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A MODEL FOR CITIZENS' SELF-KNOWLEDGE THAT INFLUENCES INTENTION TO PARTICIPATE IN E-GOVERNMENT PUBLIC DECISION MAKING

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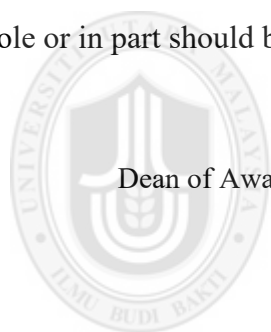
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Abstrak

Kejayaan sistem maklumat e-kerajaan boleh ditentukan berdasarkan hasrat rakyat ketika mengambil bahagian dalam proses membuat keputusan awam untuk menggunakan teknologi bagi faedah masa hadapan. Terdapat kekurangan penyertaan rakyat dalam pelaksanaan e-kerajaan di kebanyakan negara membangun apabila pendapat mereka tidak diambilkira. Kajian ini dijalankan untuk mengenal pasti hasrat rakyat untuk mengambil bahagian dalam pembuatan keputusan awam mengenai e-kerajaan. Objektif pertama penyelidikan ini adalah untuk mengenal pasti faktor yang mempengaruhi hasrat rakyat untuk mengambil bahagian dalam membuat keputusan awam berkaitan e-kerajaan. Objektif kedua meneliti ciri pengetahuan diri rakyat yang akan moderasikan hubungan di antara faktor yang mempengaruhi dan niat rakyat untuk mengambil bahagian dalam membuat keputusan awam tentang e-kerajaan. Oleh itu, objektif ketiga adalah pembangunan model penyelidikan niat rakyat untuk mengambil bahagian dalam proses pembuatan keputusan awam mengenai e-kerajaan. Kajian ini menggunakan pendekatan kuantitatif dengan mengedarkan 501 soal selidik kepada empat kumpulan responden. Hanya 474 soal selidik yang boleh digunakan, mewakili kadar 94.6%. Data yang dikumpul dianalisis dengan menggunakan SPSS v21 untuk mengkaji hubungan antara faktor penyumbang kajian dengan moderator. Faktor berikut, iaitu sikap terhadap tindakan atau tingkah laku (ATB), norma subjektif (SN), pengaruh sosial (SI), kemudahan (FC), kesesuaian (CO), dan budaya (CU) telah dikenalpasti mempengaruhi hasrat rakyat untuk mengambil bahagian. Keperluan mereka yang berlainan mempunyai kesan terhadap pembuatan keputusan awam dalam e-kerajaan. Kajian ini turut mengambil kira factor lain yang boleh menyumbang sebagai faktor moderasi seperti jantina, umur, tahap pendidikan, kumpulan sosial, sektor pekerjaan, dan pengalaman Internet. Kajian ini telah menyumbang kepada cabang keilmuan dengan menggabungkan konsep Teori Perilaku yang Irencanakan (TPB), dua konsep dari teori UTAUT2, dan satu konsep dari teori DOI dalam kajian ini. Oleh itu, satu model untuk pengetahuan diri rakyat yang mempengaruhi hasrat mengambil bahagian dalam pembuatan keputusan awam e-kerajaan dibentangkan.

Kata kunci: e-kerajaan, Teori perancangan yang dirancang, Pengetahuan sendiri rakyat, Pembuatan keputusan awam.

Abstract

The success of an e-government information system could be determined by the citizens' intention to participate in public decision-making to use the technology for future benefits. There is lack of participation of citizens in e-governments implementation in most developing countries where their opinions are not taken into considerations. This study has been conducted to identify the citizens' intentions to participate in the public decision-making of the e-government. The first objective of this research is to identify the factors that influence the citizens' intention to participate in the public decision-making of the e-government. The second objective examines the citizens' self-knowledge characteristics that will moderate the relationship between the influencing factors and the citizens' intentions to participate in the public decision-making of the e-government. The third objective is the development of a research model of the citizens' intentions to participate in the public decision-making of the e-government. The research utilised the quantitative approach by distributing 501 questionnaires to four groups of respondents. Only 474 questionnaires were usable, representing a 94.6 % rate. The data was analysed utilising SPSS v21 to examine the relationships between the study's contributing factors with the moderators. The following factors, the attitude towards act or behaviour (ATB), subjective norms (SN), social influence (SI), facilitating condition (FC), compatibility (CO), and culture (CU), were identified to influence citizen intention to participate. Their different requirements have a potential impact on the public decision-making in the e-government. The research also took into consideration other factors which would contribute as moderator factors like gender, age, level of education, social group, working sector, and Internet experiences. The research has contributed to the body of knowledge by merging the concepts of the Theory of Planned Behaviour (TPB), two concepts from the UTAUT2 theory, and one concept from the DOI theory in this research. A model for citizens' self-knowledge that influences intention to participate in e-government public decision making is presented.

Keywords: e-government, Theory of planned behaviour, Citizens' self-knowledge, Public decision-making.

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List of Abbreviations

SECI	Socialization, Externalization, Combination, Internalization
TPB	Theory of Planned Behaviour
DTPB	Definitions of the Theory of Planned Behaviour
UTAUT	Unified Theory of Acceptance and Use of Technology
TRA	Theory of Reasoned Action
IT	Information technology
EG	Electronic Government
G2G	Government to Government
G2C	Government to Citizens
G2 B	Government to Business
AIS	Association for Information Systems
TOE	Technology Organisation Environment
DOI	Diffusion Of Innovation
TAM	Technology Acceptance Model
SI	System Information
ICT	Information and Communications Technology
IB	Intention Behaviour
Sig	Significance
KMO	Kaiser-Meyer-Olkin
df	Degrees of Freedom
Std	Standard
Asymp. Sig.	Asymptotic Significance
IV	Independent Variable
DV	Dependent Variable
LLCI	Lower levels for confidence interval
ULCI	Upper levels for confidence interval
coeff	Coefficient slope
SE	Standard Error
t	t-statistic
p	p-value
R, R-square	Regression
MSE	Mean-Square Error

CHAPTER ONE
INTRODUCTION

1.1 Study Background

Electronic government (e-government) initiatives are being pursued globally by many countries to improve public services and strengthen support for public policies. It is a system utilising the Internet and the world-wide-web (WWW) to deliver government information and services to the citizens of the respective nations. Such initiatives are quite often intended to reduce processing costs, improve service deliverables, and increase transparency and communication between a government and the public. Therefore, this study is important for both practitioners and academics, and the scope of the study, which has established the study, is described in detail. The study plan and the organization of the research are also provided. Sections from 1.1.1 till 1.1.5 will explain the major points in the study background.

1.1.1 Electronic Government

In many ways, e-government provides improvement and advantages to the public. It provides better accessibility to government services, ease of usage and improvement of management of public resources, promoting better planning and targeting policies to address the problems of the communities. E-government involves using information technology (IT), particularly the Internet, to enhance the delivery of government services to the public, businesses, and other government agencies to interact and receive services from the central, state or local governments. The movement to e-government is significant for the government and its citizens to interact and communicate and provide essential services and perform business transactions. Evidently, it is due to such a magnitude of positive changes that many

countries around the world have resorted to e-government initiatives as they provide a greater potential to locate innovative ways to reach the public with much improved services and deliverables.

The advance and continuous development of new technologies have made it possible for electronic services to be adopted and applied in e-government initiatives. The success rate also differs between countries and regions. In general, developing countries have been lagging behind in e-government initiatives as compared to developed countries. This is also evident in many Middle East countries. There are various variables that are needed to support such initiatives. For the past twenty years, local governments throughout Europe and America along with some parts of the Middle East and Asia have maximised the use of information technology (IT) to provide support for their respective work (Alaaraj, 2015; Charalabidis, Lampathaki, Misuraca, & Osimo, 2012; Rana & Dwivedi, 2015). New technological tools have been developed to alleviate the tediousness of paper work, inefficiency, and bureaucratic bottle necks in various strata of the government. Most notably this has involved the area of decision making (Abdul Aziz & Idris, 2012; Buffat, 2013; Charalabidis et al., 2012; Nielsen & Pedersen, 2014).

Most countries in the world have a diversity of citizens that must be incorporated in the public decision making as more and more people get educated, and have different needs according to their jobs, age, gender, and experience. Taking into consideration the needs of different citizen groups would create a better e-government (Chang & Chen, 2008; Lian & Yen, 2014; Seuwou, Banissi, & Ubakanma, 2017; Venkatesh, Thong, & Xu, 2012; Vicent & Novo, 2014). Most citizens, especially the younger generation, have now gained more knowledge from social medias apart from the

academic training, and various other sources. Thus the demand for their rights and needs are getting louder. As evidenced in the Arab Spring revolutions, Hong Kong elections resistance, as well as in other countries in the world, they are demanding to have their voices heard (Chan, 2017; Reed, 2016; Wasike, 2017; Wong, 2017). In the next paragraph, the study clarifies the public decision making relationship with the citizens' self-knowledge characteristics. It will examine the intention of the citizens' to participate in the public decision making of the e-government.

The citizens' participation enables more flexible public decision making throughout e-government as it fulfills the citizens requirements. The democratisation needs finances and effort to build the new community that involves effective participation in the public decision making of the e-government (Bryer, 2013; Tambouris, 2015). Decision making is a process of choosing the best alternative or solution from various alternatives. It is about making an effective or best choice from the given alternatives. Inevitably, understanding the process of decision making and the knowledge to execute good decision making helps one choose the best alternative (Abdulameer, Ibrahim, Hussein, & Anad, 2013; Bryer, 2013; Siskos, Askounis, & Psarras, 2014). Decision making involves various processes that must always be supported by effective communication, logical thinking and processes, substance or knowledge, and other various variables (Allahawiah & Alsaraireh, 2014; Samiotis, Stojanovic, & Ntioudis, 2014; Wang, Zhao, Li, Liu, & Zhang, 2012). Having relevant knowledge and using it effectively helps one to make better decisions. Nevertheless, it is imperative to understand what self-knowledge is (Baban & Pollus, 2010; Samiotis et al., 2014).

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1.1.2 Citizens' Self-knowledge Characteristics

Nonaka and Toyama (2003) suggested that knowledge is a mix of different contradictions through the interactions between people, organizations, and environment. Knowledge is generated during a continuous conversation between the *explicit* and *tacit* knowledge. Everyone has one's own perspective or ‗point of view' (Dzakiria, 2004; Rana & Dwivedi, 2015), which may be affected by various factors on subjects such as innovation and technology (Allahawiah & Alsaraireh, 2014; Fullan, 2014; Nonaka & Konno, 2005; Nonaka & Takeuchi, 2011; Takeuchi & Nonaka, 2004). It is, therefore, imperative how one's knowledge impacts on his or her decision making (Allahawiah & Alsaraireh, 2014). Self-concept is focused on describing the ways by which the people organise and interpret their inner world of personal existence. Individuals have within themselves a relatively boundless potential for developing a positive and realistic self-concept (Mishra, 2016; Neisser, 1988).

Brie Gertler (2015) referred to self-knowledge as the knowledge of a person's own beliefs, thoughts, sensations, and other states of mind (Gertler, 2015). Most philosophers believe that our knowledge of our own mental states differs markedly from our knowledge of the external world (where this includes our knowledge of others' thoughts). However, there is little agreement about what precisely distinguishes self-knowledge from knowledge in other realms. Partially because of this disagreement, philosophers have endorsed competing accounts of how we acquire self-knowledge. These accounts have important consequences for a broad range of philosophical issues, especially issues in epistemology and the philosophy of the mind (Carlson, 2013; Gertler, 2015; Neisser, 1988). The citizens' self-knowledge is concluded from the studies of Nonaka (1994), Nonaka and Toyama

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(2003) which explained the knowledge and the characteristics that humans possess. These studies and others have concluded that the citizens' self-knowledge is the citizens' behaviours and thinking which is often impacted by the citizens' characteristics also, it includes various levels of education, cultural beliefs and practices, nature of job, income, and environment (Alshehri, Drew, & AlGhamdi, 2013; Nonaka, 1994; Nonaka & Konno, 2005; Nonaka & Toyama, 2003). The study on citizens' behaviours and thinking is often impacted by the citizens' characteristics (Abdulwahid, Mutalib, & Ali, 2014; Dzakiria, 2004; Nonaka & Konno, 2005; Nonaka & Takeuchi, 2011).

Thus, this study has defined citizens' self knowledge characteristics as the selected individual characteristics of the citizens that may influence their intention to participate in the e-government decision making. There have been previous studies on self-knowledge undertaken; nevertheless, the gap in research which is outlined in Chapter Two has given the motivation for this study. Evidently, there are various areas moving forward towards e-government that need attention and changes. The governments in the developing countries need to improve the political, social, and cultural structures and communion between the governments and their citizens (Abdulameer, Hasson, Shawkat, & Al-khafaji, 2012; Abdulameer et al., 2013; Al-Khafaji, Shittuline, & Osman, 2012; Aladwani, 2014; Allahawiah & Alsaraireh, 2014; Fullan, 2014; Herman Resende Santos, 2014; Lofstedt, 2012; Siskos et al., 2014). There are many challenges faced to apply e-government initiatives. These include: trustworthiness, lack of training, and know–how (tacit knowledge), transparency issues, accountability, citizens' poor participation in government operations within the democratic institutions, etc (Abdulwahida, Mutaliba, Yusofa, & Alib, 2014; Alqasa & Al-Matari, 2015).

All these may contribute to the lack of knowledge in the e-government as well as the required processes and knowledge to help propel the government to implement successful e-government initiatives (Allahawiah & Alsaraireh, 2014; Rana & Dwivedi, 2015). This can be achieved through identifying different citizens' requirements and needs. In summation, there are various issues that need attention and addressing in order to have any change in policies, systems, processes, visions, missions, etc. This is also true for any government in the world wanting to introduce and improve decision-making through e-government initiatives which are intended to improve performance to achieve better citizens' participation and administration in the respective communities. Evidently, decision making that is untrustworthy, unstructured, and has not attained the citizens' or public's trust on e-government initiatives will not be successful or sustainable (Charalabidis et al., 2012; Savoldelli, Codagnone, & Misuraca, 2014). This section describes the citizens' self-knowledge and its relationship with the citizen's intention to participate in the public decision making of the e-government. The next section will explain the citizen's intention that impacts on the citizen's participation in the public decision making of the e government.

1.1.3 Citizens' Intention

Intention is ―something that you want and plan to do‖ (Cambridge, 2017b). Intention is known as the level to which citizens intend to participate by intermediary means or the Internet for services of e-government in the future (Ajzen, 1991; Bataineh & Abu-Shanab, 2016; Fakhoury & Aubert, 2015; Maes, Leroy, & Sels, 2014; Setiawati & Pratiwi, 2015; Venkatesh et al., 2012; Weerakkody, El-Haddadeh, Al-Sobhi, Shareef, & Dwivedi, 2013; Wu, Cheng, & Cheng, 2015). Setiawati et al (2015) referred to Bandung citizens as enjoying and following their status, photos and

reports on social media. And, at that time, it became an important factor which impacted on their intentions to use social media as a major resource to get reports from the government. Their intentions built the behaviour to participate in the e-government. According to Ahmed (2016), the citizens' intention to participate in the e-government, particularly in developing countries, refers both to their trust in the government and the channels by which services are delivered (Ahmed, 2016). This study has focused on the citizens' intention towards their participation in public decision making. In the next section the study will present public decision making and explain the relationship between the intention and the participation in the public decision making. This section describes the citizens' intention and its relationship with the citizen's participation in the public decision making of the e-government. Section 1.1.4 will describe the public decision making of the e-government.

1.1.4 Public Decision Making

Decision making in the e-government is a collaboration of actions by the administrators who have been mandated to serve the public and their interests who themselves are the end users or receivers of the government services. Such collaboration would ultimately provide the best decisions and help to determine the shape of the e-government in all its stages (planning, application) and in all parts of the e- government initiatives (Bryer, 2013; Jun & Yu, 2014; Zhang, Siwen, & Xu, 2008). Nevertheless, not all human beings possess this ability. Previous studies showed that having inadequate and improper decision making skills and poor planning negated the principles of good government (Al-Taie & Kadry, 2013; Dabbicco, 2015; Li, Jiang, Liu, & Zhou, 2014; Salamat, Hassan, Fudzee, & Ramli, 2012). Moon et al (2014) clarified that the one sided decision is mostly not correct. There were many cases which led to bad decisions and failures in organisations.

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There is no guarantee that every leader or worker is always a great decision maker. Some leaders are great leaders adored by many, and some are naturally bad leaders with poor decision making skills and leadership qualities. They have powers granted by statutes or delegations. Discretionary powers do not impose an obligation on a decision-maker to exercise them or to exercise them in a particular manner. The reason for granting discretionary power to administrative agencies is that they possess experience and specialisation in a particular area to help them make various decisions. Ideally, such experiences and area specialisation helps agencies and organisations to make decisions and solve problems within their capacity respectively (Johare, Masrek, & Sa'ari, 2013; Kort & Klijn, 2011; Moon, Lee, & Roh, 2014).

Nevertheless, as the world has changed with the advancement of technology, we have seen various fundamental improvements taking place in many governments around the world. One, in particular, is the rapid use of technology to interact with the people. Today, past tedious processes have now been made easy and less tedious by the use of technology to introduce various e-government initiatives. The inclusivity of the people in various decisions making processes, for example in the planning stage is becoming a norm in various societies of the world. Trying to relieve the issues of discretionary powers would seem the simplest way to lessen the discretionary powers of government officials and replace them with more dynamic human interactions with the citizens to let them participate in making a collective decision (Bryer, 2013; Masrom, Ling, & Din, 2014a). This section explains the public decision making of the e government and its relationship with the citizens participation in the public decision making of the e government. Section 1.1.5 will

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describe the citizen's participation in the public decision making of the e government.

1.1.5 Citizens' Participation in Public Decision Making

Literature on earlier research has shown that technological, social, political and economic demands were examples of primary environmental factors which influenced the adoption of IT in decision making as the strategy to provide a transparent e-government. However, pending issues on decision making and the wider citizen participation to improve the e-government has resulted in challenges on e-government initiatives being troublesome (Abdulameer et al., 2013; Al-Khafaji et al., 2012; Li et al., 2014; Salamat, Hassan, & Muhammad, 2011). In a United Nations report about decision making, it was presented that ―Countries in all regions are increasingly embracing innovation and utilising ICTs to deliver services and engage people in decision-making processes" (Tambouris, 2015; UN, 2014).

The emphasis on the citizens' participation in the e-government in the planning stage (user requirements) is to establish the importance of the citizens' participation in the e-government platforms and initiatives. The citizens' participation increases the effectiveness of the e-government (Alharbi, Kang, & Hawryszkiewycz, 2016; Font, Wojcieszak, & Navarro, 2015). Previous researchers have studied the citizens' participation in the e-government to examine its importance (BinTouq, 2015). One example is giving the citizens the right to access information and participate in the public policy decision making (Masrom et al., 2014a). Today's globalisation requires various countries to reform the structure of their public services for efficiency and vast improvement on their delivery of the public services by involving the citizens in the development of their countries. This may reduce the probability of the citizen's

rejection of the development of the e-government initiatives. As the world witnesses the advancement of technology and changes affecting business, governments, and people, public service is also a fast moving sector that is affecting all governments, with the participation of citizens in governments, especially in the developing countries. Almost all governments around the globe are experiencing change or reformation in their practices and public services being offered. Thus, there is a significant affect from the citizens' participation in the e-government (Abaas, Shibghatullah, & Jaber, 2014; Tambouris, 2015).

1.2 Problem Statement

The previous researches highlighted that, the success of an organisation's operations, relies heavily on understanding an individual's attitudes and behaviours with different cultures and knowledge to make a decision (Elsheikh & Azzeh, 2014; Kamal, Bigdeli, Themistocleous, & Morabito, 2015; Nonaka & Takeuchi, 2011; Rodrigues, Sarabdeen, & Balasubramanian, 2016). The problem in most of the e-governments' implementations in the developing countries is that the citizens are not involved and their opinions are not taken into considerations in the planning stage to improve the e-governments' public decisions, this makes the citizens not willing to use the e-government services. For that reason, it is necessary for the citizens to be involved in the e-government decision making (Asorwoe, 2014; Gatautis, Kulvietis, & Vitkauskaite, 2015; Ramaswamy, 2014). Excluding involving the citizens' opinions in the public decision making of the e-government in the planning stage may create a huge gap between the government and the social groups of the citizens, political parties, and all the stakeholders (Al-khafaji, Shittu, & Osman, 2014; Alqasa & Al-Matari, 2015; Dombrowski, Hayes, Mazmanian, & Voida, 2014; Rana & Dwivedi, 2015; Savoldelli et al., 2014; Zhao, Shen, & Collier, 2014). In other words

as there is low citizens participation in the e-government decisions in the planning stage, the governments seek to enhance the decision making of the e-government by engaging the citizens to facilitate the services for the citizens (Bryer, 2013; Kamal et al., 2015; Naoum & Nadhim, 2014; Savoldelli et al., 2014; UN, 2016).

This also means that identifying the self-knowledge characteristics of the citizens would help to determine the different needs for the government to make better decisions that will be accepted by the public and the stakeholders (Alshehri et al., 2013; DeMeester, Lopez, Moore, Cook, & Chin, 2016; Nielsen & Pedersen, 2014; Rana, Dwivedi, Lal, & Williams, 2015; UN, 2016; Zheng, Schachter, & Holzer, 2014). The discrepancy in e-governments' implementations between the governments and their provinces are huge due to a number of reasons. Most notably the instability caused by various cultures, behaviours, and, beliefs (Danila & Abdullah, 2014; Feeney & Welch, 2016; Kamal et al., 2015; Shareef, Kumar, Dwivedi, & Kumar, 2016; UN, 2016; Wu et al., 2015).

Thus, due to the basis of the citizens' details such as the age, gender, level of education, nature of job, and other demographic factors of various social groups in the countries, there is a need to examine the different self-knowledge characteristics of the main social groups (Krishnaraju, Mathew, & Sugumaran, 2016; Lian & Yen, 2014; Tambouris, 2015; Tarhini, Hone, & Liu, 2014). The self-knowledge characteristics of the different social groups like age, level of education, gender, nature of job, and Internet experience will influence the citizens' intentions to participate in the government's public decision making (Alshehri et al., 2013; Arendsen, Peters, Hedde, & Dijk, 2014; Niehaves & Plattfaut, 2014; Rauch & Hulsink, 2015; Seuwou et al., 2017; Tambouris, 2015; Turban, Whiteside, King, &

Outland, 2017). The citizens' demographic data or personal data can be referred to as the citizens' self-knowledge characteristics as they refer to the data about the citizens and the mental beliefs of each citizen (Church, 2001; Gertler, 2015; Rana, Dwivedi, & Lal, 2015; Rauch & Hulsink, 2015).

Other reasons include management, infrastructure, and human factors that vary across this heterogeneous culture. Nevertheless, there is an urgent need to examine and investigate the factors or variables needed to improve the decision-making performance through the participation of the citizens and their self-knowledge characteristics in the e-government initiatives. One of the ongoing challenges that the government has is gaining the citizens' participation in the decision making of the e-government and support of such initiatives. The literature, for example showed that the public's perception of the e-government was that it lacked coherence and agreement to make decisions (Abaas et al., 2014; Danila & Abdullah, 2014; Elsheikh & Azzeh, 2014; Jackson & Wong, 2014; Kim, 2014; Li et al., 2014; luoguifa, 2011; Zheng et al., 2014).

Dawes et al., 2016, suggested that ―Benefits are generated as a result of the data use and the associated information products and services. They are accrued in diverse ways to different stakeholders including organisations and individuals in the private sector, civil society, and the government itself. Social, political, economic, and operational benefits are all possible with effects on the quality of life". For that reason, this study examined the different social groups' needs according to their thoughts. This is why four different groups were selected political, economic, technological, and workers (Dawes, Vidiasova, & Parkhimovich, 2016; Meijer & Bekkers, 2015). Currently, the decisions made in the developing governments are

one sided where governments have less consideration about the citizens‘ requirements (Abdulameer et al., 2013; DeMeester et al., 2016; Rana & Dwivedi, 2015; Shareef, 2016; Shareef et al., 2016). Thus, examining the citizens‘ intention to participate in the public decision making of the e-government initiatives is necessary and important in the planning stage (user requirements) (Abbas, 2016; Lee & Kim, 2014; Savoldelli et al., 2014; Zheng et al., 2014).

1.3 Research Questions

This study was intended to examine the citizens‘ intention to participate in the decision making in the e-government. The citizens‘ self-knowledge characteristics have been postulated in the research questions and objectives to identify the potential impact of the intention of the citizens to participate in the public decision making of the e-government. The research questions are as follows:

1. What are the factors that influence the citizens‘ intention to participate in the public decision making of the e-government?

2. What are the citizens‘ self-knowledge characteristics that will moderate the relationship between the influencing factors and the citizens‘ intention to participate in the public decision making of the e-government?

3. What is the research model of the citizens' intention to participate in the public decision making of the e-government?

1.4 Research Objectives

This research was intended to examine the citizens‘ intention to participate in the decision making in the e-government, through citizenship collaboration with the state, county, and municipal governments. For more details, see Section 3.7.3 in

Chapter Three and Section 6.3 in Chapter Six. Specifically, this study had the following research objectives to attain:

i. To identify the factors that influence the citizens intention to participate in the decision making of the e-government;

ii. To examine the citizens' self-knowledge characteristics that will moderate the relationship between the influence factors and the citizens intention to participate in the public decision making of the e-government;

iii. To propose a research model of the citizens' intention to participate in the public decision making of the e-government.

1.5 Motivation of the Study

Literature review shows that governments face the problem of the low of involvement of the citizens in the e-government which may cause the failure of the e-government, when citizens refuse to accept government decisions which are made unilaterally (Bakar, Choy, Lin, & Radzi, 2014; Heeks, 2006; Li, Masuda, & Russell, 2015). The study observed and used the Malaysian electronic government systems that have several online activities such as; feedback and asking opinions of citizens. For example, E-Syariah is an online portal which helps users with questions regarding the Syariah legal system and let them participate in the legal process. The dialogue box shows that the citizens can participate in the Malaysian e-government. It is also true for other e-services, such as the e-visa, e-traffic police, and others e-services in the Malaysian e-government (Salamat et al., 2012; Salamat et al., 2011). The study took the Malaysian experience through the past literature studies to improve the e-governments systems. Furthermore, Malaysia has different communities and different cultures (Seng, Jackson, & Philip, 2010), just as all the

other countries in the world have different cultures and communities. Therefore this study employed these characteristics to study the citizens' intention to participate in the e-government's public decision making (Li et al., 2015; Mears, Stewart, Warren, & Simons, 2017; Tambouris, 2015).

In recent years, many governments have started to work on the e-participation and develop such opportunities by allowing the citizens to participate in electoral votes (similar to the Brazil experiment). Coleman and Cardoso presented the key attributes of the e-participatory budgets in Belo Horizonte in Brazil (Coleman & Cardoso, 2017). There are two ways for citizens in Rio de Janeiro in Brazil to participate in public issues. The direct way is that the citizens get in contact through social media and inform of a request or they can simply call 1746. The other way is indirect through an intermediate player that participates actively in decision making process (Pereira, Macadar, Luciano, & Testa, 2017). With a background in e-government initiatives and the working experiences in governments, this study hopes to contribute to the e-government initiatives' successful implementation and adoption. Thus, the study focused on the intention of the citizens to participate in the public decision making of the e-government, and to examine to what extent citizens' different characteristics affect the intention to participate in the public decision process. For more detail see the Appendix (I).

1.6 Research Significance

This research was proposed to increase the citizens and governments communication and improve the collaborative participation by employing the citizens' self-knowledge characteristics in the public decision making of the e-government (Tambouris, 2015). The characteristics of the citizens' self-knowledge, such as their

level of education, culture, nature of job, income, age, gender, and environment, were generated by the explicit and tacit knowledge (Nonaka, 1994). The benefit of studying the intention of different citizens and their respective requirements to participate in the public decision making of the e-government will enhance the e-services and build trust between the citizens and the government. Determining the citizens' self-knowledge characteristics can increase the e-government's performance by helping to steer policies towards the needs of different groups and their demography. A UN report in 2016 referred to the citizens' participation in civic, cultural, and political activities as being major to promoting inclusion in the e-government.

This study was intended to strengthen the intention of the citizens to participate in the public decision-making of the e-government. Most important of all is a stronger and improved e-government to provide a much faster and more transparent, structured and robust systematic public decision making.

Each characteristic was found to play an important role in the public decision making of the e-government. For example, there are many cultures and traditions in the various countries, and when all these were merged into one, a common characteristic could be identified for these cultures to engage the citizens in the public decision making of the e-government. Such opportunities allowed this proposed study to be one that would lead to the most convenient progressive change in the e-governments of various countries through studying the intention of the citizens to participate in the public decision making.

Moreover, the UN report (2016) indicated that the citizens' participation demands a shift in the organisational beliefs and culture of the public sector; one that welcomes

the participation of all the people and embraces change of an open e-government. In spite of that fact, there is very little literature that has determined the factors for realising the citizens' participation in the public decision making of the e-government. In addition, limited studies were found in academic literature about the contributing factors for the intention of the citizens to participate in the public decision making of e-government through moderating the citizens' self-knowledge characteristics. Hence, this research has filled or closed the gaps of the existent literature on the intention of the citizens to participate in the public decision making of e-government through moderating the citizens' self-knowledge characteristics.

