
</tr>
<tr>
<td>I use ICT for online recording of bills</td>
<td>154 (44.5%)</td>
<td>191 (55.2%)</td>
<td>1 (0.3%)</td>
<td>2.11</td>
<td>0.994</td>
</tr>
<tr>
<td>I use ICT to search for petitions online</td>
<td>169 (48.8%)</td>
<td>162 (46.8%)</td>
<td>15 (4.3%)</td>
<td>1.98</td>
<td>0.979</td>
</tr>
<tr>
<td>I use ICT for correspondence management</td>
<td>134 (38.7%)</td>
<td>208 (60.1%)</td>
<td>4 (1.2%)</td>
<td>2.21</td>
<td>0.972</td>
</tr>
<tr>
<td>I use ICT for outreach and publications</td>
<td>154 (44.5%)</td>
<td>189 (54.6%)</td>
<td>3 (0.9%)</td>
<td>2.10</td>
<td>0.996</td>
</tr>
<tr>
<td>I use Microsoft office and databases</td>
<td>246 (71.1%)</td>
<td>98 (28.3%)</td>
<td>2 (0.6%)</td>
<td>1.57</td>
<td>0.902</td>
</tr>
<tr>
<td>I use ICT for power point presentations</td>
<td>183 (52.9%)</td>
<td>158 (45.7%)</td>
<td>5 (1.4%)</td>
<td>1.93</td>
<td>0.992</td>
</tr>
<tr>
<td>I use ICT for virtual meetings via videoconferencing</td>
<td>149 (43.1%)</td>
<td>188 (54.3%)</td>
<td>9 (2.6%)</td>
<td>2.11</td>
<td>0.982</td>
</tr>
<tr>
<td>I use ICT to make decisions</td>
<td>170 (49.1%)</td>
<td>171 (49.4%)</td>
<td>5 (1.4%)</td>
<td>2.00</td>
<td>0.994</td>
</tr>
<tr>
<td>I use ICT to reach my aides and administrative staff</td>
<td>224 (64.7%)</td>
<td>122 (35.3%)</td>
<td>-</td>
<td>1.71</td>
<td>0.957</td>
</tr>
<tr>
<td>I use ICT for communication with other legislators</td>
<td>205 (59.2%)</td>
<td>140 (40.5%)</td>
<td>1 (0.3%)</td>
<td>1.81</td>
<td>0.982</td>
</tr>
<tr>
<td>Given the chance I will use ICT in legislative work</td>
<td>207 (59.8%)</td>
<td>126 (36.4%)</td>
<td>12 (3.8%)</td>
<td>1.77</td>
<td>0.954</td>
</tr>
<tr>
<td><strong>Average Weighted Mean</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>1.95</strong></td>
<td></td>
</tr>
</tbody>
</table>

The results presented in Table 19 on legislators’ ICT usage level in the performance of legislative functions revealed that majority made use of ICT facilities for the purposes of reaching out to legislative aides and administrative staff (224 or 64.7%, X = 1.71), communicating with other legislators (205 or 59.2%, X = 1.81), performing legislative work (207 or 59.8%, X = 1.77), power point presentations (183 or 52.9%, X = 1.93), and searching for procedural matters/drafts (173 or 50.0%, X = 1.98). However, the weighted average estimated mean of legislators’ ICT usage level was 1.95, which was less than the expected mean of 2.10. The conclusion could thus be drawn that the level of ICT usage by legislators was low.
The results presented in Tables 20 and 21 show analysis of legislators' ICT usage levels using frequency counts, percentages, mean and standard deviation. It shows the details of use. For instance, the legislators mostly used the following ICT tools many times a day: fixed phone (47.1%, X= 1.76), mobile phone (45.4%, X=1.89), laptop (43.1%, X=2.34), SMS and desktop (42.8%, X=2.36/2.34), Internet (37.3%, X=2.49), emailing (37.0%, X=2.32) and printer (35.3%, X=2.36). Further analysis showed that the following ICT tools were used on a weekly basis: pager (26.6%, X=3.25), Newsgroups (24.6%, X=3.54), fax machine (23.4%, X=3.56) and iPhone/android (21.1%, X=3.25). Only 17.9% used a tablet and 17.3% used an iPad.

Table 20: Frequency of Use of ICT (N=346)

<table>
<thead>
<tr>
<th>ICT tool</th>
<th>Many times</th>
<th>Daily</th>
<th>Weekly</th>
<th>Monthly</th>
<th>Rarely</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed phone</td>
<td>163 (47.1%)</td>
<td>117 (33.8%)</td>
<td>55 (15.0%)</td>
<td>4 (1.2%)</td>
<td>6 (2.0%)</td>
<td>1.76</td>
<td>.883</td>
</tr>
<tr>
<td>Mobile phone</td>
<td>157 (45.4%)</td>
<td>108 (31.2%)</td>
<td>55 (15.9%)</td>
<td>14 (4.0%)</td>
<td>12 (3.5%)</td>
<td>1.89</td>
<td>1.04</td>
</tr>
<tr>
<td>Smart phone</td>
<td>131 (37.9%)</td>
<td>80 (23.1%)</td>
<td>46 (13.3%)</td>
<td>36 (10.4%)</td>
<td>51 (14.7%)</td>
<td>2.41</td>
<td>1.45</td>
</tr>
<tr>
<td>Web phone</td>
<td>31 (9.0%)</td>
<td>21 (6.1%)</td>
<td>41 (11.8%)</td>
<td>37 (10.7%)</td>
<td>215 (62.1%)</td>
<td>4.11</td>
<td>1.33</td>
</tr>
<tr>
<td>iPhone/Android</td>
<td>58 (16.8%)</td>
<td>59 (17.1%)</td>
<td>73 (21.1%)</td>
<td>50 (14.5%)</td>
<td>106 (30.6%)</td>
<td>3.25</td>
<td>1.46</td>
</tr>
<tr>
<td>iPad</td>
<td>57 (16.5%)</td>
<td>59 (17.1%)</td>
<td>64 (18.5%)</td>
<td>60 (17.3%)</td>
<td>106 (30.6%)</td>
<td>3.29</td>
<td>1.47</td>
</tr>
<tr>
<td>BBM</td>
<td>99 (28.6%)</td>
<td>53 (15.3%)</td>
<td>59 (17.1%)</td>
<td>35 (10.1%)</td>
<td>100 (28.1%)</td>
<td>2.95</td>
<td>1.60</td>
</tr>
<tr>
<td>Fax machine</td>
<td>41 (11.8%)</td>
<td>42 (12.1%)</td>
<td>81 (23.4%)</td>
<td>48 (13.1%)</td>
<td>134 (38.7%)</td>
<td>3.56</td>
<td>1.40</td>
</tr>
<tr>
<td>Pager</td>
<td>61 (17.6%)</td>
<td>35 (10.1%)</td>
<td>92 (26.6%)</td>
<td>40 (11.6%)</td>
<td>118 (34.1%)</td>
<td>3.34</td>
<td>1.47</td>
</tr>
<tr>
<td>SMS</td>
<td>148 (42.8%)</td>
<td>60 (17.3%)</td>
<td>52 (15.0%)</td>
<td>22 (6.4%)</td>
<td>64 (18.5%)</td>
<td>2.40</td>
<td>1.53</td>
</tr>
<tr>
<td>Desktop</td>
<td>148 (42.8%)</td>
<td>71 (20.5%)</td>
<td>46 (13.3%)</td>
<td>16 (4.6%)</td>
<td>65 (18.8%)</td>
<td>2.36</td>
<td>1.52</td>
</tr>
<tr>
<td>Laptop</td>
<td>149 (43.1%)</td>
<td>73 (21.1%)</td>
<td>35 (10.1%)</td>
<td>35 (10.1%)</td>
<td>54 (15.6%)</td>
<td>2.34</td>
<td>1.49</td>
</tr>
<tr>
<td>Notebook</td>
<td>83 (24.0%)</td>
<td>81 (23.4%)</td>
<td>61 (17.6%)</td>
<td>35 (10.1%)</td>
<td>86 (24.9%)</td>
<td>2.88</td>
<td>1.51</td>
</tr>
<tr>
<td>Tablet</td>
<td>92 (26.6%)</td>
<td>46 (13.3%)</td>
<td>57 (16.5%)</td>
<td>62 (17.9%)</td>
<td>89 (25.7%)</td>
<td>3.02</td>
<td>1.55</td>
</tr>
<tr>
<td>PDA</td>
<td>104 (30.2%)</td>
<td>56 (1.62%)</td>
<td>62 (17.9%)</td>
<td>40 (11.6%)</td>
<td>82 (23.8%)</td>
<td>2.82</td>
<td>1.56</td>
</tr>
<tr>
<td>Printer</td>
<td>122 (35.3%)</td>
<td>107 (30.9%)</td>
<td>45 (13%)</td>
<td>15 (4.3%)</td>
<td>57 (16.5%)</td>
<td>2.36</td>
<td>1.42</td>
</tr>
<tr>
<td>Emailing</td>
<td>128 (37.0%)</td>
<td>98 (28.3%)</td>
<td>55 (15.9%)</td>
<td>11 (3.2%)</td>
<td>56 (15.6%)</td>
<td>2.32</td>
<td>1.40</td>
</tr>
<tr>
<td>Internet</td>
<td>129 (37.3%)</td>
<td>83 (24.0%)</td>
<td>47 (13.6%)</td>
<td>11 (3.2%)</td>
<td>76 (22.0%)</td>
<td>2.49</td>
<td>1.54</td>
</tr>
<tr>
<td>PersonalWebsite</td>
<td>78 (22.6%)</td>
<td>57 (16.5%)</td>
<td>50 (14.5%)</td>
<td>32 (9.3%)</td>
<td>128 (37.2%)</td>
<td>3.22</td>
<td>1.61</td>
</tr>
<tr>
<td>NASS Website</td>
<td>46 (13.3%)</td>
<td>46 (13.3%)</td>
<td>60 (17.3%)</td>
<td>38 (11.0%)</td>
<td>156 (45.1%)</td>
<td>3.61</td>
<td>1.49</td>
</tr>
<tr>
<td>Newsgroups</td>
<td>54 (15.6%)</td>
<td>26 (7.5%)</td>
<td>86 (24.6%)</td>
<td>40 (11.6%)</td>
<td>140 (40.5%)</td>
<td>3.54</td>
<td>1.47</td>
</tr>
<tr>
<td>Discussionforum</td>
<td>41 (11.8%)</td>
<td>58 (16.8%)</td>
<td>68 (19.7%)</td>
<td>43 (12.4%)</td>
<td>136 (39.3%)</td>
<td>3.50</td>
<td>1.46</td>
</tr>
<tr>
<td>IM</td>
<td>85 (24.6%)</td>
<td>83 (24.0%)</td>
<td>35 (10.1%)</td>
<td>32 (9.2%)</td>
<td>111 (32.1%)</td>
<td>3.00</td>
<td>1.61</td>
</tr>
<tr>
<td>Webcasting</td>
<td>59 (17.1%)</td>
<td>16 (4.6%)</td>
<td>48 (13.9%)</td>
<td>39 (10.1%)</td>
<td>188 (54.3%)</td>
<td>3.80</td>
<td>1.54</td>
</tr>
<tr>
<td>Interactive TV</td>
<td>44 (12.7%)</td>
<td>39 (11.3%)</td>
<td>10 (2.9%)</td>
<td>28 (8.1%)</td>
<td>225 (65.0%)</td>
<td>4.01</td>
<td>1.51</td>
</tr>
<tr>
<td>V/conferencing</td>
<td>48 (13.9%)</td>
<td>11 (3.2%)</td>
<td>33 (9.5%)</td>
<td>27 (7.8%)</td>
<td>227 (65.6%)</td>
<td>4.08</td>
<td>1.46</td>
</tr>
</tbody>
</table>

Table 21: Average Number of Years of Using ICT (N=346)

<table>
<thead>
<tr>
<th>Below 1 yr</th>
<th>1 to 4 yrs</th>
<th>5 to 9 yrs</th>
<th>&gt;10 yrs</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>34 (9.8%)</td>
<td>115 (32.3%)</td>
<td>143 (41.3%)</td>
<td>54 (15.6%)</td>
<td>2.62</td>
<td>.863</td>
</tr>
</tbody>
</table>

The results presented in Tables 20 and 21 show analysis of legislators' ICT usage levels using frequency counts, percentages, mean and standard deviation. It shows the details of use. For instance, the legislators mostly used the following ICT tools many times a day: fixed phone (47.1%, X= 1.76), mobile phone (45.4%, X=1.89), laptop (43.1%, X=2.34), SMS and desktop (42.8%, X=2.36/2.34), Internet (37.3%, X=2.49), emailing (37.0%, X=2.32) and printer (35.3%, X=2.36). Further analysis showed that the following ICT tools were used on a weekly basis: pager (26.6%, X=3.25), Newsgroups (24.6%, X=3.54), fax machine (23.4%, X=3.56) and iPhone/android (21.1%, X=3.25). Only 17.9% used a tablet and 17.3% used an iPad.
once a month. Sixty-five point six percent rarely used the following: video conferencing, interactive TV (65.0%), Web phone (62.1%), Webcasting (54.3%), NASS website (45.1%), newsgroups (40.5%), personal website (37.2%). Analysis on Table 21 indicated that most of the legislators had used ICT tools for between 5-9 years (41.3%) with 15.6% having used ICT tools for 10 years and above. Only 9.8% had used ICT tools for a period below 1 year and 32.3% had used ICT tools for between 1-4 years. The results suggest that the commonly used ICT tools were fixed phone, mobile phone, laptop, SMS, desktop computing, emailing and printer, in that order.

The third research question (section 1.5) was addressed by the qualitative aspect of the data analysis – document and observation analyses. The document analysis shows scanty reference to adoption and use of ICT. It shows availability of a draft ICT policy that is being processed that acknowledges the need to drive upwards the existing low level of use of ICT of legislators. The analysis revealed a low patronage of the ICT training facilities in the two training labs and resources in the library within the NASS complex. The facilities are mostly frequented by civil servants in the NASS. The observation analysis shows that ICT tools are not used by legislators in the committee meetings.

5.3.4 Inhibitors of the Use of ICT by Legislators

The fourth research question examined the inhibitors to the use of ICT by the legislators. To answer this research question, the researcher used the responses to the seventeen items in Table 22 to determine the inhibitors.

Table 22: Inhibitors to Legislators’ ICT Acceptance and Use (N=346)

<table>
<thead>
<tr>
<th>Statement</th>
<th>Agree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of financial resources</td>
<td>231</td>
<td>111</td>
<td>4</td>
<td>1.65</td>
<td>0.933</td>
</tr>
<tr>
<td>Lack of human capacity and skills</td>
<td>228</td>
<td>116</td>
<td>2</td>
<td>1.68</td>
<td>0.944</td>
</tr>
<tr>
<td>Overall sentiments that ICT does not change efficiency of tasks in legislature</td>
<td>167</td>
<td>162</td>
<td>17</td>
<td>1.99</td>
<td>0.981</td>
</tr>
<tr>
<td>No overall uniform support for ICT</td>
<td>189</td>
<td>140</td>
<td>17</td>
<td>1.86</td>
<td>0.966</td>
</tr>
<tr>
<td>Statement</td>
<td>Agree</td>
<td>Disagree</td>
<td>Undecided</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>---------</td>
<td>----------</td>
<td>-----------</td>
<td>------</td>
<td>-----</td>
</tr>
<tr>
<td>Lack of training on use of ICT for legislators</td>
<td>250 (72.3%)</td>
<td>79 (22.8%)</td>
<td>17 (4.9%)</td>
<td>1.51</td>
<td>0.842</td>
</tr>
<tr>
<td>I do not feel like using ICT</td>
<td>128 (37.0%)</td>
<td>218 (63.0%)</td>
<td>-</td>
<td>2.26</td>
<td>0.967</td>
</tr>
<tr>
<td>I do not like to use ICT for law making oversight and communication with constituents</td>
<td>118 (34.1%)</td>
<td>211 (61.0%)</td>
<td>17 (4.9%)</td>
<td>2.27</td>
<td>0.939</td>
</tr>
<tr>
<td>I feel insecure about using ICT in my legislative work</td>
<td>177 (51.2%)</td>
<td>169 (48.8%)</td>
<td>-</td>
<td>1.98</td>
<td>1.000</td>
</tr>
<tr>
<td>I do not like to use ICT for law making oversight and communication with constituents</td>
<td>158 (45.7%)</td>
<td>187 (54.0%)</td>
<td>1 (0.3%)</td>
<td>2.08</td>
<td>0.996</td>
</tr>
<tr>
<td>My constituents have no ICT tools and infrastructure for them to reach me or vice versa</td>
<td>176 (50.9%)</td>
<td>188 (48.6%)</td>
<td>2 (0.6%)</td>
<td>1.98</td>
<td>0.998</td>
</tr>
<tr>
<td>No power or electricity to access ICT tools</td>
<td>147 (42.5%)</td>
<td>198 (57.2%)</td>
<td>1 (0.3%)</td>
<td>2.15</td>
<td>0.989</td>
</tr>
<tr>
<td>I have a fear about use of ICT for legislative work</td>
<td>137 (39.6%)</td>
<td>208 (60.1%)</td>
<td>1 (0.3%)</td>
<td>2.21</td>
<td>0.979</td>
</tr>
<tr>
<td>Learning to use ICT skills for legislative work is time-consuming</td>
<td>115 (33.2%)</td>
<td>229 (66.2%)</td>
<td>2 (0.6%)</td>
<td>2.33</td>
<td>0.942</td>
</tr>
<tr>
<td>Lack of exposure to other parliaments where ICT is put to effective use</td>
<td>268 (77.5%)</td>
<td>78 (22.5%)</td>
<td>-</td>
<td>1.45</td>
<td>0.957</td>
</tr>
<tr>
<td>Lack of technical support for ICT use in NASS</td>
<td>221 (63.9%)</td>
<td>123 (35.5%)</td>
<td>2 (0.6%)</td>
<td>1.72</td>
<td>0.837</td>
</tr>
<tr>
<td>ICT tools are not just there</td>
<td>134 (38.7%)</td>
<td>210 (60.7%)</td>
<td>2 (0.6%)</td>
<td>2.22</td>
<td>0.974</td>
</tr>
<tr>
<td>Use of ICT is not trustworthy and safe in terms of privacy and security of personal and sensitive data</td>
<td>113 (32.7%)</td>
<td>226 (65.5%)</td>
<td>7 (2.0%)</td>
<td>2.23</td>
<td>0.936</td>
</tr>
<tr>
<td><strong>Average Weighted Mean</strong></td>
<td></td>
<td></td>
<td></td>
<td>1.98</td>
<td></td>
</tr>
</tbody>
</table>

Table 22 revealed lack of exposure to other parliaments where ICT is put to effective use (268 or 77.5%), lack of training on use of ICT for legislators (250 or 72.3%), lack of financial resources (231 or 66.8%), lack of technical support for ICT use in NASS (221 or 63.9%), lack of uniform support for ICT use (189 or 54.6%), insecurity about using ICT in legislative work (177 or 51.2%) and lack of ICT tools and infrastructure in constituencies (176 or 50.9%) and issues of beliefs, mindset and lack of
awareness of potentials of e-parliaments were additional comments generated as major inhibitors to ICT use among legislators.

The analysis of qualitative data in respect of the fourth research question (in-depth interview) shows that the inhibitors to ICT acceptance and use by legislators to include: fear of technology take-over of representative democracy, cultural contexts such as identity, technology spending/affordability, political alienation and lack of interest in ICT. These findings were not reported in the analysis of quantitative data. The observation analysis showed that ICT applications were not available in committee rooms and this may inhibit the acceptance and use of ICT by the legislators.

