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# How do older adults communicate with the UK public sector?

## Comparing online communication channels

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# **How Do Older Adults communicate with the UK public sector?**

## **Comparing online communication channels**

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### **Abstract**

*Governments around the world are moving away from conventional ways of face to face communication to a more digital approach when delivering services to their citizens. This includes using the internet as both a communication tool and an information source to improve efficiency in their services. However, not all the citizens are making use of these changes, especially the older adults. Therefore, this research-in-progress paper aims to investigate and identify the factors that encourage older adults to continue using a particular communication channel when interacting with the government. In addition, future directions, limitations and conclusions are also provided within this paper. The implication of this study to academia is viewed to be the development of an extended framework that allows an understanding of continuance intention of online communication tools usage. Equally, this framework will benefit industry by informing providers of communication channels to the government to be aware of the factors that influence older adults' choices when interacting with the government. For policymakers this research will identify the communication channels that promote interaction with citizens.*

**Keywords:** Older adults, online communication channels, continuance intention, usage, UK.

# **How Do Older Adults communicate with the UK public sector?**

## **Comparing online communication channels**

### **1. INTRODUCTION**

Information and Communication Technologies (ICT) such as the internet have changed the ways of communication, information seeking behaviour, and lifestyle of individuals. (Kim et al, 2013). Currently, access to and uses of the internet are crucial factors of consideration to users of the internet, regardless of age and backgrounds (Xie et al, 2012). By accessing the internet, individuals can make informed decisions regarding daily life shopping, or work activities.

When considering the government, internet use allows citizens to proffer knowledgeable decisions, provide opinions, access government information and interact with government departments. Examples of communication mediums that governments employ to interact with citizens include e-mails, online social networking sites such as, Facebook, Twitter, LinkedIn, MySpace and video-sharing sites such as, YouTube (Ku et al, 2013 & Al-Debei et al, 2013). Access to and growth of these communication mediums due to the internet has created new opportunities for both the private and public sectors of the economy (Kim et al, 2013). For example, the development and proliferation of the internet offered public sector organisations the ability to transform and deliver wide-ranging advances to become possibilities and realities within individuals lives (Plattfaut et al, 2013); thus, making the public sector of the economy to start adapting to this changing environment which is e-Government. A recent survey carried out by the United Nations (UN) revealed that the United Kingdom (UK) is the third leading country in terms of global e-Government rankings (United Nations, 2012). It has also been learnt that not all the citizens are making use of these changes in the public sector, particularly the older adults (Choudrie et al, 2013; Ofcom, 2013).

A reason for all members of society not making use of the changes is attributed to ICT not being completely accessible and available to all members of society; hence not benefiting all members of society. For instance, it has been found that lower income individuals as well as the disabled, or older adults do not have access to broadband, which provides the infrastructure for the internet (Ofcom, 2013). Having little or no access prevents individuals from obtaining better government products and services. This provision of online products and services from the government to the citizen is known as electronic (e)-government. For the purpose of this research e-government is defined as “use of information technology to enable and improve the efficiency with which government services are provided to citizens, employees, businesses and government agencies” (Carter and Belanger, 2005: 5). E-government is viewed to be pertinent for older adults as it can assist in delivering better and more focussed services including those that can assist in tackling isolation, poverty and exclusion. Concurrently e-government is seen to be a way of improving the health of older people (Information Daily, 2006).

For the older adult population due to the improvements in the quality of life and advances in health care and treatment, the number of individuals aged 65 years or older is projected to grow from an estimated 524 million in 2010 to 1.5 billion in 2050 (WHO, 2011). Older adults are also of importance to research and society as they are wealth creators and holders. “Empirical results provide strong and consistent evidence that an increase in the portion of adult life lived at old age leads to an increase in saving rates” (Kinugasa and Mason, 2007). In terms of the communication channels, e-mail continues to be the key method older adults maintain contact with friends, family and colleagues (Madden, 2010). Currently, online social networks are also proliferating individuals lives, which the older adults population is not completely adopting (Vyas, 2013). Before continuing further, for the purposes of this research, older adults are identified as individuals whose age group falls between 50 and above (Hanson, 2009). To further define the term ‘older adults’ the definition being employed by

this research is ‘An adult, generally 50 years of age or older, who frequently surfs the Web and spends time online (“silver” refers to the colour of their hair)’ (Netlingo, 2013).