1.7 Research Scope

This study has focused on the collaboration between the two players; citizens and government. For this reason this study intended to support the e-governments initiatives. The scope of the e-government applications are limited to the usage of the Internet as the technology framework by the government, its citizens, and organisations for the purpose of distributing, communicating and/or conducting the exchange of information and business transactions with any government sector and other relevant clients. At present, countries are pursuing a revolution of their e-governments deliverables to their citizens (UN, 2016).

The citizens' intention to participate by employing the citizens' self- knowledge core characteristics in the public decision-making of the e-government which is in the planning stage (user requirements) was researched in the present study. The governments have engaged various groups and entities. These involved engagement between the Government and Government (G2G), Government and Citizens (G2C), Government and Employee (G2E), and Government and Businesses (G2B). Various

types of information and explicit knowledge has gone back and forth between all these engagements. In all of these situations, the governments have needed the citizens' participation (i.e. in decision making and in giving opinions or suggestions about the e-government to evaluate the public decision making in all of the components of the e-governments).

This study intended to examine the intention of the citizens to participate in the public decision making of the e-government through moderating the citizens' self-knowledge characteristics using the Theory of Planned Behaviour to enhance the e-government service. This research focused on social knowledge and citizens' behaviour to examine the human thinking of what citizens want in the e-government, especially in the public decision making of the e-government. The Theory of Planned Behaviour was employed in this study to support the citizens' participation in the public decision making. The new e-government initiatives encourage inclusivity and involve the partnership between the citizens and the government to become less complicated (Ajzen, 1991; Karppinen & Berghall, 2015; Susanto & Goodwin, 2013; Tambouris, 2015). For more details, see section 2.8.1. The past studies showed that the TPB is the best to study the citizens' intention and behaviour amongst all the IS theories.

With the advent of the Internet and its explosive growth, fueled by the use of e-mail, e-commerce has prompted some governments to use the Internet for the delivery of information and services to their citizens. Such is a normal revolution that is taking place and has been continuously strengthened in many countries across the globe, and Iraq is progressing towards realising such a noble intention. For that reason the study got permission from Iraqi government to perform the study survey in Iraq,

specifically in Karbala which represents Iraq in terms of tourism and high economy as shown in Table 2.5. Tourism industry is prosperous in Karbala as four thousand tourists enter the province per day and more than a hundred thousand tourists during the weekend. Karbala embraces many different religions because of the many residents who live there to work as Karbala has good work opportunities. The citizens' self-knowledge characteristics are important in this study. For that the citizens' characteristics of Karbala were studied in this research because they play a major role in determining the citizens' requirements. Karbala's citizens are from many different religions and cultures that represent the whole Iraqi citizens who participate and use the electronic government. The e-government needs to determine the citizens' requirements in order to develop its services (Kana, 2011; Simon, Jana, Peter, & Sara, 2012). Table 2.5 shows more detail about Iraqi provinces with different resource for each province and indicates that Karbala province has the highest income because it has three international borders and eight industries. One of the industries in Karbala is the religious tourism which gives large high income. Iraqi government was interested about developing Karbala province for many reasons; first Karbala contains people from many different religions, second Iraqi government is looking to easier management for this province to facilitate the business, and third to increase the income of Iraq by improving the services of this province to attract the businessman to invest their capitals in Karbala. For these reasons, this study took Karbala as a sample to employ the citizens' self- knowledge core characteristics in the public decision-making of the e-government (Al-Araji, 2010; Kana, 2011).

In addition to that, the Karbala cement factory provides 45% of Iraq's cement needs. Karbala also has the largest canning factory in Iraq and factories for oil refining. In the agriculture field it is famous for dates and citrus. For the aforementioned reasons

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the Iraqi government takes special care of the Karbala province to increase the exports and raise the income of Iraq. Furthermore Karbala has border crossings in to Saudi Arabia, Jordan and Syria (Al-Araji, 2010). Moreover, in Karbala, there is a shrine of Imam Hussein, the grandson of the Prophet Mohammed, a highly revered figure in Islam. Over thirty million Muslim pilgrims from Iran, Afghanistan, Pakistan, and India flood into the city to visit the shrine annually (Simon et al., 2012). For more information, see section 2.5 and 3.10.4 also see Appendix (G) government letters.

1.8 Operational Definitions

Nonaka & Toyama, 2003, reported that ―Knowledge is created in the spiral that goes through seemingly antithetical concepts such as order and chaos, micro and macro, part and whole, mind and body, tacit and explicit, self and other, deduction and induction, and creativity and efficiency‖ (Nonaka & Toyama, 2003).

A social group is ―people sharing some social relation, society - an extended social group having a distinctive cultural and economic organisation‖ (Farlex, 2017). According to Pinch and Bijker (1984), ―they argue that social groups that constitute the social environment play a critical role in defining and solving the problems that arise during the development of an artifact‖ (Pinch & Bijker, 1984).

Self-knowledge has been defined as ―understands of oneself or one's own motives or character‖ (Oxford, 2017f) or ―An understanding of yourself and your abilities‖ (Cambridge, 2017c). Brie Gertler (2015) referred to self-knowledge as the knowledge of a person's own beliefs, thoughts, sensations, and other states of mind (Gertler, 2015).

Person has been defined as ―A human being regarded as an individual" (Oxford, 2017d). According to the Assembly of the Universal Declaration of Human Rights (1948), ―The United Nations has in the Charter reaffirmed their faith in fundamental human rights, in the dignity and worth of the human person, and in the equal rights of men and women, and have determined to promote social progress and better standards of life in larger freedom" (Assembly, 1948).

According to the Oxford dictionary (2017), the *User* is defined as ―A person who uses or operates something" (Oxford, 2017h). The focus was on the prediction of the occupational class for a public user profile. The analysis was conducted on a new annotated corpus of Twitter users, their respective job titles, posted textual content and platform-related attributes (Preotiuc, Lampos, & Aletras, 2015).

Citizen has been defined as ―A legally recognised subject or national of a state or commonwealth, either native or naturalised" (Oxford, 2017b). Ceccaroni et al, (2017) presented that, ―the authors propose a perspective on and a definition for citizen science as: work undertaken by civic educators together with citizen communities to advance science, foster a broad scientific mentality, and/or **encourage democratic engagement**, which allows society to deal rationally with complex modern problems" (Baker & Blaagaard, 2016; Ceccaroni, Bowser, & Brenton, 2017). From these definitions of person, user, and citizen, it was observed that the word ‗citizens' was the most suitable for this study because it expressed the required meaning for this study.

Citizens' self-knowledge has been defined as the knowledge of a person's own beliefs, thoughts, sensations, and other states of mind (Gertler, 2015). Citizens' characteristics of the citizens, which include various levels of education, culture

beliefs and practices, nature of job, income, and environment (explicit and tacit knowledge) with one's self (Dzakiria, 2004; Nonaka, 1994; Nonaka & Konno, 2005; Nonaka & Toyama, 2003). In knowledge creation, one cannot be free from one's own context. Social, cultural, and historical contexts are important for individuals (Wertsch, 1986).

Characteristics are typical of a particular person, place, or thing (Oxford, 2017a). Kumar et al, (2007) referred to the characteristics of the citizens or objects as being the features or qualities which make them recognisable and are suited to them (Kumar, Mukerji, Butt, & Persaud, 2007).

Decision making in an e-government is a collaborative action by the administrators who have been mandated to serve the public and their interests who themselves are the end users or receivers of the government services (Bryer, 2013; Jun & Yu, 2014; Zhang et al., 2008).

Public decision making is ―Public Sector Organisations, whether they are Local Authorities, National Government or other public bodies, make decisions every day. For a Local Authority, that might be a decision to adopt a new local plan grant a review of a license application award a contract after a Tender process or build a new school or close another. Other public bodies make decisions in relation to their statutory functions which may have an effect on an individual, a group or community, sector of industry or, indeed, the public at large" (Janssen, Konopnicki, Snowdon, & Ojo, 2017).

Culture has been defined as ―that complex whole which includes knowledge, beliefs, art, morals, laws, customs, and any other capabilities and habits acquired by man as a

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member of society" (Tylor, 1871). Culture refers to the cumulative deposit of knowledge, experiences, beliefs, values, attitudes, meanings, hierarchies, notions of time, roles, spatial relations, concepts of the universe, and materials (Straub, Boudreau, & Gefen, 2004). Kroeber and Parsons, 1958, referred to the definition of culture as ―transmitted and created content and patterns of values, ideas, and other symbolic-meaningful systems as factors in the shaping of human behaviour and the artefacts produced through behaviour" (Kroeber & Parsons, 1958). From the aforementioned definitions of culture, this study concluded that culture is individuals' beliefs, behaviour, and knowledge which forms collectivistic and individualistic infrastructure. The study used this concluded definition as a factor in this study model.

1.9 Thesis' Organisation

This thesis has been organised into seven chapters. Each chapter is intended to present the logical framework that this research has worked with, successfully, from understanding the need of the research to the literature review, the research methodology, research analysis and discussion, and conclusion. The details of each chapter are supplied in Table 1.1.

Table 1.1

Thesis Outline

Chapters	Details
Chapter one	This chapter was written to support the background of the research, statement of the problem, questions of the research, objectives of the research, scope of the study, and Detailed outline.
Chapter two	Chapter two contains the previous research works that were linked to this research. This chapter includes the overview of knowledge,

Table 1.1 continued

	decision making, and e-government. All these theoretical data are then related to this study's conceptual model.
Chapter three	This chapter explains the study model and hypotheses. The discussion contains the related theories to the research and the statement of the hypotheses.
Chapter four	This chapter explains the study methodology applied in the research. This chapter includes a discussion about improving the study instrument, the variables measurements and the techniques of the data analysis.
Chapter five	Chapter four explains the findings of this research. The statistical information and its explanation are presented in detail.
Chapter six	This chapter debates the main findings and their summarises in the public decision making of the e-government.
Chapter seven	Chapter seven inclusion the results of this research. The recommendations and limitations for future studies are also given.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

In chapter one, the study discussed the background, problem statements, research questions and objectives of the study. This chapter contains the review of previous work. The beginning of this chapter defines intention and citizens' intention to identify the intention of citizens to participate in the public decision making of the e-government. Furthermore, this chapter is intended to discuss past research works related to e-government and provide the specific background on the characteristics, features, components, and functions of the e-government model. The primary objective of this chapter is to review the literature on the research areas to find the gap relating with the intention of citizens to participate in the e-government model. Here, the study clarifies the relationship between decision-making and knowledge to support the e-governments. This chapter also provides an overview of all of the elements related to e-government which may affect the work of the government and the decision-making involved.

On another side, the study defines knowledge and explains the citizens' self-knowledge characteristics as knowledge has a big role in developing the decision-making model of e-governments and improvements in the e-government e- services. In addition, it explains one of the important elements in e-governments which is the decision-making. This chapter also reviews the relevant theories related to user intention to address the gap. This study, as iterated in chapter one, has focused on the citizens' participation in the e-government through the intentions of the citizens to participate in the public decision-making of the e-governments.

2.2 Intention

Intention is known as the level to which citizens intend to participate by intermediary means or the Internet for services of the e-government in the future (Ajzen, 1991; Bataineh & Abu-Shanab, 2016; Fakhoury & Aubert, 2015; Maes et al., 2014; Setiawati & Pratiwi, 2015; Venkatesh et al., 2012; Weerakkody et al., 2013; Wu et al., 2015). Setiawati and Pratiwi (2015) suggested establishing an empirical study and examined it using a quantitative model to emphasise the intention factors considered on the reason for the citizens to follow the mayor's social media to participate in the e-government. Bataineh and Abu Shanab (2016) referred to it as being important to study the intention of participation in public activities, employing such as, e-consulting, e-involving, e-empowering, e-voting, and e-collaborating. Studying the citizens' intentions to participate in the e-government clarifies for the government the levels of the citizens' satisfaction in the government services.

By collecting data about the factors that have an impact on the citizens' intentions to utilise e-government services, this process will assist the government in discovering the utmost important fields which are necessary to be considered (Jayashree, Salehi, Abdollahbeigi, & Malarvizhi, 2016). This study has aimed to research the important factors necessary to increase the citizens' acceptance for e-government. From the above, it has been concluded in the study that intention is one of the major factors to investigate the success of an e-government without extra effort. Most of the countries have started to examine the (intention) factor to check the citizens' intentions towards new technologies or innovations, such as studying the citizens' intentions to participate in the e-government's public decision-making (Al-Nahdi, Habib, & Albdour, 2015; Alharbi et al., 2016; Bataineh & Abu-Shanab, 2016; Fakhoury &

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Aubert, 2015; Jayashree et al., 2016; Ly, Gagnon, Legare, Rousseau, & Simonyan, 2015; Setiawati & Pratiwi, 2015; Wu et al., 2015).

2.2.1 Related Studies about Intention

Alharbi, et al. (2015) explained that the factors of subjective norms and trust have an important impact on the intentions of citizens to engage in the e-participation activities of the e-government. Alharbi's study determined that the subjective norms indicate that the social influence of a participant in e-participation activities is the basic idea to allow citizens to communicate with their e-government by way of the Internet and to support them in participating and expressing their opinions in decision making. Thus, the citizens' subjective norms are important factors in the citizens' intentions to participate in such decisions and services. Figure 2.1 shows the model of Alhaarbi's study that referred to the importance of the factors in the present study. It supported the motivation of this study, and elaborated on the main factors of the citizens' intentions to participate in the e-government. Alhaarbi's study tried to identify the subjective norms of the citizens' needs by investigating families and friends in his study. Alhaarbi's study also agreed and confirm with the first factor attitude toward act or Behaviour and the second factor subjective norm, in the TPB, which presented the first and second factors in the present study.
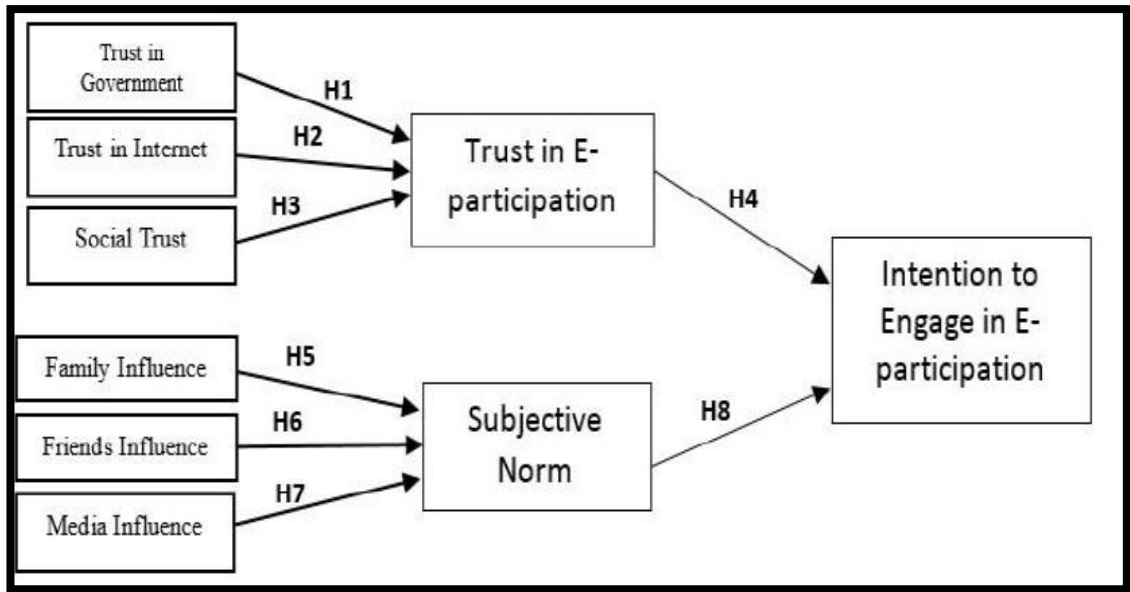
Figure 2.1. Research Model Adapted from (TPB and TAM)

Source: (Alharbi et al., 2016).

Rana, et al. (2015) clarified that attitude and subjective norm will have an important impact on a user's behavioural intention. Rana's study explained the model adapted from the TPB and TAM that included: perceived ease of use, compatibility, and perceived usefulness will significantly impact on self-efficacy, facilitating conditions, and user's attitude to significantly impact the perceived behavioural control. All of these significantly impact on the user's intention. Figure 2.2 shows the model of Rana's study that referred to the importance of the factors in the present study. It supported the motivation of this study, and elaborated on the main factors of the citizens' intentions to participate in the e-government. Rana used the TPB factors as the main factors with the TAM factors. Rana tried to identify the compatibility of the citizens with the necessity of the citizens to participate. Rana tried to identify the compatibility of the citizens with the necessity of the citizens to participate. Rana also agreed and confirmed with the first and second factors in the TPB, as well as the fifth factor (the first factor attitude toward act or Behaviour, the second factor subjective norm, and the fifth factor compatibility) in the present study.
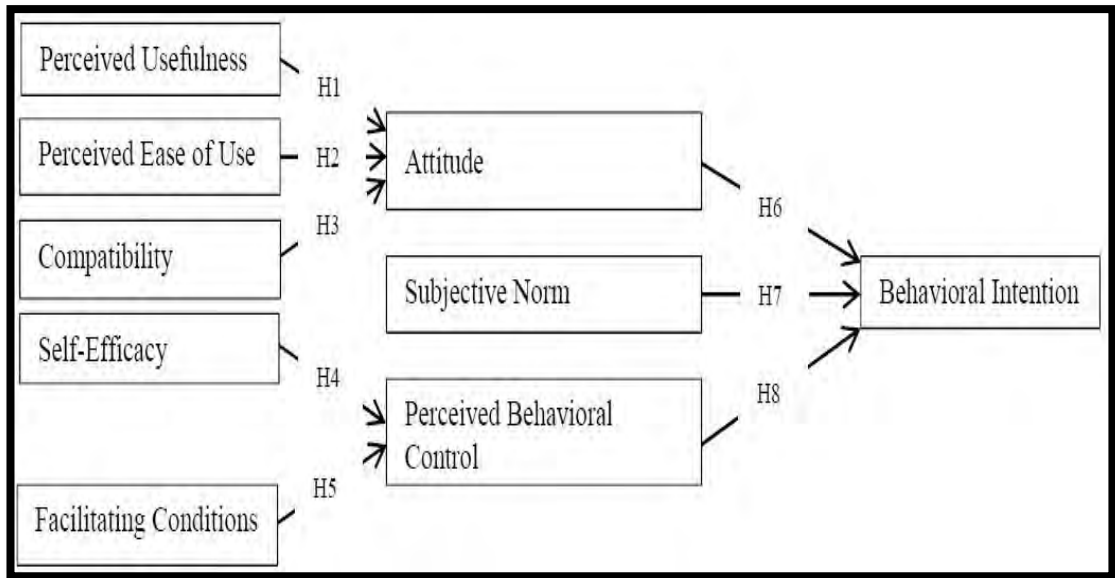
Figure 2.2. Proposed Research Model Adapted from (DTPB)

Source: (Rana, Dwivedi, & Lal, 2015).

Setiawati, et al. (2015) discovered that the theory of planned behaviour (TPB) is a good approach to influence technology acceptance. The TPB includes: the attitude factor and perceived behavioural control factor that have an impact on the citizens' intention behaviour. Figure 2.3 shows the model. Setiawati suggested that they could improve and define the initial normative factors from past studies which have the same interest in the intention of technology and the TPB in social media as the connection model of the e-government.
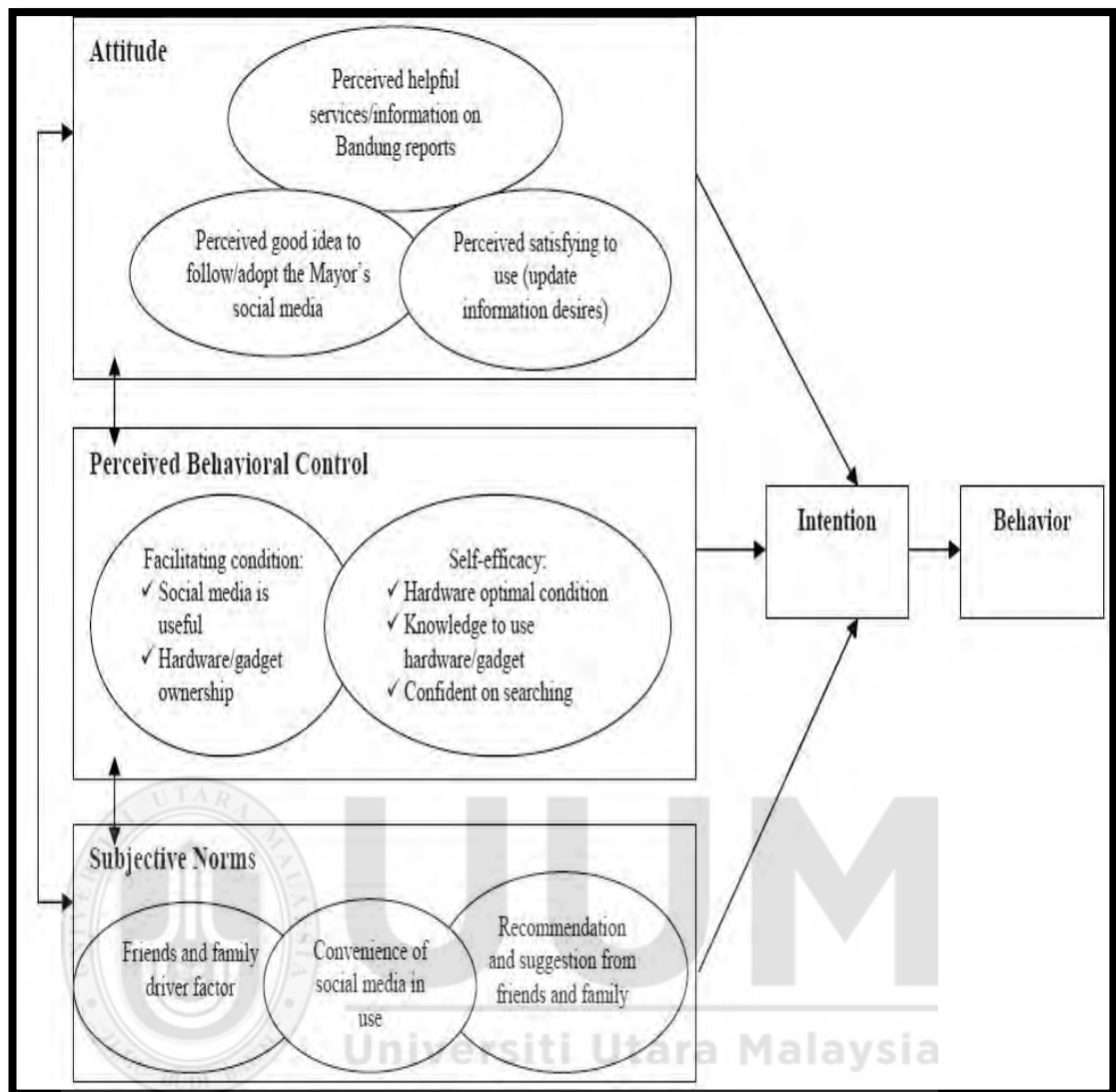
Figure 2.3. Proposed Model Adapted from (TPB)

Source: (Setiawati & Pratiwi, 2015).

Lian and Yen (2014) described the UTAUT and linked it with their study to determine the influence factors that have an impact on online shopping intentions. They explained their model which included two main factors; the first was the driver factor that contained social influence, facilitating conditions, performance expectation, and effort expectation. The second factor, Barriers contained risk, value, image, tradition, and usage. The driver, first factor, positively impacted on older people's and adults' intentions towards online buying. Lian and Yen used in their

study the moderator factors to check their impact on the relationships between the factors of the study model. Figure 2.4 shows the model of Lian and Yen's study that referred to the importance of the factors in the present study. It supported the motivation of this study, and elaborated on the third and fourth factors in the present study. They used the UTAUT factors to identify the social influence and facilitating conditions of the citizens' intentions in online shopping. Also, they moderated these factors by age to check the positive impact on older people's and adults' intentions. From the aforementioned, it has been concluded that, in the present study the control factors, such as, age, gender, social groups, level of education and Internet experience are important.
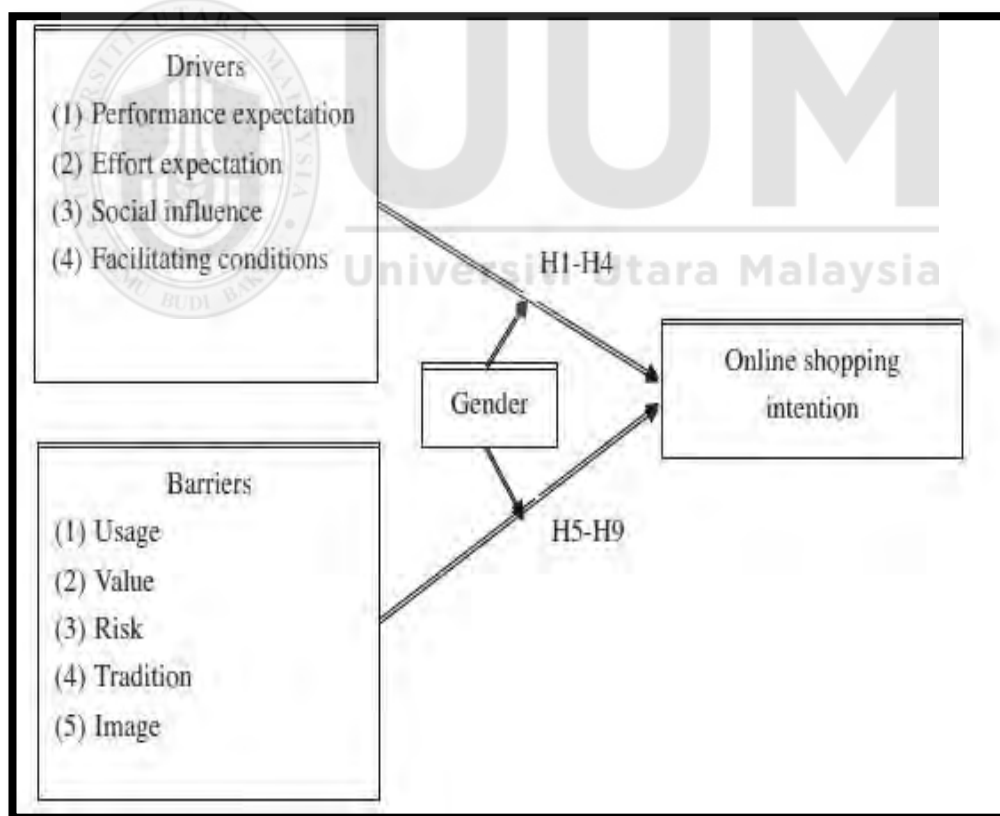
Figure 2.4. The Model of study Adapted from (UTAUT)

Source: (Lian & Yen, 2014).

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The summary of research on IS citizens intention by previous researchers is offered in Table 2.1.