5.3.5 Relationships between Independent and Dependent Variables (ICT Acceptance and Use)

The fifth question sought to determine the existing relationships between the independent variables (such as culture, ICT availability, facilitating conditions, effort expectancy, social influence and performance expectancy) and the dependent variables (ICT acceptance and use) in the study. The summary of results is presented in Table 23.

<table>
<thead>
<tr>
<th>S/N</th>
<th>Variables</th>
<th>Mean</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ICT acceptance and usage</td>
<td>1.15</td>
<td>0.510</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Performance of legislative function</td>
<td>3.69</td>
<td>1.054</td>
<td>-0.107</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Culture</td>
<td>1.44</td>
<td>0.602</td>
<td>0.017</td>
<td>0.155</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>ICT availability</td>
<td>1.56</td>
<td>0.696</td>
<td>-0.049</td>
<td>-0.006</td>
<td>-0.057</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Facilitating conditions</td>
<td>11.73</td>
<td>2.318</td>
<td>0.026</td>
<td>-0.134</td>
<td>0.044</td>
<td>0.026</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Effort expectancy</td>
<td>1.80</td>
<td>0.711</td>
<td>0.064</td>
<td>0.273</td>
<td>0.134</td>
<td>0.258</td>
<td>-0.129</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The results on the relationships between independent and dependent variables (culture, ICT availability, facilitating conditions, effort expectancy, social influence and performance expectancy) and the dependent variables (ICT acceptance and usage) by legislators presented in Table 23 revealed that culture (r = 0.017), facilitating conditions (r = 0.026), effort expectancy (r = 0.064), social influence (r = 0.053) and performance expectancy (r = 0.060) were positively correlated with ICT acceptance and usage by legislators, though the relationships were not strong. However, ICT availability (r = -0.049) and performance of legislative functions (r = -0.107), behavioural intention (r = -0.027) and gender (r = -0.019) were found to be negatively correlated with ICT acceptance and usage. The negative relationships were found to be weak. The moderators of relationships in this study are strong, weak or moderate.

Further analysis of the relationship among variables revealed that performance of legislative functions was positively correlated with culture (r = 0.155), effort expectancy (r = 0.273), social influence (r = 0.265) and performance expectancy (r = 0.374) and negatively correlated with ICT availability (r = -0.006) and facilitating conditions (-0.134). Findings on relationships between culture and other variables revealed that culture was positively correlated with facilitating conditions (r = 0.044), effort expectancy (r = 0.134), social influences (r = 0.301), while performance expectancy (r = 0.169) was negatively correlated with ICT availability (r = 0.057). Findings revealed that ICT availability was positively correlated with facilitating conditions (r = 0.026), effort expectancy (r = 0.258), social influences (r = 0.038) and performance expectancy (r = 0.040) while facilitating conditions were found to be negatively correlated with effort expectancy (r = -0.129), social influences (r = -
and performance expectancy (r = -0.048). Effort expectancy was found to be positively correlated with social influences (r = 0.303) and performance expectancy (r = 0.392) while social influences were found to be positively correlated to performance expectancy (r = 0.419).

Behavioural intention was found to be positively correlated with performance of legislative function (r = 0.230), ICT availability (r = 0.171), effort expectancy (r = 0.075), social influence (r = 0.043) and performance expectancy (r = 0.147) but negatively correlated with culture (r = -0.125) and facilitating conditions (r = -0.058). Gender was found to be positively correlated with performance of legislative functions (r = 0.132), culture (r = 0.190), effort expectancy (r = 0.051), social influence (r = 0.137), performance of expectancy (r = 0.012), and behavioural intention (r = 0.063) but negatively correlated with ICT availability (r = -0.004) and facilitating conditions (r = -0.203). Further analysis of the relationships amongst the variables of the study is revealed in the path regression analysis based on the concepts or variables of the study.

5.4. Hypotheses Testing

This section presents the results of the hypotheses to establish how the independent variables in this study predict the acceptance and use of ICT by legislators in the performance of their legislative functions in the NASS. The study had two hypotheses, as outlined below.

5.4.1 Research Hypothesis 1: There is no significant relationship between legislators’ ICT skills, age, sex, level of education and acceptance and use of ICT in performance of legislative functions

To test this hypothesis, a multiple regression analysis was carried out, as shown in Tables 24 and 25.
Table 24: Regression Analysis

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Due to Regression</td>
<td>3.437</td>
<td>4</td>
<td>0.859</td>
<td>3.403</td>
<td>0.010</td>
</tr>
<tr>
<td>Due to Residual</td>
<td>83.077</td>
<td>329</td>
<td>0.253</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>86.515</td>
<td>333</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

R = 0.199
R² = 0.040
Adj R² = 0.028
Std Error of the Estimate = 0.503
Predictors: (Constant), skills, gender, academic, qualification, age
Dependent variable: ICT acceptance and Use

The results in Table 24 show a regression analysis of the relationship of ICT skills, gender, age, level of education and acceptance and use of ICT in performance of legislative functions. The results suggest a joint significant relationship between the independent variables (ICT skills, gender, age, level of education) and dependent variables (acceptance and use of ICT) (F 4, 29 = 3.403, p < 0.05). The results revealed that the independent variables (ICT skills, gender, age and level of education) were positively related (r = 0.199), though the relationship was weak. The independent variables were found to have jointly accounted for 4.0% of the total variance in acceptance and usage of ICT legislators (r² = 0.040).

Table 25: Relative Contribution of ICT skills, Age, Sex, Level of Education and Acceptance and Usage of ICT in Performance of Legislative Functions

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardised Coefficients</th>
<th>Standardised Coefficients</th>
<th>t</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>Std Error</td>
<td>Beta</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ICT acceptance and Usage</td>
<td>1.883</td>
<td>0.235</td>
<td>8.007</td>
<td>0.000</td>
</tr>
<tr>
<td>ICT skills</td>
<td>-0.019</td>
<td>0.042</td>
<td>-0.025</td>
<td>0.452</td>
</tr>
<tr>
<td>Age</td>
<td>-0.066</td>
<td>0.034</td>
<td>-0.107</td>
<td>1.948</td>
</tr>
<tr>
<td>Gender</td>
<td>-0.095</td>
<td>0.123</td>
<td>-0.042</td>
<td>0.771</td>
</tr>
<tr>
<td>Academic qualification</td>
<td>-0.103</td>
<td>0.032</td>
<td>-0.172</td>
<td>3.164</td>
</tr>
</tbody>
</table>
The results in Table 25 on the relative contribution of independent variables (ICT skills, age, gender, academic qualification) to the dependent variables (ICT acceptance and use by legislators) and academic qualification (B = -0.172, t = 3.164, p<0.05), age (B = -0.107, t = 1.948, p<0.05), and gender (B = -0.042, t = 0.771, p<0.05) were factors that significantly contributed to the use of ICT acceptance and use by legislators.

5.4.2 Research Hypothesis 2: There is no significant relationship between culture, trust, technical support, attitudes of legislators to the benefits of use of ICT, actual use and performance of legislative functions

To test this hypothesis, a multiple regression analysis was conducted. See Tables 26, 27 and 28.

Table 26: Regression Analysis of Relationship of Culture, Trust, Technical Support, Attitude to ICT, Actual Use and Performance of Legislative Functions

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Due to Regression</td>
<td>8.299</td>
<td>5</td>
<td>1.660</td>
<td>3.850</td>
<td>0.002</td>
</tr>
<tr>
<td>Due to Residual</td>
<td>142.698</td>
<td>331</td>
<td>0.431</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>150.997</td>
<td>336</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

R = 0.234
R² = 0.055
Adj R² = 0.041
Std Error of the Estimate = 0.657
Predictors: (Constant), usage and acceptance, trust, culture, technical support, attitude to ICT.

The results in Table 26 indicate that there was a joint significant relationship (F 4, 29 = 3.403, p < 0.05) between the independent variables (culture, trust, technical support, attitude to ICT, actual use) and dependent variables (performance of legislative functions). The results revealed that the independent variables (culture, trust, technical support, attitude to ICT, actual use) were positively related (r= 0.234), though the relationship was weak. Culture, trust, technical support, attitude towards
ICT and actual use were found to have jointly accounted for 5.5% of the total variance in ICT acceptance and use by the legislators \( (r^2 = 0.055) \). Table 27 shows a summary of relative contribution of independent variables to the dependent variable of the study.

**Table 27: Relative Contribution of Culture, Trust, Technical Support, Attitude to ICT, ICT Use and Performance of Legislative Functions**

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardised Coefficients</th>
<th>Standardised Coefficients</th>
<th>t</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>Performance of legislative functions</td>
<td>1.532</td>
<td>0.177</td>
<td>8.675</td>
<td>0.000</td>
</tr>
<tr>
<td>Culture</td>
<td>-0.078</td>
<td>0.066</td>
<td>-0.070</td>
<td>1.186</td>
</tr>
<tr>
<td>Trust</td>
<td>0.059</td>
<td>0.045</td>
<td>0.070</td>
<td>1.289</td>
</tr>
<tr>
<td>Technical support</td>
<td>0.079</td>
<td>0.046</td>
<td>0.095</td>
<td>1.736</td>
</tr>
<tr>
<td>Attitude to ICT</td>
<td>0.013</td>
<td>0.062</td>
<td>0.012</td>
<td>0.208</td>
</tr>
<tr>
<td>ICT usage and acceptance</td>
<td>0.246</td>
<td>0.070</td>
<td>0.187</td>
<td>3.487</td>
</tr>
</tbody>
</table>

The results presented in Table 27 on the relative contribution of independent variables (culture, trust, technical support, attitude to ICT, ICT use) to the dependent variable (performance of legislative functions by legislators) revealed ICT use \( (B = 0.187, t = 3.487, p<0.05) \) as the only factor that significantly contributed to the performance of legislative functions by legislators. The results in Table 28 are the summary of the overall results of testing of the hypotheses. The ‘Conclusion’ column indicates whether that hypothesis was rejected or accepted, based on the result coefficients beta.

**Table 28: Summary of Overall Hypothesis Testing Results**

<table>
<thead>
<tr>
<th>Hypotheses/Path</th>
<th>Finding</th>
<th>Conclusion</th>
</tr>
</thead>
</table>
| 1. There is no significant relationship between legislators’ ICT skills, age, sex, level of education, and acceptance and use of ICT in performance of legislative functions | (i) \( (F 4, 29 = 3.403, p < 0.05) \)  
(ii) Joint significant relationship between independent variables (IV) and dependent variables (DV)  
(iii) \( (r= 0.199) \) | Rejected |
<table>
<thead>
<tr>
<th>Hypotheses/Path</th>
<th>Finding</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>(iv) (IV) were positively related though relationship was weak</td>
<td>(v) (IV) jointly accounted for 4.0% of the total variance on (DV) ($r^2 = 0.040$)</td>
<td></td>
</tr>
<tr>
<td>(v) (IV) jointly accounted for 4.0% of the total variance on (DV) ($r^2 = 0.040$)</td>
<td>(i) (F 4, 29 = 3.403, p &lt; 0.05)</td>
<td>Rejected</td>
</tr>
<tr>
<td>(ii) joint significant relationship between (IV) and (DV)</td>
<td>(iii) (IV) were positively related though relationship was weak</td>
<td></td>
</tr>
<tr>
<td>(iii) (IV) were positively related though relationship was weak</td>
<td>(iv) ($r = 0.234$)</td>
<td></td>
</tr>
<tr>
<td>(iv) ($r = 0.234$)</td>
<td>(v) (IV) jointly accounted for 5.5% of the total variance in ICT acceptance and use by the legislators ($r^2 = 0.055$)</td>
<td></td>
</tr>
<tr>
<td>(v) (IV) jointly accounted for 5.5% of the total variance in ICT acceptance and use by the legislators ($r^2 = 0.055$)</td>
<td>(vi) ICT use ($B = 0.187$, $t = 3.487$, $p &lt; 0.05$) was the only factor that significantly contributed to the performance of legislative functions</td>
<td></td>
</tr>
</tbody>
</table>

### 5.5 Interview Report

As indicated in Chapter Four of the study a combination of methods was used to collect data. Although the quantitative method was the dominant, the qualitative method was used as a complementary method. The aim was to utilize the qualitative data to buttress the quantitative findings. The interview schedule that was administered is presented as Appendix 6. The results of the interview conducted with some principal officers of the NASS are reported in detail in Appendix 11. The respondents that were reached for interview are listed in Table 29.
Table 29: Interview Respondents

<table>
<thead>
<tr>
<th>S/N</th>
<th>Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Chair of House Committee on ICT</td>
</tr>
<tr>
<td>2</td>
<td>Chair of Senate Committee on Communication</td>
</tr>
<tr>
<td>3</td>
<td>Chair of House Committee on Education</td>
</tr>
<tr>
<td>4</td>
<td>Clerk of the NASS</td>
</tr>
<tr>
<td>5</td>
<td>Director of ICT in the NASS</td>
</tr>
</tbody>
</table>

The responses from the interview are organized thematically in Appendix 11. In addition to the findings that are commensurate to specific research questions, the following issues emerged. The findings show that there is no ICT policy in the NASS, but that it is being drafted. The findings indicate the availability of hardware and software resources, including desktops in each office of legislators and civil servants. The findings show the availability of limited Internet access (wireless) for legislators and members of the public within the NASS complex. Budgetary allocation for ICT is very low and only between one and two percent of total budget of NASS is allocated to the use of ICT and associated matters. The findings indicate that funding to support ICT acceptance and use in NASS is a major problem.

5.6 Observation Report

Observational data collection was accomplished through an extended period of interaction between the researcher and study participants. The observation analysis responded to the research question three (see section 5.3.3). The findings presented here are those that do not fall under those discussed earlier alongside the research questions. For instance, it was found that the legislators seldom made use of the e-voting systems installed in the legislative chamber and often used voice voting. Some of the legislators indicated preference for voice voting over e-voting on the floor of the house. However, the legislators used mobile phones, i-pads and other hand-held devices for communication. Observation notes showed that, at a committee meeting, a legislator stated that “…PowerPoint projection should be considered for future meetings of the committee for members to follow keenly their oversight functions…” This comment suggests that legislators may explore the use of ICT in the future. The observation of the environment of the legislative chambers,
offices and committee rooms shows that minimal ICT tools such as desktops, e-voting systems and interaction/communication tools are deployed. The observation checklist is in Appendix 9.

5.7 Document Analysis Report

The document analysis had presented earlier findings related to research question four of the study (see section 5.3.4). The legislative documents analyzed include: Notice papers, House legislative journals, National Information Technology Development Agency Act of 2007 and Hansards (Senate Hansard for Thursday, 3 August, 2000; Senate Hansards for Tuesday, 29 February, 2000; Senate Hansard for Tuesday, 29 June, 2000; House of Representative Hansard for Wednesday, 23 June, 1999; House of Representative Hansard for 18 June, 1999; House of Representative Hansard for Friday 11 June, 1999; House of Representatives Hansard for Thursday, 22 March, 2007; House of Representative Hansard for Tuesday, 8 August, 2006, House of Representatives Hansard for Wednesday, 8 September, 1999). Further analysis revealed that there are limited features and digital documents available for public consumption on the website of NAS. The digital documents are not up-to-date and are available only in PDF format (Portable Document Format). These suggest that the digital documents are not made available in multiple formats such as HTML and XML (Hyper Text Markup Language and Extensible Markup Language), which are essential for online information retrieval, data transfer/conversion, metadata creation and archival of digital documents. This may infer limitations to the usage levels of ICT by the legislators and public. The document analysis guide is in Appendix 10.

5.8 Summary of Findings

The results presented in this chapter are based on a survey of predictors of ICT usage by legislators in NASS. The results of the study revealed, generally, that federal legislators in Nigeria have positive attitudes and perceptions towards ICT in the performance of their legislative functions. The results indicated that the most important predictors of ICT acceptance and use of ICT by legislators were academic qualifications, attitudes towards ICT, behavioural intention, age and organizational
impact. However, the findings indicated that the prediction relationships with ICT acceptance were negative. The exception to this was attitude towards ICT that was positive to technology acceptance and use.

The findings showed that ICT acceptance and use by legislators were positively correlated with variables such as facilitating conditions (organizational impact, technical support and government policy), effort expectancy (such as perceived ease of use and complexity), social influence (such as subjective norm, social factors, image, attitude, peer influence) and performance expectancy (such as perceived usefulness and outcome expectations).

The results obtained from the test of the hypotheses in the study returned a significant relationship between the independent variables and the dependent variables. The findings indicated that variables such as ICT skills, gender, age and level of education were significantly related to the dependent variables, acceptance and use (F 4, 29 = 3.403, p < 0.05). Similarly, findings indicated there was a joint significant relationship (F 4, 29 = 3.403, p < 0.05) between the independent variables (culture, trust, technical support, attitude to ICT and actual use) and the dependent variable (performance of legislative functions). Even though the relationships were significant, the variables such as ICT availability and performance of legislative functions were found to be negatively related with ICT acceptance and use. The only factor that significantly contributed to the performance of legislative functions was ICT use. Hence the need for recommendations to improving each of the variables, considering their roles in predicting legislators’ acceptance and use of ICT in the performance of legislative functions in the NASS. To further analyze the relationships amongst the variables of the study, a path regression analysis was conducted based, on the variables of the study.

The identified barriers to acceptance and use of ICT by legislators included lack of exposure to other e-parliaments, lack of training, lack of financial resources and funding by the NASS, lack of technical support, lack of uniform support, insecurity over the Internet and lack of ICT tools in constituencies.
Some of the solutions identified included an enabling environment and political will, funding, organizational support and overall improvement of ICT culture amongst legislators.

The observation report and document analysis complement the quantitative data by generally confirming that the legislators’ ICT usage level is low and emphasize challenges to ICT availability and access. The analyses of quantitative and qualitative data suggest that there were obvious inconsistencies in the responses. For instance, the qualitative data showed that the legislators were not exposed to parliaments that use e-parliaments and the quantitative data did not indicate this. In addition, the issue of culture (how to convince a legislator and rural citizen to use ICT to make legislative decisions/participate in legislative matters) was a barrier to the acceptance and use of ICT. This is in agreement with the information gathered from the qualitative data, but was a key issue with the quantitative data. These differences may arise as a result of the multiplicity of perceptions and attitudes by respondents of the phenomenon and the subjectivity of qualitative data. However, there are several areas of convergence. For instance, low use of ICT was reported in both cases and the issue of funding was a major issue, from both the quantitative and qualitative data.
CHAPTER SIX

DISCUSSION OF FINDINGS

6.1. Introduction

Chapter Five presented data from the survey and interviews based on the broad and specific objectives of the study. The study sought to determine the predictors of legislators' ICT acceptance and use in the performance of their legislative functions at the Nigerian National Assembly (NASS).

Chapter Six presents the discussion of the findings. This is organized around the research questions and hypotheses of the study. The discussion addresses the research questions and hypotheses of the study. The critical question of the study was: What are the predictors of legislators’ ICT acceptance and use? (See section 1.5 on research questions). The hypotheses were: There is no significant relationship between legislators’ ICT skills, age, sex, level of education and acceptance and use of ICT in their performance of legislative functions. There is no significant relationship between attitudes of legislators to benefits of use of ICT, use and performance of legislative functions. The discussion of the findings is presented in this order.