For this research study, comparisons in terms of communication channels used to communicate with the government are made. Facebook, an Online Social Networks (OSN) is viewed to be a novel communication channel, while e-mails are considered to be the classic communication channel and this research intends to draw comparisons between these communication channels that are used to interact with the government. This is because Facebook is an online social networking site that is becoming increasingly popular especially through usage and adoption rate for communication purposes. According to statistics (Facebook newsroom, 2013), Facebook has monthly active average users of about 1.19 billion across the globe as at 2013. Equally, it has been found that UK has witnessed the largest number of Facebook usage (Gadsby, 2010). On the other hand, e-mail has been in use as an online communication tool for as long as the existence of Internet technology, thus motivating this research team to conduct such research (Aamoeth, 2011).

An added motivating factor for pursuing this research also emerged due to the reasoning that communication between governments and citizens is important for any country socially, economically and politically (Wang & Lim, 2011). As new information systems are introduced in the public sector, the need to focus on whether and if these new services appeal to customers, especially the older adults and on the willingness of customers to continue to use the services arises (Zhao et al, 2012). Instant messaging, social networking, and blogging have become important as communications tools but email remains the most popular online activity particularly among older Internet users in the United States of America (USA) (Jones and Fox, 2009). Research of OSN continuous use e.g. Facebook within younger and older adults revealed that older adults lag behind the younger age groups (Zajicek, 2007).

Despite this gap in the older adults usage pattern the current ICT and Information Systems research on online communication channels has received more considerable attention on behaviour and usage patterns among the younger age groups (Debei et al, 2013; Limayem & Cheung, 2008). However, from the conducted literature review, there are fewer research studies determining the factors that promote the continued use of certain communication channels, particularly when interacting with the public sector. Therefore, the aim of this research is: *To investigate and identify the factors that encourage older adults to continue using a particular communication channel when interacting with the government.* To fulfil this aim, the following research question has been formed. ***What factors motivate older adults to continue/discontinue using a particular communication channel in dealing with the government?*** In this research-in-progress paper a conceptual framework that will assist in answering the research question and fulfilling the aim is provided.

The benefit of this conceptual framework to academia is viewed to be the development of an extended framework that allows an understanding of continuance intention of online communication tools usage all applicable to the older adult. Equally, this framework will benefit industry by informing providers of communication channels to the government to be aware of the factors that influence older adults’ choices when interacting with the government. For policymakers this research will identify the communication channels that promote interaction with citizens.

Having provided the aim and introduction to this research study, the remainder of the paper is organised as follows: section 2 will explain the theoretical background of the study, which is followed by the development, and description of the research model. Next, a brief description of the research methodology will be presented followed by the implications and conclusion to this research-in-progress paper.

## **2. THEORETICAL BACKGROUND**

This section explains the gaps that exist in the research area of older people and communication, which is then followed by an explanation of the theoretical foundations of the conceptual framework surrounding this research.