Table 2.1

Related Studies about Citizens' Intention in e-government

NO	Authors	Problems	Solutions	Factors	Research Approach / Model
1	(Alharbi et al., 2016)	Traditional ways of connection between governments and citizens.	Citizens' Intentions of e-participation in the e-government.	1- Trust 2- Subjective Norms Intention to participate.	Quantitative \ Model (TPB)
2	(Rana, Dwivedi, & Lal, 2015)	Examining the adoption of the e-government.	Understanding the effect of the DTPB factors on the possibility of an adopter's intention to adopt the e-government.	1- Perceived Usefulness. 2- Perceived Trust. 3- Superior's Influence. 4- Self-Efficacy. 5- Facilitating Conditions. 6- Attitude. 7- Subjective Norms. 8- Perceived Behavioural Control. 9- Behavioural Intention.	Quantitative \ Model (DTPB)
3	(Setiawati & Pratiwi, 2015)	The citizens accept then adopt the e-government.	Adopting the Theory of Planned Behaviour (TPB) to examine the citizens' intentions to build behaviour to participate in the e-government.	1- Attitude 2- Perceived Behavioural Control 3- Subjective Norms 4- Intention.	Quantitative \ Model (TPB)
4	(Susanto & Goodwin, 2013)	Investigate the user's acceptance of	Adopting the decomposed theory of	1 Ease of use 2 Efficiency in time & distance	Quantitative \ Model

Table 2.1 continued

		The SMS service in the e-government.	planned behaviour (DTPB) to examine the individual's acceptance of	3 Value for money 4 Responsiveness 5 Relevance of the information	(DTPB)
			SMS services in the e-government.	6 Flexibility to access 7 Trust in SMS technology 8 Quality and reliability of the content 9 Perceived risk to user's privacy 10 Reliability of the system and the mobile network 11 Trust in the government & the perceived quality of the public services 12 Perceived risk to money 13 Availability of the device and infrastructure 14 Perceived compatibility 15 Self-efficacy to use SMS.	
5	(Bataineh & Abu-Shanab, 2016)	The impact factor that influences the citizens' intentions to participate in public activities.	Investigate the citizens' intention to participate in the e-government initiatives.	Intention to participant to e-government. 1- e-informing 2- e-consulting 3- e-involving 4- e-collaborating 5- e-empowering.	Quantitative \ Model
6	(Wu et al., 2015)	Government employees' attitudes and behaviours are	Applying the theory of planned behaviour (TPB)	1- Attitudes 2- Subjective norms 3- Perceived	Quantitative \ Model (TPB)

Table 2.1 continued

		Essential factors.	to envision the behaviour of employees when deciding whether to adopt a new government model.	behavioural control 4- Behavioural intention.	
7	(Xie, Song, Peng, & Shabbir, 2017)	Understanding of the e-government adoption	Examining the citizens' intentions to participate in the e-government adoption.	1- Perceived usefulness 2- Perceived ease of use 3- Perceived risk 4- Disposition to trust 5- Trust towards the e-government 6- Attitude 7- Subjective norms.	Quantitative \ Model (TPB)
8	(Mishra, Akman, & Mishra, 2014)	The extension in the employment of Information technology in the latest decade has pooled to extra power consumption also a possible overuse of in short supply resources	Examining the behavioural intention for the adoption of Green Information Technology employing the conceptual model (TRA)	1-Subjective Norms 2- Attitude Towards behaviour 3- Behavioural intention 4- Actual behaviour 5- Person related beliefs 6- Sector of respondent 7- Experience of respondent 8- Level of awareness.	Quantitative \ Model (TRA)
9	(Lian & Yen, 2014)	Barriers affecting older consumers' intentions for online shopping.	Use of the UTAUT by comparing older consumers with their younger counterparts	1- Drivers 2- Barriers 3- Intention **Moderator** Gender	Quantitative \ Model (UTAUT)
10	(Jayashree et al., 2016)	Barriers that have a direct	Used the TAM and DOI factors	1- Trustworthiness	Quantitative \

Table 2.1 continued

				2-Compatibility 3-Perceived ease of use 4- Coordination 5-Technology acceptance 6-Uncertainty avoidance 7- Intention.	Model (TAM&DOI)
11	(Kurfalı, Arifoglu, Tokdemir, & Pacin, 2017)	citizens' decision to use e-government services	Examine behavioral intention to use e-government services	1-Performance expectancy 2-Effort expectancy 3-Social influence 4-Facilitating conditions 5-Trust of Internet 6-Trust of government	Quantitative \ Model (UTAUT)

		Effect on the intentions of citizens to utilise the electronic government.	to examine the citizens' intentions to make use of the electronic government		

Table 2.1 showed all of the past studies in relation to this study. There have been studies on the IS intention and behaviour in some areas of studies like; e-government, web analytic services, e-learning, decision supporting system, government and industrial workers. In addition, Table 2.1 detected that there were continuation in the extended IS, which were the citizens' intentions to participate in the public decision-making of the e-government. It showed three columns: the problems of the studies, the approach that was used, and the research approach or model. These studies concluded the gap between the citizens and the government then came up with the solutions.

In addition, these studies clarified that the link between strategic management, and ICT depends on the role of ICT in making decisions strategically in countries. On the contrary, there have been many situations recorded where ICT decisions were made without considering critical factors which may have resulted in mistakes (Alharbi et al., 2016; Wu et al., 2015; Xie et al., 2017). However, researchers have emphasised

that the society which takes in and adopts the benefits of intention and behaviour, enabling ICT services and applications through the citizens intention to participate in e-government initiatives, has the unique attributes of expression of productivity, innovation, quality, and growth of life as well an important competitive feature unlik the society that does not (Bakar et al., 2014; Lian & Yen, 2014; Wu et al., 2015). For this reason, this study put the citizens' self-knowledge as a moderator of the variables, such as the citizens' attitudes and subjective norms, which have an effect on the intentions of the citizens to participate in the e-government's public decision-making. All of these have been considered as basic things to enhance the public decisions in the e-government.

The past studies provided a platform to focus on IS theories, especially on the TPB, to determine the proposed study's model factors because this study aimed to examine the intentions of citizens to participate in the public decision-making of the e-government. Meanwhile, researchers of intention and behaviour have argued that behavioural intention to reuse e-government determines a user's actual behavior, directly, whilst intention is positively influenced by attitude and subjective norms. However, the behavioural intention has no relation with the perceived behavioural control of perspective. Behavioural attitudes refer to a person's subjective understanding and appraisal of a specific behaviour (Setiawati & Pratiwi, 2015; Wu et al., 2015; Xie et al., 2017). Some of the researchers continued to undrtake extensive studies which were employed to test and verify the (UTAUT) model. The explanatory power of their studies was 70%. Amongst the variables there were four antecedent variables including performance expectation, effort expectation, social influence, and facilitating conditions. The variable, social influence is the degree to which the users' peers expected them to use the new IT. The variable, facilitating

conditions was the degree to which users perceive that the organisational and technical infrastructure will help them to use the new IT. So these two variables (social influence and facilitating conditions) impacted positively on the behavioural intention to use the e-government services (Lian & Yen, 2014; Setiawati & Pratiwi, 2015).

Jayashree et al., 2016 referred to perceived ease of use and trustworthiness as having direct positive relationships with the belief of the citizens in the utilisation of the e-government services. The decision is made according to whether the individual utilises the technology or the perception of the technologies like compatibility; for example, how compatibility affects the citizens' intention to make use of the e-government services. Jayashree study results revealed that, the compatibility variable impacted positively on the citizens' intention to make use of electronic government services. From Jayashree's study and other past studies the present study determined the compatibility variable which was important to examine the intentions of citizens to participate in the public decision-making of the e-government (Jayashree et al., 2016; Susanto & Goodwin, 2013; Wang, Cho, & Denton, 2017).

Alharbi et al., 2016, Rana, et al., 2015, and Kurfal et al., 2017 referred to the contracts and elements which their studies used in the survey, and the present study adopted and then adapted them to be suitable for examining the citizens intention to participate in the decision making of the e-government. For example; in the attitude factor, using the e-government web site would be a good idea. Subjective norms, People who influence my behaviour would think that I should use the e-government web site. Intention, I intend to reuse the e-government web site. Social Influence, People who influence my behaviour think that I should use the e-government system.

Facilitating conditions, I have the resources necessary to use the e-government system. Compatibility, using the e-District system is compatible with all aspects of my day-to-day life (or work). Culture, I think that many very important things happen in the world, which the public is never informed about.

Keeping this in mind, a model can always be developed into one that has the potential to decrease the gap between the citizens and the e-government and reduce the mistakes in the public decision-making. It is by virtue of having an integrated system that is built with the participation of all important stakeholders, namely, the government and the public (citizens), that an e-government's initiatives which are more realistic and attain the satisfaction of all parties can be pursued.

2.3 Review of Various Theories

Since the mid 70's, various researchers have been interested in the factors that explain or predict the use of different technologies. Such research was founded on the theoretical framework which lies on a much broader scale of resolution. The theoretical framework dwells on time tested theories that embody the findings of numerous investigations on how phenomena occur (MacFarlane & OReillyde Brun, 2012; Martin, 2012). Research work needs to be planned to reduce errors and costs and get the best results (Dwivedi, Wade, & Schneberger, 2012; Oliveira & Martins, 2011). This section elaborates on the most suitable theory for this research model and its applications within the context of the decision-making environment for e-government initiatives.

2.3.1 Related Theories to the Study

The foundation of many previous information systems and innovation adoption studies have been based on theoretical frameworks derived from IS theory.

According to Oliveira & Martins, 2011, the**Technology organisation environment theory (TOE) was created by Tornatzky, et al, 1990.**

Figure 2.5 explainsthe development of innovation by experts, engineers, and businessmen to the adoption and implementation of these innovations by users as part of a company. There are three levels that affect the development of technological innovation as presented below:

1- Technological context: Includes all relevant technology in the company, the technology available in the company and used, and even existing in the marketplace but not currently in use.

2- Organisational context: Includes the company's resources, connecting structures between staff, process of communication between companies, company size, and the amount of fixed resources.

3- Environmental context: Includes the presence of technological service providers or the absence this service, existence of a regulatory environment, and the presence of industry structure.
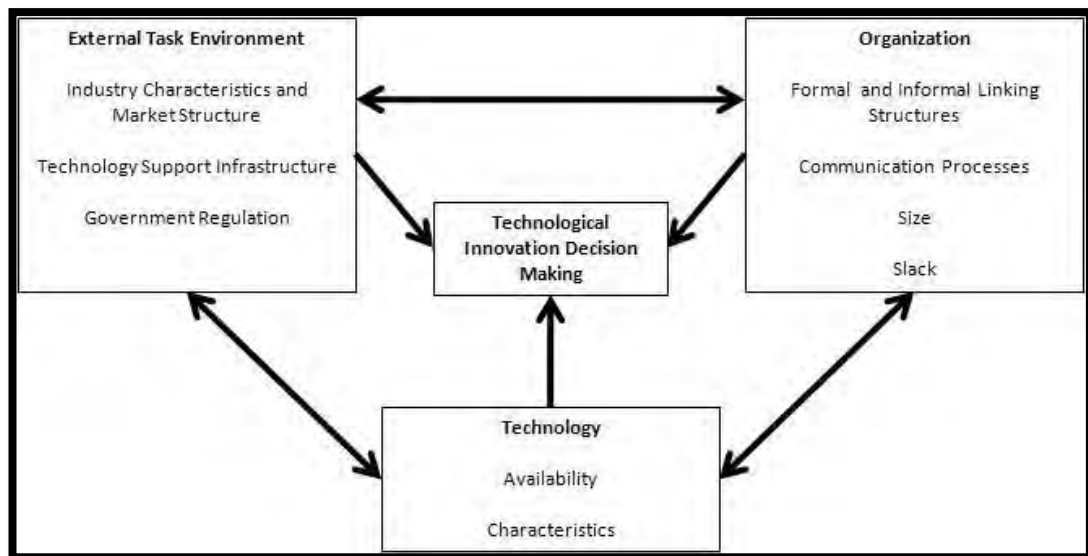
Figure 2.5. Technology organisation environment (TOE)

Source: (Susanto & Goodwin, 2013).

According to Oliveira & Martins, 2011,the **diffusion of innovation theory (DOI) was created by Rogers, 1995.**Figure 2.6 shows:

1- Individual characteristics describe the leader's attitude toward change.

2- Internal characteristics of the organisational structure includes observations according to Rogers (1995); whereby: ―centralisation is the degree to which power and control in a system are concentrated in the hands of a relatively few individuals"; ―complexity is the degree to which an organisation's members possess a relatively high level of knowledge and expertise"; ―formalisation is the degree to which an organisation emphasises its members' following rules and procedures"; ―interconnectedness is the degree to which the units in a social system are linked by interpersonal networks"; ―organisational slack is the degree to which uncommitted resources are available to an organisation"; ―size is the number of employees of the organisation".

3- External characteristics of the organisation refers to system openness.
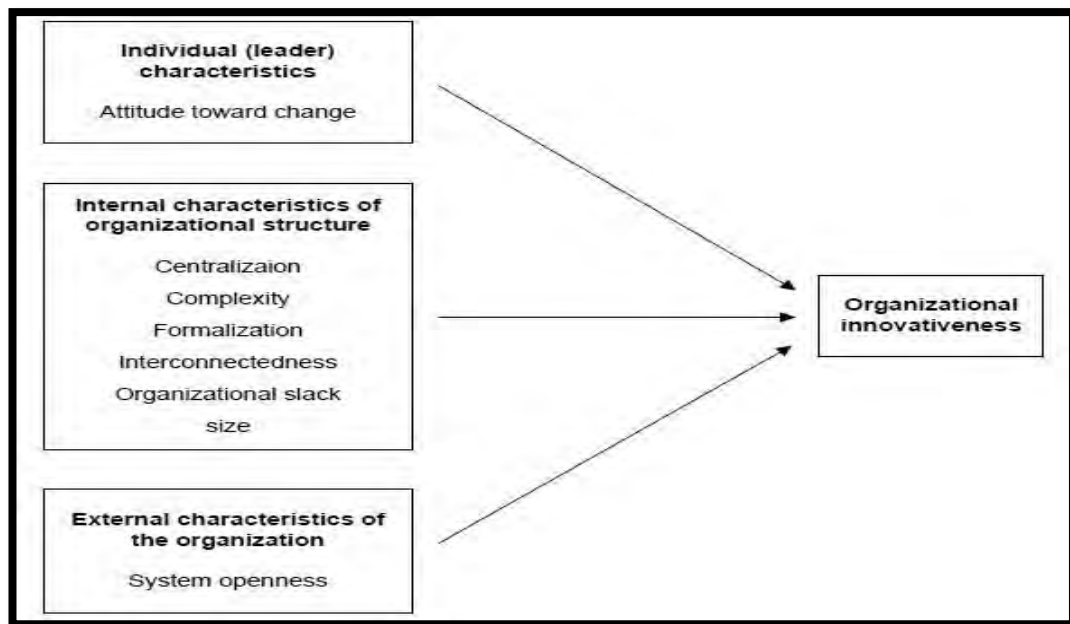
Figure 2.6. Diffusion of Innovation (DOI)

Source: (Susanto & Goodwin, 2013).

According to Venkatesh and Davis, 2011, the **technology acceptance model theory (TAM) was created by Davis, 1989.**

Figure 2.7 displays the explanation determinates of the acceptance that computers are acceptable for users and can explain the behaviour of users across a wide range of computing techniques and user populations. The factors of this theory are as given below:

1- Perceived Usefulness (PU): Notes on people's tendency to use or not to use the application, and they believe it will help them to accomplish their work better. This means the benefits of the application of the system outweigh the effort to use the system.

2- Perceived Ease of Use (PEOU): The user's view about the simplicity of the use of the system, it will affect the use of the system.

3- Attitude Towards use of System (A): User's attitude towards the use of new information technology.

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4- Behavioural Intention to use (BI): Behavioural intention to use the system, which is based on the users' acceptance of the system.

5- Actual Use: Writing a detailed report of the case study and documenting it.
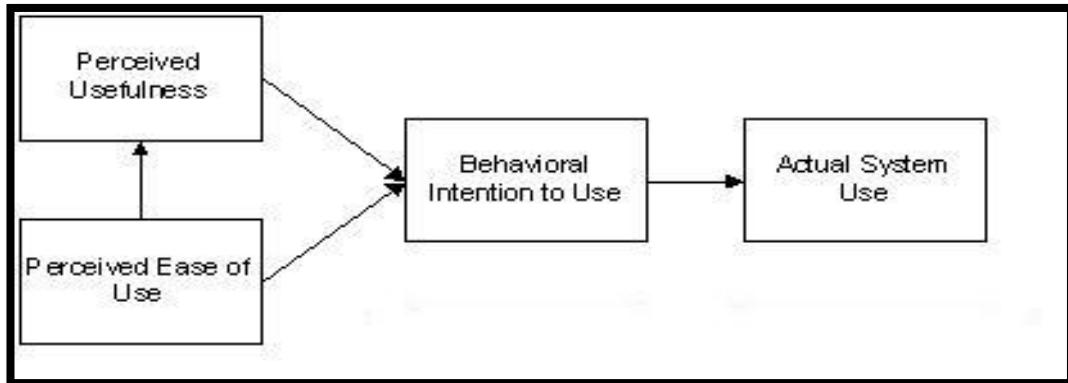
Figure 2.7. Technology Acceptance Model (TAM)

Source: (Hsu, Yu, & Wu, 2014).

Venkatesh, et al, 2003, referred to the Unified theory of acceptance and use of technology (UTAUT). Figure 2.8 explains:

1- Performance expectancy is defined as the degree to which an individual believes that using the system will help him or her better attain significant rewards, and performance expectancy was found to be a significant determinant of the behavioural intention, with its affect varying across gender and age such that, the affect was strongest for younger men.

2- Effort expectancy is defined as the degree of ease associated with the use of the system, and it was found that the effect of the effort expectancy on the behavioural intention varied across gender and age such that, the effect was strongest for older women in the early factor of experience.

3- Social influence is defined as the degree to which an individual perceives that important others believe he or she should use the new system, and it was found that, the effect of social influence on the behavioural intention was found to be contingent

on gender, age, experience, and voluntariness such that, it was the strongest for older women in the early factor of experience in mandatory contexts.

4- Facilitating conditions is defined as the degree to which an individual believes that an organisational and technical infrastructure exists to support the use of the system, and it was found that the effect of facilitating conditions on technology use was moderated by age and experience such that, the effect was strongest for older workers in the later factor of experience.
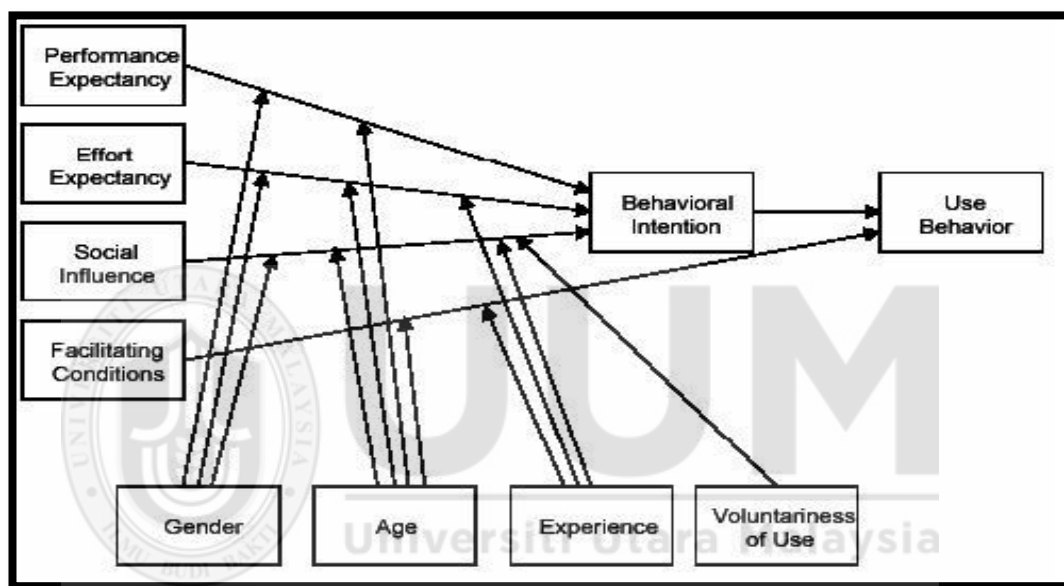
Figure 2.8. Unified theory of acceptance and use of technology (UTAUT)

Source: (Venkatesh, Morris, Davis, & Davis, 2003; Venkatesh & Zhang, 2010).

Ajzen, 1991 Theory of Planned Behaviour (TPB), the theory of planned behaviour was created by Ajzen, 1985, 1987.

Figure 2.9 clarifies the theory of planned behaviour studies the relationship between behaviour and beliefs, to improve the ability to predict, and perceived behavioural control. The factors of the theory are present below:

1- Attitude towards behaviour: an individual's negative or positive evaluation of the self-performance of the particular behaviour. This point is to determine the degree to which the performance of the behaviour is negatively or positively valued.

Attitude towards behaviour is defined as the individual's positive or negative feelings about performing the behaviour. It is determined through an assessment of one's beliefs regarding the consequences arising from behaviour and an evaluation of the desirability of these consequences. Formally, the overall attitude can be assessed as the sum of the individual consequence x desirability assessments for all of the expected consequences of the behaviour.

2- Subjective norms: The individual's belief about a particular behaviour, which is to influenced through the decision of others or people close to him/her (e.g., spouse, parents, teachers, and friends).

A subjective norm is defined as an individual's perception of whether people important to the individual think the behaviour should be performed. The contribution of the opinion of any given referent is weighted by the motivation that an individual has to comply with the wishes of that referent. Hence, overall, subjective norm can be expressed as the sum of the individual perception x motivation assessments for all of the relevant referents.

3- Behavioural control: An individual's ease of performance for the particular behaviour or the difficulty of performing the behaviour.

Behavioural control is defined as one's perception of the difficulty of performing behaviour. The TPB views the control that people have over their behaviour as lying on a continuum from behaviours that are easily performed to those requiring considerable effort, resources, etc. Although Ajzen has suggested that the link between behaviour and behavioural control outlined in the model should be between behaviour and actual behavioural control rather than perceived behavioural control, the difficulty of assessing actual control has led to the use of perceived control as a proxy.

4- Behavioural Intention: An indication of the individual wanting to do a particular behaviour; it is supposed to be immediately before doing the behaviour.

5- Behaviour: An Individual's response in a given solution with respect to a given target.
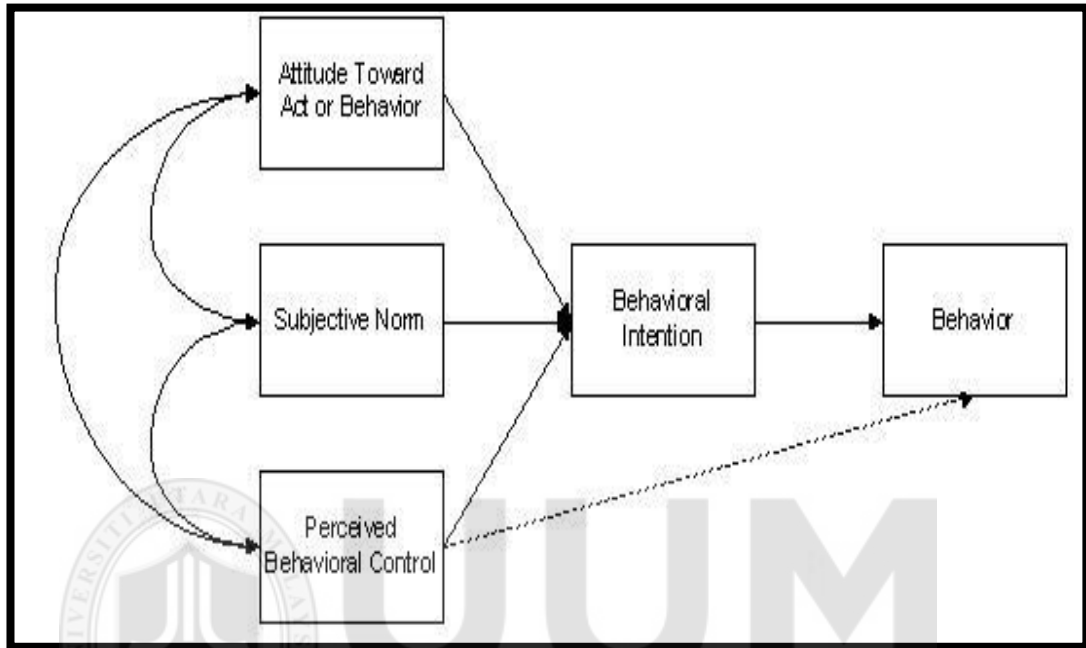
Figure 2.9. Theory of Planned Behaviors (TPB)

Source: (Straub et al., 2004).

Table 2.2 shows the theories discussed in this study, their factors, and the fields of their usage.

Table 2.2

Applicable Theories in this study:

Theories (Author)	Factors	Usage	Selected Articles Using the Theory
Diffusion of innovation (DOI) Rogers, 1983, 1995.	1- Technical compatibility 2- Technical complexity 3- Relative Advantage	Acceptance of any new innovation	(Oliveira & Martins, 2011); ; (Al-Jabri & Sohail, 2012; Mustonen & Lyytinen, 2003).
Technology organisation environment (TOE) Tornatzky and Fleischer, 1990.	1- Technology 2- Organisation 3- Environment	Adoption of a technology or innovation of an organisation	(Oliveira & Martins, 2011); (Angeles, 2013); (Baker, 2012).
Technology Acceptance Model (TAM) Davis, 1989.	1- Perceived usefulness 2- Perceived ease of use	Acceptance of innovation of Technology.	(Baker, 2012); (Lin, Fofanah, & Liang, 2011a); (Dulcic, Pavlic, & Silic, 2012);(Shroff, Deneen, & Ng, 2011; Xie et al., 2017).
Unified Theory of Acceptance and Use of Technology (UTAUT) Venkatesh et al, 2003.	1- Performance expectancy 2- Effort expectancy 3- Social influence 4- Facilitating conditions.	Behaviour of individual's intention in using technology	(Venkatesh & Zhang, 2010);(Rodrigues et al., 2016)
Theory of Planned Behaviours (TPB) Ajzen, 1985.	1- Attitude towards using 2- Subjective norms 3- Perceived behavioural control	Improving the intention of predictability in various innovations or technologies for dealing with the complexities of human social behaviour.	(Ajzen, 1991); (Ajzen, 2011); (Morgan & Bachrach, 2011; Wu et al., 2015; Xie et al., 2017)

2.3.2 Justification for the Theory of Planned Behaviour (TPB)

The Theory of Planned Behaviour (TPB) was proposed by Ajzen (1985) because of the restrictions found in the TRA. Therefore, this TPB model has been mostly utilised and validated by different researchers in the prediction of the personal behaviour and intention of technology adoption. In addition, the Theory of Planned Behaviour model was proposed to evaluate the behaviour and intention of an individual in technology adoption, whilst Jackson (1997) recommended that the attitude towards behaviour and subjective norm constructs can be officially added to the new model. Furthermore, the causative relationships between the variables, including the subjective norm and attitude with the behavioural intention, determine the citizens' participation in the public decision-making of the e-government, with exclusion of the factor of perceived behavioural control that controls beliefs (Ajzen, 1991; Ajzen & Fishbein, 1980). The present study has focused on only the intention to participate, by citizens, in the public decision-making of the e-government (Kabbar, 2016; Mishra et al., 2014).

Table 2.2 shows that the TPB was used in improving the intention of predictability in various innovations or technologies for dealing with the complexities of human social behaviour, which the present study has focused on to examine the citizens intention to participate in the public decision making of the e-government. The Theory of Planned Behaviour is useful for studying the intentions of citizens to adopt the behaviour of examining the techniques of the e-government (Rana, Dwivedi, & Lal, 2015; Xie et al., 2017). Xie, et al. (2017) presented that several scholars have extended the TPB model, with compatibility and culture as two determinants which are often introduced to the TPB. Some previous studies have linked compatibility to the TPB in the e-government. Therefore, the Theory of Planned Behaviour has been

useful in this research whilst trying to identify the contributing factors for citizens' participation in the public decision making of the e-government. Thus, according to Alharbi et al., 2016 and Wu et al., 2015, which referred to excluding the perceived behavioural control variable if the study is about examining the citizen's intention to participate without taking into account the people who have incomplete volitional control (Ajzen, 2011). However, behavioural intention has no relation with the perceived behavioural control perspective. Behavioural attitude refers to a person's subjective understanding and appraisal of a specific behaviour (Wu et al., 2015).

2.3.3 Justification of the Unified Theory of Acceptance and Use of Technology

The Unified Theory of Acceptance and Use of Technology (UTAUT) was suggested by Venkatesh et al. (2003). However, researchers have emphasised that several constructs in the UTAUT may not be suitable with several constructs towards examining the participation intention with technology. Thus, this study has taken two constructs from the UTAUT to be engaged in this study model (Alshehri et al., 2013; KIT, 2014). This has displayed that the components of the UTAUT are beneficial for modelling the citizens' intentions to participate in the public decision-making of the e-government (Escobar, Carvajal, & Monge, 2014; KIT, 2014). Thus, according to Lian & Yen, 2014 and Venkatesh, et al, 2016, the social influence variable and the facilitating conditions variable's performance expectations were in the level to which users expect that the IT will improve their job performance. For that the present study focused on examining the citizen's intention to participate in the public decision making of the e-government with the citizens' expectations that their participation will improve the e-government public decision making performance. This study has taken the social influence factor and facilitating condition factor to study the participation intentions of citizens' in the public decision-making of the e-

government (Escobar et al., 2014; Kurfalı et al., 2017; Venkatesh & Zhang, 2010). The UTAUT factors like social influence and facilitating conditions fit with the objectives of this research because they supplied 70% of the variance in intention (Chae, Cho, & Kim, 2016; Slade, Williams, & Dwivedi, 2014; Verdegem & De Marez, 2011).

2.4 E-Government and E-Governance

Electronic government and electronic governance can be realised as two very special term. Electronic governance is a wider topic that deal with all of the types of networks and relationships in the government regarding the application and usage of ICTs (Adeyeye & Aladesanmi, 2011). E-government is the utilisation of communication and information technology in public administration integrated with new skills and organisational change in order to perfect democratic processes and public services, and to strengthen the support of public policies. The government uses, most particularly, the Internet and ICT to support employing citizens, the government's performance, and provide government services to the public. E-governance offers ICTs platforms at various opportunity steps of the public sector and government services, and support to enhance the governance (Abaas et al., 2014; Hien, 2014; Lim, Masrom, & Din, 2014). Both e-government and e-governance have been utilised interchangeably. The e-government idea is a content subset of e-governance. E-governance is a wide idea and contains the use of civil society and ICT by the government to increase greater citizens' participation in the governance of political organisations (Al-Dalou & Abu-Shanab, 2013; Hien, 2014). This research focused on the e-government.