6.2 Summary of Findings on Predictors of Legislators’ ICT Acceptance and Use

The findings showed that the predictors of legislators' ICT acceptance and use were academic qualification \( (B = -124, t = 2.101) \), behavioural intention \( (B = -0.110, t = 1.730) \), attitude to ICT \( (B = 0.118, t = 1.560) \), culture \( (B = -0.123, t = 1.860) \) and age \( (B = -0.109, t = 1.88) \). Further findings revealed that the attitude and perceptions of respondents towards ICT acceptance and use in the performance of legislative functions were positive. Overall, this implied that legislators who had a positive attitude towards ICT would accept and use it more than those with a negative attitude towards ICT. It is clear from the findings that the legislators at NASS hold
positive views of acceptance and use of ICT. However, the findings indicated that the use of ICT by the legislators was very low. Further findings revealed that the inhibitors to the acceptance and the use of ICT by the legislators include the lack of exposure to other parliaments, where ICT is put to effective use, lack of training, lack of financial resources to support e-parliament, lack of technical support, fear of using ICT in legislative work, lack of political will and lack of ICT tools and infrastructure in constituencies for citizen participation. Lastly, the findings revealed that culture, facilitating conditions, effort expectancy, social influence and performance expectancy were positively related with ICT acceptance and usage by legislators. These relationships however were not strong. However, ICT availability and performance of legislative functions were found to be negatively related to ICT acceptance and use.

The findings from the hypotheses revealed that variables such as legislators’ ICT skills, age, sex, and level of education are positively correlated with the acceptance and use of ICT by legislators in the performance of other legislative functions. However, the relationship was weak. The findings of the hypotheses when tested further revealed that there were relationships between social and technical variables. These variables were culture, trust, technical support and attitudes towards the use of ICT that positively correlated with the legislators’ performance of legislative functions. The variables however were found to be ones that carry weak relationships.

6.3 Discussion of Findings

The purpose of this study was to assess the predictors of legislators’ ICT acceptance and use in the performance of legislative functions in the Nigerian National Assembly. The study addressed the following research questions: (1) What are the predictors of legislators’ ICT acceptance and use? (2) What are the attitudes and perceptions of legislators towards ICT? (3) What is the legislators’ ICT usage level in performing legislative functions? (4) What are the inhibitors to the use of ICT by legislators of NASS? (5) What relationships exist between independent variables (culture, ICT availability, facilitating conditions, effort expectancy, social influences
and performance expectancy) and dependent variables (ICT acceptance and usage)? The discussion below is presented based on the requisite research question and the corresponding findings of the study.

6.3.1 Predictors of Legislators’ ICT Acceptance and Use

The critical question in the study sought to determine the predictors of legislators’ acceptance and use of ICT in the NASS. The corresponding hypothesis stated that there was no significant relationship between the predictors and acceptance and use of ICT in the performance of legislative functions. The responses were analyzed and regressed to determine how they predicted the acceptance and use of ICT in the performance of legislative functions (dependent variable). The hypothesis was tested using regression analysis and stepwise regression analysis.

The findings revealed that variables such as academic qualification, behavioural intention, attitude to ICT, culture, age and organizational impact as the predictors of ICT acceptance and usage among legislators in the NASS. The findings suggest that academic qualification, behavioural intention, attitude, culture, age and organizational impact are predictors of legislators’ ICT acceptance and use (Beekhuyzen, Hellens and Siedle, 2005). These findings show that cultural contexts (identity, diversity, norms and traditions) are predictors of ICT acceptance and use by the legislators in the NASS. The findings of Lee, Trimi and Kim (2013) imply that cultures influence innovation and technology adoption. However, the prediction relationships of culture, academic qualification, behavioural intention, organizational impact and age, with ICT acceptance and use were negative. It can be inferred that older legislators (47 years of age and above) would have low level of ICT acceptance and usage just as younger legislators (46 years of age and below) would have a high level of ICT acceptance and use. These results are similar when compared with the findings of Czaja et al. (2006) which indicate that older adults were less likely than younger adults to use technology tools like computers and the World Wide Web. The results further show that some of the external variables applied had direct relationship with behavioural intention and user behaviour (moderators of relationships) and predicted ICT use and acceptance in the
performance of legislative functions. Variables such as status in NASS, gender, motivation, ICT policy, perceived relevance, perceived ease of use, security, technical support, individual impact, system quality, output quality and ICT skills were not significant predictors of ICT acceptance and use. This finding suggested that the six variables of academic qualification, behavioural intention, culture, attitude, organizational impact and age predicted the legislators’ acceptance and use of ICT. The prediction relationships were negative, with the exception of attitude towards ICT, which had a positive relationship with ICT acceptance and use. The prediction relationships can be either positive or negative.

The findings of the present study showed that academic qualification is a predictor of the adoption and use of ICT by the legislators. However, the prediction relationship of education is negative. The implication of this finding is that the legislators with low academic qualifications have high levels of ICT acceptance and use, while legislators with high academic qualifications have low ICT acceptance and use. This result is perhaps due to the fact that non-university degree holders (Diplomas, NCE) were considered to have a low level of education. The findings in the present study conform to other studies that indicated that academic qualification is a predictor of technology adoption (Davis and Venkatesh, 1996; Igbaria, 1993). Li, Kuo and Russell (1999) and Burke (2002) reported that education is often positively correlated with individual level of Internet literacy. Al-Queisi (2009) reported the insignificance of the predicting role of education in the adoption of Internet banking in a study comparing adoption and use of technology between Jordan and the UK. Al-Queisi (2009) reported that the hypothesized education moderating effect was not supported for the Jordanian sample in that study. Findings on behavioural intention may suggest that legislators with negative intentions would accept and use ICT to overcome their negative intentions much more readily than those with positive intentions. This is similar to the report of Maier, Laumer, Eckhardt and Wejtzel (2012), whose results included an assessment of the practical relevance of the findings. Al-Queisi (2009) reported the prediction relationship of education in a technology adoption research in Jordan and the UK. The study reported that, contrary to widely publicized findings, academic qualification had a negative prediction relationship with adoption and use of technology in a Jordanian sample.
The study by Al-Queisi (2009) exhibited similarities with the findings from the present study in Nigeria, in respect of the role of education which, although significant, the beta indicated a negative influence on the use of ICT. It appears that the level of education plays a moderating role, mostly in studies conducted in Western cultures such as the UK. The Jordanian sample did not show any major differences between respondents with low levels of education and those with high levels of education in their acceptance and use of ICT. The reason for this convergence may be due to the fact that both Jordan and Nigeria are developing countries. The common feature of the studies is that academic qualification negatively predicted technology acceptance and use. However, in the UK sample of the same study (Al-Queisi, 2009), the role of education was significant (with positive correlation) and the reason for this can be attributed to the fact that the moderating effects of academic qualification vary between the UK and Nigeria.

The findings in the present study in respect of organizational impact is confirmed by several studies (Venkatesh et al., 2003; Al-Gahtani, Hubona and Wang, 2007; Alshehri, Drew and AlGhamdi, 2012), who reported that expectancy, performance expectancy and facilitating conditions had a significant effect on behavioural intention and use of ICT in countries such as Iran and Saudi Arabia. For instance, the result of ICT users in Nigeria and Saudi Arabia show that when perception of usefulness and outcome expectations (performance expectancy) is high, with a provision for technical and organizational support (facilitating conditions), many people are likely to accept and use ICT. Similarly, studies such as those of Beekhuyzen, Von Hellens and Siedle (2005) have supported the fact that there are differences in the culture of technology spending (using France, South Korea and the US), centralized versus decentralized environments, hardware and telecommunications, innovation and risk taking, IS and strategic planning integration and information sharing, across developed and developing countries. The differences on the basis of culture and differences in groups of people are highlighted in a study by Beekhuyzen, Von Hellens and Siedle (2005) on the components of technology readiness, with variations in how innovative, optimistic, comfortable and secure different races (African-Americans and Latinos) are about technology.
These authors suggested that the moderators of relationships in the variables of the study, such as, behavioural intention, user behaviour and performance expectancy (perceived usefulness and output quality), were influenced by culture. Sun and Zhang (2006) reported a similar finding on the impact of performance expectancy in the UTAUT model. They pointed out that performance expectancy would be greater in countries that have a lower power distance and a more individualistic culture. Sun and Zhang (2006) concluded that the users of technology in a more individualistic culture were expected to make more independent decisions about adopting a technology. In this case, the most important decision was whether the technology would be beneficial to the users and would result in the stronger impact on the behavioural intention to use the ICT. This contrasts sharply with existing culture in Nigeria that is less individualistic. The impact of social and peer control is high, as indicated in the findings of the present study. Nigeria appears capitalist, highly Westernized and has representative democracy in recent times, the country still holds dearly to its different cultural and traditional backgrounds. There remain political idiosyncrasies, stemming from its population of close to 200 million people, with well over 250 different ethnic groupings (Okanlawon, 2012). Nigeria has other distinctive elements such as language, customs and religion that may influence the way they perceive ICT in representative democracy. Findings from key informants (five principal officers of NASS) showed that some feared the low ICT culture in the country could affect the acceptance and use of ICT.

Straub, Keil and Brennan (1997) reported results from a study done in the USA. This study reveals a more individualistic culture than that of Japan or South Korea, which has a more collective culture, with attendant impact on the adoption of ICT being stronger in the USA than in Japan or Korea. The authors indicated that a relationship existed between culture and behavioural intention to accept and use ICT. The culture in Nigeria is less individualistic, with strong communal and political ties along ethnic lines. This factor may cause unease among politicians with regard to adoption of e-parliament, since legislators’ use of ICT is more likely to be influenced by the environment. Leidner and Kayworth (2006) reviewed the role of culture in technology adoption. This study indicated that people from a high uncertainty avoidance (risk-averse) culture were less likely to experiment with or adopt new technologies. A
comparative was done examining South Korea and the USA. This was very similar to the findings in the present study that reported a significant relationship between culture and the acceptance and use of ICT. The political climate in Nigeria is uncertain, with ethnic suspicions, a threat of political instability and the recent acts of terrorism, which may make legislators of the NASS wary in adopting ICT. In the present study, the prediction relationship of culture was negative and the findings suggest that the behavioural intention of legislators was less likely to result in acceptance and use of ICT as a result of high cultural affinities in Nigeria. One possible explanation may be low ICT penetration and low ICT skills in the general populace. This finding indicated that fewer legislators in Nigeria may be inclined to accept and use ICT because of a culture of not using ICT in the performance of legislative functions. This conclusion was reached based on the assumption that the measurement instruments of most UTAUT constructs are valid across multiple cultures (Oshlyansky, Cairns and Thimbleby, 2007). Sun and Zhang (2006) reported on the impact of social influence (attitude) as greater in countries that have a less individualistic culture. This implies that users in a more collectivistic culture are more likely be affected by others when making decisions on technology adoption. The present study found that social influence (attitude towards ICT) was a predictor of acceptance and use of ICT. Therefore it is evident that attitude has a positive relationship with ICT acceptance and use. Consequently, legislators with a positive attitude towards ICT would accept and use ICT more than those with a negative attitude towards ICT.

Contrary to the findings of Thompson et al. (1991), this research found organizational impact (facilitating condition) as a predictor of ICT acceptance and use. This study revealed that the facilitating condition for technology was positively correlated with the use of technology (Venkatesh et al., 2003). The reason for this finding is based on the fact that Thompson et al. (1991) focused on predictors such as habits, anxiety and less on facilitating conditions. The present study focuses on facilitating conditions, among other factors, as major predictors. These findings are similar to the results of the study by Im, Hong and Kang (2009) that compared technology adoption in the USA and Korea. Gupta, Dasgupta and Gupta (2008) in India found that social influence (attitude) has a considerable effect on behavioural
intention. Moore and Benbasat (1991) agreed with UTAUT, that facilitating conditions (such as organizational impact) are a significant factor in system use. The UTAUT postulates that when conditions (such as organizational impact, technical support, government policy) facilitate the use of a technology, then people would be more inclined to adopt the technology, regardless of their nationality. In the present study it was found that facilitating conditions (organizational impact and support) positively correlated with legislators’ ICT acceptance and use, though the relationships were not strong. The overall indication of these was that facilitating conditions (organizational impact) significantly affected behavioural intention and social influence (attitude towards ICT) had significant effects on user behaviour.

The impact of performance expectancy (perceived usefulness) and trust were not significant on behavioural intention and user behaviour. Chiu, Huang and Yen (2010) corroborated this finding by indicating that trust remained a weak predictor of technology adoption. Eriksson, Kerem and Nilsson (2005) considered trust as a determinant of PEOU and PU and ultimately a predictor of ICT use. The reason for this difference may be attributed to the fact that the present study did not emphasize trust as the most central predictor in the social exchange process leading to ICT use. The findings from the present study show that academic qualifications and behavioural intentions were the best predictors of legislators’ ICT acceptance and use. The relationships were negative, inferring that the lower the academic qualification of the legislator the more likely the use of ICT. The finding suggested that the legislators with positive behavioural intention were less likely to accept and use ICT. These findings are in contrast with many UTAUT-based studies in Europe and the USA. The difference can be due to the low literacy levels in the developing countries. The findings from the present study show that participation at ICT training sessions did not necessarily result in ICT adoption. This implies that, even though the legislators at the NASS had positive behavioural intention towards ICT, there were other factors (such as availability of ICT tools and power supply) that hindered the acceptance and use of ICT. Unlike previous UTAUT based studies that tested the effect of facilitating conditions and behavioural intention on age, gender and experience (Venkatesh, Thong and Xu, 2012), the present study directly tested the relationships between moderating factors such as age, gender, academic
qualifications, ICT skills and status in the NASS (house of representative member or senator) on behavioural intention/user behaviour.

Further analysis in the present study indicated that age was a predictor of ICT acceptance and use. However, gender was not found to be a predictor. The results suggest that older legislators tended to face more difficulty in learning ICT when compared to their youthful counterpart (Morris et al., 2005; Plude and Hoyer, 1985). Although age, gender, experience and voluntary use are moderating variables in the original UTAUT (Venkatesh et al., 2003), these moderators were treated as external variables in the present study in order to determine their effects on legislators’ ICT acceptance and use. This approach was similar to that of Aggelidis and Chatzoglou (2009), Dadayan and Ferro (2005) and Jong and Wang (2009). In summary, culture, attitude, academic qualification, behavioural intention, organizational impact and age were found to be the predictors of legislators’ ICT acceptance and use. The prediction relationships in most cases were negative. However, attitude towards ICT was positive. Prediction relationships can either be positive or negative. Overall, academic qualification and behavioural intention were the best predictors of legislators’ acceptance and use of ICT.

6.3.2 Attitudes and Perceptions of Legislators Towards ICT

The second research objective was to determine the attitudes and perceptions of legislators towards ICT. The corresponding research question assessed the attitudes and perceptions of legislators towards ICT. The requisite hypothesis stated that there was no significant relationship between attitudes of legislators towards ICT acceptance and use, and the performance of legislative functions. The hypothesis was tested using regression analysis and stepwise regression analysis.

Attitude was found to be a predictor of legislators’ ICT acceptance and use. The results indicate that legislators had positive attitudes towards ICT. They also accepted and used some ICT tools in their legislative work. This was in spite of the fact that actual use of ICT is low. The lack of ICT training, paucity of funds in the NASS and lack of ICT skills may have affected the actual use of ICT by legislators.
Attitude towards ICT was found to be the most important contributor to perceived usefulness of ICT. It is important that legislators of NASS show a positive attitude in their use of ICT, as this is an indicator that they can accept and use ICT. Performance of legislative function was positively correlated with (attitude) social influence (social influence $r = 0.265$). Onasanya, Shehu, Oduwaiye and Shehu (2010) and Shiro (2008) suggest that positive attitude towards ICT was an important component for anyone who uses ICT. Further analysis indicated that continuous usage and exposure to ICT must be emphasized, if the positive attitude towards ICT usage was to be cultivated and maintained (Zhang et al., 2008; Zhang and Aikman, 2007). Dixon (2009) indicated, that the persistent usage and exposure to ICT will result in expertise in ICT. Further analysis of findings revealed that the legislators affirmed their ease of use of ICT in that perceived usefulness of ICT was confirmed. Lastly, the perceived relevance of ICT to the performance of legislative functions was confirmed. The legislators also had positive attitudes towards the use of ICT as a result of the relative advantages of the use of ICT.

Longe, Boateng, Longe and Olatubosun (2010) and Davis (1989) reported similar findings. The convergence of the results may be as a result of the relative advantages of the use of ICT that tended to influence the legislators' attitude towards ICT. In recent times there appears to be a growing interest in the use of technology, for purposes of development and good governance, not only in Nigeria but in the developing world. The electoral body in Nigeria (Independent National Electoral Commission) has engaged the NASS with a view to enacting legislation on the adoption of e-voting to address election rigging and violence that characterize elections in Nigeria. The gains in the telecommunications industry in Nigeria may have contributed towards the positive attitudes of the legislators to the adoption of technology, even though actual use remains low. Longe et al. (2010) showed in a study among adults in south-western Nigeria that perceived usefulness was high for ICT products. This was supported by Davis (1989), who found that perceived usefulness was high amongst people who intended to use computers. Meso, Musa and Mbarika (2005) emphasized that perceived usefulness and perceived ease of use, greater reliability of the technology and easier access to ICT were important predictors of the use of ICT. Laudon and Laudon (2000) and Ongori (2009)
suggested that ICT can be perceived as useful when it is able to gather large volume of information within a short time. It was suggested that for the positive attitudes and high perceptions of ICT to be maintained, and result in actual use of ICT, there may be a need for the frequency of ICT trainings, workshops and seminars for the legislators’ ICT acceptance and use to be increased (Carey, Chisholm and Irwin, 2002). The ICT skills and ICT experience influenced legislators’ positive attitudes towards the democratic potentials of ICT than more the background variables of each legislator (such as gender and the number of years spent on seat legislator). The results revealed legislators’ level of perceived ease of use, attitude, perceived usefulness and perceived relevance were high. Attitude was an important factor in predicting ICT acceptance and use. Several similar studies (Williamson et al., 2009) suggested that adoption of ICT was largely down to personal attitudes to it.

6.3.3 Legislators’ ICT Usage Level in the Performance of Legislative Functions

The third objective of the study was to assess the legislators’ ICT usage level in the performance of legislative functions. The corresponding research question sought legislators’ ICT usage level in the performance of legislative functions.

Analysis of findings revealed that the legislators’ ICT usage level was low. Findings further revealed that the weighted average estimated mean of legislators’ ICT usage level was 1.95, which was less than the expected mean of 2.10, further confirming low ICT usage level by the legislators. Despite their low usage of ICT, perhaps due to reasons such as inhibitors and cultural contexts, the majority of the legislators used ICT for the following purposes: reaching out to legislative aides and administrative staff, communicating with other legislators, performing minor legislative work and searching for procedural matters/drafts online. The reasons for low usage of ICT include lack of interest, change management and lack of awareness (Norton, 2007). ICT tools used included desktops, the Internet, printers, scanners, mobile telephony, emailing, Short Message Service and, to some extent, PowerPoint. The majority of legislators had never used video conferencing or social media. In terms of the categorizations of ICT, the results showed most legislators
used only administrative and communication tools. The findings indicated that the legislators did not use the NASS website. The UN e-parliament Survey Report (2012) showed that legislators from the developing world use ICT for purposes of searching records of all proceedings online, searching procedural matters involving drafting of motions, record bills for divisions online, searching petitions online, posting reports of the various committees online, staff development (such as online toolkits, e-learning) and communication (with constituents, other legislators, political parties and their aides).