## **2.1 Older adult Internet usage**

In USA, older adults are the fastest growing demographic group to use the Internet (Fox, 2001). A survey carried out by Pew Internet on internet use amongst older adult as at 2012 showed that 53% of American adults ages 65 and older use the internet or email and also, adults ages 50-64, almost eight in ten (77%) use the internet, a proportion that has remained relatively steady over the past three years (Zickhur & Madden, 2012). There are diverse examples of literature highlighting older adult internet usage, such as, for example, Niehaves & Plattfaut (2013) who studied the intentions of the elderly with regards to internet use. They concluded that growing group of the elderly have different attitudes, beliefs and intentions when it comes to technology usage. Cody et al (1999) found that older adults surfing the internet had more positive attitudes toward aging, higher levels of perceived social support, and higher levels of connectivity. Surfers spent more time on-line when computer efficacy was high, computer anxiety low, and attitudes toward aging were positive. Participation in the four month programme was associated with significantly reduced computer anxiety and increased ratings of perceived social support and connectivity. Sum et al (2008) found using multiple regression analysis that greater use of the Internet as a communication tool was associated with a lower level of social loneliness. Comparatively, greater use of the Internet to find new people was associated with a higher level of emotional loneliness. Shapira et al (2007) suggested that Computer and Internet use seems to contribute to older adults' well-being and sense of empowerment by affecting their interpersonal interactions, promoting their cognitive functioning and contributing to their experience of control and independence. Gatto and Tak (2008) revealed that older adults found computers to be beneficial in terms of providing a sense of connectedness, satisfaction, utility, and positive learning experiences. However, they identified that the barriers for computer use to be frustration, physical and mental limitations, mistrust, and time issues. When considering the public sector, the health sector is also considered. The Internet has been recognized for many years as an important, if concerning, mechanism for transforming medical care. From a study completed by Baker et al (2003) it was found that an estimated almost 40 % of participants used the Internet for information about health or health care. 6 percent employed e-mail to contact a physician or other health care professional. About one third of those using the Internet for health reported that using the Internet affected a decision about health or their health care, but very few reported impacts on measurable health care utilization; 94% said that Internet use had no effect on the number of physician visits they had and 93% said it had no effect on the number of telephone contacts. Five percent or less reported use of the Internet to obtain prescriptions or purchase pharmaceutical products. Therefore, from these results it can be learnt that older adults' Internet use is of immense importance to society not only for general purposes, but for personal matters that the public sector can help with.

## **2.2 Public sector in information society**

The UK government like many other countries around the globe has moved from a conservative way of delivering services to a digital approach using the internet (Hazlett & Hill, 2003). In the last few years, the UK government has begun to employ communication mediums such as, blogs, Facebook, Twitter and Youtube. This is because digital communications is changing the way they engage and interact with their citizens by moving from email to an online social networking environment. The main aim of this change was to deliver high quality public service to its citizens by giving them the choice to have a modified service designed around their needs and not the convenience of the service provider (Choudrie et al, 2013) thus, the emergence of E-government. Whilst an earlier definition of e-government is provided, there are also some disparities that exist when defining the concept of e-government, which is illustrated by Silcock (2001) who defined E-Government as the use of ICT to improve the access to and delivery of government services to benefit its citizens. This shows that the

relationship is no longer one-way but building a partnership between governments and its citizens. The OECD (2001) in their report categorised government-citizen communication in policy making into three levels namely; information, consultation and active participation. This research will be concentrating on the consultation level which is equally known as citizen-to-government communication. It characterizes an interactive communication channel that allows citizens to send their comments and feedback on government services. Based on literature reviews it has been found that most of the research carried out on the public sector and older adults are based on the digital divide (Choudrie et al, 2013), citizen satisfaction with e-government (Welch et al, 2004), internet technology helping the public sector achieve transparency (McIvor et al, 2002) but rarely on communication channel selection among older adults in the UK public sector which creates a gap for us to consider in this research work.

### **2.3 Communication channels**

According to this study, a communication channel will be viewed as an online tool or a process used online by which the public sector and its citizens interact (Wang & Lim, 2001). Communication channels within the public sector can be categorised into two: face-to-face communication channel (i.e. a conversation that one has while being face to face with the other party) and online based communication i.e. internet-based-communication which takes place on a global connection of networks (Lee, 2010). Recently research has been conducted on communication channels due to innovative ICT in the information systems arena. For instance, Debei et al (2013) examined the continuance participation intentions and behaviour on Facebook as a communication channel and found that factors such as, attitude, subjective norms and perceived value have significant effect on the continuance participation intention of post adopters. Ku et al (2013) explored factors that affect members continued use of social networking sites and concluded that factors such as, gratification and privacy can influence continuance intention. Also, Chiu & Wang (2008) carried out a study on continuous use of e-learning services, findings suggest that ease of use, playfulness and usefulness are considered important issues in information technology usage. Wang & Lim (2011) investigated the China's citizens preferred choice of communication channel when receiving public information and expressing their personal opinions, findings revealed that citizens have diverse preferences. Likewise, Plattfaut et al (2013) explored individual differences on service channel for e-government services in Germany and Australia and they found different preferences on the choice of communication channel in each of the countries studied.

Based on the above-mentioned research a gap, a conceptual framework has been developed for this research study.