2.4.1 E-Government

E-government, which is the short form for electronic government, is also known as Internet government, digital government, online government, and connected government. It consists of various types of interactions which may include the digital interactions between a citizen and his/her government, between governments and government agencies, between governments and citizens, between governments and employees, and between governments and businesses/commerce. It is intended to provide convenience, and customer-oriented and efficient public services in terms of cost and the exchange of information by electronic means. In particular, the use of e-government information and communications technology, such as Wide Area Networks, the Internet, and mobile computing, has been aimed to transform relations with citizens, businesses, and other branches of the government (Hasani & Beleraj, 2013; Igari, 2014; Kolachalam, 2012; Turban et al., 2017; UN, 2014).

The difference between e-governance and e-government is that, e-government is the shift from internal and external relations in the public sector, with the help of information and communication technology (ICT) in order to improve the delivery of government services and citizens' participation. Digital society is a society, or community that has been established in the development and integration of digital technologies in everyday life at home, work, and play. E-government is the development, implementation, and application of policies, laws, and regulations necessary to support the work of the knowledgeable society and e-governance (Bonson, Torres, Royo, & Flores, 2012; Hassan, Mahdi, & Al-Khafaji, 2014; Siskos et al., 2014). Capacities and innovation will be required to improve public accountability, promote policy integration, and encourage participation for extra inclusive societies as to ensure fair and successful public services for all, especially

for the most vulnerable and poorest groups. The e-government and ICT are significant tools to understand these objectives (UN, 2016).

2.4.2 Types of E-Government

The e-government initiatives were created to help the government departments, the citizens, government employees, humanitarian institutions, and businesses in the private and public sectors by employing ICT and building a big database centre (Dijk, Ebbers, & Wijngaert, 2015; Kolachalam, 2012; Lofstedt, 2012; Moon et al., 2014). Governments in all countries are adapting and establishing e-governments to better provide and deliver information and data to service their citizens (G2C), government (G2G), and businesses (G2B) (Moon et al., 2014; Norris & Reddick, 2013; Turban et al., 2017). The study clarified the three main players or types of e-governments as listed below:

> **Government to Citizen (G2C)**

E-services for e-governments are a provision service to the citizens for multiple purposes. These include services for the public to pay bills, perform various applications, track particular applications and decisions on government actions, to reduce routines, and provide convenience to the public (Haider, Shuwen, & Hyder, 2014; Turban et al., 2017; Ziemba & Papaj, 2012). It is a major step to enhance transparency, minimise challenges to the public, and speed up application processes. In addition, the e-government also promotes better relationships with the citizens (Lee & Kim, 2014). It offers more accessibility and flexibility to the public irrespective of distance, location, and time and provides services and information

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continuously twenty four hours a day, seven days a week to the citizens (Prasad & Atukuri, 2012; Rana & Dwivedi, 2015).

> **Government to Government (G2G)**

G2G was intended to establish a unified database integrated amongst all the organisations in the government via the integration of various services in the portal which includes financial systems, recruitment applications, core business application systems, and human resource systems (Alghamdi, Goodwin, & Rampersad, 2011; Jun, Wang, & Wang, 2014; Turban et al., 2017). Facilitating interaction amongst government organisations is accomplished by simplifying the interaction through the usage of ICT and the coordination and collaboration amongst the respective organisations. Employing data sharing and using electronic transactions between governmental administrations has made the government achieve improvement in its transaction procedures, efficiency, cost savings, speed of work, minimum use of staffing to perform a particular task, and modifying the consistency of the results. The G2G includes services, such as e-Security, e-Identity, and e-documentation (Alsaghier, Ford, Nguyen, & Hexel, 2011; Usman, Thoyib, & Otok, 2014).

> **Government to Business (G2B)**

The government, from all sectors, has to support the businesses and the business communities because they are major part of the government. Activities between the government and different public organisations are necessary (Banowosari, Wicaksana, Wulandari, Purnamasari, & Setyantana, 2014; Hossain & Moon, 2011; Turban et al., 2017). The e-government has provided the businesses easy access and flexibility to retrieve information and use it to complete their transactions online

(Lofstedt, 2012; Qureshi, 2014). The government has encouraged joint action between the e-government and public agencies to improve the provided services to the citizens (Alaaraj & Ibrahim, 2014; Valdes et al., 2011).

2.4.3 Barriers and Challenges in the E-Government

A number of barriers and challenges have restricted the continuous improvement of the e-government. These have involved insufficient or poor ICT infrastructure, security, and privacy data sharing. Another common barrier in the e-government has been the technical challenge. Literature has suggested that there has to be continuous research attempts to develop a better understanding of access and confidence in the natural environment surrounding the electronic government system (Dombrowski et al., 2014; Welch & Feeney, 2014). Evidently, there was much to improve on in the e-government initiatives. Some of the e-government services are better today than before, but still require more work. They require frequent updating and improvement, and this is where citizen participants' feedback and input are preciously sought (Charalabidis et al., 2012; Dijk et al., 2015; Welch & Feeney, 2014; Zheng et al., 2014). For example, literature showed that the policies and regulations for e-usage, partnership, and collaboration amongst stakeholders, promotion on e-government's benefits and advantages, and strategic planning to promote electronic means were all weak. In addition, the human resources and personnel to man such changes were found to be needing upgrading. Governments have needed to hire and appoint qualified and knowledgeable professionals (Athmay, 2013; Charalabidis et al., 2012; Dombrowski et al., 2014; Niehaves & Plattfaut, 2014; Xie et al., 2017). Nevertheless, another important issue that has needed attention surrounds the leadership and top management in the government and organisations. Leaders need to be visionaries on e-government application initiatives.

They play a significant role in the adoption and employment of the e-government. The temptations of bribery charges and work on bribery explicitly, or the use of administrative discretion for personal reasons and favouritism, all would determine the success rate and transparency of the government (Alshehri & Drew, 2010; Kim, 2014; Montani, Battistelli, & Odoardi, 2015; Savoldelli et al., 2014).

Another barrier has been found to be the social exclusion or gap manifested by poor IT and computer skills. Such cases have involved cultural variances on multidimensional issues that affect the social complexity. Despite the growing number of empirical studies on cultural issues, little is known about the citizens' cultural values of the e-government, and how these values limit the absorption of the e-government (Alshehri & Drew, 2010; Dombrowski et al., 2014; Efrat, 2014; Rodrigues et al., 2016).

Other problems or issues relevant to the e-government initiatives with developing countries have included the absence of infrastructure, resistance to change, lack of education, natural disasters, power shortages, and the unavailability of Internet facilities which have hampered the implementation of electronic governments, severely. Most notable, corruption was still the greatest barrier to promoting transparency in governments within the developing countries (Barry & Bannister, 2014; Rahman & Rajon, 2012; Rodrigues et al., 2016). The artificial dichotomy between the central and local governments and central/state officials ought to recognise the rural areas more. For instance, the rural areas ought to receive more grant allocations (and support) than the urban municipalities. In addition, they should also be given greater access to obtain commercial loans for their capital development projects. Consequently, urban development and areas could indirectly support the

rural areas whilst other avenues for cooperation and assistance could also be sought. Similarly, personnel conditions ought to be skewed in favour of rural areas for both local and state government employees. Additionally, the state governments ought to take more purposive action, often in concert with donor organisations to ensure that urban municipalities become largely self-sustaining (Adeyeye & Aladesanmi, 2011; Savoldelli et al., 2014; Turban et al., 2017).

Other studies have focused on two specific views on e-government, namely, the "government" and "citizen", and attempts have been made to identify areas of e-government that could possibly provide feedback. Some suggestions for future research were also provided. There is a need to conduct a systematic research on the impacts of the e-services or cloud Computing on the e-government (Alawneh, Al-Refai, & Batiha, 2013; Hashemi, Monfaredi, & Masdari, 2013; Srivastava, 2011; Utkina, 2014; Weerakkody et al., 2013).

2.4.4 E-Government Models and Frameworks

The proposed framework of the user's satisfaction with e-government services as shown in Figure 2.10 measured the success and the preparation of e-government implementation employing the Technology Acceptance Model to measure the level of acceptance of e-government by the stakeholders. The theory of planned behaviour to measure the user'sbehaviour of e-government applications, and a model of the information system to measure the success of the training and e-government applications have been the common research applications when pursuing such studies (Danila & Abdullah, 2014). This framework has supported the idea of this research through studying the behaviour of the citizens to check the citizens' acceptance or non-acceptance of the e-government's proposed framework. Danila

and Abdullah's study gave four factors that conformed with the four factors in this study.
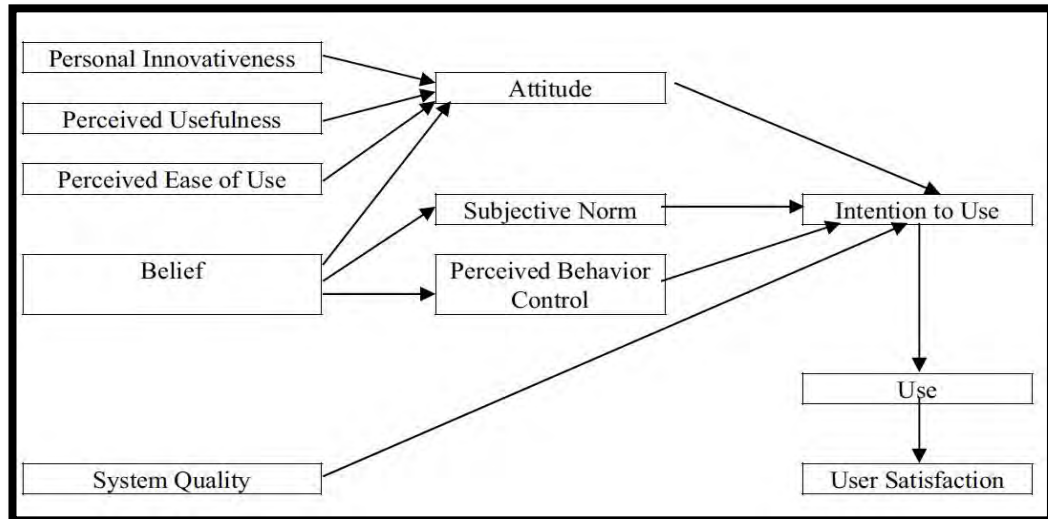
Figure 2.10. Proposed Framework User's satisfaction on the e-government services Source: (Danila & Abdullah, 2014).

The proposed model for the electronic government in Figure 2.11 was established as promoting and constructing an innovative e-government performance evaluation model are important matters for local governance. The employees of the local government play an essential role in management policies and performing environmental planning. The employees of the government have attitudes and behaviours which are decisive factors for an effective implementation of governance models, especially novel policy instruments or new governance models. This model was built on various main factors, such as behavioural attitudes, subjective norms, and perceived behavioural control. Each factor had sub factors or extended factors. The objective of Wu's research was to explore the essential factors of attitudes and behavioural intentions to define which factors impacted on the behaviour of the employees in the e-government to improve the service of the e-government (Wu et al., 2015).

According to Wu, et al.'s (2015) research, as shown in Figure 2.11, this study took the behaviour and intention of the essential factors to establish a new study. All these main factors in Wu's study proved the main factors of this study and the extended factors of Wu's study which has driven this study to identify the citizens' self-knowledge characteristics as moderating factors.
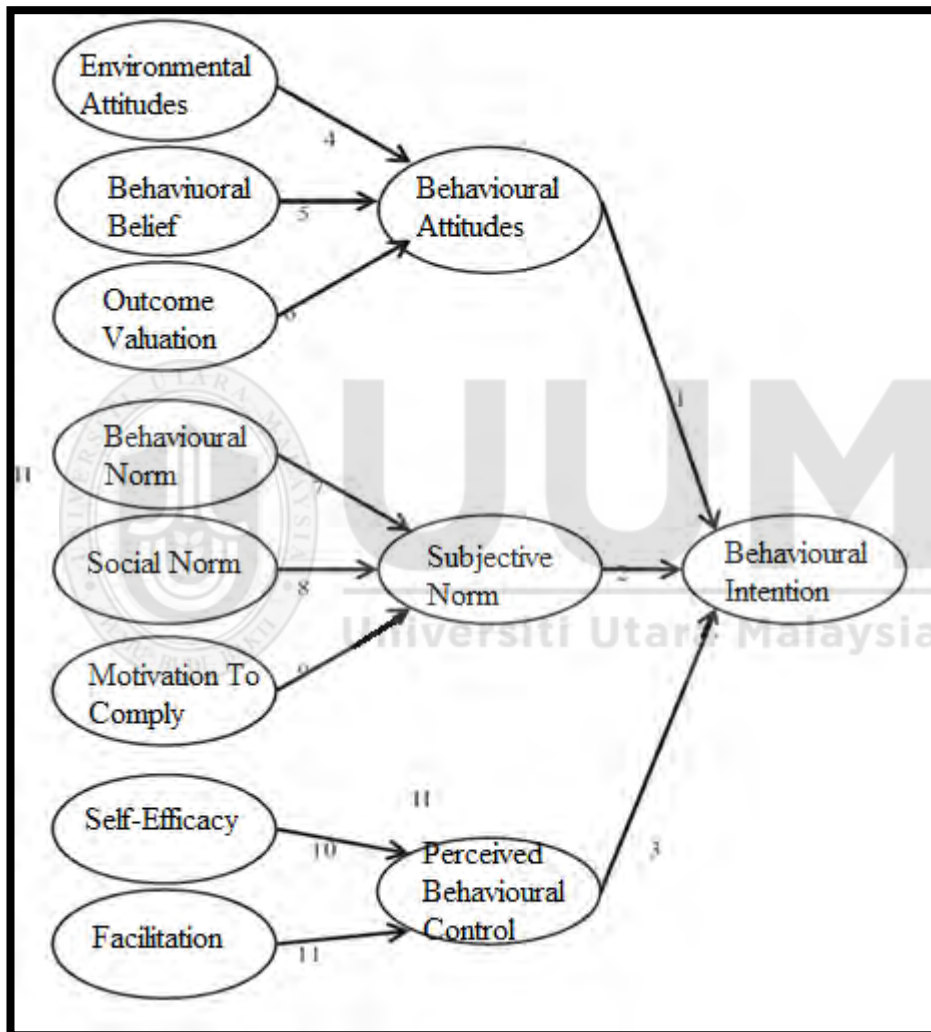
Figure 2.11. Structure Model

Source: (Wu et al., 2015).

The proposed model of the Unified Theory of Acceptance and the Use of Technology, shown in Figure 2.12, became the UTAUT. It is the most complicated

of many technology adoption and acceptance models by combining elements of other

models produced in the hope of strengthening the appropriate model for the study.

The validity and reliability of the UTAUT model has been confirmed by many of the

studies in a variety of situations and contexts. It consisted of four predictors of

behavioural intention and the behaviour of users to use. These four factors were the

length of the performance, the duration of the effort, social influence, and the

conditions that made it easier. In order to moderate the relationship between these

structures and the behaviour, key factors which included the intention to use age,

gender, experience, and voluntary willingness to develop the e-government were

considered (Alqasa & Al-Matari, 2015). Alqasa and Al-Matari's model had four

main characteristics generated from people's behaviour: gender, age, experience, and

voluntariness. These characteristics had an impact on the factors of their study. From

Alqasa and Al-Matari's study, it was concluded that the citizen's characteristics in the

present study played an important role in identifying the potential impact on public

decision-making.
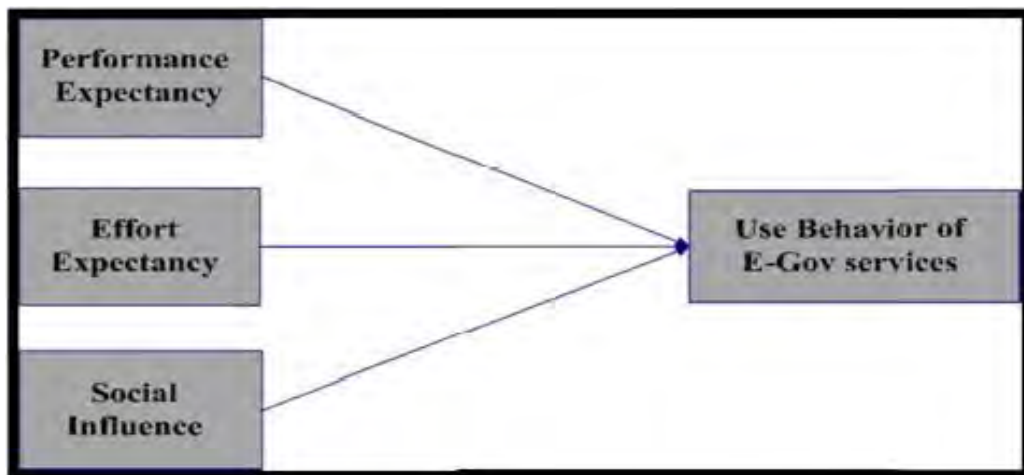
Figure 2.12. Proposed Research Framework of EG adoption

Source: (Alqasa & Al-Matari, 2015).

The proposed conceptual framework shown in Figure 2.13 was built on past studies which played a crucial methodological role to study other roads to citizens' and communities' activities on specific implementation correlated to the information communication technology (ICT) for policy modelling and government fields. The past studies searched showed limited consideration to the characteristics of the citizens (such as culture, personality, gender, beliefs, education level, value of systems, and experience) (Alzahrani, Karaghouli, & Weerakkody, 2017). Alzahrani's conceptual framework contained the antecedents of trust, citizens' beliefs, and outcome of trust. In the antecedents' part, the citizens' characteristics were significant factors which had impact on the citizens' trust in the e-government; and gender, Internet experience, and education were considered on the citizens' sides. Substantially, Alzahrani's study referred to gender, education, and Internet experience as important factors impacting on the factors of the intentions of citizens' to participate in the public decision-making in this study. This contributed to the focus in this study being to use these factors as moderators in the proposed study.
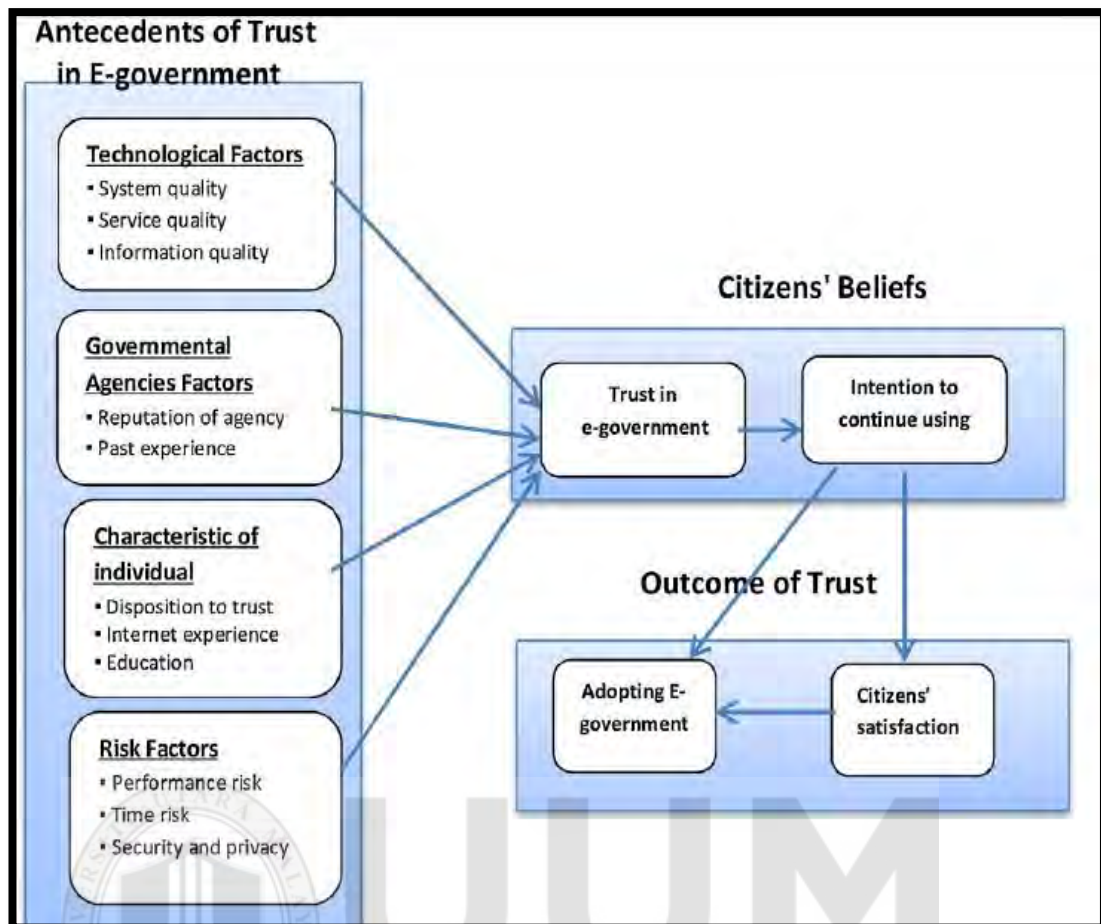
Figure 2.13. Conceptual Framework

Source: (Alzahrani et al., 2017).

The proposed framework Technique for Order Preference by Similarity to Ideal Solution (TOPSIS), as shown in Figure 2.14, was created in a particular government's willingness assessment rather than the conventional accreditation of risk evaluation. This model used fundamental information to help the government analyse their respective citizen. Such opportunities helped the government to improve their action plans to develop the electronic government's readiness with optimal points of resources. This model was divided into three phases as listed below:

1. The first phase: Identified the decision points; the researcher determined the candidate communities, the decision makers, and the electronic government willingness hierarchy.

2. The second phase: Counted the important weights of the electronic government willingness items (sub-sub-indicators, sub-indicators, and indicators).

3. The third phase: Counted the electronic government willingness indicator for each society. The commission used the suggested fuzzy group TOPSIS' way to calculate the relative proximity of the electronic government willingness of a community to the ideal electronic government willingness indicator (Tavana, Zandi, & Katehakis, 2013). The proposed framework of TOPSIS was related to the present study as it focused on the communities' readiness for e-government initiatives to deal with its citizens and competitiveness parallel to its national, regional and local counterparts.
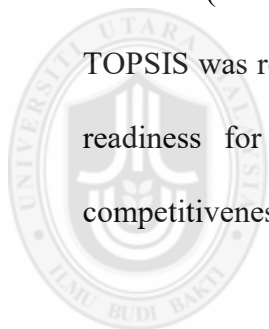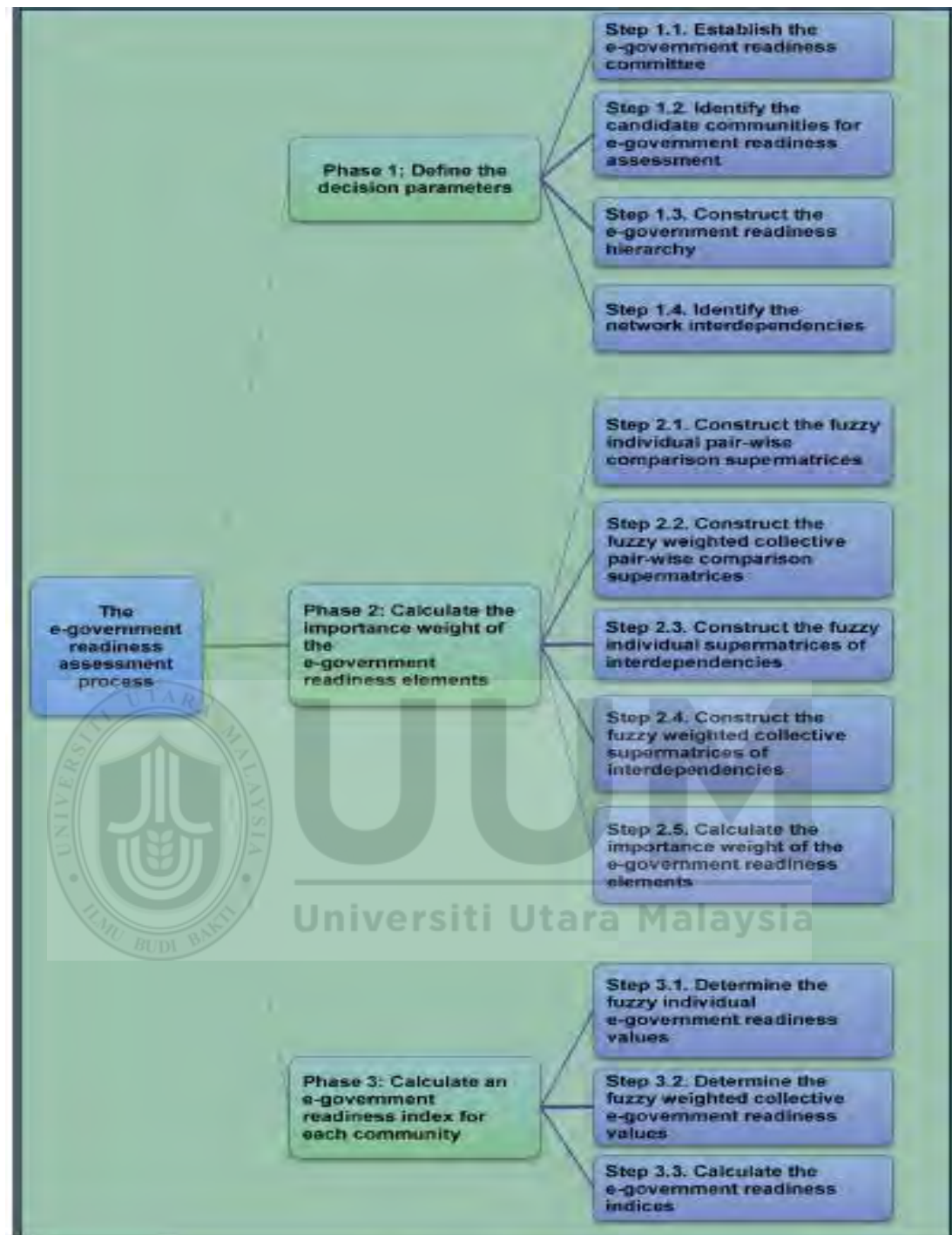
Figure 2.14. Proposed Framework (TOPSIS)

Source: (Tavana et al., 2013).

This study proposed a model of citizens' effective electronic participation. The conceptual model of active e-participation with concentration on the role of citizen participation and social capital design underpinned the motivation of this study.

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Figure 2.15 illustrated the three levels of personal social capital (strength of offline social ties, civic norms, and trust in government) that needed to be supported by the citizens' effective use of electronic participation. Furthermore, the research proposed that the following three items of electronic participation management (responsiveness, understanding the justice of the participation operation, access to information) were associated with effective electronic participation (Lee & Kim, 2014). This conceptual model supported this study by studying the individual social capital of the citizens, then managing and activating the e-participation in the e-government.
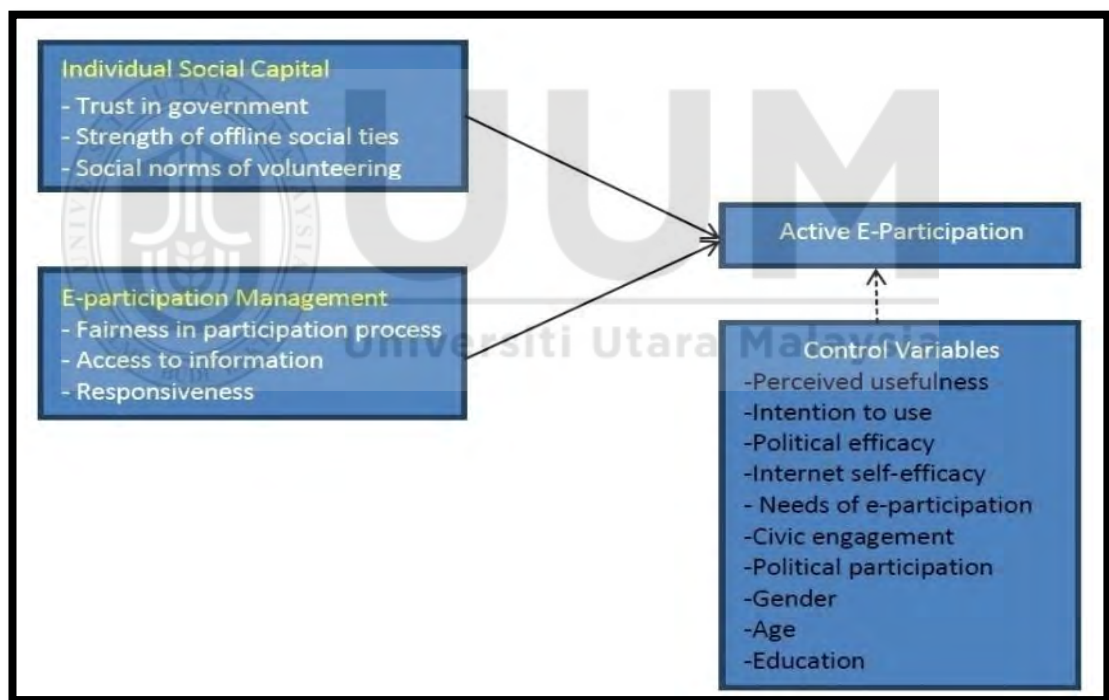
Figure 2.15. Conceptual Model of Active E-participation

Source: (Lee & Kim, 2014).