The UN World e-parliament survey indicated that legislators in Europe and European parliaments used parliamentary websites primarily for information provision and bilateral interactivity (such as offering email access to MPs, online consultation and other parliamentary staff). In contrast to legislators in Nigeria, the level of use of ICT by legislators in developed countries was reported to be high (UN World e-parliament Survey Report, 2012). Several studies (Filzmaier et al, 2004, p.25; Cardoso et al, 2004, p.38) reported a high degree of use of ICT in Europe to support internal communications and relationships between representatives and party and parliamentary staff, which in many cases exceeded the use of ICTs to support external communications with voters and lobbyists. The difference in the level of use of ICT between legislators in Nigeria and their colleagues in Europe and America may be explained by reasons such as low funding (less than 2% of total NASS budget is spent on ICT whereas funding is much higher in the developed countries), lack of ICT culture, lack of facilitating conditions, poor ICT infrastructure across Nigeria and limited awareness of the potentials for ICT adoption for representative democracy.

Norton (2007, p.6) reported that most MPs in Britain used ICT, mainly for the purpose of correspondence and publicity of their work on websites, however, some MPs avoid using the Internet. Some are hesitant to use the Internet. Other MPs prefer to reply by letter, so as not to privilege e-mail over ordinary mail. Norton (2007) concluded that some MPs may be wary of the new technology, but they accept that they have to utilize it. Francoli and Ward (2007) identified other uses of ICT by MPs. This includes the use of blogs and social networking sites such as
Facebook and MySpace. Studies (Norton, 2007; Francoli and Ward, 2007) concluded that the purpose of use by MPs was mostly as a way of supplementing or reinforcing the existing means of promoting themselves and their parties, to constituents. They use the Internet to develop and justify their views and encourage constituents, and others, to support them. These findings suggest that the use of ICT was largely at the individual level rather than at the institutional level. This is similar to the finding in the present study, where individual legislators used ICT more in their day-to-day lives but seldom in the performance of legislative functions. One explanation may be the absence of a clear-cut position on the future of ICT adoption by the political leadership of the NASS. There is no ICT policy in the NASS, as the processing is on-going. Chen (2002) revealed the existence of an urban-rural divide in the levels of use of the Internet by elected representatives in a study in Australia. Chen (2002) surveyed a sample of 1,500 MPs. The study identified differences in usage of the World Wide Web and email, depending on the region the MP belonged to in Australia.

The present study emphasized the predictive relationship of gender to legislators’ ICT acceptance and use. The NASS, female legislators did not differ significantly from their male counterparts in their frequency of use of the World Wide Web or email. This was similar to the findings of Kernaghan, Riehle and Lo (2003) in Canada. In the Australian case, female MPs demonstrated lower levels of Web browsing, but used email at comparable frequencies. Francoli and Ward (2007) concluded that MPs were more interested in purposeful and increased effectiveness, improved internal communication or increased Internet use in electoral campaigns, than in a general increase in political communication between political elites and their public. The similarities between the present study and the previous studies are based on the fact that both reported that citizens’ use of ICT in parliament was very low. Similarities were that the studies were all conducted on members of the legislature and involved large sample sizes from both Canada and Australia. These countries also practice representative democracy similar to that of Nigeria. In all the studies, the issue of citizen participation was a problem. This is due to the vastness of the countries and difficulty in accessing certain remote and rural locations. This can be related to the situation in Nigeria. Variables such as culture, facilitating
conditions, effort expectancy, social influence and performance expectancy were positively correlated to ICT acceptance and use by legislators. These variables indicated that, the proper application can result in ICT acceptance and use by legislators. There was a tendency that overall levels of use of ICT would improve.

6.3.4 Inhibitors of Legislators’ ICT Acceptance and Use

The fourth objective of the study is to investigate the inhibitors of the acceptance and use of ICT by the elected representatives of the NASS. The corresponding research question sought to determine inhibitors of the use of ICT by legislators.

Lack of training for legislators, lack of financial resources, lack of technical support, insecurity about using ICT in legislative work and lack of ICT tools and infrastructure in constituencies were major inhibitors to ICT use among legislators in Nigeria. Previous studies have revealed commonly reported inhibitors to ICT acceptance and use such as poor infrastructure, poverty, accessibility and lack of ICT skills. The additional inhibitors that were found in this study were lack of exposure to e-parliament systems and fear of technology manipulation and political alienation. Karamagioli and Berntzen (2007) suggested that e-parliaments had challenges such as high public expectations, and demand for transparency in parliamentary practices, faster responses to their queries predominantly using Internet technology, issues of culture in Asia and the developing world, application of e-parliament solutions, such as advanced open standards, and archival software (applications used for Web and digital formats for archiving and preservation of digital documents) and, lastly, the problem of MPs staying online and the continuance of the use of ICT. The similarity to the present study is in underlining the fact that there are inhibitors to e-parliament adoption peculiar to the environment in which the technology is applied. Okiy (2005) revealed that problems to overall use of ICT by the general public in Nigeria included inadequate telecommunication facilities, poor levels of computer literacy, poor levels of computer facilities, poor levels of awareness of Internet facilities among policy-makers, government officials and the political class in general (Coleman and Nathanson, 2005). Further analysis of the findings obtained from the hypotheses showed that the variables such as ICT skills, gender, age and level of education
were positively related \((r = 0.199)\) to the acceptance and use of ICT. These relationships were weak. The findings indicate that there are factors other than the identified inhibitors that obstruct the legislators' use of ICT, such as institutional factors, fear, political suspicions, norms and the individual (habit). These findings imply that, with more education on the prospects of ICT adoption and improved ICT skills training, more legislators would use ICT.

### 6.3.5 Relationships between Independent and Dependent Variables

The fifth and last objective of the study was to determine the existing relationships between the study's independent variables such as culture, ICT availability, facilitating conditions, effort expectancy, social influences, performance expectancy and the dependent variables, ICT acceptance and use. The corresponding research question therefore sought to determine the relationships between independent variables (culture, ICT availability, facilitating conditions, effort expectancy, social influence and performance expectancy) and the dependent variable (ICT acceptance and use). This question was addressed by the two research hypotheses of the study, namely, (1) there is no significant relationship between legislators' ICT skills, age, sex, level of education and acceptance and use of ICT in performance of their legislative functions and (2) there is no significant relationship between attitudes of legislators to benefits of the use of ICT and use and performance of legislative functions. The hypotheses were tested using regression correlation analysis, stepwise regression analysis and path analysis.

The findings revealed that independent variables such as culture, facilitating conditions \((r = 0.026)\), effort expectancy \((r = 0.064)\), social influence \((r = 0.053)\), and performance expectancy \((r = 0.060)\) are positively correlated with ICT acceptance and use by legislators, though the relationships were not strong. These results are supported by the findings of Zhou, Lu and Wang (2010) that indicate performance expectancy, social influence and facilitating conditions positively correlated with user adoption. The study by Zhou et al. (2010) was conducted on the acceptance and use of ICT in banking in Asia, a region that shares similar developmental challenges with Nigeria. The reason for the convergence of findings may also be because Zhou et al.
(2010) and the present study made use of external variables to extend the UTAUT, even though, in the case of Zhou et al. (2010), variables from the Task Technology Fit (TTF) were used. Conversely, ICT availability ($r = -0.049$) and performance of legislative functions ($r = -0.107$) were found to be negatively correlated with ICT acceptance and use. The results on the relationship among the variables were that performance of legislative functions was positively correlated with culture ($r = 0.155$), effort expectancy ($r = 0.237$), social influence ($r = 0.265$) and performance expectancy ($r = 0.374$) but negatively correlated with ICT availability ($r = -0.006$) and facilitating conditions ($r = -0.134$). Findings on relationships between culture and other variables revealed that culture is positively correlated with facilitating conditions ($r = 0.044$), effort expectancy ($r = 0.134$), social influence ($r = 0.301$), and performance expectancy ($r = 0.169$) but negatively correlated with ICT availability ($r = -0.057$). Findings revealed that ICT availability is positively correlated with facilitating conditions ($r = 0.026$), effort expectancy ($r = 0.258$), social influence ($r = 0.038$) and performance expectancy ($r = 0.040$), while facilitating conditions were found to be negatively correlated with effort expectancy ($r = -0.129$), social influences ($r = -0.039$) and performance expectancy ($r = -0.048$). Effort expectancy was found to be positively correlated to social influences ($r = 0.303$) and performance expectancy ($r = 0.392$), while social influence was found to be positively correlated to performance expectancy ($r = 0.419$).

Several studies (Davis, 1989; Davis et al., 1989; Taylor and Todd, 1995b) support the findings of the present study on the hypothesized link between the variables effort expectancy (PEOU) and performance expectancy (PU), which is grounded in the literature on technology acceptance research. These previous studies also used model extensions such as the Decomposed Theory of Planned Behaviour by Taylor and Todd (1995) to better understand behaviour and IT usage. In a study conducted by Taylor and Todd (1995b) it was evident that business school students’ effort expectancy correlated with performance expectancy. These findings are corroborated by the present study. This corroboration can be due to some variable measurements that were common across the studies, such as perceived ease of use corresponding to complexity (Taylor et al., 1995a) and perceived usefulness corresponding to relative advantage (Taylor et al., 1995a). These variables were
operationalized in the same way as the analysis reported across the studies. In the present work, effort expectancy is positively correlated with social influence ($r = 0.303$) and performance expectancy ($r = 0.393$). Nevertheless, the relationship between effort expectancy and performance expectancy (that is, PEOU-PU) showed inconsistencies in other studies, indicating negative correlation (Sun and Zhang, 2006; Al-Queisi, 2009). The reasons for these seeming inconsistencies may be attributable to differences in operationalization of variables, varying sample sizes, income and level of education across cultures. Sun et al. (2006) used the TAM as a theoretical framework, while other studies that also used the TAM showed the opposite findings. Further explanation for these inconsistencies may be the more diverse backgrounds of the study populations, such as educated and non-educated, professionals and non-professionals and less experienced and more experienced, who are less likely to transfer their perceptions of ease of use to generalizations about perceived usefulness of ICT. In the present study, respondents are current users of ICT and are all legislators in the NASS.

The present study reported a positive correlation between social influence and performance expectancy ($r = 0.419$). This result implied that legislators may depend on colleagues’ opinions, or they may use other people’s experiences with ICT, to form their intentions or perceptions of usefulness. This finding is supported by Ghalandari (2012), who conducted a study on a sample of 350 ICT users in Iran. He analyzed data based on simple linear regression, which showed that variables such as performance expectancy, effort expectancy, social influence and facilitating conditions, were positively correlated and highly significant on users' behaviour and intention to use ICT. Several other studies (Venkatesh et al., 2000; Gupta, Dasgupta and Gupta, 2008; Chang, Hwang and Li, 2007; AlAwadhi and Morris, 2008) are consistent with the findings of the present study on a positive correlation between social influence and performance expectancy. The explanation for this consistency may be attributed to the fact that across the studies, social influence (attitude) was a predictor of technology acceptance and use.

Other works (Karahanna, Straub and Chervany, 1999; Taylor and Todd, 1995a; Venkatesh and Davis, 2000; Venkatesh et al., 2003) reported no link between social
influence and performance expectancy and that social influence may be weaker over time. The explanation for the difference with the finding from the present study may be due to the extensions made to UTAUT, appropriation of scales for each variable and emphasis on content validity, which were made to overcome the reported limitations of UTAUT (Bagozzi, 2007). Further explanation for the difference may be the variation in approaches used by the various studies. Many investigations adopted a statistical approach that used variances from Partial Least Squares (PLS), generated from using regression analysis designed in SPSS to explain the relationships among the variables. In this study the determination of relationships among variables is presented by the use of a path analysis approach. This approach is an extension of regression analysis. The present study suggested a positive effect of facilitating conditions on ICT acceptance and use ($r = 0.026$) in respect of the conduct of legislative functions by legislators. It thus seems necessary to provide organizational and technical support and training to encourage the legislators to accept and use ICT in their legislative life-styles. This finding is supported by other studies (Azjen, 1991; Thompson et al., 1991, Taylor and Todd, 1995a; Chang et al., 2007; Al Shafi and Weerakoddy, 2010).

The present investigation found that facilitating conditions negatively correlated with effort expectancy ($r = -0.129$), social influence ($r = -0.039$) and performance expectancy ($r = -0.048$). These findings are supported by Thompson et al. (1991), who reported that facilitating conditions were of less importance. The explanation for this may be that the legislators considered facilitating conditions from an individual rather than an organizational point of view with respect to their perceived ease of use of ICT.

### 6.4 Summary of Discussion of Findings

The discussion of the findings of the study suggest a significant relationship between all the variables of UTAUT and their extensions in predicting legislators’ ICT acceptance and use in the performance of their legislative functions at the NASS. The study has demonstrated that there are variables, besides those of UTAUT that can be used to extend and strengthen the UTAUT. The discussion has demonstrated
that variables such as culture, facilitating conditions, effort expectancy, social influence and performance expectancy are positively correlated with the legislators’ use of ICT. The relationships are not strong. The variables are therefore important to the acceptance and use of ICT by the legislators. Examination of findings has revealed that current research on UTAUT variables are impacted upon by many external variables drawn from different studies. The same pattern is evident in studies on earlier technology adoption models, such as TAM (Lee and Baskerville, 2003). However, UTAUT claims to have integrated eight established theories and models (Technology Acceptance Model, TAM; Theory of Reasoned Action, TRA; Motivational Model, MM; Theory of Planned Behaviour, TPB; a combination of Technology Acceptance Model, TAM and TPB model, CTAM &TPB; Model of PC Utilization, MPCU; Innovation Diffusion Theory, IDT; and Social Cognition Theory, SCT) into a mega-model of technology adoption. Results from the present study suggest the need for further work on the selection of variables and their integration into UTAUT. It is evident, based on the findings of the present study that no supportive evidence was found for positive correlation between ICT availability and ICT acceptance and use; facilitating conditions and effort expectancy, social influence and performance expectancy. Finally, the findings have exposed the multiple relationships amongst the UTAUT variables, when applied to a developing country like Nigeria, and the extensions to the model by variables such as culture and organizational support.
CHAPTER SEVEN

SUMMARY, CONCLUSION AND RECOMMENDATIONS

7.1 Introduction

The purpose of the study was to determine the predictors of legislators’ ICT acceptance and use in the performance of their legislative functions in the Nigerian National Assembly, NASS. The study sought to: (1) investigate the predictors of legislators’ ICT acceptance and use in the performance of their legislative functions; (2) examine the attitudes and perceptions of the federal legislators towards ICT; (3) assess the ICT usage level of the legislators; (4) determine the inhibitors to the acceptance and use of ICT by the legislators; and (5) investigate the relationships existing between independent variables (culture, ICT availability, facilitating conditions, effort expectancy, social influences and performance expectancy) and dependent variables (ICT acceptance and usage). The study was based on a positivist paradigm and underpinned by a combination of theoretical models known together as the Unified Theory of Acceptance and Use of Technology (UTAUT) by Venkatesh, Morris, Davis and Davis (2003). Quantitative and qualitative approaches were used with the survey design. The population of the study was all the members of the bicameral (Senate and House of Representatives) NASS. Data was collected through survey questionnaire and interviews. Qualitative and quantitative data were analyzed by using SPSS to generate narrations and descriptive and inferential statistics.

Chapter Seven is organized conceptually, based on the research questions. The chapter provides the overall summary of the findings, conclusion and recommendations of the study. Chapter Seven discusses the contributions of the study to policy, practice and theory. It also maps out future research directions.
7.2 Summary of Chapters

Chapter One provided the context of the study through the discussion of the following aspects: role of legislature from a global perspective, the legislature in Nigeria, use of ICT in legislative functions, statement of the problem, research objectives, research questions, hypotheses, delimitations and definitions of the study. Likewise, the Chapter briefly discussed theories and research methods employed in the study. The aim of this introductory Chapter was to provide the background of the study and set the stage for the formulation of the research questions and the organization of the study.

The theoretical framework in Chapter Two highlighted the various technology adoption theories/models (Technology Acceptance Model, Theory of Reasoned Action, Theory of Planned Behaviour, Combined Technology Acceptance Model and Theory of Planned Behaviour, Motivational Model, PC Utilization Model, Social Cognitive Theory, Innovation Diffusion Theory and the Unified Theory of Acceptance and Use of Technology Model) and how they have been applied by such researchers as Zhang, Li and Sun (2006), Wang and Yang (2005), Engebretsen (2005), Cody-Allen and Kishore (2006). In particular the Theory of Planned Behaviour (TPB), Theory of Reasoned Action (TRA), Technology Acceptance Model (TAM) and the Unified Technology Acceptance and Use of Technology Model (UTAUT) were discussed. The chapter aimed at providing a clear theoretical framework appropriate for the study, since recent technology adoption literature has exposed the inadequacies of the commonly used TAM and UTAUT models in explaining technology adoption in non-Western cultures such as Nigeria (Bagozzi, 2007). Therefore, this presented the mapping of the research questions to the UTAUT constructs in order to show the relationships among the variables of the study.

Chapter Three focused on and presented the need for the extension of UTAUT with variables such as culture, fear, security, trust, motivation, ICT policy and power supply (see section 3.7). These factors are peculiar to Nigeria and are useful in extending UTAUT to better understand the technology adoption phenomenon in the context of a developing country.
The literature (empirical and descriptive) was reviewed in Chapter Three. The purpose of the chapter was to situate the study in the current debate in the domain of existing knowledge. As such, this Chapter focused on identifying practical, policy and theoretical gaps in the literature and how the study would contribute in addressing them. The literature reviewed was predicated on the research problem; research questions; and key variables of the theoretical model, such as Predictors of ICT acceptance and use, Performance Expectancy-Perceived Usefulness (PU), Relative Advantages; Attitude and Perceptions; Effort Expectancy–Perceived Ease of Use (PEOU), User Behaviour; Behavioural Intention (BI), Usage Behaviour and Social Influence (Subjective norm, Social factors, Image); Actual Use; Moderating Factors of Predictors (e.g. age, sex); Inhibiting Factors to Acceptance and Use of Technology and Facilitating Conditions (such as culture, language, infrastructure, cost, accessibility, reliability, trust, security, privacy, government policy, compatibility, organizational and technical support and perceived behavioural control). The literature reviewed covered the various criticisms of models of technology adoption, such as UTAUT, and how it would be extended and improved in order to provide clear relationships amongst the model constructs. The literature also highlighted a growing concern about the suitability of UTAUT to non-Western cultures (Al-Gahtani et al., 2007). It further revealed that, though technology adoption studies seemingly were over-researched, there was limited research in the area of adoption and use of ICT by elected representatives. By implication, this indicated the need not only for extension of contextual boundaries of technology adoption by legislators in Nigeria, but also the need for more knowledge of models of technology adoption and e-parliament practice in a developing country. The literature revealed evidence from extant research, showing emphasis of technology adoption studies on organizational and not the individual (in this study the legislators) contexts. Overall, Chapter Three was aimed at integrating and summarizing research in the area of e-parliament adoption by legislators from the perspective of a developing country.

Chapter Four outlined the research methodology and design. The chapter presented the population, sampling procedure, data collection procedures, reliability and validity, data analysis and ethical considerations in research. The overall research
methodology adapted paradigms commonly used in technology adoption research, such as positivism and interpretivism (Klein and Lyytinen, 1984; Livari, 1991). Chapter Four gave an overview of the positivist paradigm which was used in the study, along with both quantitative and qualitative approaches. A survey research design, which is in line with the positivist paradigm, was applied. The chapter also covered the test-retest of the instruments that was conducted on 24 state legislators in Kwara State of Nigeria. The reliability in this study was achieved with a test re-test and subjection of the results to a Cronbach Alpha. The expected reliability stood at r=0.92, which was adequate (see Chapter 4, Tables 4.1 and 4.2). The overall purpose of this chapter was to describe the research methodology of the study, explain the sample selection, describe the procedure used in designing the instrument and collecting the data and lastly to provide an explanation of the statistical procedures used to analyze the data.