### **3. DEVELOPMENT OF RESEARCH MODEL**

In information systems research, there are diverse integrated theories used by researchers to explain different aspects of ICT e.g. adoption, usage, acceptance, or decision making. The conceptual framework that will be used for this research is based on the Expectation-Confirmation Theory (ECT) with two moderating effects added to it i.e. service quality and trust. There are other closely related theories to the ECT namely: Theory of Planned Behaviour (TPB) and Theory of Acceptance Model (TAM) that model the behavioural intent of a user (Ajzen, 1991) and how users accept and use a technology (Davis, 1986) respectively. However, ECT tends to extend these theories by evaluating a customer's satisfaction level before accepting to continuously use a product. In the following subsections, reasons for this are provided.

### **3.1 Expectation –Confirmation Theory (ECT)**

Recently, information systems research has seen an increasing research on technology adoption and acceptance. However, the success of these technologies does not depend on its initial use but its continuous usage (Hossain & Quaddus, 2012). The ECT holds that consumers' intention to continue service use is primarily determined by their satisfaction with prior use of that service (Oliver, 1980). The ECT theory and model was modified and tested in the information systems research area by Bhattacharji (2001b). Hossain & Quaddus (2012) argued that ECT should be used to examine the continuance intention of Information System users rather than just to explain satisfaction thus, making this study to use it.

### **3.2 Trust**

Trust has always been an important factor in online communication and usage. Equally, it is something that is experienced on a daily basis. However, what has also been learnt is that trust is a concept that is quite challenging to define. Grandison & Sloman (2000) defined trust as a strong belief in the capability of a thing to act consistently, securely and dependably within a definite context. Josang et al (2005) stated in their study that lack of trust is like sand in the social machinery, and represents a real obstacle for the uptake of online services. Within e-government research Carter and Belanger (2005) investigated trust using concepts drawn from e-commerce and found that trust exists in two forms: Trust of the Internet and trust of the government. This study is going to use two classes of trust, which was provided by Josang et al (2007) for the conceptual framework. They are the decision and reliability trust. This is because both reliability trust and decision trust are based on positive belief about the object that the trustor depends on for his welfare.

### **3.3 Service Quality**

Based on marketing terms, service quality could be seen as a measure of how well the service level delivered by a product or service matches customer expectations (Lewis & Booms, 1983). In essence, delivering a quality service means conforming to customer expectations on a constant basis. Also, Service quality tends to reflect reliability, responsiveness, assurance and personalisation (Parasuraman et al, 1985). Pitt et al (1995) suggested that information researchers should include a measure of service quality in the assessment of information system effectiveness. Gronroos (1982) on the other hand proposed two types of service quality namely: technical and functional quality, which would be included as, constructs in our conceptual framework.

## **4. PROPOSED RESEARCH MODEL**

Based on the above discussion, a research model has been developed as depicted in appendix 1. The main features of the research model are that both trust and service qualities are used to extend the expectation confirmation theory that acts as a guide to the selection of our model factors. Our constructs are stated below.

The first construct pertinent to this research is Technical quality that is defined as the value that a customer is actually receiving from a service (Gronroos, 1982). Therefore, if an older adult is not actually receiving the actual quality he/she expects from a particular online communication channel, it could make them discontinue a service. The second construct is Functional quality (1982) that is defined as the manner in which the service itself is delivered (Gronroos, 1982).

The third construct is Reliability trust that is defined as the subjective probability by which one individual expects another individual to perform a given action on which his/her welfare depends on (Josang et al, 2007). The fourth construct, Decision trust is defined as the extent to which a given individual is willing to depend on something or somebody in a given situation with a feeling of

relative security, even though negative consequences are possible (Josang et al, 2007). When considering trust, credibility is usually associated with it. Therefore, this construct was selected to understand whether the older adults' choice to continue using a particular communication channel to deal with the government depends on the trust quality of the channel.