2.4.5 E- Government Decision Making Relationship with this Study

Decision-making is indeed the most important management function. No other control functions, such as planning, organising, directing and controlling, and employment, can be carried out without a well thought out and rigorous decision making analysis (Siskos et al., 2014; Zhang et al., 2008). E-governments are developed by engaging citizens in the decision making process. Countries elsewhere in the world are increasingly embracing innovations and ICTs to employ the citizens in the process of decision making (Bryer, 2013; Qureshi, 2014; Tambouris, 2015). According to the UN, 2016, ―In recent years, e-government has enabled enhanced public participation in government decisions in ways that were unthinkable in the past. The use of ICTs and the increased availability of open and innovative channels of communication between government and citizens, including social media, have made e-participation more widespread and pervasive than ever before". The UN report clarifies that developing decision making by involving the citizens enhances the e-governments to deliver better e-services to the citizens.

Shared decision making (SDM): DeMeester et al, (2016) suggested shared decision making (SDM) come about when clinicians and patients work with each other to reach decisions of care which are both responsive to patients' preferences and medically sound. SDM is a major principle of patient- centered care which can enhance patient outcomes as shown in Figure 2.16.
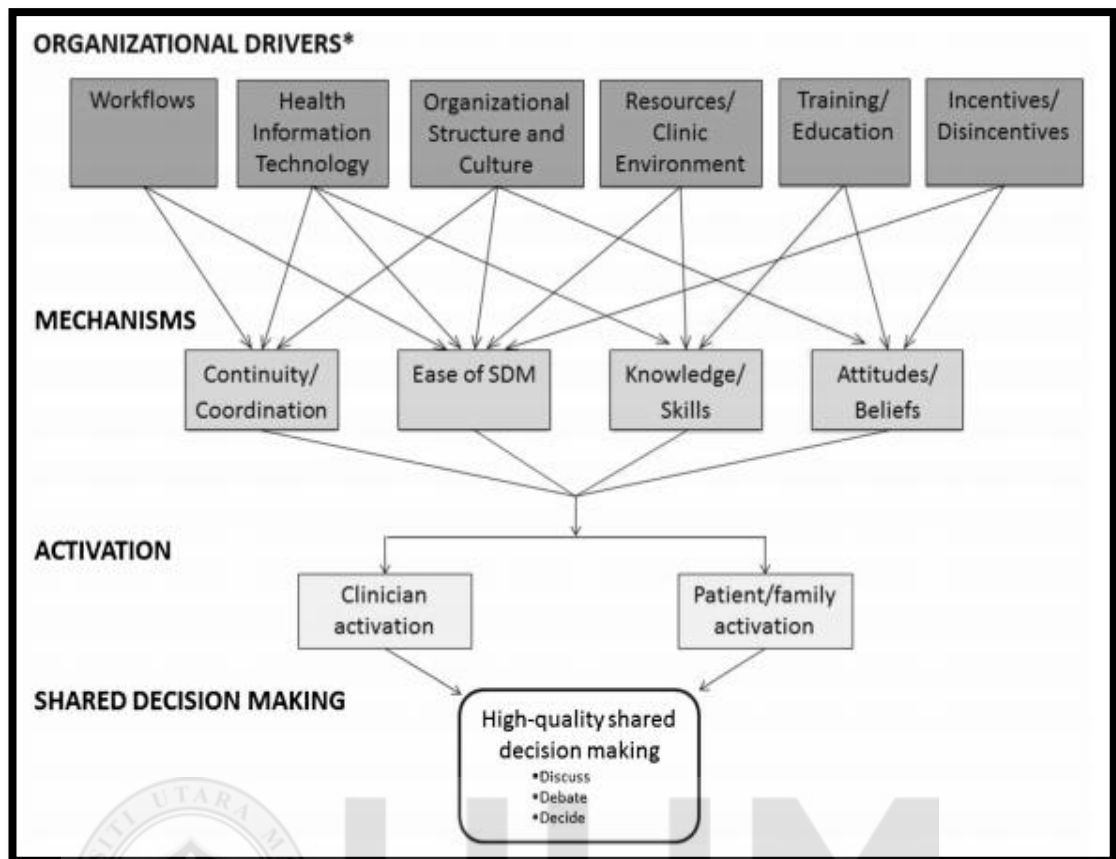
Figure 2.16. Shared decision making model

Source: (DeMeester et al., 2016)

Lewis outlines a conceptual model for how organisations can form their operations to support decision-making and contextual structure. This model has four main elements: The first element is the six organisational drivers, which are the disincentives and incentives attached to education and training, physical environment and clinic resources, culture and organisational structure, technology of health information, workflows, and incentives and disincentives to the shared decision-making model. The second element in the SDM model is that, each driver influences the SDM by at least two of the subsequent four mechanisms: attitudes and beliefs, knowledge and skills, ease of SDM, and continuity and coordination. The third and fourth elements in the SDM model, coordination across organisations, group members, and visits are required in order; decisions are rarely constricted to a single

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visit. Patients and clinicians are more probable to be motivated and begin to follow a SDM when it is easier to make, like when the SDM is inserted into the culture, expectations, and day-today procedures as a part of the usual care. Specific skills and knowledge of both patients and clinicians make the SDM easier, including an intuition into the factors affecting care, cultural competence, SDM methods, open-ended transmission techniques, and empathy. Key beliefs and attitudes are necessary for the successful SDM. Patients and clinicians should see usefulness in the SDM and expect that it will work (DeMeester et al., 2016; Lewis, Stacey, Squires, & Carroll, 2016). Liontos (1993) applied SDM in educational issues by working in four various states Independent School in Colorado (Texas), School in University Elementary in Los Angeles, High School in North Eugene, Oregon, and Dade County School in Florida (Liontos, 1993).

From the SDM model, this study indicates the necessity of searching the attitudes and beliefs of the citizens that are included in the TPB theory, as well as each of the skills and types of knowledge, which has led the study to think about the moderatoring factors in the conceptual model of this study. Furthermore, the SDM model which mentioned the cultural competence as a major factor, prompting this research to focus on the culture factor to study the intention of the citizens' to participate in the public decision-making of the e-government and enhance the model of this research. Moreover, Lewis, et al., in their study, clarified that the idea of developing or enhancing the decision-making process in the organisations by their stakeholders will increase the effectiveness of the organisations and the stakeholders' satisfaction. Thus, Lewis' study has pushed the researcher in this study to focus more on the decision-making in the e-government to improve the e-government.

2.4.6 Citizens' Participation in the E-government

E-participation is the recognised element, which affects decision making (Gaber & Mojskerc, 2014; Herman Resende Santos, 2014). The trust between governments and citizens is essential for good government. In order to build confidence through a citizen's participation, governments need to communicate in a transparent manner on the decisions and actions of the past and future to achieve e-democracy (Gaber & Mojskerc, 2014; Herman Resende Santos, 2014; Masrom, Ling, & Din, 2014b). However, the e-government should include the citizens' participation in the thoughts and ideas that they put forward in the process of decision-making and implementation, and provide a valuable contribution to improve the quality of local services and policies (Alharbi & Kang, 2014; Lee & Kim, 2014; luoguifa, 2011). For example, the government pays more attention to individual social capital as a facilitator of active participation and in building an effective design in the e-government (Lee & Kim, 2014). Citizen participation can bring fruitful results in the fight against corruption, to judge the government's policy to provide better public services, and cost savings in electronic form, enabling the citizens, particularly in the decision making and efficient services in the reporting process in the public and private sections (Alaaraj & Ibrahim, 2014; Haider et al., 2014; Salamat et al., 2012).

2.4.7 E-Government Related Studies

From section 2.4 till section 2.4.7 related studies about the e-government have been explained which helped this study to enhance the model of the proposed study. E-governments have focused on the citizens who were appreciative to the government initiatives extending their views and participation on what worked and what did not work, and what needed improvement in future e-government initiatives. All the

research works were necessary to achieve further growth and development of the future government plans to stimulate the use of online services and investment within the national infrastructure (Danila & Abdullah, 2014; Faaeq, Alqasa, & Al-Matari, 2015; Haider et al., 2014; Im, Cho, Porumbescu, & Park, 2014; Sangeetha, 2015; Wu et al., 2015).

Jackson and Wong (2015) suggested that the development of the e-government showed that the fundamental problems in the development of the public institutions in Malaysia were the nrrd to change the dynamics and understanding of the subcultures in the e-government. Expression of culture comes into being by associations with others; it is by the flows and flux of social action and behaviour. Utilising the group and grid cultural theory framework, researchers and practitioners can recognise subcultural variations at play which impact on the projects of the e-government, by understanding the dynamical change over time (Jackson & Wong, 2015).

Weerakkodya, et al., (2016) clarified the U.K. citizens' satisfaction by focusing on the customer satisfaction index of service quality in the e-government. The customer satisfaction evaluation had been introduced to the government performance evaluation. The development of networks and information increased the e-government's opportunity and ability to absorb people to participate in public management processes, and build a more open and transparent service-oriented government with a high quality for the public (Weerakkody, Irani, Lee, Hindi, & Osman, 2016).

The literature in this field showed the fast development of the electronic government and suggested a new paradigm: multi agents' technique, decision-making support

system, and shared decision-making (SDM).These models were created to support the making of decisions in administrations. These models analysed and supported the managerial decision-making on the basis of a multi technological system structure. In addition, they also promoted the scientific decision-making procedures and democracy (Lewis et al., 2016; Rahman, Rashid, Yadlapalli, & Yiqun, 2014; Zhang et al., 2008).

In another study, Feeney, et al., (2016) suggested social media technologies to improve the e-government public decision-making. The website of the government has become a bridge between the authorities and the public. Thus, the quality of the information and services from public websites provide the quality of popular participation in decision-making which is the key to determining the effectiveness of the information transfer. The past work of the e-government statement that supported e-participation could improve the quality of the public sector management (Feeney & Welch, 2016). This is important for a country's survival and progression. Bryer (2013) showed that if citizens were not invested in the governments, especially in participatory operations, and citizens were not active participants in the decision-making operations, the country would not be democratic enough to harness openness and transparency in the government. In addition, such experience would offer an interaction between institutions which would help local agencies to take benefits like improving the accuracy and currency of the information, and the reduction of document or paperwork data management, and make decision-making more effective in the e-government (Al-khafaji et al., 2014).

In another interesting study, the Bangladeshi experience focused on the real critical factors related to the implementation to apply the e-government in Bangladesh.

There were two important factors for the e-government in Bangladesh; the successful implementation of institutional and associated access. The first factor like political awareness and commitment was the most important factor; whilst, the second factor like security, privacy, and economic issues was less important. Furthermore, developing nations must give higher estimation for citizens to access information on awareness, regulations, and education for successful application of the e government (Rahman et al., 2014). Rahman, et al., applied a multi-criteria decision-making approach.

In another study conducted by Kamal, etal (2015), they studied the factors influencing the higher management's decision-making operations whilst selecting integration technologies. They further suggested that these were vital for facilitating local government authorities' process reforms, and that the prosperity of an institution's processes relies largely on understanding the behaviours and individual's attitudes, the briefing context, and the kind of decisions made. The last study in this section compared the e-governments in many countries to find differences and similarities between them, like social media tools to enhance the open participation in the e-government. The public input their opinions and used them in political decisions (Fath-Allah, Cheikhi, Al-Qutaish, & Idri, 2014).

After explaining the concepts of the e-government, the present study has highlighted some issues that are significant; employment of the citizens to develop the e-governments is a necessary action to achieve further growth and develop the future government plans to stimulate the use of online services and investment within the national infrastructure. Expression of culture comes into being by associations with others; it is by the flows and flux of social action and behaviour. By utilising the

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group and grid cultural theory framework, researchers and practitioners can recognise subcultural variations which impact on the projects of the e-government, by understanding the dynamical change over time, focus on building more open and transparent service-oriented government with high quality for the public, and supporting the managerial decision-making by promoting the scientific decision-making procedures and democracy. The quality of the information and services from public websites provides the quality of citizens' participation in decision-making which is the key of determining the effectiveness of the information transfer and improving the quality of public sector management. In summary, Table 2.3 depicts some of the past studies on the citizens intention of IS/ IT with their independent and dependent variables, that the main factors of this study were identified by examining the citizens' intentions to participate in the public decision-making of the e-government.

Table 2.3

The E-Government Related Studies

No	Authors	Problems	Solutions	Factors	Research Approach / Model
1	(Danila & Abdullah, 2014)	Few citizens used the e-government service and the e-government lacked a good e-service.	The study introduced a framework that combined the theory of planned behaviour (TPB), Technology Acceptance Model (TAM), and information system success theory (ISS) to achieve the individual's need with services in the organisations.	1- Personal innovativeness 2- Perceived usefulness 3- Perceived ease of use 4- Belief 5- System quality 6- Attitude 7- Subjective norms 8- Perceived behavioural control 9- Intention to use 10- Use 11- User satisfaction.	Quantitative & Model

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Table 2.3 continued

2	(Wu et al., 2015)	Examined the behaviours and attitudes of government employees.	Investigated the government employees' behavioural intentions to adopt a new governance model.	1- Personalisation 2- Compatibility 3- Performance expectancy 4- Effort expectancy 5- Behavioural intention.	Quantitative & Model
3	(Alzahrani et al., 2017)	The citizens' trust in the e-government.	Focused on the most critical factors influencing the citizens' trust in respect of the adoption of the e-government.	1- Technical 2- Government agencies 3- Characteristic of the individual 4- Risk 5- Trust in the e-government 6- Intention to use 7- Citizens's satisfaction 8- Adoption of the E-government.	Conceptual Framework
4	(Haider et al., 2014)	Challenges that citizens faced whilst participating in the services of the e-government.	Two recommendations and suggestions were presented to the policy makers, ICT service providers, academicians, and readers; Recommendation for the Government and Recommendation for the Citizens.	1- E-participation performances 2- Citizen participation 3- E-government services	Model
5	(Rana & Dwivedi, 2015)	The factors of the social impact on e-government adoption.	Examined factors such as outcome expectation, affect, anxiety, self-efficacy, and social influence; influencing the intention to take on an electronic government	1-Perceived usefulness 2- Perceived trust 3- Superior's influence 4- Self-Efficacy 5- Facilitating conditions 6- Attitude 7- Subjective	Quantitative & Model

Table 2.3 continued

				norms 8- Perceived behavioural control 9- Behavioural intention. 1- Macro political environment 2- Socio-cultural environment 3- ICT infrastructure 4- Socio-economic environment 5- Legal and regulatory environment 6- Perceived organisational change management	
6	(Elsheikh & Azzeh, 2014)	The suitable theories' application with social structures and ICT.	Developed a model to apply the holistic approach to improve the service in the e-government by the citizens' participation in the e-government.	7- Perceived organisational integration 8- Perceived organisational loyalty 9- Perceived managerial efficiency 10- Perceived intrinsic characteristics of the citizens towards IT 11- Perceived trust in the government 12- Perceived aspects of the citizens towards IT usage 13- Perceived quality of the e-	Quantitative & Model

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Table 2.3 continued

No	Reference	Column 3	Column 4	Column 5	Column 6
				services 14- Perceived online safety and security 15- Perceived website design issues.	
				1- Individual: Trust in government 2- Social Capital: Strength of social ties, social norms 3- E-participation: Perceived fairness 4- Management: Information access	
7	(Lee & Kim, 2014)	The citizens' participation in the policy of the decision-making processes.	Studied that three dimensions of social capital and citizens' participation management are positively associated with active e-participation.	perceived responsiveness **Moderators** 1- TAM Factors: Perceived usefulness, Intention to Use 2- Psychological factors: Political efficacy, Internet self-efficacy, and E-participation Needs 3- Political: Voting participation 4- Participation 5- Gender 6- Age 7- Level of education.	Quantitative & Model
8	(Jun et al., 2014)	Need to make	Providing public service information	1- Perceived transparency	Quantitative &

Table 2.3 continued

		public service delivery more effective.	on the government Websites indirectly improved the perceived service capacity through perceived transparency.	2- e-government usage patterns 3- Perceived capacity	Model
9	(Savoldelli et al., 2014)	The development of the e-government concentrated on more technological and operational matters.	Introduced conceptual and systemic innovation pertaining to a new way of thinking and of interacting with stakeholders and citizens as sources of both legitimacy and evidence.	1- Technological and economical 2- Managerial and organisational 3- Institutional and political	Quantitative & Model
10	(Zheng et al., 2014)	Lack of citizens' participation to evaluate the e-government service.	Explored the factors impacting on the citizens' e-participation.	1- Government form (council-manager) 2- Government form (mayor-council) 3- Government form (township) 4- e-Participation **Moderators** 1- Technology 2- Transparency 3- e-Services 4- Budget 5- Municipal size.	Quantitative & Model
11	(DeMeester et al., 2016; Lewis et al., 2016)	Weakness in decision--making with making a decision by one side leads to weak service for	Engaged the stakeholders with the organisations together to reach a good decision to serve all sides.		Model

Table 2.3 continued

12	(Kamal et al., 2015)	The past studies lacked attempts to identify the factors which influence decision makers.	The factors that impacted on the making of the decisions by using the integration of technologies.	1- Individual context 2- Decision context 3- Organisational context 4- Factors influencing the decision - making process.	Model\Qualitative
13	(Feeney & Welch, 2016)	Improve the local governments in the United States to collaborative work inside the organisation and participative interaction with external stakeholders.	Examined the social media technology to enhance the decision-making by participative interaction with external stakeholders.	1- Participation 2- Job satisfaction 3- Routineness 4- Centralisation 5- E-services 6- Good Websites **Moderators** 1- Age 2- Job tenure 3- Gender 4- Previous Work experience.	Model
14	(Bryer, 2013)	The citizens' participation in the regulatory decision-making.	Increased the citizens' access and participation regularly in the decision-making without any kind of fraud.		Qualitative
15	(Al-khafaji et al., 2014)	Lack in sharing inters organisational information to enhance the	Recognised the most significant factor affecting the e-interaction amidst local agencies in enhanced countries.	1- Benefits 2- Compatibility 3- Complexity 4- Cost	Factors that affect G2G interaction based on DOI theory

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Table 2.3 continued

		Efficiency of the agencies of the government.			
16	(Rahman et al., 2014)	Investigation of the critical factors associated with the implementation of the government.	Utilided AHP based multi-criteria making of decision approach to examine the critical factors of the implementation of the e-government.	Critical factors of the e-government implementation 1- Institutional 2- Resource 3- Access 4- Legal	Framework \Quantitative
17	(Makedon, Sudborough, Baiter, & Conalis, 2015)	The lack of data sharing and incomplete information decreased the loyalty of the citizens to Participate in the e-government.	Data sharing ensures democratic principles (SCENS: Secure Content Exchange Negotiation System)		Framework
18	(Nielsen & Pedersen, 2014)	The wrong decision-making aspect is considered to have a negative impact on the outcome of e-government investments.	Investigated decision-making processes in the (IT project portfolio management PPM) practices of local governments.		Qualitative / Case study
20	(Gatautis et al., 2015)	Lack of interoperability is expected to	Created model characterises a new approach to determine the		Model

Table 2.3 continued

		Some of the factors. It may be policy reasons. Lack of interoperability is related to the heterogeneous nature of the government information model the result of past decisions regarding software, hardware, and legacy models.	Semantics, technicalities, and stresses the significance of political interoperability and organisational dimensions.		
21	(Zhao et al., 2014)	The national culture affects the e-government diffusion.	Societal cultural practices in the e-government development and participation indexes from the most recent United Nations' recommendation.	E-government diffusion 1- Uncertainty avoidance 2- Power distance 3- In-group collectivism 4- Future orientation 5- Performance orientation **Moderators** Economic development.	Quantitative and Model
22	(Naoum & Nadhim, 2014)	The citizens were not satisfied with the current e-government in terms of several aspects, such as:	A newly proposed conceptual model of the e-government system was developed.	1- User Interface 2- Security and Privacy 3- Provided Services 4- Overall Performance	Quantitative and Model

Table 2.3 continued

		Services, user interface, and overall performance of the e-government.			
23	(Alqasa & Al-Matari, 2015)	The e-government services usage behaviour	Examined infrastructure, security, skills, social factors, and users' behaviour	1- Performance expectancy 2- Effort expectancy 3- Social influence.	Quantitative and Model
24	(Shareef, 2016)	The mobile-Government service and	Attempt to reveal the sources of beliefs for developing intention toward the mobile e-government. Investigate cultural influence as the reason for a difference in consumer attitudes and intentions toward mobile e-government.	1- Beliefs of cognitive component 2- Beliefs of affective component 3- Beliefs of conative component	Quantitative and Model
25	(Abbas, 2016)	Performance of the electronic information sharing.	Examine environmental factors	Environmental - Policies - Political constrance	Quantitative and Model
26	(Allahawiah & Alsaraireh, 2014)	The relationship between e-government Success and Knowledge Management. Lack of citizen participation	Examine the citizens' attitude toward it, investigate the Factors that can motivate or inhibit citizens to be engaged in the e-government.	1- Level of service 2- Benefits to the user 3- Level of quality	Quantitative and Model

Table 2.3 showed all the past studies. There have been studies on the intention and

behaviour in some areas of studies, like government service, which examined the

behaviours and attitudes of government employees, the citizens' trust in the e-

government, challenges that citizens faced whilst participating in the services of the e-government, the factors of the social impact on e-government adoption, the citizens' participation in the policies of the decision-making processes, and many other studies. The past studies that were clarified in Table 2.3 were confirmed to work on the IS theories like TPB, UTAUT, TOE, DOI, and TAM. These theories support the factors of attitude toward act or behaviour, subjective norm, social influence, facilitating conditions, compatibility, and culture. These theories focused on the intention and behaviour that worked to solve the study gap.

The past studies in Table 2.3 (DeMeester, et al. (2016), Lewis, et al. (2016), Feeney & Welch (2016), Bryer (2013), Al-khafaji, et al. (2014), and Makedon, et al. (2015)) referred to the importance of sharing the information with the public sector to improve the decision-making and the citizens' participation. Kamal, et al. (2015) and Rahman, et al. (2014) explained some of the factors that are important for the implementation of the e-government, such as the secure political obligation for the e-government application. This factor relates with the social influence. Another factor develops access to citizens and improves awareness; it relates to the facilitating conditions of the decision-making method to investigate the major factors of the e-government. The researchers, Nielsen & Pedersen (2014); Savoldelli, et al. (2014); and Reeta, et al. (2015), concluded that, alternatively, for a radically changing decision-making type, the organisations might be good for developing IT management practices within the boundaries of their existing type of decision-making. It should rather establish a systemic and conceptual innovation pertaining to a new way of interacting and of thinking of stakeholders as sources of both evidence and legitimacy. From these studies, this research has concluded that examining the

citizens' intentions to participate in the public decision-making of the e-government is necessary.

What is lacking in the model of the past studies was shown in Table 2.3., Jun et al., 2014, referred to the lack of the descriptive results showing that there is a gap in the usage of the e-government, especially in circumstances where a citizen is providing feedback about public service problems. Kamal et al., 2015, noted that the theoretical and empirical data collected were confined to the limited context of the model of the study within the UK. The structure of the model of the study varies not only in different parts of UK but across different countries. In addition the present study focused on the citizen's requirements in the planning terms to avoid the problem in Jun's study, then the study was applied in a different country as Kamal recommended.

According to Kamal et al., 2015, there is yet a lot of research to be conducted on decision-making, which will indeed facilitate researchers, psychologists, practitioners and educators to positively influence the lives of many. Furthermore, the administrative decision-making process has several uncertainties whilst it is required to satisfy a higher request on the public decision-making information, the decision-making entities, the decision-making objects, and the public decision-making methods. As a result, the implementation of a new technology in the decision-making of the administration process would be beneficial to fix the problems of decision-making in complicated environments.

Other previous studies confirmed that enhancing the public decision-making in the e-government is necessary to improve the decision-making in administrations. An enhanced decision-making process in the e-government would improve the citizens'

interactions with the e-government. In addition, most previous studies from the literature review have helped to contribute research ideas for this study in proposing a model to study the participation intention of the citizens' self-knowledge characteristics in the public decision-making process of the e-government and strengthen the citizens' trust in the e-government.

2.5 Citizens Knowledge in this Study

Studying human knowledge and people's self-knowledge improves the innovations, organisations, and technologies. This has made the present studies take knowledge into consideration (E. Abu-Shanab, 2014; Allahawiah & Alsaraireh, 2014; BinTouq, 2015; Siskos et al., 2014). The UN, 2016, stated in its report that, ―there is a critical need for new forms of collaborative leadership and shared organisational culture, including re-shaping values, mindsets, attitudes, and behaviours in the public sector through visible guiding principles and leadership". Kamal, et al, 2014, explained that, to achieve success in the organisations, innovations, and technologies, individual's skills, experiences, and knowledge must be considered with understanding of the behaviours and individual's attitudes, the surrounding factors and the kind of decisions made.

Examining citizens' skills, experiences, culture, behaviours employed in public decision-making improves the decision-making in the e-governments (Kamal et al., 2015; Shareef, 2016; Tambouris, 2015). Engaging the citizens in e-governments or an organisation's e-services increases the transparency in the decision-making of the e-governments (Asorwoe, 2014; Nonaka, 1994; Ramaswamy, 2014). According to the UN, 2014, ―it is important that government officials, particularly at the local level, have the appropriate attitudes, skills, and expertise to harness ideas from

diverse communities and to engage citizens through new collaborative channels and modalities. This is so, because local governments are at the contact point between the government and the people. This type of interaction between public officials and citizens requires new skills, attitudes, and knowledge, as well as the capacity to utilise, effectively, social media, mobiles, and other ICT tools". From the above, it has been concluded that knowledge strongly relates to the decision-making of the e-governments as it improves the decision-making by employing the citizens' knowledge in enhancing the decision-making model of the e-governments (Nonaka, 1994).

2.5.1 Human Knowledge and Skills

Nonaka, 1994, identified that knowledge can be attained or generated from having continuous conversations between explicit and tacit knowledge. In addition, Nonaka and Toyama, 2003, inserted that knowledge is a mix of different contradictions through the interactions amongst the people, the organisations, and the environment. Knowledge and having the right or sufficient knowledge is pertinent to human life and activities. Fullan (2014) stated that knowledge can be accumulated from various sources and opportunities. It can be attained from human experience, scholarship, events, and erudition. For example, it has been stated that for a leader to become successful in leading, he or she must be continuously knowledgeable, seek new knowledge, and be culturally sensitive. Understanding culture, according to Fullan and Michael, can help leaders cope better in all circumstances.

It is clear that there is an argument in explaining knowledge amongst the scientists and the intellectuals. According to Nonaka, 1994, and Fullan, 2014, it is observed that there is a difference in the definition of knowledge which has led to several

research studies identifying the benefits of knowledge in technologies and innovations. In spite of the scientists and the intellectuals having different views about knowledge, they have agreed on one point. This point is that knowledge is gained from different experiences and various events in a human's life.

Knowledge is applied to ideas or facts gained through observation, experience, examination, study, or investigation to be useful for the success of innovations and new technologies (Allahawiah & Alsaraireh, 2014; Apostolou, Mentzas, Stojanovic, Thoenssen, & Lobo, 2011; Apple, 2014; Fullan, 2014; Mohamad Zani, Hashim, Ahmad, & Ahmad, 2014; Nonaka & Konno, 2005; Nonaka & Takeuchi, 2011; Rijpkema & Girard, 1991).

Evidently, literature shows that knowledge used in system designs and management has positive effects and provides good results. Knowledge is used for continuous improvement and development based on the recommendations of the implementers and designers. For example, a change in federal legislation rules may sometimes lead to several modifications or changes in source codes, test cases, and design models. Such modification will not be possible in the absence of _proper' knowledge. For example, without the ability to deal systematically and change the laws, and the ability to use the knowledge for the installation of these laws, attempts to change or modify the system may not be successfully realised. The presence of the _right' or relevant knowledge is pertinent for any change to occur (Apostolou et al., 2011).

In a study conducted by Choo and Chun (1996), they presented knowledge creation in decision-making. They postulated that in order to retain knowledge and gain new knowledge, it must be continuously pursued to improve decision-making, and in order to innovate, new knowledge is important. Creating new knowledge offers

better wisdom that could transform organisations to improve their performance or to design new products (Choo, 1996).

In another study, Rijpkema and Girard (1991) offered the installation of a human hand activity via an approach based on knowledge. The study of the activities of the human hand included all of the activities that involved behaviours, geometric constraint, and complex physical movements. Similar to Choo and Chun's (1996) insertion, Rijpkema& Girard, (1991) also confirmed that technology is constantly dependent on knowledge for continuous improvement.

2.5.2 Types of Knowledge

Knowledge includes two types: *tacit knowledge* and *explicit knowledge* which are pertinent to organisational improvements (Nonaka, 1994; Nonaka & Konno, 2005; Nonaka & Takeuchi, 2011; Nonaka & Toyama, 2003; I. Nonaka & Takeuchi, 1995).The distinction between what constitute tacit and explicit knowledge is perhaps the most fundamental concept of knowledge management (Nonaka, 1994).