Chapter Five covered data analysis and presentation of the results from the survey conducted on the legislators’ acceptance and use of ICT in the performance of legislative functions in the NASS. A high response rate of respondents was recorded at 74% (with a breakdown showing the members of the house of representatives, lower house at 79.5% and 17.3% of respondents were senators, upper house and 3.2% were senior legislative aides and personal assistants). Finally, demographic analysis was conducted between status in the NASS (member of either house of representatives/senate), gender, age, educational level and legislators’ ICT acceptance and use in the performance of their legislative functions at the NASS. The results revealed that federal legislators in Nigeria have positive attitudes and perceptions towards the use of ICT in the performance of their legislative functions. The results also indicated that the most important predictors of ICT acceptance and use of ICT by legislators were attitudes towards ICT, behavioural intention, academic qualifications, age and organizational impact. The general aim of the Chapter Five is to provide an overview of the data collected and giving a description of the transformation of raw data into meaningful facts using specified methods of data presentation.
Chapter 6 discussed the research findings and provided an interpretation of the results and how they compared with related existent literature. The discussion revealed significant relationships between the variables of UTAUT and variables such as culture and organizational impact that were used to extend UTAUT to better predict legislators’ ICT acceptance and use in the performance of their legislative functions at the NASS. The results demonstrated that there were variables, besides those of UTAUT, such as culture that could be used to extend and make UTAUT more robust.

The overall aim of this Seventh Chapter is to provide a discussion of the research findings presented in Chapter Five. The chapter presented answers to the questions posed in Chapter One, explained how the results support the answers and how the answers fit in with existing knowledge concerning the phenomenon of the study.

7.3 Summary of Findings

The main findings derived from the study are summarized below. The summary is based on the research questions as the framework for organizing this section. Generally, the findings revealed that there is no significant relationship between legislators’ ICT skills, age, gender, level of education and acceptance and use of ICT in their performance of legislative functions. There is no significant relationship between attitudes of legislators to benefits of the use of ICT and use and performance of legislative functions.

The first research question sought to determine the predictors of legislators’ ICT acceptance and use in the performance of legislative functions in the NASS. The sub-questions investigated the determinants of use, and ease of use, of ICT by the legislators, the influence of UTAUT variables such as social influence, performance expectancy, effort expectancy and facilitating conditions on legislators’ ICT acceptance and use. Other sub-questions investigated the predictive ability of external variables such as fear, culture, trust, insecurity, availability and accessibility on ICT acceptance and use. The main research question and sub-question were addressed through the literature review and an empirical survey, respectively. From
the reviewed literature it was evident that there was a lack of cohesive theoretical model associated with e-parliament acceptance and use in the context of Nigeria. Therefore there was a need to extend UTAUT with a variable such as culture, to better understand issues such as predictors of ICT acceptance and use by elected representatives in the context of Nigeria. The literature reviewed in the study revealed that technology adoption models such as TAM and UTAUT have been criticized for not being appropriate for determining issues of technology adoption in non-Western cultures. It was envisaged that an extension of UTAUT attributes, with variables such as accessibility, trust, fear, culture, organizational impact for better understanding legislators’ ICT acceptance and use for the performance of legislative functions in the NASS, would help address this gap from the perspectives of developing countries. The findings from the empirical part of the study showed that culture (B = -0.123, t = 1.860), academic qualification (B = -0.124, t = 2.101), attitude to ICT (B = 0.118, t = 1.560), behavioural intention (B = -0.110, t = 1.730), age (B = -0.109, t = 1.88), and organizational impact (B = -0.105, t = 1.712) as the most important predictors of ICT acceptance and usage among legislators in the NASS. The prediction relationships of culture, academic qualification, behavioural intention, organizational impact, and age with ICT acceptance and use were negative. The prediction relationship of attitude was positive. Overall, culture, academic qualification, attitude, behavioural intention, age and organizational impact are predictors of legislators’ ICT acceptance and use. The beta value is considered in this case. A beta value (B above) less than .100 (B < 0.100) indicates that the IV (independent variable) or MV (moderating variable) does not have an effect on the DV (dependent variable) while a beta value above 0.100 (B > 0.100) signifies an effect of a variable on the other. The B and t values show whether each independent variable coefficient is significant or not. It also shows the percentage contribution of the IV to the DV. The prediction can be either negative or positive. A negative prediction can be interpreted to mean an inverse relationship. For example, age is a predictor of ICT acceptance and use, but the relationship is negative, which implies that older legislators have a lower level of ICT acceptance and usage. The results indicate that older legislators (47 years of age and older) would have a low level of ICT acceptance and usage, just as younger legislators (46 years of age and below) would have high levels of ICT acceptance and use. This result implies that legislators
with a positive attitude to ICT would accept and use ICT more than those with a negative attitude to ICT.

The second research question was an attempt to discover the attitudes and perceptions of legislators towards ICT. This research question was addressed through the literature review and an empirical survey. The findings showed that the legislators’ level of perceived ease of use, attitude, perceived usefulness and perceived relevance of ICT is high. The findings revealed that the attitude of legislators towards ICT acceptance and usage had a Weighted Average Estimated Mean of 1.76, which was greater than the Expected Mean of 1.50. The Expected Mean was calculated by picking the middle mean or finding the average of the two middle means. For instance, for Perceived Relevance Expected Mean was \((1.67 + 1.58)/2 = 1.62\); for ICT acceptance and use Expected Mean was 2.10. The results showed findings indicated that for Perceived Ease of Use, Expected Mean was 1.58 and the Weighted Average Mean was 1.72, revealing that the perceived ease of use was high. For Perceived Usefulness, the Expected Mean was 1.51 and the Weighted Average Mean was 1.67, suggesting that perceived usefulness of ICT was high. Similarly, the Expected Mean of Perceived Relevance was 1.62 and the Weighted Average Estimated Mean was 1.71, affirming that the legislators had a high perceived relevance of ICT. The positive dispositions of the legislators to the potentials of e-parliament was indicated when the majority of the respondents (269 or 77.7%, X = 1.44) agreed with the statement that “using ICT in work as legislator is pleasant”, while the majority of the respondents (196 or 56.6%, X = 2.18) disagreed with statements such as “I would prefer paper-based work because of negative impressions I have about use of ICT” (where X=Mean). Similarly, the legislators’ perceived ease of use of ICT was reflected in the agreement of legislators with statements that supported the ease of use of ICT, as well as their disagreement with statements that do not support ease of use of ICT. For instance, the majority of the legislators (285 or 76.6%, X = 1.46) agreed with the fact that “learning to interact with the ICT, Internet, websites and ICT tools would be easy for me”, while the majority of the legislators (177 or 51.2%, X = 1.63) disagreed with statements such as “I would find ICT difficult to use”. The usefulness of ICT to legislative work was affirmed through the agreement of the majority of respondents with statements that
emphasized the usefulness of ICT and their disagreement with statements that portrayed ICT as not useful for legislative work. For example, the majority of the legislators (244 or 70.5%) agreed with statements such as “Internet usage increases the productivity of my legislative work”, while the majority of the legislators (173 or 50.0%) disagreed with statements such as “The use of ICT/Internet for legislative work would be useless to me”. Lastly, the relevance of ICT to legislative work was affirmed when the majority of legislators agreed with statements that stressed the relevance of ICT. For example, the majority of the legislators (245 or 70.8%) agreed with statements such as “Use of ICT provides me with information that is relevant to my legislative job”. Overall, the findings suggest that legislators had a high perception and positive attitude to accept and use ICT in the performance of their legislative functions in the NASS.

The third research question sought to determine the legislators’ ICT usage level in performing legislative functions. This question was addressed through the literature review and an empirical survey. The findings showed that the legislators’ ICT usage level was low. The legislators used the following ICT tools many times a day: fixed phone, mobile phone, laptop, SMS and desktop, Internet, emailing and printer. Further analysis showed that the following ICT tools were used on a weekly basis: pager, Newsgroups, fax machine and iPhone/android. ICT tools such as NASS website, tablet and iPad were rarely used. Analysis of data in Table 20 (section 5.3.3) indicated that most of the legislators had used ICT tools for periods ranging between five and nine years and over, one to four years and less than one year. The results revealed that the commonly used ICT tools were fixed phone, mobile phone, laptop, SMS, desktop computing, emailing and printer, in that order.

The fourth research question was to discover the inhibitors of legislators’ ICT acceptance and use. This research question was addressed through a literature review and an empirical survey. The results showed that the inhibitors were lack of exposure to other parliaments where ICT is put to effective use (268 or 77.5%), lack of training (250 or 72.3%), lack of financial resources (231 or 66.8%), lack of technical support for ICT (221 or 63.9%), lack of uniform support (189 or 54.6%), insecurity about using ICT in legislative work (177 or 51.2%) and lack of ICT tools
and infrastructure in constituencies (176 or 50.9%). Additional issues that emerged from the in-depth interviews were cultural contexts, beliefs, mindset and lack of awareness of potentials of e-parliaments, fear of technology manipulation and e-parliament readiness. The Weighted Average Mean of 1.98 implied that there was a low level of inhibitors to ICT acceptance and use among legislators in the NASS. This suggests that there were factors other than the inhibitors, such as culture, performance expectancy, effort expectancy, social influence and facilitating conditions, that predicted the acceptance and use of ICT by the legislators.

The fifth research question probed the relationships between (IV) independent variables (such as culture, ICT availability, facilitating conditions, effort expectancy, social influence and performance expectancy) and (DV) dependent variables (ICT acceptance and use). This research question was addressed through a literature review and an empirical survey. The corresponding findings showed that culture \( (r = 0.017) \), facilitating conditions \( (r = 0.026) \), effort expectancy \( (r = 0.064) \), social influence \( (r = 0.053) \), and performance expectancy \( (r = 0.060) \) are positively related with ICT acceptance and usage by legislators, though the relationships were not strong. ICT availability \( (r = -0.049) \) and performance of legislative functions \( (r = -0.107) \) were found to be negatively related with ICT acceptance and usage. Findings on the relationship among the variables revealed that performance of legislative functions was positively correlated with culture \( (r = 0.155) \), effort expectancy \( (r = 0.273) \), social influence \( (r = 0.265) \), and performance expectancy \( (r = 0.374) \) and negatively correlated with ICT availability \( (r = -0.006) \) and facilitating conditions \( (r = -0.134) \). Further findings on relationships between culture and other variables revealed that culture is positively correlated with facilitating conditions \( (r = 0.044) \), effort expectancy \( (r = 0.134) \), social influences \( (r = 0.301) \), and performance expectancy \( (r = 0.169) \) are negatively correlated with ICT availability \( (r = 0.057) \). Similarly, ICT availability is positively correlated with facilitating conditions \( (r = 0.026) \), effort expectancy \( (r = 0.258) \), social influences \( (r = 0.038) \), and performance expectancy \( (r = 0.040) \), while facilitating conditions were found to be negatively related with effort expectancy \( (r = -0.129) \), social influences \( (r = -0.039) \), and performance expectancy \( (r = -0.048) \). Effort expectancy was found to be positively related to social influences \( (r = 0.303) \) and performance expectancy \( (r = 0.392) \).
while social influences were found to be positively related to performance expectancy \((r = 0.419)\). These findings are generated from a correlation matrix showing relationships among variables of interest by testing the strength or weakness of relationships among variables. The values are represented as follows: strong positive relationship \((r = 0.600 \text{ to } 0.999)\); weak positive relationship \((r = 0.200 \text{ to } 0.399)\); very weak positive relationship \((r = 0.199 \text{ and below})\); moderate relationship \((r = 0.400 \text{ to } 0.599)\); strong negative relationship \((r = -0.600 \text{ to } -0.999)\). There can also be very strong positive relationship, depending on the scale of choice. But for the purpose of this study it is limited to strong, weak and moderate. The aim of the research is to draw inferences based on the focus of the specific research question and the overall study.

The study tested two null hypotheses. The first hypothesis stated that there is no significant relationship between legislators’ ICT skills, age, sex, level of education and acceptance and use of ICT in the performance of their legislative functions. The corresponding finding revealed that (i). \((F_{4, 29} = 3.403, p < 0.05)\). This implies that the independent variables (ICT skills, gender, age and level of education) are positively related \((r= 0.199)\), though the relationship is weak. (ii). Joint significant relationship between independent variables (IV) and dependent variables (DV) (iii). \((r= 0.199)\) (iv). (IV) are positively related, though the relationship is weak (v). (IV) jointly accounted for 4.0% of the total variance on (DV) \((r^2 = 0.040)\). The relative contribution of independent variables (ICT skills, age, gender, academic qualification) to the dependent variable (ICT acceptance and usage by legislators) revealed academic qualification \((B = -0.172, t = 3.164, p<0.05)\), age \((B = -0.107, t = 1.948, p<0.05)\), and gender \((B = -0.042, t = 0.771, p<0.05)\) as factors that significantly contribute to the use of ICT acceptance and use by legislators. This hypothesis is rejected. The second hypothesis stated that there is no significant relationship between culture, trust, technical support and the attitudes of legislators to the benefits of use of ICT and use and performance of legislative functions. The corresponding finding revealed that: (i). \((F_{4, 29} = 3.403, p < 0.05)\). This implies that the independent variables (trust, technical support, attitude to ICT, actual use) are positively related \((r=0.234)\), though the relationship is weak. (ii). Joint significant relationship between (IV) and (DV) (iii). (IVs) are positively related, though the
relationship was weak (iv). \( r=0.234 \) (v). (IV) jointly accounted for 5.5% of the total variance in ICT acceptance and use by the legislators \( r^2 = 0.055 \) (vi). Similarly, the relative contribution of independent variables (culture, trust, technical support, attitude to ICT, ICT use) to the dependent variable (performance of legislative functions by legislators) revealed that culture \( (B = 0.187, t = 3.487, p<0.05) \) as the only factor that significantly contributed to performance of legislative functions by legislators. This hypothesis is also rejected. The \( r^2 \) represents the contribution of the IVs to DV. The beta value (B) is considered in this case. A beta value less than 0.100 \( (B < 0.100) \) indicates the IV or MV does not have an effect on DV, while a beta value above 0.100 \( (B > 0.100) \) signifies an effect of a variable on the other. The value of \( r \) always falls between –1 and 1. (a) A positive value of \( r \) indicates a positive correlation and a negative value of \( r \) indicates a negative correlation. (b) The closer \( r \) is to 1, the stronger the positive correlation and the closer \( r \) is to –1, the stronger the negative correlation. Values of \( r \) closer to zero indicate no linear association. (c) The larger the absolute value of \( r \), the stronger the relationship between the two variables. (d) \( r \) measures only the strength of linear relationship between two variables. If the unit of measurement on the variables is changed, the value of \( r \) remains the same.

7.4 Conclusion

This conclusion is based on each of the key findings on each of the research questions. The first research question investigated the predictors of legislators’ ICT acceptance and use in the performance of legislative functions in the NASS. The findings revealed that variables such as culture, academic qualification, attitude towards ICT, behavioural intention, age and organizational impact are the most important predictors of ICT acceptance and use by legislators in the context of Nigeria. The conclusion drawn from these findings is that those variables influencing ICT adoption and use among legislators in Nigeria appear to be similar to those in developed countries. It is therefore evident that, UTAUT seems to apply equally to both contexts. This shows the strength of UTAUT in studying the adoption of technology in different contexts. The factors that influence legislators’ acceptance and use of ICT are cultural contexts such as habits, culture of technology spending,
suitability of ICT to culture and socio-political ways of life. It is concluded that cultural
affinities notably helped to predict acceptance and use of ICT by legislators. The
implication is that culture is found to be of primary concern and not a secondary one
attracting only a mere theoretical mention, as suggested by previous studies
exploring culture and technology adoption (Colby and Albert, 2003). The findings
underlined a linkage between ICT acceptance and use and culture. The technology
adoption literature cited in Chapter Two (Bagozzi, 2007; Li and Kishore, 2006)
criticized technology adoption models such as TAM and UTAUT for not addressing
technology adoption in the context of culture. For instance, the culture of technology
spending (ICT practice) is different between Nigeria and the developed world and it
is not the same technologies adopted in the US that are applicable in Nigeria.
Several studies (Benbasat and Barki, 2007; Zhenghao, Liu and Chuan, 2009) have
shown that UTAUT has not been adequately tested empirically.

Findings from the study therefore support the suitability of UTAUT for e-parliament
adoption and use studies. However, the UTAUT is extended with the additional
variable, culture in the context of Nigeria. Regarding theory, the overall conclusion is
that the variables such as trust, security, accessibility, electricity, motivation and ICT
policy, often used to extend technology adoption models such as UTAUT in studies
in Asia and South America, were not found relevant in the context of legislators in
Nigeria. The full potentials of e-parliament cannot be realized in the NASS without
substantial legislators’ acceptance and use. This point is emphasized in the NASS’s
draft ICT policy, the National Information Technology Development Agency Act and
e-government policy of the federal government of Nigeria (Adeyeye and Iweha,
2005).

The second research question examined the legislators’ attitudes and perceptions
towards ICT. The key finding was that the legislators had positive attitudes towards
e-parliament and indicated preference for communication tools. This result would
seem to point to viability and growth of e-parliament in Nigeria. The positive attitudes
of the legislators towards ICT may result in actual use of ICT in the performance of
legislative functions, thus making the legislators more efficient and engaging.
Several studies cited earlier have shown that positive attitude is one of the factors that significantly contribute to technology adoption and use.

The third research question explored the legislators’ ICT usage level in performing legislative functions. The research findings suggest that the level of use of ICT by the legislators was low. The purpose of use was mostly for administrative work and communicating with co-legislators, respectively suggesting a tendency for a higher use for communication at low ICT skills’ level. This result suggests that there is the need to create awareness and capacity-building interventions. Similarly, there is a suggestion for a policy framework that institutionalizes ICT in the legislative functions of legislators in Nigeria.

The fourth research question sought to establish the inhibitors to the use of ICT by the legislators. The inhibitors included lack of training, lack of financial resources, lack of technical support and lack of ICT tools and infrastructure in constituencies. Some of these have been identified in previous studies of technology adoption. The consequent extension of UTAUT by variables peculiar to Nigeria resulted in identifying inhibitors such as lack of e-parliament exposure, insecurities and fears about the technology takeover of representative democracy. Wright and Street (2007) theorized about legislators’ fears of technology takeover of representative democracy, but limited empirical evidence has been found to support this. To a large extent, the inhibitors identified in this study are different from those reported elsewhere, presumably because of contextual factors such as literacy level, ICT infrastructure, and lack of a policy framework in Nigeria.

The fifth research question explained the relationships existing between independent variables (such as culture, ICT availability, facilitating conditions, effort expectancy, social influences and performance expectancy) and dependent variables (ICT acceptance and use). The findings revealed that culture, facilitating conditions, effort expectancy, social influence and performance expectancy are positively related to ICT acceptance and use by legislators. However, ICT availability and performance of legislative functions were found to be negatively related with ICT acceptance and usage. Culture was found to be positively correlated with the following constructs of
UTAUT, namely facilitating conditions and effort expectancy, whilst social influence and performance expectancy (also constructs of UTAUT) were negatively correlated with ICT availability. These hypothesized relationships can serve as a guide for decision-makers to support the management of the NASS and those who seek the success of e-parliament in Nigeria.

7.5 Recommendations

The study has identified a variety of issues in relation to the phenomenon. It has presented the recommendations of the study based on each of the research question and the findings, where applicable.