The fifth construct is Expectation and it is defined as believe about a products probability of outcome occurrence and evaluation of that outcome at some time in the future (Spreng et al, 1996). The sixth construct is perceived performance, which refers to consumer evaluation of recent consumption with a particular product. It is influenced by both customer expectations and the actual performance (Bhattacharjee, 2001b). The seventh construct is confirmation, which is defined as rational process users go through prior to setting up an affect and subsequent intention (Bhattacharjee 2001b). The eighth construct is satisfaction, which relies on the extent to which consumers perceive their initial expectation s of a service to be confirmed or disconfirmed during actual use (Bhattacharjee, 2001a). Finally, the ninth construct is continuance intention, which is defined as user's intention to continue using a particular service or product (Bhattacharjee, 2001a). The fifth, sixth, seventh eighth and ninth constructs as stated above are the components of the expectation confirmation theory. These constructs were selected to understand how the older adults form an initial expectation of a specific online communication channel and then to continue/discontinue use of the channel. According to Bhattacharji (2001b), following a period of initial use of a service by consumers, perceptions are formed regarding performance and thereafter assess its perceived performance. Then they determine the extent to which these two constructs i.e. expectation and performance are met and then based upon these confirmations, form decisions about the future. Finally, satisfied consumers form a continuance intention on that service while dissatisfied consumers discontinue its subsequent use.

#### **4. RESEARCH METHODOLOGY**

When determining the appropriate research approach for this research, ICT and continuance intentions research approaches were reviewed (Al-Debei et al, 2013; Limayem & Cheung, 2008; Zhou,2013; Sun & Jeyraraj,2013; Ku et al, 2013; Hong et al, 2006; Zhao, 2012). Based on this assessment, timing, the abilities to gather an understanding from larger sample numbers and accessibility led us to consider a quantitative research method that will enable the research team to achieve its aim. Initially, a survey questionnaire will be designed based on the constructs to test the proposed research model. The questionnaire will be disseminated in Hertfordshire to ensure that over 1000 completed replies from the older population can be obtained. In order to guarantee the reliability and validity of this research work, a construct validity test with an estimated 250 individuals will be completed. To ensure that the questions are understandable and can be completed within the scheduled duration, a pilot will be completed. For this about 20 experts that will include academics and experts familiar to the opinions of older adults will be used. The feedback received from the experts will lead to an alteration of the questionnaire. For analysis the software package of SPSS will be used and appropriate analytical techniques such as, Partial Least Squares or Structural Equation Modelling (SEM).

#### **5. IMPLICATIONS OF THIS RESEARCH**

With the internet impacting our daily life and transforming individuals behaviour and attitude towards the internet, the public sector does not want to remain behind, which accounts for the reason that e-government has taken off. However, as more is being discovered about the potentials of the internet transformations and innovations within the communication channels are occurring. In this research paper the implication of establishing a framework that encompasses trust, service quality and continuance intentions, it will be determined whether older adults who are viewed to be 'digital immigrants' are accepting and using the new or older technologies. Prior research has focused upon whether older adults are accepting diverse types of e-government services or the impacts of the existence of the internet on older adults' lives. This research has proceeded to a higher level and intends to show that government service deserve and merit and attention which if not attended to, could impact the adoption of novel or classic forms of communication.



Secondly, by considering such research, public sector and private sector providers of ICT can learn whether the provided services and products are indeed being accepted by citizens, more than it is recognised as one that is disadvantaged. If the novel forms of ICT are not being accepted, then the revelations provided by the conceptual framework application in practice could identify means that the adoption and use of novel products and services could be increased and is possible.

For the policymakers this research study provides conceptual framework that they can use to determine whether their efforts to introduce and implement strategies to increase access to innovations such as, high speed broadband are making an impact on all members of society and not particular groups or individuals.

## 6. CONCLUSIONS

In conclusion, to investigate and identify the factors that encourage older adults to continue using a particular communication channel when interacting with the government, a conceptual framework based on the ECT along with service quality and trust factors has been developed to help in addressing the research aim of this study. Prior to forming the framework, a literature review of the main issues surrounding communication channels, older people and e-government were provided. A description of the applied research approach was also offered. This implies that the next phase of this research involves data collection that is anticipated to take about a year for the pilot phase and a further six months for the final phase of this research. It is recognised that the limitation that is associated with this research is the emphasis on the age range i.e. 50 years and above and the sample population, which is just restricted to Hertfordshire, exists. To ensure that this will be reduced, we intend to conduct a comparison of the younger and older adults at the pilot phase and determine the future directions of this research. To overcome these limitations, future directions for this study would include selecting different age ranges and a larger sample size drawn from regions of UK in order to form generalisations about the older population in the UK.

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## APPENDIX 1: THE PROPOSED RESEARCH MODEL