Explicit Knowledge: Explicit knowledge refers to the articulated knowledge. Quite often it is expressed and recorded as words, numbers, codes, mathematical and scientific formulae, and musical notations. Explicit knowledge is easy to communicate, store, and distribute. It is the knowledge found in books, on the web, and other visual and oral means. It is acquired largely through association with other people, and requires joint or shared activities to be imparted from one to another. Explicit knowledge can be expressed in sentences, words, formulae, numbers, or sound and exchanges of data, visuals, manuals, scientific formulae, product specifications, or audiotapes. Though transmitting tacit knowledge is not easy, it can

be transmitted officially, theoretically, systematically, manually, and though other avenues like problem solving, and the use of databases (Nonaka & Takeuchi, 2011; Takeuchi & Nonaka, 2004).

Tacit Knowledge: People are quite often not aware of the knowledge they possess or how it can be valuable to others. The effective transfer of tacit knowledge generally requires extensive personal contact, regular interaction and trust. This kind of knowledge can only be revealed through practice in a particular context and transmitted through social networks. To some extent, tacit knowledge can be accumulated when the knowledge holder joins a network or a community of practice. The tacit knowledge is most readily handled by knowledge management systems to simplify the storage, modification, and retrieval of texts and documents (Nonaka, 1994; Nonaka & Konno, 2005; Nonaka & Takeuchi, 1995; Nonaka & Toyama, 2003; Takeuchi & Nonaka, 1986). Tacit knowledge is experimental and subjective and quite often not able to be expressed in sentences, words, formulae, or numbers. It consists of two parts. The first part is the cognitive skills such as perspectives, mental models, beliefs, and images. The second part is the technical skills such as know-how, and craft (Nonaka & Takeuchi, 2011; Takeuchi & Nonaka, 2004).

Tacit knowledge is not easily expressed. It is not easy to share tacit knowledge with others as it involves the consciousness of the human. Tacit knowledge is the hidden information, unwritten, unspoken, and kept within. This knowledge is founded on an individual's experiences, emotions, intuition, insights, internalised information, and observations. The following are two parts of tacit knowledge. The first important part is the cognitive skills, such as ideals, perspectives, values, perceptions, mental models, beliefs, and images. The cognitive skills refer to human behaviours and have

been greatly understood. The cognitive skills are the group of processes or abilities that go along with human action. The second part is the technical skills or know-how like stock broking where remises perform particular skills to sell and buy stocks. They need to be able to read and analyse the current stock trends and charts to research stock prices. These types of skills and knowledge bases are accumulated through years of working and many years of experience, which is difficult to be expressed and explained (Nonaka, 1994; Nonaka & Konno, 2005; Nonaka & Takeuchi, 2011; I. Nonaka & Takeuchi, 1995; Takeuchi & Nonaka, 1986, 2004).

2.5.3 Comparison between Person, User, Citizens' Self- Knowledge terms

Person is ―A human being regarded as an individual" (Oxford, 2017d). According to the Assembly Universal Declaration of Human Rights (1948), it stated that ―The United Nations has in the Charter reaffirmed their faith in fundamental human rights, in the dignity and worth of the human person and in the equal rights of men and women and have determined to promote social progress and better standards of life in larger freedom" (Assembly, 1948).

User is ―A person who uses or operates something" (Oxford, 2017h). This focused on the prediction of the occupational class for a public user profile. The analysis was conducted on a newly annotated corpus of Twitter users, their respective job titles, posted textual content and platform-related attributes (Preotiuc et al., 2015).

Citizen is ―A legally recognised subject or national of a state or commonwealth, either native or naturalised" (Oxford, 2017b). Ceccaroni, et al. (2017) presented that ―the authors proposed a perspective on and a definition for citizen science as: work undertaken by civic educators together with citizen communities to advance science,

foster a broad scientific mentality, and/or encourage democratic engagement, which allows society to deal rationally with complex modern problems" (Baker & Blaagaard, 2016; Ceccaroni et al., 2017). From these definitions of person, user, and citizen, it is observed that the word citizen was the most suitable for this study because it expresses the required meaning for this study.

Citizens' Self-Knowledge is formed by the characteristics of the citizens, which include various levels of education, culture beliefs and practices, nature of job, income, and environment (explicit and tacit knowledge) with the awareness of one's self (Dzakiria, 2004; Nonaka, 1994; Nonaka & Konno, 2005; Nonaka & Toyama, 2003).

Nonaka & Toyama, 2003, stated that ―Knowledge is created in the spiral that goes through seemingly antithetical concepts such as order and chaos, micro and macro, part and whole, mind and body, tacit and explicit, self and other, deduction and induction, and creativity and efficiency" (Nonaka & Toyama, 2003).

Self is a person's essential being that distinguishes him/her from others, especially considered as the object of introspection or reflexive action (Oxford, 2017e). Self-conceptual is the knowledge of one's self and one's properties, and the desire to seek such knowledge that guides the development of the self-concept. For example, the information that an individual draws upon when finding an answer to the question ―What am I like?" or ―What do I know about X" (Dzakiria, 2004; Neisser, 1988).

Self-knowledge is the understanding of oneself or one's own motives or character (Oxford, 2017g). Brie Gertler (2015) refers to self-knowledge as the knowledge of a person's own beliefs, thoughts, sensations, and other states of mind (Gertler, 2015).

Most philosophers have believed that our knowledge of our own mental states differs markedly from our knowledge of the external world (where this includes our knowledge of others' thoughts). But there is little agreement about what precisely distinguishes self-knowledge from knowledge in other realms. Partially because of this disagreement, philosophers have endorsed competing accounts of how we acquire self-knowledge. These accounts have important consequences for a broad range of philosophical issues, especially issues in epistemology and the philosophy of the mind (Carlson, 2013; Gertler, 2015; Neisser, 1988).

Nonaka and Konno (2005) asked ―Is it possible to actually manage knowledge like other resource". ―the organization's knowledge assets and the intellectualising capabilities within the knowledge creation processes", manage the knowledge to create the basic knowledge to take the benefit for solving the problems and putting forth the solutions for the models and the systems of the organisations (Nonaka & Konno, 2005).

Pertinent to this study, self-knowledge informs us of our mental representations of ourselves, which contain attributes that we uniquely pair with ourselves, and theories on whether these attributes are stable, or dynamic. It requires ongoing continuous reflection on one's self-awareness and self-consciousness (Nonaka & Toyama, 2003). Human beings can be homogenous or heterogeneous. We can be very similar or different from one another. We all have our own opinions and perceptions on the various issues and events. We accumulate experiences from our daily work and routines under the effect of many factors, such as the culture, environment, and nature of job, political affiliation, level of education, and economic level.

In this regard, every individual has his or her personal point of view, which is influenced by the factors aforementioned, which are strongly based on what he or she sees, talks about, reads, and shares. These also include how human beings perceive innovation and technology. Mergel and Ines (2013), for example, examined various citizen behaviours towards innovation and adoption in governments. Knowledge is continuously available and generated. It is generated from continuous conversation between explicit and tacit knowledge. Through social networks and various studies, different types of information about best experiences and practices were examined to improve the e-government (Allahawiah & Alsaraireh, 2014; Apostolou et al., 2011; Apple, 2014; Fullan, 2014; Nonaka, 1994; Nonaka & Takeuchi, 2011; Rijpkema & Girard, 1991; Samiotis et al., 2014).

Nonaka and Toyama (2003) provided an interesting take on what constituted self-knowledge. They claimed that self-knowledge arose from the spiral through the concepts of contradiction, such as chaos and order, macro and micro, whole and part, body and mind, explicit and tacit, other and self, induction and deduction, and efficiency and creativity. Another study inserted the importance of having a knowledge base as a prerequisite to future improvement. The _right and relevant' knowledge provide better decision-making and results, which can gonner difficult conditions and circumstances. A knowledge base is fundamental to change, and particularly important to support innovation within the given environment. Fullan, 2014, presented that good decision-making needs to be supported by a specific knowledge base. The study explained that citizens have different cultures, education, behaviour, environments, and nature of jobs. It is, therefore, particularly important to respect those variables and efforts must be made to accumulate those multi bases of citizen's knowledge in pursuing change and improvement. Thus, the citizen's self-

knowledge characteristics for this study have been selected, as gender, age, level of education, working sector, social groups, and Internet experiences.

2.5.4 Culture

Culture is ―the way of life, especially the general customs and beliefs, of a particular group of people at a particular time" (Cambridge, 2017a). Culture is the social behaviour, ideas, and customs of the society or a particular people (Oxford, 2017c). The collectivistic and individualistic infrastructure, however, should shed light on how motivation and cognition might identify healthy behaviours in various cultures (Bruder, Haffke, Neave, Nouripanah, & Imhoff, 2013; Li et al., 2015). Culture refers to the cumulative deposit of knowledge, experience, beliefs, values, attitudes, meanings, hierarchies, religion, notions of time, roles, spatial relations, concepts of the universe, and material (Jackson & Wong, 2015; Straub et al., 2004). Min, et al (2008) stated that ―Information technology is not culturally neutral". The improvement of e-commerce will be most likely influenced by the culture of a country's or region's social and economic background. For example, NTT DoCoMo's enormous mobile operator success is confirmed to be unique and cannot be replicated by others. The distinctive Japanese culture is the reason that describes the blow-up penetration speed of iMode (Min, Ji, & Qu, 2008). Efrat (2014) presented ―deep into the age of globalisation and following the shift from nation-based to firm-based innovation motivators, culture still matters". The people from that particular cultural background will identify that innovation as being useful or not, so culture is one of the major reasons that affects innovations and technologies (Efrat, 2014).

According to the UN report (2016) that stated ―the along with integrated services, the e-government may increasingly support policy integration and encourage the efforts of various government institutions to work more closely together. It can provide governments with increased insights to help revisit existing decision making processes and work flows. Progress is, however, slow. Although there are examples of successful integrations of policies within the social area, for example; integrating policies and services across the economic, social and environmental areas remains difficult. Efforts to promote whole-of-government service delivery and policies have to be accompanied with efforts to ensure that organisational cultures, coordination mechanisms and financial and accountability systems support collaboration amongst public institutions‖.

Overall, every country has its own peculiar characteristics in the expression of participation culture and a better method of interaction amongst public authorities and people. The objective of this study has enhanced the bonds of the culture factor with the public decision-making of the e-government. Several studies, especially the UN reports, ensure that the culture factor plays an important role in the e-government, through examining the level of citizens‗ acceptance to the new technologies and innovations; like the citizens' participation in the public decision-making of the e-government (Hujran, Debei, Chatfield, & Migdadi, 2015; Li et al., 2015; Rufin, Belanger, Molina, Carter, & Figueroa, 2014; UN, 2016; Welch & Feeney, 2014; Zhao et al., 2014; Zhao, Wallis, & Singh, 2015).

2.5.5 Related Knowledge Model (benefits of knowledge to develop the technological innovations)

This section is intended to share a model on knowledge that has been conceptualised by various scholars (i.e, Nonaka, Konno, and others). For example, this knowledge model was used to explain and be applied in business, technology, and organisations. Knowledge is often used to support change and improvement to human life and activities. This study has aimed to explain one of such models and interpret how the past studies used knowledge to improve or develop their businesses, technologies, innovations, and organisations. Nonaka and Konno 1998, referred to the Spiral or SECI model as consisting of socialisation, externalisation, combination, and internalisation. The spiral model offers four steps to ensure interactions between the tacit and explicit knowledge to create new knowledge. Figure 2.17 shows the interactions, steps, and characteristics of this model.
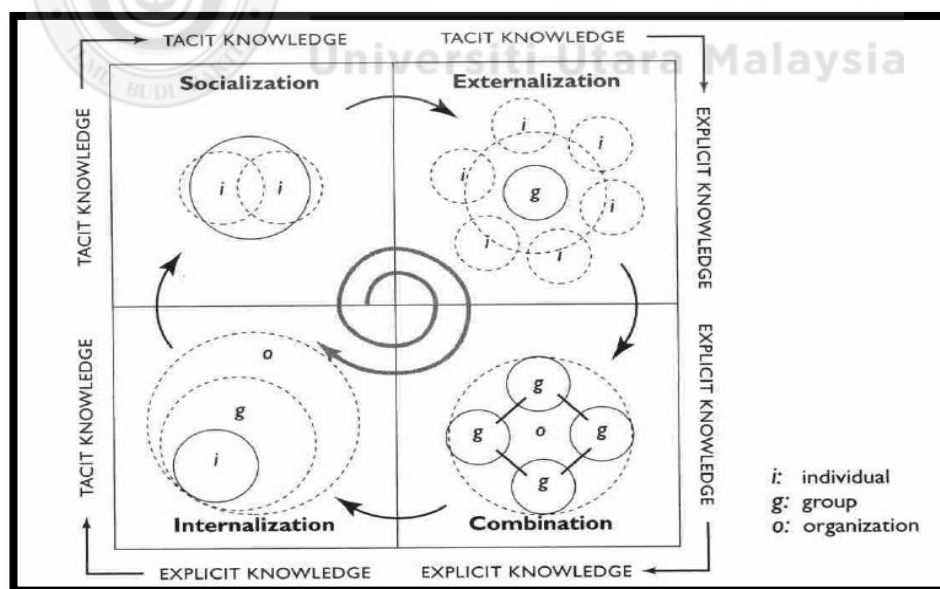
Figure 2.17. Spiral Model

Source: (Nonaka & Konno, 2005).

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The first step is socialisation, which shows the exchange of tacit knowledge between the individuals and the sharing of the knowledge between the human beings. Socialisation is the set of tacit knowledge gathered from human interactions. The second step is externalisation. It requires explaining knowledge that is tacit and making it comprehensible to others. Externalisation needs translation into an understandable shape that could be understood by others. Therefore, externalisation is the transformation of group tacit knowledge into knowledge that is explicit by the usage of metaphors, dialogues, and images. The third step includes the conversion of explicit knowledge into more complex groups of knowledge. In this step, the most important aspect is the diffusion processes, the systemisation of knowledge, and communication. Here, a new generation of knowledge in the externalisation step transcends the set in digital signals or analogue (E. Abu-Shanab, 2014; Arikan, 2009; Takeuchi & Nonaka, 2004).

The last step in the SECI model is the internalisation. This refers to the internalisation of the new knowledge created to transform the explicit knowledge into tacit knowledge. This allows one to determine the knowledge pertinent for one's self-awareness within an organisation. Learning by doing and training let the person access the science of knowledge for the group and the respective organization (Arikan, 2009; Nonaka & Konno, 2005; Nonaka & Takeuchi, 2011; Nonaka & Toyama, 2003; Takeuchi & Nonaka, 2004). Exchange of experiences between communities of various cultures and systems offers continuous improvement to organisations and administrations, then develops the communities and the organisations. Nonaka and his partners through their spiral model support the culture factor of the model in this study and the moderator factors (citizens' self-knowledge characteristics).

2.5.6 The Difference between Knowledge and Citizens' Self-knowledge

Knowledge is defined as the understanding of information, individual interpretation, and experience, discovery, education by perceiving, and the ability to learn something new. Knowledge is created from explicit areas, such as academic knowledge and from tacit areas, such as skills and practice knowledge (Nonaka, 1994; Nonaka & Takeuchi, 2011).

The relation between e-government success and Knowledge Management depends on the citizens' participation by examining the factors that can drive or prevent citizens to be involved in the government, and by examining the role of knowledge (such as, gender, age, cultures, etc.) to develop the e-government (Allahawiah & Alsaraireh, 2014; Alqasa & Al-Matari, 2015; Zhang et al., 2008). From the past studies above, Nonaka (1994) defined knowledge and its contents, so knowledge becomes clear. Furthermore, Allahawiah and Alsaraireh (2014) explained how the citizens' knowledge and knowledge management are important to develop the e-government. Self-knowledge resulted from Nonaka's definition for knowledge with Allahawiah and other researchers' recommendations for using citizens' knowledge and knowledge management to develop the e-government. The citizens' self-knowledge is the various levels of education, culture, nature of job, income, and environment. For example, Nonaka, 1994, stated that explicit knowledge, such as academic knowledge, etc., is related with the levels of education. Then, tacit knowledge, such as skills, practice, etc., is related with culture. Employing citizens' self-knowledge characteristics, such as age, gender, jobs, social groups, and Internet experience, to control the model factors of this study has determined the influence factors on the intentions of citizens to participate in the public decision-making of the e-government. For example employing the economists' characteristics to develop the

decision for access to the economic data will present better services such as registering the economic companies and facilitating the economic enterprises. Table 2.4 has concluded that the participation of the citizens' perspectives (citizens' self-knowledge) is important to control the main factors of this study by examining the citizens' intention to participate in the public decision-making of the e-government. Identifying the culture factor from the background of the past studies was important as it is one of the major factors that affect the innovations and technologies, which made it one of the main factors in this study model.

Table 2.4

Related Studies about the citizens' self-knowledge and culture

No	Authors	Problems	Influencing Factors	Idea of Study
1	(Allahawiah & Alsaraireh, 2014)	Lack of knowledge management in the e-government.	Motivate citizens to be engaged in e-government	E-government success depending on the citizens' attitude toward and their knowledge.
2	(Kamal et al., 2015)	Decision makers adopting risky decisions.	The success of the e-government processes relies on understanding an individual's behaviours and attitudes.	The knowledge gained from exploring the factors impacting the management's decision-making in the e-government.
3	(Li et al., 2015)	Differences in culture and the decision-making in organisations	Quantity of information utilised, speed of information search, and kind of information utilised.	The influence of cultural thinking styles on the online decision-making.
4	(Zhao et al., 2014)	Identifying the limitations of the e-government.	Culture affects the e-government diffusion.	Exploring the relationship between culture and e-government diffusion.
5	(Nonaka & Takeuchi, 2011)	Leaders find it	Making decisions on the foundation of what is good for the	Employing the people's knowledge and

Table 2.4 continued

#	Author			
		difficult to make the right decision with new technologies, demographic shifts, and consumer trends.	society and for the organization.	giving them the right to participate.
6	(Ramaswamy, 2014)	Corruption and lack of transparency.	Automating the government to the citizen's interactions.	Socio and cultural factors need to be considered as they play a very important role in the e-government.
7	(Asorwoe, 2014)	Corruption threatens good governance, undermines the rule of law, and undermines the efficiency and effectiveness of public services.	Supplying citizens with information about public service and allowing them to participate in the e-government.	Developing the e-government to raise economic growth, reduce poverty, and reduce administrative corruption.
8	(Jackson & Wong, 2014)	Enhance the e-governments function	Organizational culture. Rlationship between organizational culture and E-Government.	Understanding different subcultures, and the dynamic of change, which influence the ability to manage and implement of E-Government projects.
9	(Tambouris, 2015)	The limitations of international rankings and provides supply-side assessment of e-government implementation	Evaluates 4 stages of Online 1- Emerging online presence 2- Enhanced presence 3- Transactional presence 4- Connected presence.	Experience of UN international methodology for assessing e-government development at federal and regional levels in Russia.
10	(Feeney & Welch, 2016)	Improve the local governments	Examined the social media technology to	1- Participation 2- Job

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Table 2.4 continued

in the United States to collaborative work inside the organisation and participative interaction with external stakeholders.	enhance the decision-making by participative interaction with external stakeholders.	satisfaction 3- Routineness 4- Centralisation 5- E-services 6-Good Websites **Moderators** 1- Age 2- Job tenure 3- Gender 4- Previous Work experience.

All of the studies in Table 2.4 were related to this research and enhanced it. Allahawiah & Alsaraireh, 2014, highlighted the relationship between Knowledge Management, and e-government success which depends on the citizens' attitudes toward it. The investigated the factors that can motivate or inhibit citizens' engagement in e-government. They also investigated the role of knowledge management as a tuning up parameter for raising citizens' expectations and trust in e-government and, consequently, their engagement in its success.

Allahawiah & Alsaraireh's result showed that the highest average rate was (3.14) in (Std. Deviation) of the statement (Invest in good coordination with key stakeholders and initiative owners to identify the uses and practices of the e-government). The present study concluded that the ability to think, reflect, and assess or evaluate are important skills to have in order to progress for betterment. Without this very basic and fundamental _self-knowledge', the people cannot progress or improve their activities and life. No change can be sustainable or effectively implemented without barriers or challenges. Creating techniques or strategies that can determine the self-knowledge is imperative for ensuring the successful implementation of any e-government initiatives. Employing the citizens' self-knowledge forms the primary characteristic of the public decision-making in the e-government. Such techniques,

subsequently, can be used to check or assess the most pertinent aspects of the public decision making in the e-government.

Zhao et al., 2014, studied a new approach to analysis the effects of culture on the e-government as well as explore the moderating effect of economic development on the purported relationship between culture and e-government diffusion. For example, social influence, which has a significant impact on e-government, was not studied in Hofstede's model. Moreover, the results also showed that the impact of the cultural factor on e-government diffusion may vary across different economic environments. Zhao's study suggested applying the effects of culture on other different countries and comparing them with Zhao's results to advance the development of e-government diffusion strategies. Zhao's results confirmed that culture does have a significant impact on e-government diffusion. The highest number in the beta was β = -0.666 for e-government development and β = -0.496 for e-participation which were both significant at the 0.001 level. Zhao's study will help the model to make the decision which is convenient for all cultures.

Feeney and Welch, 2016, referred to individual characteristic: age, job tenure, gender, and previous work experience, as having a two-way of information exchange between individuals or groups, such as between individual public employees and citizens. In comparison, perceptions that e-government results in negative outcomes were related to organisation centralisation, private sector work experience, and population. Respondents working in more centralised organisations reported more negative outcomes about e-government, possibly because centralised organisations make decisions about e-government initiatives without engaging individual managers in the technology adoption. Respondents who had private sector work experience

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reported lower negative views of e-government outcomes, as did respondents working in larger cities. From Feeney and Welch study the present study observed that it is necessary to involve the citizen's self-knowledge characteristic (as individual characteristics).

Many dimensions of lives are affected by the intention of citizens to participate in the public decision making of e-government. Therefore, this chapter has argued that deployment of intention and behaviour could have a great effect in the areas of education, social convergence opportunity, employment opportunity, citizen's communication with e- government services, and other activities in life. From the aforementioned, it has been concluded that the citizens' self-knowledge as a moderator influences citizens' intention to participate in the e-government decision making. In addition, it is necessary to investigate and invest in the citizens' knowledge in enhancing the e-government service. Almost all of these studies have focused on individual factors, such as education, gender, social group, nature of jobs, environment, and socio-economics. The main idea of this research which was focused on the citizen's self-knowledge characteristics, which affected the main factors of attitudes, subjective norms, social influence, facilitating conditions, compatibility, and cultures to give the final results to the intention of citizens to participate in the public decision making of the e-government.

2.6 Overview of Karbala the Tourism and high Economic Region in Iraq

The geography of Iraq is diverse with an area of 168,754 mi² (437,072 km²) and population of 33.42 million (2013). It encompasses four main regions: the desert (west of the Euphrates), Upper Mesopotamia (between the upper Tigris and the Euphrates rivers), the Lower Mesopotamia (the alluvial plain that extends from

around Tikrit to the Persian Gulf), and the northern highlands of Iraqi Kurdistan The mountains in the northeast are extended from the alpine mountain system running eastward from the Balkans through the southern part of Turkey, northern part of Iraq, Iran, and Afghanistan, until it finally reaches the Himalayas. In the southwest and the central provinces along the borders with Jordan and Saudi Arabia, is the desert which belongs geographically with the Arabian Peninsula (Abdullah, 2014; Burnham, Lafta, Doocy, & Roberts, 2006; Tripp, 2002).

Since the Sassanid times, Arabs have been the majority of the population of Iraq. The indigenous empires of Akkadia, Sumeria, Assyria and Babylonia ruled Iraq. Islam, which is followed by 97% of the Iraqis, is the major religion in Iraq. Christianity, Yazidism, Mandaeians, and other religions make up the other 3%. The country of Iraq, home to many Muslims, is wide and full of a diverse heritage with a wide spectrum of culture making Iraq a rich cultures (Abdullah, 2014; Tripp, 2002).

The country of Iraq, as with other countries across the globe is planning to develop its e-government involving the citizens' participation. Iraq is widely known for its religious and archeological tourism and also with the historical landmarks that go beyond thousands of years old as Iraq is the land of prophets and messengers of Allah (Bataineh & Abu-Shanab, 2016; Bazargan et al., 2017; Mishra et al., 2014).

As Iraq is no exception to this desire for an e-government, public service reforms in Iraq began following the 2003 war. The majority of the reforms of public service were mainly aimed at restructuring the administration to become better and stronger. Subsequently, the Iraqi government developed an e-portal in 2004 which was considered to be one of the most important accomplishments of the Iraqi government. The system of the Iraqi e- portal during those times only provided

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various types of information and, where relevant, made e-forms available to its citizens. Nevertheless, the Iraqi e-government initiative can be considered small and not matured compared to other countries, it is still in the planning term for all parts of the e-government. It is also not interactive in nature. It is centralised and only possesses basic information of Iraq (Abdulameer et al., 2012; Abdulameer et al., 2013; Abdulwahida et al., 2014; Mohammed, Hussein, & Anad, 2013; Naoum & Nadhim, 2014). In the case of the Iraqi government, the practicability of the e-government has not been widely explored. In the recent years the Iraqi government has been planning to create the e-government to authorise the citizens transactions and interaction online in an expedient and extensive manner (Alqasa & Al-Matari, 2015).

Iraq has 18 provinces and Baghdad is the capital city of Iraq (Abdullah, 2014). Table 2.5 shows Iraq provinces starting from the north till the south and the importance of each province by mentioning the international borders and industries for each province. Dahuk contains two international borders with Turkey and Syria and four industries, Erbil also has two international borders but with Turkey and Iran, one international border and two industries for Sulaymaniyah, Ninewah contains an international border with Syria and eight industries, there are three industries and no international borders in Kirkuk, Salah al Din has just four industries without any international borders, Diyala contains an international border with Iran and five industries, the capital city Baghdad has no international borders with seven industries, no international borders and six industries for Babil, one international borders and five industries exist in Wassit, the province where the survey of this study was applied Karbala contains three international borders with Saudi Arabia, Jordan, and Syria and eight industries including the religious tourism which is

considered more important than the tourism of entertainment, Anbar has three international borders through Karbala province all the way to the Ar'ar and six industries, no international borders with four industries in Qadissya, Missan contains an international border and four industries, Najaf has one international border and five industries, two international borders and six industries exist in Muthanna, Thi Qar has not any international borders and three industries, last province Basrah contains three international borders with Iran, Kuwait, and Saudi Arabia and five industries (Al-Araji, 2010).

In particular, this study took Karbala province, which is known for its religious and archeological tourism, as the research area. There are, each weekday 4,000 tourists entering the province of Karbala. This number swells on the weekends to 10,000 or more (Simon et al., 2012). Karbala is known as one of the most significant areas for mineral sand sediment deposits, possessing 42% of all this resource in Iraq, and has the largest factory for cement. In addition, it has deposits of mud and limestone which are utilised to make clay bricks and cement. The Karbala province has the highest economic income in Iraq with the highest number of tourists; for those reasons, the study took Karbala province as the area to apply the survey (Baban & Pollus, 2010; Kana, 2011). Karbala embraces the many different religions of the people who live in it, and has a great deal of wealth from its natural resources and tourists good work opportunities, so the citizens self knowledge characteristics are important in this study because people from many different religions and cultures participate and use the electronic government (Alzahrani et al., 2017; Fakhoury & Aubert, 2015; Li et al., 2015). The major industries and international borders for each province in Iraq are presented in Table 2.5.