The first research question identified the predictors of legislators’ ICT acceptance and use in the performance of legislative functions. The major finding was that variables such as culture, academic qualification, attitude towards ICT, behavioural intention, age and organizational were important predictors of ICT acceptance and use by legislators in the context of Nigeria. The implication is that culture and organizational impact influence adoption and the use of ICT by legislators in Nigeria. The recommendation is that the first step in initiating an e-parliament implementation strategy in NASS should be the collection of comprehensive data on predictors of adoption and use of ICT by legislators. Good baseline data will inform policy on e-parliament. This will bridge the gap between factors that predict acceptance and use and inhibitors, and consequently devise means to increase potential adoption and use rates. There is also a need to deploy ICT tools that fit the cultural contexts such as language and political realities in Nigeria. This recommendation is supported by Al-Queisi (2009), Leidner and Kayworth (2006). The researchers in separate comparative studies done in the UK and Jordan and South Korea and the USA, recommended that technology adoption should be suited to the cultural context. Similar studies undertaken by Beekhuyzen, Von Hellens and Siedle (2005), Merchant (2007) and Colby and Albert (2003) have recommended fitting technology adoption and use to cultural beliefs. These recommendations were based on the evidence, that certain cultures may be resistant to change, and as a result
technology can be an overwhelming force under certain cultural and sociological contexts.

The second research question sought to reveal legislators’ attitudes and perceptions towards ICT. The major findings were that the legislators had positive attitudes towards the potentials of e-parliament for representative democracy. The implications of these are that the positive attitudes of the legislators may serve as leverage for high rates of adoption and use of e-parliament in the NASS. This reflects a tradition of legislators who have interest in ICT, compared with those who do not show interest in exploring ICT. It is evident that adoption and use of the ICT is largely influenced by personal attitudes. Therefore, the research findings recommended that legislators be provided with continuous ICT training in order that they can effectively use collaboration and communication tools. Moreover, it is appropriate to put in place ICT change agents from among the legislators to support them to become truly mobile workers. These agents are needed to develop and sustain the high level of attitude, perceived ease of use and perceived usefulness towards ICT usage. Following a study done in Turkey by Carey, Chisholm and Irwin (2002) it was recommended that there is a need for regular ICT training to leverage positive attitudes towards ICT to increase adoption and use rates. Siddike, Munshi and Sayeed (2011) recommended ICT training for librarians in Bangladesh to sustain positive attitudes towards ICT and higher rates of adoption and use.

The third research question examined the legislators’ ICT usage level when performing legislative functions. The relevant findings revealed a low usage level and that the purpose of use was mostly for administration and communication. It is evident that ICT usage is lower than expected, despite the positive attitude towards usage many frequently used emailing and mobile telephony. A small number however used instant messaging, social media and Web 2.0 tools. The implication is that there is a need to consciously engage the legislators in e-parliament adoption to increase usage levels by reinforcing existing means of communication. A policy framework is needed to promote ICT usage by legislators. This will enhance the development of ICT infrastructure in remote locations and enable the legislators to engage with the electorate. The management of the NASS and related stakeholders
are called upon to finalize the draft ICT policy of the NASS, which has been not been finalized for a long time. It is also recommended that institutional arrangements to increase the use of ICT by legislators be made and incentives created for legislators by the management of the NASS. These should be done to build awareness of legislators about potentials of ICT (Al-Zaidiyeen, Mei and Fook, 2010).

The fourth research question discussed legislators’ inhibitors to the use of ICT. The corresponding findings indicate that poor funding, lack of training, lack of awareness of potentials of e-parliament, lack of technical support and poor ICT infrastructure, particularly in remote locations are the factors that inhibit the adoption and use of ICT by the legislators. These inhibitors were similar to findings of previous technology adoption research. The new evidence indicate that lack of e-parliament exposure, rigid mindsets and beliefs and fears of technology manipulation are the inhibitors of the adoption and use of ICT by legislators in Nigeria. Previous literature has not reported these in the context of elected representatives. The findings indicated that there were factors other than the inhibitors that influenced ICT acceptance and use by legislators. The knowledge and extent to which these inhibitors affect individual legislators and NASS can help decision making (Becta, 2004). The implication is that knowledge of these inhibitors and the factors that will aid legislators in reaching appropriate decisions on proposed NASS’ ICT policy, e-parliament project and representative democracy in Nigeria. The proposed ICT policy of NASS needs to aim at overcoming these inhibitors through dynamic, cost-effective, adaptable and differentiated interventions. The ICT policy must develop and disseminate principles, standards, policies, strategies, and best practices for e-parliament. The ICT policy must be clear on the suitable strategy and ICTs for communication within the NASS and with the public. The suitability of ICT must include cultural contexts and costs. This must involve multiple tools such as communication media which the legislators showed preference for in the survey. The ICT policy must also consider a variety of ICT-based strategies (such as online and offline strategies). The adoption and use of ICT by legislators in the NASS should cater for individual preferences. The ICT policy intervention may include a budget for each legislator to help develop their ICT facilities and online presence for improved internal and external communication. It is also recommended that the ICT directorate
of the NASS should promote technical and organizational support in the form of training and access to infrastructure. The ICT training must fully take into cognizance the busy schedules of the legislators and associated matters. The training should not be mere lessons on MS Word, but aim at teaching legislators how to understand, and later take advantage of, the potential of ICT for representative democracy. The awareness is strategic because even those legislators who presently use ICT were not largely aware of its potentials for e-parliament. Williamson, Miller, Allen, Desai and Goodstone (2009) asserted that the MPs in Britain were divided on whether or not they were adequately resourced to use ICT and recommended that MPs and their staff needed more training. The management of ICT in the NASS should concern itself more with (i) technical issues such as training – exposure to e-parliament systems, (ii) accessibility, (iii) ICT availability, (iv) support services and (v) non-technical issues such as culture, affordability of ICT and change management in the e-parliament implementation. The management of NASS needs to sustain and improve user attitudes and perceptions of ICT. Lastly, the management of NASS needs to improve facilitating conditions and curb the inhibitors to legislators’ acceptance and use of ICT, by policy interventions and devising strategies aimed at promoting ICT adoption and use rates. Overall, financial support and provision of affordable ICT should be solicited from international agencies, donor bodies, foreign parliaments and countries to support e-parliament implementation in NASS.

The final research question looked for interrelationships between independent variables of the study (such as culture, ICT availability, facilitating conditions, effort expectancy, social influences and performance expectancy) and dependent variables (ICT acceptance and usage). The correlating findings revealed that culture, facilitating conditions, effort expectancy, social influence and performance expectancy are positively related to ICT acceptance and use by legislators. Gender was insignificant in influencing behavioural intention to use ICT. The key components of the adoption and use of ICT by legislators were facilitating conditions, effort expectancy, social influence and performance expectancy. Regarding social influence, the finding implied that legislators may, in the future, rely on their own beliefs rather than on colleagues’ opinions, or they may use their personal experience with ICT to form their attitude and perceptions of usefulness of ICT. The
understanding of these interrelationships, may serve as a guide for theorists of technology adoption to rethink and create new constructs and assumptions. The purpose is to improve models of technology adoption in the context of cross-cultural research. It is recommended that IS researchers and theorists of technology adoption models further explore the specific relationships among constructs of UTAUT, with a view to integrating elements such as culture. There is a need for a deeper understanding of the interrelationships of constructs of technology adoption. Zhou, Lu and Wang (2010) made this recommendation in a study on mobile banking adoption and use in China.

7.6 Contributions and Originality of the Study

The findings from the study contribute towards creating an awareness about policy, practical and theoretical interventions, to institutionalize ICT in the legislative functions of NASS. The findings also contribute towards understanding the predictors of technology adoption, particularly in the context of Nigeria. The predictors of ICT acceptance and use, such as gender, motivation, ICT policy, perceived relevance, perceived ease of use, security, technical support, individual impact, system quality, output quality and ICT skills. These predictors although prevalent in technology adoption literature, were found not to be significant predictors of ICT acceptance and use by legislators in Nigeria. These findings could aid political institutions such as the NASS in their decisions on whether or not to implement full-scale e-parliament initiatives. The theoretical framework is used to explain the need to extend UTAUT with variables peculiar to a developing country context, such as Nigeria, to better explain and understand the ICT adoption and use phenomenon. In terms of theory, the study has identified new constructs/variables, such as culture, to further extend UTAUT to better predict ICT acceptance and use by elected representatives in Nigeria. The evidence from the study on the predictors of ICT adoption and use provided a strong basis for understanding better relationships amongst variables/constructs in the UTAUT model.

The study has extended the generalizability of UTAUT from mostly education, commerce, banking, health and industry contexts to that of representative
democracy in Nigeria. Previous e-parliament acceptance and use studies have focused more on organizational domains and less on the individual, where perceived usefulness and outcome expectations have predicted behavioural intention to use ICT. In the case of legislators’ acceptance and use of ICT, other predictors (such as culture, academic qualification, attitude towards ICT, age and organizational impact) come to the fore. While several studies have called for more research on the role of culture in technology adoption, which is reported as under-studied (Colby and Albert, 2003; Bagozi, 2007), the present study integrated culture into UTAUT in a way that is similar to the prior unifications of eight models of technology adoption into UTAUT.

The theoretical framework for this study is the UTAUT model, which is a unification of eight existing models (see Chapter Two). The results from the study compare in several ways to those obtained from the original UTAUT (Venkatesh et al., 2003), which focused on the organizational context. This suggests that the extension of UTAUT with variables such as culture, motivation and security are essential in making the predictive validity of UTAUT in the context of elected representatives in Nigeria. These variables can be used to extend UTAUT in other similar studies in the context of Africa to test their applicability in the development of a new technology adoption model suitable for the continent.

7.7. Areas of Further Research

There are some gaps in the empirical literature from previous studies done in the area of technology adoption studies that were not addressed in this study. The findings in this study examined factors such as individual habits, beliefs and interest in ICT. These factors seem to determine the acceptance and use of technology by legislators, rather than cultural contexts. There is a need to evaluate constructs of UTAUT and integrate more into the model to make it more robust. Similarly, the extension of UTAUT with the variable culture in similar research contexts elsewhere is recommended. Future research can build on the study by including more structural elements of use, such as those related to user and tasks (Burton-Jones and Straub, 2006), to examine the explanatory power of behavioural intention and habit. Perhaps, the predictive power of culture may increase relative to that of behavioural intention when more complex daily functions of legislators are included in the
measurement scales. A survey of the general citizenry to know what predictors will influence citizens’ adoption and use of e-parliaments is recommended, as findings from the in-depth interviews indicated concerns to fit e-parliament to citizens’ expectations. Lastly, a comparison of the findings with those of predictors of citizens’ acceptance and use will improve understanding of technology adoption.
References


Alatawi, F., Dwevedi, Y., Williams, M. Rana, N. 2012. Conceptual model for examining knowledge management system (KMs) adoption in public sector organizations in Saudi Arabia tGov Workshop 12 (tGOV12), May 8 – 9, Brunel University, West London, UB8 3PH.


Al-Queisi, K. 2009. Analyzing the use of UTAUT model in explaining an online behaviour: Internet banking adoption, Department of Marketing and Branding, Brunel University, Jordan (Unpublished thesis).


Carlsson, J., Hyvonen, K., Repo, P. and Walden, P. 2005. Adoption of mobile services across different platforms, in proceedings. 18th Bled eCommerce Conference, Bled, Slovenia.


Colby, C. and Albert, T. 2003. The role of culture in technology adoption in the US: Results of the African American and Latino technology readiness survey. White paper, University of Hartford


Frick, M. 2003. The new bureaucracy; on informatics, the internet and politics. Gerardo Caetano and Rubén Perina (Publishers); Latin American Centre for Human Economics (CLAEH) and Organization of American States (OPD-OAS); Montevideo.


Im, I., Hong, S. and Kang, M. 2009. An international comparison of technology adoption- testing the UTAUT model. Research supported by NSF Grants, Yonsei University, Korea (Unpublished).


Lin, C. 2006. Organizational, technological, and environmental determinants of electronic commerce adoption in small and medium enterprises in Taiwan, Ph.D., Lynn University, 216 pp.; AAT 3213333 (Unpublished).


Sun, H., and Zhang, P. 2006. The role of moderating factors in user technology acceptance. *International Journal of Human-Computer Studies* (IJHCS), 64 (2) 53-78.


Williams, M., Rana, N., Dwivedi, Y. and Lal, B. 2011. Is UTAUT really used or just cited for the sake of it? a systematic review of citations of UTAUT’s originating article. In ECIS.


Zakour, A. 2004. Cultural differences and information technology acceptance proceedings of the 7th Annual Conference of the Southern Association for Information Systems, Savannah, GA.


APPENDIX 1: Letter of Introduction

The Clerk of the Nigerian National Assembly
Federal Secretariat Phase III
AbuBukar Bello Way
Central Business Area
P.M.B. 558
Abuja, Nigeria.

RE: Introducing Mr Gbolahan OLASINA – PhD Student at University of KwaZulu Natal

This letter serves to introduce and confirm that Mr Gbolahan Olasina is a duly registered PhD (Information Studies) candidate at the University of KwaZulu Natal. The title of his PhD research is, “Predictors of Legislators’ ICT Acceptance and Use in Performance of Legislative Functions in Nigerian National Assembly”. The outcome from the study is expected to improve practice, inform policy and extend theory in this field of study. As part of the requirements for the award of a PhD degree he is expected to undertake original research in an environment and place of his choice. The UKZN ethical compliance regulations require him to provide proof that the relevant authority where the research is to be undertaken has given approval.

We appreciate your support and understanding to grant Mr Gbolahan Olasina permission to carry out research in your organisation. Should you need any further clarification, do not hesitate to contact me.

Thank you in advance for your understanding

[Signature]

Prof Stephen Muthula (Information Studies Programme)

Supervisor and Academic Leader, Development Cluster
University of KwaZulu Natal
Private Bag X01, Scottsville 3209
Pietermaritzburg
Email: mmutula@ukzn.ac.za
Tel: +27 33 260 5571, +27 71 2750 109

School of Social Sciences
Postal Address: Private Bag X01, Scottsville, 3209, South Africa
Telephone: +27 33 260 3206, +27 71 2750 109
Fax: +27 33 260 4467
Email: socialsciences@ukzn.ac.za
APPENDIX 2: Request For Permission

Clerk of the Nigerian National Assembly
Federal Secretariat Phase III
Ahmadu Bello Way
Central Business Area
P.M.B. 558
Abuja, Nigeria

Dear Sir:

Request for Permission to Access the National Assembly Complex to Collect Data for PhD Research Work in the Nigerian National Assembly

Mr. Gbolahan OLASINA, a doctoral student of Information Studies, School of Social Sciences, University of Kwazulu Natal, UKZN, South Africa and a lecturer in the Department of Library and Information Science, University of Ilorin, Ilorin, Nigeria, writes to solicit for your consent to access the NASS Complex and collect data. My study is on “Predictors of Legislators’ ICT Acceptance and Use in Performance of Legislative Functions in Nigerian National Assembly”. The questionnaire is to be completed by all Senators and Members of the House of Representatives of the Federal Republic of Nigeria. Any member wanting to refrain from completing the questionnaire is obliged to do so. Permission is also sought to conduct an in-depth interview with principal officers of the NASS, the Clerk of the NASS and Chairs of Committees of both Houses on Education and ICT, please.

I would appreciate your cooperation by completing the administered questionnaire, interview and the research as a whole. The data obtained will be used solely for research work.

The study will help build an e-parliament policy, affect practice by assisting the implementation of an e-parliament strategy to enhance quality of legislative debates, bills and functions and extend theory.

School of Social Sciences
Postal Address: Private Bag X01, Scottsville, 3209, South Africa
Telephone: +27 (0) 33 260 0286
Facsimile: +27 (0) 33 260 0287
It will also express positive or negative opinions on legislators' perceptions of acceptance and use of ICT for performance of legislative functions and e-governance as a whole. The study will reveal the potentials of use of ICT for the present and future, if any at all, to enhance legislative work in the NASS and representative democracy in Nigeria as a whole. Lastly, it will raise consciousness of legislators and other stakeholders to use of ICT tools and strategies that can enhance performance of legislative functions and e-participation of citizens in governance.

Kindly direct your future enquiries concerning this study to my supervisor, Prof Stephen Mutha, (telephone 0027332605571, email: Mutula@ux.ac.za).

Thank you for your anticipated cooperation.

Gbolahan OLASINA
APPENDIX 3: Approval From NASS

FEDERAL REPUBLIC OF NIGERIA
NATIONAL ASSEMBLY
Three - Arms Zone P. M. B. 141, Abuja
SERGEANT-AT-ARMS

Tel:..............08037889166...
Fax:...................
Our Ref:..............
NASS/SAA/381/S.1

Prof. Stephen Mutula
(Information Studies Programme)
School of Social Studies
University of Kwa Zulu Natal
Private Bag X01
Scottsville. 3209
South Africa.

Sir,

RE: REQUEST FOR PERMISSION TO ACCESS THE NATIONAL ASSEMBLY COMPLEX TO COLLECT DATA FOR PhD RESEARCH WORK IN THE NIGERIAN NATIONAL ASSEMBLY.

Your letter on the above subject matter dated 6th April, 2012 refers, please.

I am directed to convey to you the approval of the Clerk to the National Assembly (CNA) to undertake your research work in National Assembly of Nigeria.

While wishing you safe arrival to the National Assembly, please accept the assurances of the CNA’s esteem regards.

IBRAHIM NDako
Dept. Sgt-At-Arms
For: CNA

APPENDIX 4: Informed Consent Letter

Dear Respondent

Informed Consent Letter

Researcher: Gbolahan OLASINA
Institution: University of KwaZulu-Natal
Telephone number: +27783735065
Email address: 212557162@stu.ukzn.ac.za
 gbolasina@yahoo.com

Supervisor: Prof. Stephen Mutula
Institution: University of KwaZulu-Natal
Telephone number: 033-260 5571
Email address: Mutulas@ukzn.ac.za

I, Gbolahan OLASINA, University of KwaZulu Natal, South Africa, kindly invite you to participate in the research project entitled, Predictors of Legislators’ ICT Acceptance and Use in Performance of Legislative Functions in Nigerian National Assembly

This research project is undertaken as part of the requirements of the PhD, which is undertaken through the University of KwaZulu-Natal, Information Studies Department.

The aim of this study is to investigate predictors of legislators’ ICT acceptance and use in performance of legislative functions in Nigerian National Assembly.

Participation in this research project is voluntary. You may refuse to participate or withdraw from the research project at any stage and for any reason without any form of disadvantage. There will be no monetary gain from participating in this research project. Confidentiality and anonymity of records identifying you as a participant will be maintained by the Development Cluster, at the University of KwaZulu-Natal.
If you have any questions or concerns about participating in this study, please feel free to contact myself or my supervisor at the numbers indicated above.

It should take you about 15 minutes to complete the questionnaire.

Thank you for participating in this research project.

24 March 2012

______________________
Signature Date

I ........................................................ hereby consent to participate in the above study.

Name: .............................................. Date: ........................ Signature:

Supervisor’s details

Prof. S. Mutula
Information Studies Programme
Academic Leader, Development
School of Social Sciences
UKZN

Student’s details

Gbolahan Olasina
Doctoral Student
Information Studies
School of Social Sciences
UKZN
APPENDIX 5: Questionnaire For Legislators

Questionnaire on Predictors of Legislators' ICT Acceptance and Use in the Performance of Legislative Functions in NASS (For Legislators)

This questionnaire is meant for legislators. Thank you for agreeing to participate in this survey for a PhD study on predictors of legislators’ ICT acceptance and use in performance of legislative functions in Nigerian National Assembly. All information provided will be used only for educational purpose and will not be divulged to third parties.