Table 2.5

Brief Table of provinces

No	Provinces	No of Tourists	Major Industries	International Borders
1	Dahuk	No turists	1- Fruit 2- Beekeeping 3-Crossborder 4- Trade	1- Turkey 2- Syria
2	Erbil	No turists	1- Agriculture 2- Tourism 3- Livestock	1- Turkey 2- Iran
3	Sulaymaniyah	Oly in summer (10 thousanes in each tourism season in a year)	1- Agriculture 2- Tourism	1- Iran
4	Ninewah	No turists	1- Agriculture 2- Oil 3- Asphalt 4- Textiles 5- Sugar 6- Dairy products 7- Cement	1- Syria
5	Kirkuk	No turists	1- Oil 2- Cement 3- Agriculture	None
6	Salah al-Din	No turists	1-Livestock 2-Agriculture 3- Oil Refining 4- Animal Feed	None
7	Diyala	No turists	1- Citrus fruit 2- Dates 3- Grain 4- Fish farming 5- Livestock	1- Iran
8	Baghdad		1- Oil refining 2- Furniture 3- Printing 4- Construction 5- Chemicals 6- Plastics 7- Bottling	None
9	Babil	eight thousants each year	1- Manufacturin 2- Textiles 3- Livestock 4- Grains 5- Dates 6- Tourism	None

Table 2.5 continued

10	Wassit	No turists	1- Grain 2- Textiles 3- Fisheries 4- Agriculture 5- Building Materials	1- Iran
11	Karbala	Four thusands each day and 10 thusands each weekend Over 30 M muslim pilgrims from Iran, Afghanistan, Pakistan, and India flood into the city to visit the shrine annually	1- Tourism 2- Oil refining 3- Dates 4- Citrus 5- Agriculture 6- Cement 7- Bottling 8- Commerce 9- Construction	Through southern Anbar province all the way to the Ar'ar border crossing to 1- Saudi Arabia, 2- Jordan 3- Syria.
12	Anbar	No turists	1- Grain 2- Livestock 3- Dates 4- Fertilizer 5- Cement 6- Ceramic	Through Karbala province all the way to the Ar'ar 1- Saudi Arabia, 2- Jordan 3- Syria
13	Qadissiya	No turists	1- Dates 2- Grains 3- Livestock 4- Rubber products	None
14	Missan	No turists	1- Oil 2- Agriculture 3- Livestock 4- Wool	1- Iran
15	Najaf	Four thusands each day and 10 thusands each weekend	1- Tourism 2- Agriculture 3- Livestock 4- Commerce 5- Construction	1- Saudi Arabia
16	Muthanna	No turists	1- Agriculture 2- Textiles 3- Oil production and refining 4- Salt 5- Poultry 6- Animal feed	1- Saudi Arabia 2- Kuwait

Table 2.5 continued

17	Thi Qar	No turists	1- Agriculture 2- Fishing 3- Oil and Gas Production	None
18	Basrah	No turists	1- Oil 2- Shipping 3- Agriculture 4- Tomato paste 5- Fisheries	1- Iran 2- Kuwait 3- Saudi Arabia

As Iraq has moved into the recent years, the nature of the bureaucracies in the country has been becoming more complex and diverse in culture; as such the necessity for reforms which are in line with new global realities is rising. The content of the citizens' participation in the model of the decision making of the Iraqi e-government must not only be transparent, but must also be uniform and standardised (Abdulameer et al., 2013; Alqasa & Al-Matari, 2015). This study has intended to examine the citizens' self-knowledge as a moderator that influences the citizens' intentions to participate in the e-government decisions. At present, the Iraqi government has an e-government portal which mostly contains general information. In addition to that the Iraqi e-government portal has e-government initiatives such as, an e-form for job vacancies in human resources of the government. Currently the Iraqi government in collaboration with the Ministry of Higher Education and the Ministry of Science and Technology is working to develop effective and efficient e-government initiatives with the citizen's participation. In the united nations report of the "E-Government Development Index", Iraq was in the middle of the EGDI of the United nations (Tambouris, 2015; UN, 2014, 2016).

2.7 Summary

This chapter offered the literature review pertinent to this study. It focused on all the necessary areas of importance to the development of the proposed model to incorporate collaborative decision-making between the governments with the citizens' participation. An in depth study of such research ensured the success of the study, which plays an important role in the progress of society. The introduction of new innovations would enable a particular system to work better and help to attain the desired results. The literature provided a review of past circumstances, and the challenges and solutions that were proposed to improve a particular system. Various case studies of e-government initiatives implemented in different countries were reviewed. Such a review offered various learning curves on possible strengths and weaknesses of e-government initiatives. Evidently, e-government initiatives may be homogeneous or heterogeneous amongst countries. Each country offers the country's unique case, which can be studied for the purpose of learning and improving other efforts to engage the citizens' participation in the e-government initiatives and the involved decision-making. The countries were selected based on their similarity in culture and traditions where the proposed model could be applied. The research suggested a solid basis for the management of the components and for the achievement of an integrated model that can be used in all kinds of situations and circumstances.

This research focused on developing a decision-making model in the e-government by employing the citizens' participation in decision-making through the self-knowledge characteristics' integration. This involved what citizens were thinking, which was also dependent on other pertinent variables, such as one's behaviour, culture, level of education, nature of job, etc. By studying the knowledge and

knowledge types exhibited by the citizen, this research was able to relate to some of the models or theories that were presented in this chapter. In particular, this study adopted the Theory of Planned Behaviour (TPB) to frame this study, as it is one of the best theories that matched the objectives of this study. Literature has shown that the TPB has been used for various research works on society, community, and social networks and this study used the TPB to achieve the aims of this research.

CHAPTER THREE
CONCEPTUAL FRAMEWORK

3.1 Introduction

The previous chapter presented the related literatures to this study. The chapter of the literature review argued the research theoretical framework from the past studies. This chapter presents the research process and the theoretical framework of the present research according to the study background. This chapter is intended to review the conceptual model and the relationship with the related variables, and validate the contributing factors for the citizens' intentions to participate in the public decision-making in the e-government. Thus, this chapter suggests a study on a model of the citizens' intentions to participate in the public decision-making in e-government, and formulates the hypotheses based on the establishment of the related theory as debated in the chapter of the literature review.

3.2 Research Process

From the literature review, this study found the relevant research gap and determined the problem statement. Subsequently, a relevant theory for the problem statement of this study was sought to support this study, all these have been presented in chapter one. Chapter two includes a detailed information review of this research since it has been debated that the major basis of any research is the literature review; so, the issues related to the decision-making model of the e-government initiatives were reviewed equally in depth. The former studies conducted in various places around the globe have been critically reported and discussed. In this chapter three, this theory helps to write the concepts of the study model and identify the independent variables and the dependent variables.

Figure 3.1 explains the research process. In addition, this chapter is a summary about the study. Also, this chapter supplies conclusions and an overview of this research. The researcher debates the summary of the outcomes and the conclusions of this study. This chapter is intended to present the study's contributions, theories and practices.

Chapter four will determine the convenient research methodology to support this study. From the theory, the hypotheses will be written. Then, many operations will be followed, such as the development of the questionnaire, content validity and reliability, sample size, and data collection. The methodology of the research and hypotheses improvement has been debated in chapter three. The research information was the primary data collected by using a questionnaire.

For the next step, the research data will be analysed in chapter five of this study. Chapter five summarises the outcomes obtained from the information analysis of the survey that was conducted to test the factors that influence citizens' intentions towards the participation in the public decision-making of the e-government, and the statistics of the descriptions to clarify the general data of the respondents, and then investigate the proposed study. The result discussion is in chapter six, then the recommendations and conclusion will be presented in chapter seven of this study.

Phase	Process	Output

P1

Literatures review
↔
-Analyse the literature.
-Literature review on Intention, citizens' participation in public decision making of e-government and the related theories.

Research problem

Collection Preliminary data
↔
- Location of the sample
-Sample size and population
-Design of the questionnaire
-Validation of the questionnaire
-Sending of request letter to Karbala province as distribution and collation of survey instrument.
-pilot study
- Distribution and collection of survey instrument (Karbala of Iraq).

Contribution factors for citizen intention to participate in public decision making of Iraqi e-government.

P 2

Main Study Data Collection and Analysis
↔
-Validating the instrument and Conduct pilot study.
- Checking for the reliability and normality of the instrument.
– Redistribution of the instrument for main data collection
-Analyse the data.
-Main study of the reliability
-Construct validity
-Factor analysis
-Moderator Variables
-Model (Equation) Regression

Quantitative Data

P3

Conclusion
↔
-Achieving the research Objective
-Discussion of results
-Contribution
-Practicl recommendation
-Limitation & Future Research

Findings and Writing

Validation of the study model and the recommendations, through experts

Figure 3.1. Overall process of the Research

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3.3 Theoretical Framework

In Information System (IS), discipline there is several theories which have worked with intention and behaviour. The past studies conformed to these theories, such as the Theory of Planned Behaviour (TPB), Unified Theory of Acceptance and Use of Technology (UTAUT), and other theories mainly focusing on the intention to use (Ajzen, 1991; Rogers, 1981; Venkatesh et al., 2012). Moreover, researchers have discussed that the success of technology relies on the intention to use and the actual behaviour to use the technology (KIT, 2014; Weerakkody et al., 2013).

Meanwhile, past studies about the theory of planned behaviour (TPB) and the UTAUT have shown that some factors of the TPB and UTAUT have established constructs which are suitable for measuring the intention to participate in the public decision making of the e-government (Alshehri et al., 2013; Bataineh & Abu-Shanab, 2016; Bazargan et al., 2017; Jayashree et al., 2016; KIT, 2014; Lean, Zailani, Ramayah, & Fernando, 2009; Mishra et al., 2014; Rana, Dwivedi, Lal, et al., 2015; Weerakkody et al., 2013; Xie et al., 2017). Xie et al. (2017); KIT (2014); and Arendsen et al. (2014) debated that there is a need to study other factors so as to include the validity of the new model that must be utilised in another context. Hence, this research has utilised the Theory of Planned Behaviour (TPB) and UTAUT as the based theories with inclusion of compatibility and culture factors for identifying the contributing factors of the citizens' intentions to participate in the public decision-making in the e-government.

3.3.1 Definitions of the Theory of Planned Behaviour

The constructs for achieving citizens' intentions to participate in the public decision-making of the e-government have been formulated in the TPB model. The literature, for example showed that the public's perception of the e-government was that it lacked coherence and agreement to make decisions, as was referred to in the problem of the present study. According to the TPB, the behavioural intention of the citizens' participation in the public decision making of the e-government determines a citizens' actual behaviour directly, whilst the intention is positively affected by the attitude, and the subjective norms (Ajzen, 1985; Bazargan et al., 2017; Fishbein & Ajzen, 1975; Rana, Dwivedi, Lal, et al., 2015; Wu et al., 2015; Xie et al., 2017). Table 3.1 shows definitions of the TPB factors; attitude toward act or behavior, subjective norm, and intention.

Table 3.1

Theory of Planned Behaviour

Variables	Definitions	Authors
Attitude toward Act or Behavior	A person's negative or positive feelings about executing the purposed behaviour.	(Ajzen & Fishbein, 1980; Kabbar, 2016; Mishra et al., 2014; Xie et al., 2017).
Subjective Norm	The person's understands that most individuals who are important to her/him believe that she/he could or could not execute the behaviour in question.	(Ajzen & Fishbein, 1980; Al-Swidi, Mohammed, Hafeez, & Shariff, 2014; Kabbar, 2016; Xie et al., 2017).
Intention	The person's intention to participate in a definite behaviour.	(Ajzen & Fishbein, 1980; Al-Swidi et al., 2014; Kabbar, 2016; Xie et al., 2017).

3.3.2 Definitions of the Components of the UTAUT

Precisely, the components related to the ICT development of infrastructure during the effort of anticipating the constructs are apprehended by the UTAUT factor of facilitating condition (KIT, 2014; Slade et al., 2014; Venkatesh et al., 2012). The social influence and facilitating condition factors fit with the objectives of the present study because they are suitable for behavioural intention research (Chae et al., 2016; Slade et al., 2014; Verdegem & De Marez, 2011). On the other hand, the UTAUT displays when the facilitating condition becomes unimportant in the prognosis of the intention. Thus, the elements of the UTAUT which require understandable definitions for superior understanding are given in Table 3.2.

Table 3.2

Definition of the Elements of the UTAUT

Variables	Definition	Authors
Social Influence	The degree to which a person understands that important other citizens believe that one could participate in the innovation.	(Escobar et al., 2014; Kabbar, 2016; Slade et al., 2014; Venkatesh et al., 2003; Venkatesh et al., 2012).
Facilitating Condition	The degree to which a person believes that there is technical developed infrastructure to back the participation of new information technology.	(Escobar et al., 2014; Slade et al., 2014; Venkatesh et al., 2003; Venkatesh et al., 2012).

3.4 Justification for Inclusion of the Compatibility and Culture Constructs

Both compatibility and culture as constructs were found to be useful in this research towards identifying the contributing factors for citizens' intentions to participate in the public decision-making of the e-government. Sections 3.4.1 and 3.4.2 supply detailed clarification for their advantage in this research.

3.4.1 Needs for Compatibility Inclusion

The compatibility variable of technology has been observed as a new practice and idea to shape the implementation of the institution, but only when it is compared with its compatibility towards the success of the institution. The compatibility variable allows knowing the intention of users for using the technology and the level of users' compatibility with their intention to use the technology. Thus the development of the institution is promoted (Ainin, Parveen, Moghavvemi, Jaafar, & Shuib, 2015; Carter & Belanger, 2005; Jayashree et al., 2016). Jayashree et al., 2016, referred to compatibility as being the most significant in his research findings which was identified by the respondents to increase the intentions to adopt the e-government initiatives. Compatibility has often been found to have the most significant relationship with the use of the intentions. Meanwhile, Picoto et al. (2014) reported that the success of any project in an institution should be realised by inculcating the participation to develop the institution by the compatibility of the inserted innovation. Therefore, the regular needs and values that are embedded in the technology of innovation utilised in the institution should serve as the determination of the participant for frequent intent in the future. Moreover, the researchers have viewed that the innovation which is more compatible with the ways and values of the business transactions in an institution would be selected for future use and the citizens' participation in the public decision-making of the e-government in lieu of the non-compatibility innovation (Ainin et al., 2015; Picoto, Belanger, & Palma, 2014; Venkatesh & Zhang, 2010).

Thus, compatibility plays a significant role in identifying the success of innovation and technology in the citizens' participation in the public decision-making of the e-government. Furthermore, participation in technology may be observed as a

dimension of technology innovation to the citizens in the public decision-making of the e-government; moreover, the behaviour of the citizens towards their future participation needs to be taken into consideration (Hsu et al., 2014; Jayashree et al., 2016; Lean et al., 2009). The study of Jayashree et al. (2016) reported that achieving citizens' participation in the public decision-making of the e-government related to the use of technology intention should not be restricted to the factors like ease of use and service quality and performance expectancy, but it also needs the compatibility of the innovation or the technology. As it was referred to in the problem of the present study, the government aims to make better decisions that will be accepted by the people and the stakeholders. Thus, the compatibility variable is necessary for identifying the compatible elements of all the stakeholders in the present study. In addition, the decision is established as to whether the citizen uses the e-government on the perception of technologies such as being compatible or not. For this reason, utilising compatibility assists in identifying the contributing factors for the citizens' participation in the technology regarding the public decision-making of the e-government.

3.4.2 Needs for Culture Inclusion

The impact of culture on innovation or technology adoption was recognised in previous research, specifically the impact of culture on innovation or technology adoption in developing countries (Ameen & Willis, 2015; Fullan, 2014). Baptista and Oliveira (2015) found that understanding the impact of culture on innovation adoption could inform investigators to incorporate the cultural values that have a relationship with the technology under examination (citizens' participation) in the public decision-making of the e-government (Baptista & Oliveira, 2015). Guiso et al. (2015) explained that to research the potential impact of culture, the studies need to

be obvious as to why culture might be an issue. Culture is contemplated to be relevant since employees face choices which cannot be completely regulated (Guiso, Sapienza, & Zingales, 2015; Kreps, 1990). Li, et al. (2015) explained that evidence also displays that culture influences our operations of the psychological in the decision-making domain, displaying obvious cultural variances in past decisions made for North American and East Asian cultures. To understand the differences in the public decision-making for two cultures, a study needs to investigate, further the online operations associated with their decisions (Li et al., 2015). One of the main aims of this study has been to research the relationship between the cultural factor and citizens' participation adoption as it is the most successful in the public decision-making of the e-government technology by the citizens in the developing countries (Li et al., 2015; Mears et al., 2017; Zhao et al., 2014).

3.5 Conceptual Model

A conceptual study makes or theorises the logical perception of the relationships amongst many factors which have been determined as substantial to the problems (Sekaran & Bougie, 2003). Thus, Sekaran and Bougie (2003) emphasised that a model of research is the basic infrastructure upon which other structures of research extend the limit of knowledge and information. Considering the debates found in the literature review for this chapter, the investigator came-up with a study model for the factors contributing to the citizens' intentions to participate in the public decision-making of the e-government. For this reason, Figure 3.2 displays the conceptual model for this research.

The updated IS model has been successfully utilised in many studies in the IS domain. Several researchers declared that the updated TPB and UTAUT models are

the most adequate to evaluate IS success in predicting behavioural intention. Past studies have shown that some factors of the TPB and UTAUT have embedded constructs which are suitable for measuring the intention to use the e-government (Al-Nahdi et al., 2015; Baker, Al-Gahtani, & Hubona, 2007; Bataineh & Abu-Shanab, 2016; Krishnaraju et al., 2016; Maes et al., 2014; Montani et al., 2015; Seuwou et al., 2017; Tarhini et al., 2014; Venkatesh, Thong, & Xu, 2016; Weerakkody et al., 2013; Xie et al., 2017).
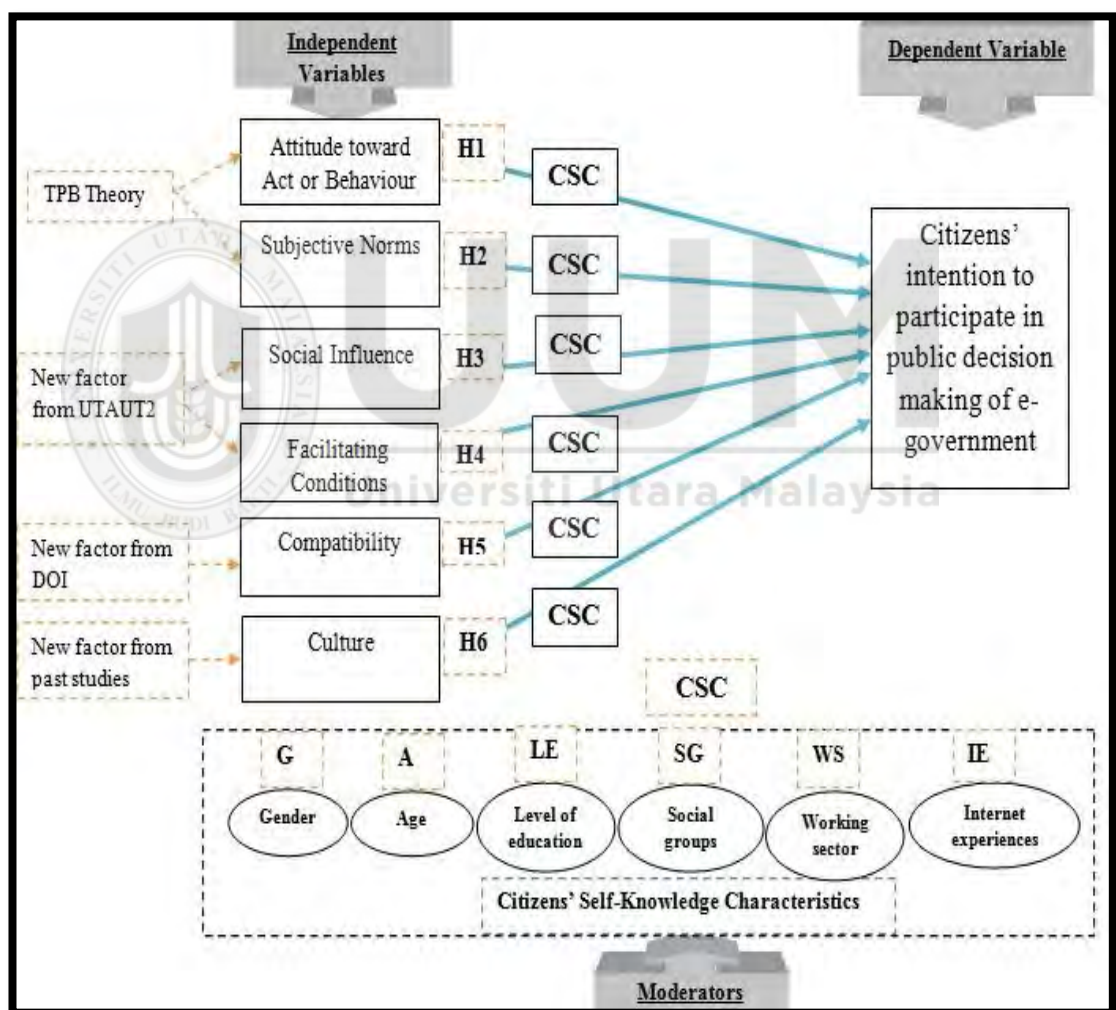
Figure 3.2. Conceptual Model

According to Jackson (1997) and Setiawati (2015), it is recommended that the (TPB) factors; attitude towards behaviour and subjective norm constructs be officially used

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in the new models that examine the predicted behavioural intention. According to Escobar (2014), KIT (2014) has displayed that the components of UTAUT, like Social Influence and Facilitating condition are beneficial for modelling the examined predicted behavioural intention, such as citizens' intentions to participate in the public decision-making of the e-government. According to Picoto et al., (2014), Choudrie (2016) reported that the success of any project in an institution should be realised by inculcating the participation to develop the institution by the compatibility of the inserted innovation with predicting behavioural intention. For example, the citizens may perceive intention to participate in the public decision making of the e-government to be more compatible if they see benefits in participating in the public decision making of the e-government to perform certain activities. Li, et al. (2015) explained that the evidence also displayed that culture influences the psychological operations in the decision-making domain, displaying obvious cultural variances in the past decisions made for North American and East Asian cultures. Overall, the culture factor in modelling to examine predicted behavioural intention focus is on important information that citizens need in e-government services. It's one of the important factors in predicting behavioural intention for the citizens to participate in the public decision making of the e-government (Al-Nahdi et al., 2015; Alharbi et al., 2016; Baker et al., 2007; Bataineh & Abu-Shanab, 2016; Krishnaraju et al., 2016; Maes et al., 2014; Mears et al., 2017; Montani et al., 2015; Seuwou et al., 2017; Tarhini et al., 2014; Venkatesh et al., 2016; Weerakkody et al., 2013).

Moreover, the dependent variable of this research was the citizens' intentions to participate in the public decision-making of the e-government (Bataineh & Abu-Shanab, 2016; Fakhoury & Aubert, 2015; KIT, 2014; Mtebe & Raisamo, 2014; Rana,

Dwivedi, Lal, et al., 2015; Wu et al., 2015; Xie et al., 2017). Furthermore, the research has considered an approach for measuring the citizens' intentions to participate in the public decision-making of the e-government adapted from past research works by different scholars (Alzahrani et al., 2017; Dabbicco, 2015; Escobar et al., 2014; Rana, Dwivedi, Lal, et al., 2015; Wu et al., 2015; Xie et al., 2017). In addition, the independent variables were attitude toward act, subjective norms, social influence, facilitating condition, compatibility, and culture.

Besides that, the independent variables of the model were measured through adaptations from past works in the literature by different authorities (Ajzen, 1991; Al-Swidi et al., 2014; Balthazard & Cooke, 2004; Choudrie, 2016; Diatmika, Irianto, & Baridwan, 2016; Escobar et al., 2014; Jayashree et al., 2016; Ly et al., 2015; Mishra et al., 2014; Rana, Dwivedi, Lal, et al., 2015; Rogers, 1981; Triandis, 2002; Venkatesh et al., 2012; Weerakkody et al., 2013; Wu et al., 2015).

3.6 Constructs of the Operations

The operational introduction of the variables offered the functional terms to characterise the relationships amongst the variables that were utilised in this research. Therefore, this research utilised twelve variables in the study of modelling the contribution for the citizens' intentions to participate in the public decision-making of the e-government. The variables were attitude towards act, subjective norms, social influence, facilitating condition, compatibility, culture, and citizens' intentions to participate. Other factors were age, gender, level of education, job, and social groups. However, this study used other factors as the moderators in the model of the study (Baker et al., 2007; Jayashree et al., 2016).

The moderator variables were used to study the statistically significant effects amongst the attitude towards act or behaviour, subjective norms, social influence, facilitating condition, and culture with the citizens' intentions to participate in the public decision-making of the e-government, by age, gender, level of education, social groups, worker sector, and Internet experience (Al-Nahdi et al., 2015; Baker et al., 2007; Bataineh & Abu-Shanab, 2016; Krishnaraju et al., 2016; Maes et al., 2014; Montani et al., 2015; Seuwou et al., 2017; Tarhini et al., 2014; Venkatesh et al., 2016; Weerakkody et al., 2013). Venkatesh et al. (2016) presented that age, gender, and experience are related to envisioning the behavioural intention to utilise actual technology, and a technology is utilised primarily in the context of organisations. Montani et al. (2015) offered that education, job tenure, and age are related to behavioural intention. More specifically, education is actually supposed to widely stimulate innovation and technology; as, highly educated individuals are more probable to utilise diverse methods to solve problems.

Attitude towards Act or Behaviour is a person's negative or positive feelings about executing the purposed behaviour (Ajzen, 1991). According to Yagil (1998), these attitudes are supported by social norms related to social groups, gender, and age. For example, teenagers contemplate driving after drinking is more likely for boys than for girls (Yagil, 1998). For that, this study has concluded the moderators of age, gender, and social groups as being necessary for this factor in the model of the study. In addition, past research works have specified that men are more probable to improve the intention to begin a business project than women. Also, age has been related to parents who are business people who are role models and raise or increase social entrepreneurship behaviour (Abbasi, Tarhini, Hassouna, & Shah, 2015; Mishra et al., 2014; Previte, Russell, & Parkinson, 2015; Rauch & Hulsink, 2015).

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Subjective Norms is the person's understanding that most individuals who are important to her/him believe that she/he could or could not execute the behaviour in question (Ajzen, 1991). Rana et al., (2015) referred that considering superior influence as the antecedent of subjective norm, the new system is relatively new and validated only from the responses of the non-adopters, such as those users who have relatively good experience with the use of the Internet, but have not used this e-government system before. Sanchez-Prieto et al. (2015) explained the effect of the Subjective norm by the level of education, ―Subjective norm has a positive relation with the primary teachers' perceived usefulness. Subjective norm has a positive relation with the primary teachers' behavioral intention to use mobile devices". Through the impact of the level of education and experience with technology, the teachers try to reduce the social pressure placed on teachers to use a given technology and Subjective norm is a construct formulated to examine the level of education and experience with technology (Sanchez-Prieto, Olmos, & Garcia, 2016).

Social Influence is the understanding of a person where important others like relatives and rivals believe that the person should adopt the innovation or technology (Venkatesh et al., 2012). Significant Moderators with social influence have a significant effect on Behavioural Intention to use e-government and the factors that must be taken by the researchers are age, gender, Internet experience, and culture or social groups (Alshehri et al., 2013; Baker et al., 2007; Lian & Yen, 2014; Niehaves & Plattfaut, 2014).

Facilitating condition is the availability of resources like money, time, and other resources needed to participate in a behaviour (Venkatesh et al., 2012). (Venkatesh et al., 2012). Niehaves and Plattfaut (2014) and Decman (2015) referred that testing the facilitating condition factor from UTAUT with different moderators in different environments, tests the influence of gender, students' level of education and age, and

identifies these moderator factors as being significant (Decman, 2015; Lian & Yen, 2014; Niehaves & Plattfaut, 2014).

Compatibility is the level to which an innovation is perceived as uniform with the past experiences, needs of potential adopters, and existing values. Carter and Belanger's (2005), findings referred to compatibility as being a significant predictor of the citizens' intention to participate in the e- government (Carter & Belanger, 2005). Jayashree et al., 2016, referred to compatibility as being the most significant in his research findings as it was identified by the respondents to increase the intentions to adopt the e-government initiatives. Compatibility has often been found to have the most significant relationship with the use of the intentions.

Culture is the individuals' beliefs, behaviour, and knowledge which form collectivistic and individualistic infrastructures (Bruder et al., 2013; Efrat, 2014; Sharma, Shimp, & Shin, 1994; Straub et al., 2004; Tylor, 1871; Zhao et al., 2014). Measuring the impact of culture on IT's effects may also be complicated by the extent to which an individual identifies with persons in the scenario and this, therefore, may also be probed, perhaps even prior to the various social group identifications presented immediately above (Bruder et al., 2013; Min et al., 2008; Straub, Loch, Evaristo, Karahanna, & Srite, 2002). Min et al. (2008) presented that, to "study user acceptance in China, we have proposed a revised UTAUT model that incorporates the factors of the unique characteristics of mobile-commerce, Chinese culture, and user satisfaction". Min and his partners studied the Chinese culture to identify the impact factors that have an influence on technology (Min et al., 2008). There are many researchers who have started to engage the culture factor in their studies to determine the effect factor on innovations and technologies (Fullan, 2014; Welch & Feeney, 2014; Zhao et al., 2014).

3.7 Variables

The current job of all researchers has been to explain and describe the variance between the variables in the given studies (Bonson et al., 2012). The different degrees of citizens' participation in the e-government from one country to another country depends on the gender, ethnicity, and culture (Chua, Goh, & Ang, 2012). Through the descriptive study between the variables, for example, life satisfaction and political participation, it was found through the survey data that the citizens' participation in politics was dependent on the life satisfaction. Citizens of any given nation are more likely to vote and participate in a government when the citizens are satisfied with the policies of the government (Flavin & Keane, 2012). Each study had two types of variables in its experiment: independent and dependent (Creswell, 2014; Kothari, 2011; Saunders, Lewis, & Thornhill, 2011). See Figure 3.1 for the model of the study.

3.7.1 Dependent and Independent Variables

3.7.2 Dependent Variable

Dependent variables are affected or may be altered by independent variables; for example, value A has an effect on value B, so value B is dependent and value A is independent. Using the categorical or continuous scores means that many measures can be used to measure the dependent variables. All of the studies have aimed to explain and develop the dependent variables in the research, research questions, test purpose statements, and hypotheses (Ajzen, 1991; Creswell, 2014; Kothari, 2011; Saunders et al., 2011; Venkatesh et al., 2003). The problem of the present study was about the necessity for involving the citizens in the e-government decision making. Thus, this research has tried to present an integrated model. It has a further inclusive

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understanding of the intention of the citizens' to participate in the public decision making of the e-government, by using the third research question of this study which was." What is the research model of the citizens' intention to participate in the public decision making of the e-government?" The dependent variable of this study was the citizen' intentions to participate in the public decision-making of the e-government as shown in Figure 3.1 in the model of the study.