A: Demographic Data

Please provide your status in the NASS by ticking appropriately below:

i. 1. Member of House of Representative [ ] 2. Senator [ ] 3. Other [ ]

ii. State your gender:

1. Male [ ] 2. Female [ ]

iii. State your age:

1. 25-35 [ ] 2. 36-46 [ ] 3. 47-57 [ ] 4. 58-68 [ ] 5. 69 and above [ ]

iv. State your Academic Qualification:

Qualification 1. O’Level/A’level [ ] 2. NCE [ ] 3. Diploma [ ] 4. Degree [ ] 5. Higher Degrees [ ]

Other please specify………………………….

v. Committee membership (please write out committees you belong to such as Communications, Education and Science & Technology)

………………………………………………………………………………………………………………

vi. Please state political party affiliation

………………………………………………………………………………………………………………

vii. Please state the number of terms (years spent as legislator) you have served as Legislator

(a) 1 Term [ ] (b) 2 Terms [ ] (c) 3 Terms [ ] (d) More than 3 Terms [ ]

viii. What State do you represent?

………………………………………………………………………………………………………………

ix. State the Constituency you represent

………………………………………………………………………………………………………………

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x. State relevant ICT role/position you hold in the NASS (such as chair or member of Communications, Education or Science & Technology Committees)

xi. What is your ICT skills

1. No skills [ ] 2. Beginner/Learner [ ] 3. Skilled user [ ] 4. Advanced user [ ] 5. Expert [ ]

xii. Kindly respond to the items below by indicating your level of agreement with the statements.

<table>
<thead>
<tr>
<th>ICT Skills</th>
<th>Agree 3</th>
<th>Undecided 2</th>
<th>Disagree 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>a). I would find it easy to navigate within public websites and Internet without having ICT or computer skills.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b). It is not easy for me to understand ICT tools such as Internet because I do not have the required skills to use ICT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c). Having the Internet and computer skills improve my online interactions.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d). Having the ICT/Internet and computer skills enable me to access the e-services provided through ICT tools, the Internet, emailing, websites, etc</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

xiii. ICT resources such as Internet, printers, multimedia projector, laptops, etcetera are available in my office at the NASS/constituent offices. Tick as appropriate. 1. Yes [ ] 2. No [ ] 3. I do not know [ ]

B: Acceptance and Use of ICT (Performance Expectancy)

1. The following table contains a list of ICT tools and services. Indicate in the boxes on each row your frequency of use.

**Actual Use:** Tick appropriately, those that apply to you

<table>
<thead>
<tr>
<th>Item 1: System Use</th>
<th>a) State frequency of use</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ICT Tools and services</strong></td>
<td>Many times a day</td>
</tr>
<tr>
<td>Phone/fax</td>
<td></td>
</tr>
<tr>
<td>• (a) Have access to Phone (fixed)</td>
<td>☐</td>
</tr>
<tr>
<td>• (b) Have access to Mobile phone</td>
<td>☐</td>
</tr>
<tr>
<td></td>
<td></td>
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<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>• © Have access to Smart phone</td>
<td></td>
</tr>
<tr>
<td>• (d) Have access to Web phone (VoIP)</td>
<td></td>
</tr>
<tr>
<td>• (e) Have access to iPhone/Android</td>
<td></td>
</tr>
<tr>
<td>• (f) Have access to iPad</td>
<td></td>
</tr>
<tr>
<td>• (g) Have access to Blackberry (BBM)</td>
<td></td>
</tr>
<tr>
<td>• (h) Have access to Fax machine</td>
<td></td>
</tr>
<tr>
<td>• (i) Have access to Pager</td>
<td></td>
</tr>
<tr>
<td>• (j) Have access to Texting/SMS</td>
<td></td>
</tr>
<tr>
<td><strong>Computer/Organizer</strong></td>
<td></td>
</tr>
<tr>
<td>• (k) Have access to Desktop PC</td>
<td></td>
</tr>
<tr>
<td>• (l) Have access to Laptop</td>
<td></td>
</tr>
<tr>
<td>• (m) Have access to Notebook</td>
<td></td>
</tr>
<tr>
<td>• (n) Have access to Tablet computer</td>
<td></td>
</tr>
<tr>
<td>• (o) Have access to Handheld organizer (PDA)</td>
<td></td>
</tr>
<tr>
<td>• (p) Have access to Printer</td>
<td></td>
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<tr>
<td><strong>Web</strong></td>
<td></td>
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<tr>
<td>• (q) Have access to E-mail</td>
<td></td>
</tr>
<tr>
<td>• ® Have access to Internet access</td>
<td></td>
</tr>
<tr>
<td>• (s) Have access to Personal website</td>
<td></td>
</tr>
<tr>
<td>• (t) Have access to NASS</td>
<td></td>
</tr>
</tbody>
</table>
2. Which of the tasks (below) would you use ICT tools for?

<table>
<thead>
<tr>
<th>Item 2: Performance of Legislative Functions</th>
<th>Agree</th>
<th>Undecided</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) I use ICT to search records of proceedings online</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>2) I use ICT such as Internet and emails to interact with other legislators and my constituents</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3) I use ICT to interact with other arms of government via the Web/Internet</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>4) I use ICT (Internet) to search for procedural matters involving drafting of motions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5) I use ICT for online recording of bills for divisions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6) I use ICT to search for petitions and papers online</td>
<td></td>
<td></td>
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<tr>
<td>7) I use ICT for correspondence and management of programmes for delegations</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>8) I use ICT for outreach, publications and promotion of legislative institution</td>
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<td></td>
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<tr>
<td>9) I use Word processing such as Microsoft Office</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10) I use ICT to make powerpoint/slide presentations at plenary or public hearings</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11) I use ICT to take part in virtual meetings via</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
12) I use ICT to make decisions
13) I use ICT to reach my aides & administrative staff in NASS
14) I use ICT to communicate and share information with colleagues in NASS
15) Given the chance, I will use ICT in carrying out my legislative work

3. **Social Influence:** (Using a three-point scale below, indicate how use of ICT has influenced your legislative functions):

<table>
<thead>
<tr>
<th>Item 3: Perceived Relevance of use of ICT</th>
<th>Agree</th>
<th>Undecided</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) In my legislative work, use of the computer/Internet and other ICT tools is very important</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2) My use of ICT has dramatically increased my legislative productivity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3) My use of ICT has enhanced my legislative role</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4) Use of ICT provides me with information that is relevant to my legislative job</td>
<td></td>
<td></td>
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<tr>
<td>5) Use of ICT provides me with up-to-date information</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6) I depend on ICT to carry out my legislative functions</td>
<td></td>
<td></td>
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</tbody>
</table>

4. (Using a three-point scale, indicate how use of ICT has been useful in the performance of your Legislative functions): **Performance expectancy – perceived usefulness**

<table>
<thead>
<tr>
<th>Item 4: Perceived usefulness</th>
<th>Agree</th>
<th>Undecided</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Internet is useful in my legislative functions &amp; information dissemination to the public</td>
<td></td>
<td></td>
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<tr>
<td>2) Use of the Internet improves the performance of my legislative work &amp; functions (see items 3 &amp; 4 above)</td>
<td></td>
<td></td>
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<tr>
<td>3) Internet usage increases the productivity of my legislative work (see items 3 &amp; 4 above)</td>
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<tr>
<td>4) Internet usage enhances the effectiveness of my legislative functions (see items 3 &amp; 4 above)</td>
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<tr>
<td>5) Internet usage makes my work easier as a legislator</td>
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<tr>
<td>6) ICT/Internet usage enables me to accomplish tasks more quickly.</td>
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</tbody>
</table>
7). Use of Emails helps me to interact with constituents

8). The use of ICT/Internet for legislative work would be useless to me

9). I find the NASS website, Internet-emailing and other ICT tools useful for my legislative work

5. (Using a three-point scale, indicate your attitude towards ICT in your legislative work): **Attitude**

<table>
<thead>
<tr>
<th>Item 5: Attitude</th>
<th>Agree</th>
<th>Undecided</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 I use ICT in lawmaking (legislation, representation &amp; oversight) and it is a good idea.</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>2 I would prefer paper-based work because of negative impressions I have about use of ICT</td>
<td></td>
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<tr>
<td>3 My efficiency as a legislator is enhanced by use of ICT</td>
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<tr>
<td>4 I think ICT skills training &amp; knowledge should be part of orientation and training for legislators</td>
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<tr>
<td>5 I use ICT for information dissemination to constituents and the public</td>
<td></td>
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</tr>
<tr>
<td>6 I would easily adapt to any changes that use of ICT may cause to my work as a legislator</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 Using ICT in work as legislator is pleasant</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 Using the NASS &amp; other government websites is a good idea</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 I trust use of Internet – emailing, online and electronic data security</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 I trust that use of ICT in my legislative work cannot harm me e.g. data fraud</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 I am worried about loss of data</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 I am worried about culture and absence of content in local languages on the Internet</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13 I am worried that local culture does not go with ICT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14 Overall, I am satisfied with use of ICT</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6. (Using a three-point scale, indicate your perceived ease of use of ICT in your legislative work): **Effort Expectancy PEOU**

<table>
<thead>
<tr>
<th>Item 6: Perceived Ease of Use (PEOU)</th>
<th>Agree</th>
<th>Undecided</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) My interaction with ICT tools such as laptops, printers, Internet, websites, etc is easy for me to understand (how to use them)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2) Learning to interact with the ICT – Internet, websites and ICT tools would be easy for me.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3) I believe interacting with the ICT-Internet,</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
websites, emailing, etc would be a clear and understandable process.

4) I would find ICT-Internet, websites, emailing, etc difficult to use

5) I would find the ICT-Internet, websites, emailing, etc to be flexible to interact with.

6) I do not find that using ICT-Internet, emailing, websites, laptops, printers, etc need advanced level ICT skills

7. (Using a three-point scale, indicate impact of use of ICT on your legislative work as an individual): **Performance of Legislative Functions**

<table>
<thead>
<tr>
<th>Item 7: Individual Impact</th>
<th>Agree 3</th>
<th>Undecided 2</th>
<th>Disagree 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>With my use of ICT, I do not need to do “repetitive work” again</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>The use of ICT helps me make effective decisions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>I use ICT in the processing of motions and bills</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>The use of ICT helps me to interact with my legislative aides and staff</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>The use of ICT improves my communication with the grassroots/constituency/political party</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>The use of ICT helps me to effectively store and manage information that I need</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Use of ICT makes me accomplish tasks more efficiently</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Use of ICT improves the quality of my legislative work life</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>My performance of legislative functions is enhanced by use of ICT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Use of ICT provides me with up-to-date information</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8. (Using a three-point scale, indicate the impact of use of ICT on the Legislature as an institution)

**Performance of Legislative Functions**

<table>
<thead>
<tr>
<th>Item 8: Organizational Impact</th>
<th>Agree 3</th>
<th>Undecided 2</th>
<th>Disagree 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>With the use of ICT, the NASS saves operating costs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>With the use of ICT, I am a lot more effective and efficient</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Use of ICT has dramatically increased legislators’ volume of completed legislative bills, representation and oversight functions</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4 Use of ICT has dramatically increased committee work and public engagement

5 Use of ICT has dramatically improved legislators' overall performance

9. (Using a three-point scale, how use of ICT helped you as a legislator) Tick appropriately below:

<table>
<thead>
<tr>
<th>Item 9: System quality</th>
<th>Agree</th>
<th>Undecided</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Faster access to information</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Easier, user friendly and more comfortable access to information</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 I think using the computer system, Internet and other ICT is very reliable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 I do not worry about data loss when I use ICT tools</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 I do not find system errors very often when I use ICT tools</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Enjoy an improved presentation of data</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 I have no difficulty telling others about the results of using the computer system, Internet and other ICT tools</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 Download speed of internet access in NASS is very high</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

10. (Using a three-point scale, indicate quality of output of use of ICT in your legislative work)

<table>
<thead>
<tr>
<th>Item 10: Output quality</th>
<th>Agree</th>
<th>Undecided</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 The quality of output I get from using ICT is high</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Obtain more current and timely information</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Have more relevant, useful and significant information</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Have more concise and summarized information</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Enjoy more accurate information</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Easy for me to create MS Word processed documents</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 Easy for me to use emails/mobile phones/Internet</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 Information provided by use of ICT tools is important and helpful to my work as legislator</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
11. (Using a three-point scale, indicate how you intend to use ICT in your legislative work in the future): **Social influence - BI**

<table>
<thead>
<tr>
<th>Item 11: Behavioural Intention</th>
<th>Agree</th>
<th>Undecided</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 I will use ICT in my legislative work on a regular basis in the future.</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 I will use ICT in my legislative work at present frequently.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>3 I will strongly recommend other legislators to use ICT on their legislative jobs.</td>
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</tbody>
</table>

12. Is there an overall motivation to strengthen the use of ICT by legislature to better enhance the efficiency of legislative functions and information dissemination to the public? 1. Yes [ ] 2. No [ ] 3. I do not know [ ]

13 a. Does the NASS have an ICT policy to guide the use ICT for legislative functions? Please Tick
1. Yes [ ] 2. No [ ] 3. I do not know [ ]

**Inhibitors to use of ICT**

<table>
<thead>
<tr>
<th>Item 13b: Inhibitors to use of ICT</th>
<th>Agree</th>
<th>Undecided</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Lack of financial resources</td>
<td>3</td>
<td></td>
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<tr>
<td>2) Lack of human capacity and skills</td>
<td></td>
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<tr>
<td>3) Overall sentiment that ICT does not change the efficiency of tasks in Legislature</td>
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<tr>
<td>4) No overall uniform support exists</td>
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<tr>
<td>5) Lack of training on use of ICT for legislators</td>
<td></td>
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<tr>
<td>6) I do not feel like using ICT</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>7) I have no trust in online information and use of ICT</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>8) The use of ICT in legislation can be manipulated &amp; is not secure</td>
<td></td>
<td></td>
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<tr>
<td>9) I do not like to use ICT for law making, oversight functions and communication with my constituents</td>
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<td></td>
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<tr>
<td>10) My constituents have no ICT tools and infrastructure for them to reach me or vice versa</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>11) No power or electricity to access ICT tools</td>
<td></td>
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<tr>
<td>12) I have a fear about accessibility due to poor power, etc</td>
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<tr>
<td>13) I am hesitant to learn to use ICT skills for legislative work. This is time consuming</td>
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<tr>
<td>14) Lack of exposure to other parliaments where ICT is put to effective use</td>
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<tr>
<td>15) Lack of technical support for ICT use in NASS</td>
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<td></td>
</tr>
<tr>
<td>16) ICT tools are not just there</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>17) I do not trust the use of ICT as it is not safe in terms of privacy and security of personal and sensitive legislative information</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18) Other inhibitors please specify</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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APPENDIX 6: Interview Guide I

Interview Guide for the Senate President (Upper house), Speaker (lower house) and the Clerk of the NASS

(You may leave comments other than listed below)

Predictors of ICT Acceptance and Use (Social influence and performance expectancy)

1. Is there a policy framework guiding use of ICT in the NASS? If yes, what are its main features?

2. Is this policy stand alone or aligned to the national policy on ICT? And why?

3. What role(s) do you play to enhance the use of ICT by members of the NASS?

4. Members of the NASS have participated at e-parliament conferences across the world and in Africa but where will you place the NASS on the use of ICT by federal legislators in Nigeria?

5. What is the level of ICT tools provision to members of the NASS such as PCs, printers, laptops?

6. What is your perception about use of ICT in performance for legislative functions?

7. How do you think the following issues will influence acceptance and use of ICT by legislators? Issues such as: (a) ICT availability, accessibility, (b) satisfaction with use of ICT, (c) ease of use of ICT, (d) attitude/perceptions of legislators towards ICT, (e) social factors, (f) image, (g) government policy, (h) organizational support, (i) technical support and (j) cultural contexts (affordability and suitability of technology to legislative work, identity, dialogue, funding, ICT skills, etcetera).

Availability (Facilitating conditions)

8. What ICT infrastructure is available for legislators?

9. What budgetary allocations and funding are made for available for ICT infrastructure at NASS?
Inhibitors

10. What are the barriers to the use of ICT, deployment of ICT tools, availability of Internet services and access for legislators?

11. (a) What ICT capacity development programme is in place to train legislators, legislative aides and others?

12. (b) If there are? How often do they come up?

13. Given that adoption and use of ICT is new in our culture and additional issues of adaptability, low ICT skills’ level and culture of technology related spending in Nigeria, what are your thoughts about ICT acceptance and use by legislators of the NASS within the context of our culture?

Additional comments

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APPENDIX 7: Interview Guide II

Interview Guide for the Chairs of Committees on Communications, Education, Science & Technology of both houses (Upper and Lower)

(You may leave comments other than listed below)

Predictors of ICT Acceptance and Use

1. What are the functions of your committee?
   ……………………………………………………………………………………………………………
   ……………………………………………………………………………………………………………
   ……………………………………………………………………………………………………………
   ……………………………………………………………………………………………………………

2. How does your function at the committee level influence the use of ICT by members of NASS?
   ……………………………………………………………………………………………………………
   ……………………………………………………………………………………………………………
   ……………………………………………………………………………………………………………

3. What is the level of ICT tools provision for your committee’s work? In terms of PCs, printers, laptops etc for work at committee level?
   ……………………………………………………………………………………………………………
   ……………………………………………………………………………………………………………

4. What is your perception about use of ICT in performance of work at various committees of the NASS?
   ……………………………………………………………………………………………………………

5. What ICT tools do you use at the committee/individual level to communicate your work to the
public or your constituents?

6. How do you think the following issues will influence acceptance and use of ICT by legislators? Issues such as: (a) ICT availability, accessibility, (b) satisfaction with use of ICT, (c) ease of use of ICT, (d) attitude/perceptions of legislators towards ICT, (e) social factors, (f) image, (g) government policy, (h) organizational support, (i) technical support and (j) cultural contexts (affordability and suitability of technology to legislative work, identity, dialogue, funding, ICT skills, etcetera).

Inhibitors

7. What are the barriers to the use of ICT, deployment of ICT tools, availability of Internet services and access for legislators?

8. (a) What ICT capacity development programme is in place to train legislators, legislative aides and others facilitated by your committee for the NASS?

9. (b) If there are? How often do they come up?

10. Given that adoption and use of ICT is new in our culture and additional issues of adaptability, low ICT skills’ level and culture of technology related spending in Nigeria, what are your thoughts about ICT acceptance and use by legislators of the NASS within the context of our
culture?

Additional comments
APPENDIX 8: Ethical Clearance

UNIVERSITY OF
KWAZULU-NATAL

Research Office, Gowan Mbeki Centre
Westville Campus
Private Bag X54001
DURBAN, 4000
Tel No: +27 31 260 8350
Fax No: +27 31 260 8609
research@ukzn.ac.za

30 May 2012

Mr G Olisias (ZL2557162)
School of Social Sciences

Dear Mr Olisias

Protocol reference number: HSS/0197/012/1
Project title: Predictors of Legislators’ ICT Acceptance and Use In Performance of Legislative Functions in Nigerian National Assembly

In response to your application dated 30 April 2012, the Humanities & Social Sciences Research Ethics Committee has considered the aforementioned application and the protocol has been granted FULL APPROVAL.

Any alterations to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number. Please note: Research data should be securely stored in the school/department for a period of 5 years.

I wish you the best of luck with your study.

Yours faithfully,

[Signature]

Professor Steven Collings (Chair)
Humanities & Social Sciences Research Ethics Committee

cc: Supervisor: Professor S Mutula
cc: Academic Leader: Professor Victor Mudzvidziwa
cc: Mrs D Joubert
**APPENDIX 9: Observation Checklist**

<table>
<thead>
<tr>
<th>Construct</th>
<th>Activities</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICT availability</td>
<td>Where are the ICT tools located?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Offices</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Training rooms</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Committee rooms</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Legislative chamber</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Library</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other places</td>
<td></td>
</tr>
<tr>
<td>Knowledge/skills</td>
<td>Communication tools</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Interaction tools</td>
<td></td>
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<td></td>
<td>Cooperation tools</td>
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<td></td>
<td>Collaboration tools</td>
<td></td>
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<tr>
<td></td>
<td>Other software and hardware applications</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Online research tools</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Administrative – printers, scanners</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Legislative software</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td></td>
</tr>
<tr>
<td>Use of ICT</td>
<td>Plenary/committee activity that involves the use of ICT</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Knowing legislative situations that are suitable for ICT use</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Using ICT for the performance of legislative functions</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Using the Internet such as websites, online forums</td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX 10: Document Analysis Guide

1. What kind of document is this? How do you know? (a Hansard, parliamentary document, white paper, a diary, Web document or journal entry?)

2. Who is the author of the document?

3. What is the level of ICT usage of the legislators? Is there any information that indicates this?

4. What policy guides the use of ICT in the NASS?

5. What is written about the inhibitors of use of ICT by legislators in NASS?

6. What is the objective of procuring ICT tools for legislators in the NASS?

7. Does the document reveal the writer’s views of the attitude or perceptions of legislators towards ICT? If yes, what is their attitude or perceptions?
<table>
<thead>
<tr>
<th>Item</th>
<th>Chair, HoR Committee on ICT</th>
<th>Chair, Senate Committee on Communication</th>
<th>Chair, HoR Committee on Education</th>
<th>Director, ICT in NASS</th>
<th>Clerk, NASS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functions of committee/directorate/office</td>
<td>Oversee ICT related issues, agencies of government such as NITDA, etcetera</td>
<td>Oversight of the communication industry in terms of practice, legislation, etcetera</td>
<td>Oversee federal and state education ministries, federal educational institutions</td>
<td>Oversees all ICT issues in NASS such as Internet access provision – cable, wireless, maintenance of hardware, computer rooms, training of legislators, etcetera</td>
<td>Administration of the NASS including ICT</td>
</tr>
<tr>
<td>ICT Policy</td>
<td>Not at the moment as it has reached second reading and is receiving attention of leadership of NASS</td>
<td>There is none</td>
<td>None</td>
<td>Recently the leadership of NASS met on the draft ICT policy.</td>
<td>None. Should be in place soon.</td>
</tr>
<tr>
<td>Impact of your unit/office on use of ICT by legislators</td>
<td>Regularly engage the leadership of the House on issues related to use of ICT by legislators such as training, workshops. E-parliament is a costly enterprise</td>
<td>The use of ICT has impact on committee work, volume of completed bills and public engagement at the moment</td>
<td>Work in partnership with House committees on ICT and Communication to avoid replication of efforts on related issues such as deployment of ICT to schools via NITDA</td>
<td>Very regularly meets with the leadership of the NASS (political) and the Clerk of the NASS on issues such as training for legislators and staff. Discussing on deployment of sophisticated ICT</td>
<td>Engagement of legislators with ICT is inevitable judging from influx of mobile telephony and social media and administration of NASS leaves no stone unturned to further finance and</td>
</tr>
<tr>
<td>Item</td>
<td>Chair, HoR Committee on ICT</td>
<td>Chair, Senate Committee on Communication</td>
<td>Chair, HoR Committee on Education</td>
<td>Director, ICT in NASS</td>
<td>Clerk, NASS</td>
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<tr>
<td></td>
<td>that the NASS cannot afford.</td>
<td></td>
<td></td>
<td>tools, training, reliable Internet connections, and capacity to disseminate information. Budgeting should improve for more impact</td>
<td>equip the directorate of ICT in provision of ICT and training</td>
</tr>
<tr>
<td>Availability/Level of ICT use for committee work</td>
<td>At the moment we make very little use of ICT. Committee rooms have microphones but no high end ICT tools. Although we sometimes make use of PowerPoint slides for public memoranda</td>
<td>The level of ICT use is low. I know of TV broadcasting of plenary sessions and some committee work is in place and have improved in last 2 years or so. A lot more needs to be done like radio broadcasting and mobile communication with constituents</td>
<td>The committee makes use of multi-media projector and that is about it. There are a lot of other technologies that can be used</td>
<td>The level of use is improving given the trainings that have been provided for legislators and staff. These improvements have been in editing and creation of documents using MS Word and basic skills. Many legislators access the Internet from the access points at NASS. Internet access (LAN, wireless) is provided in all committee rooms and all offices at the NASS complex. Wireless access is available for the public and this is been extended around</td>
<td>All offices of legislators and staff offices are provided with computer desktops. Staff use ICT in their day to day duties. Civil servants in NASS use it more than the elected representatives, in my opinion.</td>
</tr>
<tr>
<td>Item</td>
<td>Chair, HoR Committee on ICT</td>
<td>Chair, Senate Committee on Communication</td>
<td>Chair, HoR Committee on Education</td>
<td>Director, ICT in NASS</td>
<td>Clerk, NASS</td>
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</tr>
<tr>
<td>Place of e-parliament/ use of ICT in NASS</td>
<td>Nigeria participates at some of the African regional and international levels of the e-parliament initiatives as partners in a global world</td>
<td>We can learn more by attending the world e-parliament conferences and visit other e-parliaments</td>
<td>We have a long way to go. I say this because we are not only talking about deployment of technology and skills to federal legislators but also to the constituents. The ICT infrastructure, in the remote places of the country that we represent to enable citizens engage their elected representatives via emails, Internet, VOIP, e-petition tools, etcetera must be put in place for e-parliament to be effective. At the moment, mobile telephony is still a problem.</td>
<td>The leadership of the NASS engages some parliaments via the Inter parliamentary union and other platforms and a lot of exchanges take place with these parliaments on issues of technical assistance on issues of e-parliament systems, funding and ICT.</td>
<td>The management of NASS is poised to re-position ICT infrastructure in the legislature. We will encourage leadership of the NASS to attend e-parliament conferences in recent times, such as the e-parliament conference held in September 2013 in Rome, Italy which had participants from Nigeria. We should do more in this regard.</td>
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<td>Provision of ICT tools</td>
<td>In offices of all legislators including those of senior legislative aides, assistants and secretaries there are PCs, printers, photocopier</td>
<td>Internet access in offices is problematic. Limited media available in committee rooms.</td>
<td>Overall, some ICT tools are available. Perhaps, acceptance and use are other issues altogether. Besides, the citizens we represent are not provided with ICT tools</td>
<td>Recently we upgraded the NASS’s network adapter card of each server on the Lync Server topology to support at least 1 gigabit per second (Gbps). This Server topology uses a low</td>
<td>Regular improvements have been made in terms of ICT facilities in the last 2 years. The ICT directorate has been equipped with 2 training labs and technical personnel.</td>
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<td>Item</td>
<td>Chair, HoR Committee on ICT</td>
<td>Chair, Senate Committee on Communication</td>
<td>Chair, HoR Committee on Education</td>
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<td>machines, scanners and other media devices. There are no specific technologies for committee use in committee rooms</td>
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<td>latency and high bandwidth local area network (LAN) and is robust enough to support audio/video (A/V) conferencing and application sharing. Two computer rooms with a capacity to train 100 legislators and staff, equipped with state of the art technologies are intact. We recently installed a Role Based Access Control (RBAC), capacity VS coverage, application level filtering, directory service and device registration capability on our wireless access points. At the same time expanding wireless access points even to visitors to the NASS. We look forward to setting up systems for managing</td>
<td>E-voting systems have been installed on floors of both houses. Consultants are also engaged for further expansion of networks and for troubleshooting and maintenance. Expansions and further deployments are on-going. The problem here is funding.</td>
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<td>emails from the public, digitization formats for preservation of documents management, speech to dictation software, etcetera. We are also improving Internet connection quality in offices of legislators. Additionally, the Library in the NASS is also equipped with Internet access and has an Internet room with its own VSAT technology installed and maintained under another agreement with a third party.</td>
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<td>Predictors – Trust, ICT Training, Policy Intervention, Satisfaction with ICT, Social image,</td>
<td>Suitable policy intervention should drive it and sincerity of purpose in leadership</td>
<td>We should be careful over adopting e-parliament wholesale. Focus must be on appropriate technologies. The electorates that we</td>
<td>We have a responsibility to citizens who voted us in and use of ICT may drive this responsibility</td>
<td>User satisfaction, organizational and technical support with positive attitude and ICT culture are major factors</td>
<td>Provision of a conducive environment for e-parliament culture to grow and mature</td>
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<td>Technical Support, Culture</td>
<td>represent must be trained to use ICT as well. Cultural contexts are a concern</td>
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<td>Attitudes and Perception of use of ICT in performance of legislative functions</td>
<td>Legislators in their personal conducts use ICT. We all have Web enabled phones and gadgets that we use. The application in performance of legislative functions is another issue. My worries are skills requirements, technologies involved and ICT infrastructural deficiencies in respect of the public. We are positive in our attitude to this global phenomenon.</td>
<td>Perceptions are high to exploit technology for good governance and enhance efficiency not only in NASS but government as a whole. The attitudes of legislators seem positive. Perhaps some bother about older generation members and volatile nature of technology</td>
<td>I think there is a positive attitude towards use of ICT in general. Perceptions in terms of competence and skills of legislators is another issue altogether. We are not using ICT as much as one would have liked. The prospects of using social media and other technologies to communicate amongst legislators and between us and constituents look good and it is my opinion that many of us like that idea. The absence of enabling environment may be an issue for many of my colleagues.</td>
<td>The perception is very high amongst elected representatives, their support staff and others. The legislators were available to attend basic ICT training. There was genuine interest to use ICT and the legislators find the relative advantages of ICT beneficial. The younger generation mostly. At training workshops, legislators are very attentive and show high expectations of ICT training and overall use of ICT.</td>
<td>The value of technology use in NASS is high. Emailing and other interactive tools have made communication easier. The attitude of legislators and public servants at the NASS towards use of ICT is positive.</td>
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<td>ICT availability - tools/support systems/staff , training</td>
<td>Computer systems, printers. Some training workshops held for legislators. I cannot remember attending any ICT training</td>
<td>PCs. Attended ICT training once</td>
<td>Computers. My support staffs attend regular ICT training. Time constraints attending training workshops</td>
<td>Desktop PCs, printers, scanners, photocopiers, TV sets and other hardware in offices of all 469 legislators. E-voting systems, audio systems in both chambers, Internet access is provided by cable modems for high speed broadband access with WLAN capabilities, servers to bridge poor quality of access in sections of the NASS complex. Two computer training rooms for legislators and staff with a capacity for 100 trainees at a time. Multimedia technologies and 4 ICT programmers and staff.</td>
<td>Further hardware (servers) and software are to be purchased to enhance ICT infrastructure and maintenance</td>
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<td>Budgetary allocations and funding for ICT</td>
<td>The budget is usually low and drafted by the appropriate</td>
<td>This committee does not have a separate budget for ICT for committee</td>
<td>We work within the budgetary allocations made by legislative budget committee. We do not</td>
<td>We do not handle budgeting and make no purchases or acquisitions. Budgetary</td>
<td>Funding is a major issue. Approximately between 1 percent and 2 percent of total</td>
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<td>infrastructure</td>
<td>committee alongside the entire budget of the NASS</td>
<td>work</td>
<td>have any such provisions from within this committee</td>
<td>allocations drawn up by Office of the Clerk in terms of acquisitions, training costs, etcetera. The lists of staff that undergo ICT training are also provided for within the budgets of their sections.</td>
<td>legislative budget is allocated to ICT. This is low. Donor agencies, UN and foreign parliaments also give technical and other supports.</td>
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<td>Inhibitors</td>
<td>Lack of ICT skills, Poor finances, Cultural issues, low spending on ICT, Fears of technology, inadequate ICT infrastructure, lack of citizens’ participation, mindset and old beliefs, legislators do not need it</td>
<td>Lack of funds, Lack of awareness of e-parliaments, Legislators do not have ICT skills, lack of exposure and information on use of ICT in legislature, fear of alienating masses and those who may not have access to ICT in the public, technology manipulation and elite-focus, identity issues</td>
<td>No coordinated plan, time consuming constraints to train in use of ICT, lack of conviction in certain departments that we are ready or that we understand what e-parliament involves, expensive nature of venture, funding, personnel and lack of ICT infrastructure. The people expect so much and quite rightly so, too. Many legislators think they do not need ICT perhaps out of fear of their political relevance with use of ICT</td>
<td>Fear of need to be tech-savvy, masses may be alienated, possible manipulation lack of overall commitment to drive home the ICT initiative, low funding, culture, lack of interest, no time, little engagement of other e-parliaments, busy nature of legislators, fears that constituents may not have access to ICT tools, language, education, affordability and economic barriers</td>
<td>Change may be difficult, loss of identity, time constraints, lack of continuity – legislators come and go, lack of interest, need for heavy investments, low levels of ICT literacy. The legislators will experiment with ICT integration if they feel it is consistent with their legislative work, if they feel they are knowledgeable and competently skilled, if</td>
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<td>they are supported and motivated to do so, and if they can see how it is useful</td>
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<td>Solutions</td>
<td>Funding, political will, facilitating conditions such as appropriate environment and improved ICT culture</td>
<td>Political will, ICT infrastructure in remote places for citizens’ participation</td>
<td>Financing, improving ICT culture, organizational support and other facilitating conditions</td>
<td>Improved funding and exposure to other e-parliaments</td>
<td>Using the right tempo of attitude by creating the right atmosphere and leverages to leapfrog to e-parliament</td>
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APPENDIX 12: Definition of Terms

The following terms are identified and defined in the context in which they are used in this study. The purpose of the definition of terms is for clarification of the words and terms used. This leads to a clearer understanding of the study.

**Attitude**

This is the link between the object and a positive or negative evaluation of that object (Ajzen and Fishbein, 1980, p. 5).

**Behavioural Intention**

Behavioral intention (BI) is defined as a person's perceived likelihood or subjective probability that he or she will engage in a given behavior (Institute of Medicine, US, 2002, p. 31).

**Communication of Legislative Information**

This refers to transmitting information relating to legislative functions - legislative communiqué, message, hearing, announcement, statement, letter, contact or dialogue, or any other form of communication that involves legislators and citizens. This allows for public feedback and participation (Bradley, 1980, p. 399).

**Culture**

Culture is generally defined as the ways in which members of a community conduct their lives. This includes the community’s language, customs, traditions, social life, political behaviour, cultural conditioning, individualism/collectivism, habit, culture of technology spending, interest in ICT and education (Arnold, 2006 cited in Toure, Diarra, Karsenti and Tchaméni-Ngamo, 2008, p. 1).
**Dissemination of Legislative Information**

This is distributing, broadcasting, diffusing, propagating, spreading and giving out legislative information widely to members of the public and engagement with the citizens in dialogue (Morris, 1985, p. 100).

**Effective Performance**

This refers to a legislative initiative or product having the desired outcome and citizen satisfaction (Elling, 1979, p. 355).

**Effort Expectancy**

The degree of ease associated with the use of the system (Venkatesh, Morris, Davis and Davis, 2003, p. 450).

**E-parliament**

The use of ICT tools connected to a LAN or standalone devices in the legislature (UN World E-parliament Survey Report, 2012, p. 73).

**Facilitating Conditions**

This is the provision of support for users of PCs and other ICTs that can influence system utilization (Thompson, Higgins and Howell, 1991, p. 129).
ICT

This consists of hardware, software, networks and media used for collection, storage, processing, transmission and presentation of information (Dutton, 1996, p.1). In this study, ICT applications include multimedia, hypermedia, PCs, laptops, palm tops, printers, scanners, Blackberries, pagers, Internet radio, webcasts, blogs, intranets, extranets, LANs and WANs, the Internet, websites, social media, networks, databases, application software, discussion forums, emails, groupware, shareware, e-conferencing and e-voting machines.

ICT Acceptance

This is the demonstrable willingness within a user group to employ information technology for the tasks it is designed to support (Dillon and Morris, 1996, p. 2).

ICT Skills

These are skills and training used for accessing, gathering, manipulation and the presentation or communication of information using ICT applications and tools (Cuttance and Stokes, 2000, p. iv).

ICT Use

The performance of legislative functions with the use of telecommunication infrastructure (Lindh and Miles, 2007, p. 425).
Legislators

Law-makers and federal representatives of the citizens who are drawn from federal and state constituencies and elected for four years may be re-elected into either the House of Representatives or Senate in the bicameral house of the Nigerian National Assembly (NASS) in Abuja. Legislators in other climes are known by other names (Akindele, Adeyemi and Aluko, 2012, p. 180).

Legislative Functions

These are the three cardinal functions of the legislature; to make laws, that is, legislation, representation and oversight (Leston-Bandeira, 2007b, p. 660).

Model

This is a representation containing the essential structure of some object or event in the real world (Moore, 1986, p. 68).

National Assembly of Nigeria (NASS)

This refers to the Nigerian legislature which is a bicameral house of the National Assembly of Nigeria, located at the National Assembly Complex, Abuja (Retrieved 12 March 2012 from http://www.nassnig.org/).

Parsimony

This is often considered in relation to the Technology Adoption Model (TAM), the meanness and inflexible nature have made it difficult to apply the model in the context of domains outside the origins of the model to enhance the extension of the model's theoretical boundaries (Venkatesh, Davis and Morris, 2007, p. 267).
**Performance Expectancy**

The degree to which an individual believes that using the system will help him or her to attain gains in job performance (Venkatesh, Morris, Davis and Davis, 2003, p. 447).

**Perceived Ease of Use**

This indicates the degree of ease associated with the use of the ICT applications in carrying out legislative functions (Davis, 1989, p. 320).

**Predictors**

These are variables that influence the dependent variable and are simply useful for predicting the value of the response variable (Jeyaraj, Rottman, and Lacity, 2006, p. 2).

**Robust**

This refers mostly to the considered prominence of the Unified Theory of Acceptance and Use of Technology (UTAUT) model in the stream of Information Technology adoption research, often connoting the richness of the instruments regarding the key constructs of the model (Li and Kishore, 2006, p. 197).

**Social influence**

The degree to which an individual perceives that important others believe he or she should use the new system (Venkatesh, Morris, Davis and Davis, 2003, p. 451).
Subjective norm

This is a person's perception that most people who are important to him think he should or should not perform the behaviour in question (Fishbein and Ajzen, 1975, p. 302).

Theory

This is evidence accumulated to support a hypothesis that has become accepted as a valid explanation of a phenomenon (Suppes, 1964, p. 58).

Theoretical Framework

This provides a broad explanation of relationships that exists between concepts and relates back to theory (Brown, Reveles and Kelly, 2005, p.783).
7 Sanders Road,
Scottsville,
3201 Pietermaritzburg
13 December 2013.

Mr Gbolahan Olawuse,
School of Social Sciences,
UKZN, Pietermaritzburg.

CERTIFICATION OF EDITING

This is to certify that this thesis has been thoroughly edited for correct English usage. Spelling, punctuation, syntax and grammar have been scrutinised and—where necessary—corrected. Where the meaning is not clear the paragraph or sentence has been marked for the student's attention.

No ideas of my own have been added and the meaning of the text has not been changed.

This particular student's English is and the corrections made are minimal.

[Signature]
R.A. Bell

(44/63)