3.7.2.1 Behaviour Intention (DV)

The person's intention to participate in a definite behaviour is known as the behaviour intention (Ajzen, 1991). This study called the dependent variable the behaviour intention to participate in decisions (BIPPD). Intention is the strength of the user's intention to implement a specified behaviour (Venkatesh et al., 2003). Previous studies have revealed that the intention construct was derived from the Theory of Reasoned Action by Fishbein and Ajzen (1975). The intention construct has been introduced into the IS study in both the use and acceptance of technology (Bataineh & Abu-Shanab, 2016; Cambridge, 2017b; Jayashree et al., 2016; Ly et al., 2015; Venkatesh et al., 2016). Thus, the intention construct was detected as a significant construct amongst IS investigators due to the part it plays in the post adoption and acceptance of technology (Diatmika et al., 2016; Shroff et al., 2011; Venkatesh et al., 2016; Wu et al., 2015). The related argument buttresses that behavioural intention has a direct relationship on the personal level of technology usage (Bataineh & Abu-Shanab, 2016). This displays the citizens' requirements as independent variables to examine the citizens' intentions to participate in the public decision-making of the e-government of this study. Conclusively, several researchers have reported that the intention of the users of technology impacts the used behaviour which could be synonymous to the citizens' intention of behaviour. In fact,

the successful experience of citizens using e-government services, finally can assist them in beginning to build compatibility with the citizens culture in the e-government, which may increase their intentions to participate in the public decision making of the e-government in the future (Setiawati & Pratiwi, 2015; Shafi & Weerakkody, 2009).

3.7.3 Independent Variables

The independent variables influence the dependent variables, and may cause a change in the result of a study. These factors are called independent variables, predictors, treatments, antecedent variables, or determinants. All these names act the same (independently). They impact on the dependent variables (Creswell, 2014; Kothari, 2011; Saunders et al., 2011). The mentioned reasons in the problem of the present study were about the citizens' requirements to participate in the decision making of the e-government. Thus, this research has tried to present an integrated model, it has a further inclusive understanding of the intention of the citizens' to participate in the public decision making of the e-government, by using attitude towards behaviour (ATB), subjective norms (SN), social influence (SI), facilitating condition (FC), compatibility (CO), and culture (CU) in the context of the e-government. The first research question of this study was" What are the factors that influence the citizens' intention to participate in the public decision making of the e-government?" The independent variables of this study, attitude towards act, subjective norms, social influence, facilitating condition, compatibility, culture, and citizens' intention to participate, are as shown in Figure 3.1 in the model of the study.

3.7.3.1 Attitude towards Act or behaviour (IV1)

Table 3.3 shows that the attitude towards Act or Behaviour is a person's negative or positive feelings about executing the purposed behaviour (Ajzen, 1991). Belief in the citizens' participation as a realistic probability is also a key predictor of the citizens' intentions. In addition, that means it would be credible to assume that specific behaviours directed at the target of the attitude of the citizens' participation would create a positive attitude towards the citizens' intention to participate in the public decision-making of the e-government (Hujran et al., 2015; Mishra et al., 2014; Rauch & Hulsink, 2015; Yagil, 1998).

Attitude towards behaviour (ATB) leads to the first factor in the supposed model, as the literature review on the citizens' participation behaviour noted that the citizens' attitudinal measure operationalised by incorporating expressions concerning many different groups of citizens' cases. Besides that, the past studies have detected that the positive impact of IT professionals was strong on the behavioural intention with the relationship between Attitude towards behaviour (ATB) and the behavioural intention to participate in technology (Ajzen, 2011; Alharbi et al., 2016; Hujran et al., 2015; Mishra et al., 2014; Xie et al., 2017).

Thus, attitude towards behaviour (ATB) was measured in this research with six questions adapted from the past studies. For more details, see Table 3.4 which shows the descriptions and codes of the items for each factor.

3.7.3.2 Subjective Norms (IV2)

Table 3.3 shows that *subjective Norms* is the person's understanding that most individuals who are important to her/him believe that she/he could or could not

execute the behaviour in question (Ajzen, 1991). One of the mentioned reasons in the problem of the present study was that the individuals who are important to the citizens have an impact on the citizen's intention to participate in the decision making of the e-government, such as, the subjective norms factor. Subjective norms have important influence on citizens' intentions to be involved in e-participation actions (Alharbi et al., 2016; Xie et al., 2017).

Displays of participation offer a form of two way communication between governments and citizens, and subjective norms are key to making this successful (Al-Swidi et al., 2014; Alharbi & Kang, 2014; Mishra et al., 2014). Examining the intention of citizens' participation in terms of how individual values affect attitudes and subjective norms in a developing country has an influence on the enhancement of the public decisions of the e-government. Besides that, the participation intention of the citizens in the public decision-making of the e-government generates the relationship amongst the IT attitude, subjective norms, and behavioral intention towards the understanding of the adoption of information technology in enhancing the e-government services. In addition, past studies have detected that subjective norms (SN) have significant effects on the behavioral intention with the relationship between subjective norms (SN) and the behavioural intention (Wu et al., 2015). Thus, a subjective norm (SN) was measured in this research with six questions adapted from past studies. For more details, see Table 3.4 which shows the descriptions and codes of the items for each factor.

3.7.3.3 Social Influence (IV3)

Table 3.3 shows that *social influence* is the extent to which the technology is perceived by the user to be important enough that she or he must employ a particular

technology (Venkatesh et al., 2012). Venkatesh et al. (2003) debated that social influence is suggested from three constructs which have their theoretical grounds from six various models. These models were Image (DOI), Subjective Norms (TRA, TPB, C-TAM-TPB, andTAM2), and Social Factors (MPCU). Furthermore, researchers have confirmed that social influence serves as grounds for individual intention to employ new technology, such as citizens' participation in public decision making (Venkatesh et al., 2003). Moreover, a highly expert user of technology has further impact on the relationship between the behavioural intention and social influence of the users of technology (Escobar et al., 2014; Kurfalı et al., 2017; Venkatesh et al., 2016). In addition, the relationship between citizens' intention to participate and social influence has been established as being moderated by age, gender, and experience with the internet, such that the impact is greater with extremely experienced technology users than with low experienced users (Alshehri et al., 2013; Venkatesh et al., 2012).

Besides that, past studies have detected that the impact of the female is greater than the male on the relationship between the behavioural intention and social influence of users of technology (Ainin et al., 2015; Decman, 2015; Rana & Dwivedi, 2015). Consequently, this study measured the social influence with four questions adapted from past studies. For more details, see Table 3.4 which shows the descriptions and codes of the items for each factor.

3.7.3.4 Facilitating Condition (IV4)

Table 3.3 shows that *the facilitating condition* is explained as the level at which a user is convinced that a technical and organisational infrastructure exists for supporting the technology usage (Venkatesh & Zhang, 2010). Indeed, the construct

of facilitating condition has been obtained from the incorporation of four different models or theories by Venkatesh et al. (2003).

Other reasons mentioned in the problem of the present study was to what degree citizens believe that the government infrastructure exists to support the citizens to participate in the public decision making of the e-government. Thus, facilitating conditions will have a negative or a positive influence on citizens' behavioural intentions to participate in the public decision making of the e-government. Consequently, facilitating condition has been found in the past studies to impact on the repetition of the citizen's intention to participate (Decman, 2015; Escobar et al., 2014; Masrom et al., 2014b; Venkatesh et al., 2016; Weerakkody et al., 2013).

In addition, the relationship between citizens' intention to participate and the facilitating condition has been established to be moderated by age, gender, and experience with the internet, such that the impact is greater with extremely experienced technology users than with low experienced users (Alshehri et al., 2013; Venkatesh et al., 2012). Conclusively, five questions measured the facilitating condition that was adapted from the past studies. For more details, see Table 3.4 which shows the descriptions and codes of the items for each factor.

3.7.3.5 Compatibility (IV5)

Moore and Benbasat (1991) defined *compatibility* as the range in which an innovation is displayed as being consistent with the existing values, experiences, and needs of future users, as is shows in Table 3.3. Moreover, Rogers (1995) described compatibility as the level to which an innovation is perceived to be consistent with the present values, previous needs, and experiences of possible adopters.

Rogers (2003) explained compatibility as the level that a person is perceived as being consistent with the potential user's existing values, initial knowledge, current needs, and beliefs. Therefore, the compatibility of the innovation or new technology is bound to impact on a user's intention, which is expected to retain the meaning of the technology (Hsu et al., 2014; Rogers, 2002), which is not different from the citizens' intention to participate in the public decision-making of the e-government.

In addition, Hsu et al. (2014) explained compatibility as the perceived operations of gaining knowledge between antecedent techniques and an innovation for perfecting tasks. Consequently, compatibility scale elements concentrate on work type or the beliefs or thoughts about previous experiences (Moore & Benbasat, 1991). Investigators have progressively concentrated on the dimension of compatibility which is similar to the usual work style (Choudrie, 2016; Maillet, Mathieu, & Sicotte, 2015; Wang et al., 2017). In addition, the compatibility scales include multiple dimensions, which are, compatibility with the style of work, compatibility with old experiences, compatibility with values, and compatibility with run processes (Choudrie, 2016; Wang et al., 2017).

In other words, past studies argue about which significant identifier is the utmost significant identifier of the behavioural intention to employ a technology in accordance with the initial employment decision. Hence, it has been empirically detected that there is a relationship between behavioural intention and the compatibility to employ a technology (Choudrie, 2016; Hsu et al., 2014; Maillet et al., 2015; Rogers, 2002; Shaikh & Karjaluoto, 2015). Thus, the compatibility of citizens' participation in the public decision-making would increase the behavioural intention. Moreover, five questions have measured the compatibility in this research. For more details see Table 3.4 which shows the descriptions and codes of the items for each factor.

3.7.3.6 Culture (IV6)

Table 3.3 shows that *culture* is the individuals' beliefs, behaviour, and knowledge which form collectivistic and individualistic infrastructures (Bruder et al., 2013; Efrat, 2014; Sharma et al., 1994; Straub et al., 2004; Tylor, 1871; Zhao et al., 2014). It is also reported as being the ―transmitted and created content and patterns of values, ideas, and other symbolic-meaningful systems as factors in the shaping of human behaviour and the artefacts produced through behaviour" (Kroeber & Parsons, 1958).

Min et al, (2008) referred that significant differences exist in users' attitude and users' behaviour towards intention. Based on past studies the cultural factors impact on the level of significance of the determinants, on user's intention, the independent variables, moderation of their relationships, and the dependent variables (Min et al., 2008). Zhao et al (2014) explained a new approach and outcomes which present a fresh intuition into how culture impacts on e-government participation and development. For example, Zha'o study found that future orientation and in-group collectivism, have an important effect on e-government (Zhao et al., 2014).

Past studies have detected the impact of culture on the behavioural intention through individualistic cultures; there is a strong association between cultures and user behavioural intentions. Some of the past studies took culture as a moderator on the factors of the model and others depended on culture as a factor in their models (Bruder et al., 2013; Min et al., 2008; Rodrigues et al., 2016; Rojas, Parasuraman, & Papadopoulos, 2017; Sehli, Cooper, & Sarkar, 2016; Shareef et al., 2016; Zhao et al., 2014). Thus, the culture of the citizens' participation in public decision-making would be a determinant of behavioural intention. Moreover, four questions have

measured culture in this research. These statements were adopted from Bruder et al.'s 2013 study. For more details see Table 3.3 which explains the factors utilised and Table 3.4 which shows the descriptions and codes of the items.

Table 3.3

Outline of the Factors utilised in the Model of the Research

Sources	Variables	Definitions
(Ajzen, 1991; Ajzen & Fishbein, 1980)	Attitude towards Act or Behaviour	A person's negative or positive feelings about executing the purposed behaviour.
(Ajzen, 1991; Ajzen & Fishbein, 1980)	Subjective Norm	The person's understands that most individuals who are important to her/him believe that she/he could or could not execute the behaviour in question.
(Venkatesh et al., 2012)	Social Influence	The understanding of a person where important others like relatives and rivals believes the person should adopt the innovation or technology.
(Venkatesh et al., 2012)	Facilitating Condition	The availability of resources like money, time, and other resources needed to participate in behaviour.
(Moore & Benbasat, 1991; Rogers, 1981)	Compatibility	The degree to which an innovation or technology is perceived as being consistent with the needs of the potential adopters, past experiences, and existing values.
(Balthazard & Cooke, 2004; Bruder et al., 2013; Markus & Kitayama, 1991)	Culture	Culture is the individuals' beliefs, behaviour, and knowledge which form collectivistic and individualistic infrastructures.
(Ajzen, 1991; Ajzen & Fishbein, 1980)	Intention	The person's' intention to participant in a definite behaviour.

Table 3.4

Description and Codes of All of the Research Variables

Factors and Sources	Codes	Variable Descriptions
Citizens' Intention to participate in the public decision-making of the e-government (Ajzen & Timko, 1986; Al-Swidi et al., 2014)	IB1 IB2 IB3 IB4 IB5	The level to which citizens have formulated awarded plans to not continue or continue participating in the public decision making of the e-government.
Attitude towards Act or Behaviour.	ATB1 ATB2 ATB3 ATB4 ATB5 ATB6	The level to which citizens have negative or positive feelings about the participation in the public decision making of the e-government.
Subjective Norm.	SN1 SN2 SN3 SN4 SN5 SN6	The level to which citizens have the understanding that most individuals who are important to her/him believe that she/he could or could not participate in the public decision-making of the e-government.
Social Influence	SI1 SI2 SI3 SI4	The level to which citizens perceive that important people to them believe that she/he must participate in the public decision-making of the e-government.
Facilitating Condition	FC1 FC2 FC3 FC4 FC5	The availability of experience and sources like time and other resources needed to participate in the public decision making of the e-government.
Compatibility	Co1 Co2 Co3 Co4 Co5	The level to which a public decision-making is perceived as consistent with the needs of the participation in the public decision-making of the e-government.

Table 3.4 continued

Culture	Cu1	The level to which citizens have collectivistic and
	Cu2	individualistic infrastructures and cognition which
	Cu3	might identify healthy behaviours in various
	Cu4	cultures with the participation in the public
		decision-making of the e-government

3.7.4 Moderator Variables

Moderation analysis seeks to determine whether the size or sign of the effect of some putative causal variable X on outcome Y depends in one way or another on a moderator variable or variables (Andrew, 2012; Hayes & Rockwood, 2016). The problem of the present study was about the citizen's requirements to participate in the decision making of the e-government. The self-knowledge characteristics of the citizens would help to determine the different needs of the citizens for the government to make better decisions that will be accepted by the people and the stakeholders, by using gender, age, level of education, social groups, working sector, and Internet experience. The second research question of this study is; what are the citizens' self-knowledge characteristics that will moderate the relationship between the influencing factors and the citizens' intention to participate in the public decision making of the e-government, to determine the different needs of the citizens?'

The study used moderation analysis to check the interest in testing whether the magnitude of citizens' self-knowledge characteristics' effect on some outcome variables of interest depends on a third variable or set of variables (Hayes & Rockwood, 2016; Ibrahim, Hilles, Adam, Jamous, & Yafooz, 2016; Seuwou et al., 2017; Venkatesh et al., 2016; Weerakkody et al., 2016).

The study controlled six demographic characteristics (citizens' self-knowledge characteristics) that may have had an impact on the results of the proposed study: gender, age, level of education, social groups, working sector, and Internet experience (Krishnaraju et al., 2016; Montani et al., 2015; Seuwou et al., 2017; Venkatesh et al., 2016; Wang, Wu, & Wang, 2009). They were referred to as the citizens' self-knowledge characteristics as the study looked at four different groups who behaved differently based on demographic factors. Age might also have an effect on intention, because they consider personal expertise and knowledge that are highly auxiliary to the idea of implementation and development (Baker et al., 2007; Venkatesh et al., 2016). Gender ws considered as prior studies proposed that attitudes toward female and male patterns disappear in respondents who are younger (Baker et al., 2007; Venkatesh et al., 2016). Education is as expected widely supposed to stimulate innovation, as educated people are likely to utilise diverse methods to solve problems (Baker et al., 2007; Tarhini, Elyas, Akour, & Zahran, 2016; Venkatesh et al., 2016). Social groups such as, economical, political, IT, and worker groups are more able to gain relevant information to reduce the uncertainty associated with innovative endeavors. Social groups are expected widely, to encourage innovations (Krishnaraju et al., 2016). Working sector was considered as prior studies proposed that the working sector affected subjective norm and attitude while perceived behavioural control was not. Working sector is more receptive to the need of adopting and developing new ideas to get improvements and changes (Al-Nahdi et al., 2015; Krishnaraju et al., 2016). Internet experience might also have an effect on intention, because they also consider personal expertise and knowledge that are highly auxiliary to the idea of implementation and development (Weerakkody et al., 2016).

3.7.5 Research Hypotheses

The hypotheses for this research have provided an opportunity for this research to obtain vital and important information on the citizen' intentions to participate in the public decision-making of the e-government in the research area (Creswell, 2014; Dimaggio, 2013; Kothari, 2011). Past literature assured hypotheses and used them (Belanche, Casala, & Flavian, 2012). The testing of a hypothesis is a shape of the statistical conclusion that employs information from a sample to draw outcomes about a population's probability distribution or a population parameter. First, a tentative supposition is made about the parameter or distribution.

This supposition is named the null hypothesis and is referred to by H_0, and is a hypothesis which the study tries to nullify, reject, or disprove, and another hypothesis (referred to as H_A; alternative hypothesis) is what the study really believes is the reason for a phenomenon, which is the reverse of what is declared in the null hypothesis (Bates, Maechler, Bolker, & Walker, 2014; Johnson, 1999; Kahn & Sempos, 1989). The hypotheses of this study were tested in Chapter five Data Analysis to check the reject of the null hypotheses or not.

Figure 3.2 presented the conceptual model of the study. The left side of the figure shows the independent factors/variables which were the attitude towards act or behaviour (ATB), subjective norms (SN), social influence (SI), facilitating condition (FC), compatibility (CO), and culture (CU) that impacted on the dependent variable (IB) that was the citizens' intentions to participate in the public decision-making of the e-government, on the right side of the figure.

Additionally, this research hypothesized that those which had relationships between the identifiers of the citizens' behavioural intentions (Attitude, Subjective Norms,

Social Influence, Facilitating condition, Compatibility, and Culture) were moderated by age, gender, level of education, social groups, and Internet experiences as suggested by several researchers (Abbasi et al., 2015; Alshehri et al., 2013; Baker et al., 2007; Chen, 2010; Rana, Dwivedi, Lal, et al., 2015; Seuwou et al., 2017). Abbasi et al., (2015) presented six situational and demographic moderators: educational level, age, voluntariness, academic position, usage experience, and organisation type, which were hypothesised to have a moderating impact on the behaviour of individuals' acceptance. These moderators gave useful insights for the influence factors, resistance or acceptance of technology and the Internet by offering opportunities and intended users for research in the future by understanding the technology acceptance. From Abbasi's study, this research has proposed that the moderators of this research: educational level, gender, age, Internet experiences, and social groups, were recommended in the demographics of the past studies as moderators because they gave useful insights for the influence factors of the citizens' intentions.

Therefore, this research suggested hypotheses H1-H6 as the major hypotheses. As a result, H7-H42 were suggested as the moderating variable hypotheses. If there was no significant relationship amongst the hypotheses, the null or invalid hypothesis H0 was returned. Otherwise, the hypotheses stayed valid.

3.7.6 Main Hypotheses

The major hypotheses in this research were formulated based on the proposals of past researchers as debated in section 3.6.4 and summarised in the following Table 3.5.

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H₁. Attitude has a positive effect on the citizens' intentions to participate in the public decision-making in the e-government.

H₂. Subjective norms have a positive effect on the citizens' intentions to participate in the public decision-making in the e-government.

H₃. Social influence will have a positive influence on the intention of the citizens to participate in the public decision-making.

H₄. Facilitating conditions will have a positive influence on the behavioural intentions of citizens to participate in the public decision-making of the e-government.

H₅. Perceived compatibility will be positively related to the intention of the citizens to participate in the public decision-making in the e-government.

H₆. Culture will be positively related with the type of citizens' participation outcomes that promote the public decision-making in the e-government's success.

Table 3.5 shows the hypotheses and the relationship between the IV variable and the DV variable in each hypothesis. The intention of citizens to participate in public decision making is called ICPPD in the Table 3.5.

Table 3.5

Summary Research of the Hypotheses

H	Description of the Hypotheses	Independent Variables	Dependent Variables
H_1	ATB has a positive effect on the BI in the participation in the public decision making	ATB	ICPPD
H_2	SN has a positive effect on the BI in the participation in the public decision making	SN	ICPPD
H_3	SI has a positive influence on the BI in the participation in the public decision making	SI	ICPPD
H_4	FC has a positive influence on the BI in the participation in the public decision making	FC	ICPPD
H_5	CO has a positive related on the BI in the participation in the public decision making	CO	ICPPD
H_6	CU has a positive related on the BI in the participation in the public decision making	CU	ICPPD

3.7.7 Hypotheses for the Moderating Variables

The hypotheses for the variables of moderating were formulated based on the proposals of the past studies, such as Social influence will positively affect older adults' intentions to shop online, Facilitating conditions will positively affect older adults' intentions to shop online, Age is negatively related to attitude towards using technology in the short term, and Age is negatively related to subjective norms and using technology in the short term (Al-Nahdi et al., 2015; Baker et al., 2007; Krishnaraju et al., 2016; Morris & Venkatesh, 2000; Tarhini et al., 2014). It was Debated in section 3.5 and 3.7.4 and summarised in the following Table 3.6.

H_7. Attitude towards Act or Behaviour influences the behavioural intention to participate in the public decision-making of the e-government more strongly for men than for women.

H₈. Attitude towards Act or Behaviour influences the behavioural intention to participate in the public decision-making of the e-government more strongly for younger people than for older people.

H₉. Attitude towards Act or Behaviour influences the behavioural intention to participate in the public decision-making of the e-government more strongly for a higher level of education than for a lower level of education.

H₁₀. Attitude towards Act or Behaviour influences the behavioural intention to participate in the public decision-making of the e-government more strongly for political groups than other social groups.

H₁₁. Attitude towards Act or Behaviour influences the behavioural intention to participate in the public decision-making of the e-government more strongly for a higher level of experiences than a lower level of experiences.

H₁₂. Attitude towards Act or Behaviour influences the behavioural intention to participate in the public decision-making of the e-government more strongly for a private sector than a public sector.

H₁₃. Subjective norms influence the behavioural intention to participate in the public decision-making of the e-government more strongly for men than for women.

H₁₄. Subjective norms influence the behavioural intention to participate in the public decision-making of the e-government more strongly for younger than for older people.

H₁₅. Subjective norms influence the behavioural intention to participate in the public decision-making of the e-government more strongly for a higher level of education than for a lower level of education.

H₁₆. Subjective norms influence the behavioural intention to participate in the public decision-making of the e-government more strongly for IT groups than other social groups.

H₁₇. Subjective norms influence the behavioural intention to participate in the public decision-making of the e-government more strongly for a private sector than a public sector.

H₁₈. Subjective norms influence the behavioural intention to participate in the public decision-making of the e-government more strongly for a higher level of experiences than a lower level of experiences.

H₁₉. Social influence influences the behavioural intention to participate in the public decision-making of the e-government more strongly for men than for women.

H₂₀. Social influence influences the behavioural intention to participate in the public decision-making of the e-government more strongly for younger people than for older people.

H₂₁. Social influence influences the behavioural intention to participate in the public decision-making of the e-government more strongly for a higher level of education than for a lower level of education.

H₂₂. Social influence influences the behavioural intention to participate in the public decision-making of the e-government more strongly for economic groups than other social groups.

H₂₃. Social influence influences the behavioural intention to participate in the public decision-making of the e-government more strongly for a private sector than a public sector.

H₂₄. Social influence influences the behavioural intention to participate in the public decision-making of the e-government more strongly for a higher level of experiences than a lower level of experiences.

H₂₅. Facilitating conditions influence the behavioural intention to participate in the public decision-making of the e-government more strongly for men than for women.

H₂₆. Facilitating conditions influence the behavioural intention to participate in the public decision-making of the e-government more strongly for younger people than for older people.

H₂₇. Facilitating conditions influence the behavioural intention to participate in the public decision-making of the e-government more strongly for a higher level of education than for a lower level of education.

H₂₈. Facilitating conditions influences the behavioural intention to participate in the public decision-making of the e-government more strongly for worker groups than other social groups.

H₂₉. Facilitating conditions influences the behavioural intention to participate in the public decision-making of the e-government more strongly for a private sector than a public sector.

H₃₀. Facilitating conditions influence the behavioural intention to participate in the public decision-making of the e-government more strongly for a higher level of experiences than a lower level of experiences.

H₃₁. Compatibility influences the behavioural intention to participate in the public decision-making of the e-government more strongly for men than for women.

H₃₂. Compatibility influences the behavioural intention to participate in the public decision-making of the e-government more strongly for younger people than for older people.

H₃₃. Compatibility influences the behavioural intention to participate in the public decision-making of the e-government more strongly for a higher level of education than for a lower level of education.

H₃₄. Compatibility influences the behavioural intention to participate in the public decision-making of the e-government more strongly for worker groups than other social groups.

H₃₅. Compatibility influences the behavioural intention to participate in the public decision-making of the e-government more strongly for a private sector than a public sector.

H₃₆. Compatibility influences the behavioural intention to participate in the public decision-making of the e-government more strongly for a higher level of experiences than a lower level of experiences.

H₃₇. Culture influences the behavioural intention to participate in the public decision-making of the e-government more strongly for men than for women.

H₃₈. Culture influences the behavioural intention to participate in the public decision-making of the e-government more strongly for younger people than for older people.

H₃₉. Culture influences the behavioural intention to participate in the public decision-making of the e-government more strongly for a higher level of education than for a lower level of education.

H₄₀. Culture influences the behavioural intention to participate in the public decision-making of the e-government more strongly for worker groups than other social groups.

H₄₁. Culture influences the behavioural intention to participate in the public decision-making of the e-government more strongly for a private sector than a public sector.

H₄₂. Culture influences the behavioural intention to participate in the public decision-making of the e-government more strongly for a higher level of experiences than a lower level of experiences.

The study has put a Symbol for the each moderator as: gender Female and Male (F, M), Age younger and older (Y, O) and so on for all of the moderators.

Table 3.6

Study Hypotheses amongst the Variables of Moderating

H	Hypotheses	G	A	LE	SG	WS	IE
H_7	**G** moderator the relationship between ATB and ICPPD	M					
H_8	**A** moderator the relationship between ATB and ICPPD		Y				
H_9	**LE** moderator the relationship between ATB and ICPPD			H			
H_{10}	**SG** moderator the relationship between ATB and ICPPD				IT		
H_{11}	**WS** moderator the relationship between ATB and ICPPD					PS	
H_{12}	**IE** moderator the relationship between ATB and ICPPD						H
H_{13}	**G** moderator the relationship between SN and ICPPD	M					
H_{14}	**A** moderator the relationship between SN and ICPPD		Y				
H_{15}	**LE** moderator the relationship between SN and ICPPD			H			
H_{16}	**SG** moderator the relationship between SN and ICPPD				IT		
H_{17}	**WS** moderator the relationship between SN and ICPPD					PS	
H_{18}	**IE** moderator the relationship between SN and ICPPD						H
H_{19}	**G** moderator the relationship between SI and ICPPD	M					
H_{20}	**A** moderator the relationship between SI and ICPPD		Y				
H_{21}	**LE** moderator the relationship between SI and ICPPD			H			
H_{22}	**SG** moderator the relationship between SI and ICPPD				IT		
H_{23}	**WS** moderator the relationship between SI and ICPPD					PS	
H_{24}	**IE** moderator the relationship between SI and ICPPD						H
H_{25}	**G** moderator the relationship between FC and ICPPD	M					
H_{26}	**A** moderator the relationship between FC and ICPPD		Y				
H_{27}	**LE** moderator the relationship between FC and ICPPD			H			
H_{28}	**SG** moderator the relationship between FC and ICPPD				IT		
H_{29}	**WS** moderator the relationship between FC and ICPPD					PS	
H_{30}	**IE** moderator the relationship between FC and ICPPD						H
H_{31}	**G** moderator the relationship between CO and ICPPD	M					
H_{32}	**A** moderator the relationship between CO and ICPPD		Y				
H_{33}	**LE** moderator the relationship between CO and ICPPD			H			
H_{34}	**SG** moderator the relationship between CO and ICPPD				IT		

Table 3.6 continued

H$_{35}$	**WS** moderator the relationship between CO and ICPPD					PS	
H$_{36}$	**IE** moderator the relationship between CO and ICPPD						H
H$_{37}$	**G** moderator the relationship between CU and ICPPD	M					
H$_{38}$	**A** moderator the relationship between CU and ICPPD		Y				
H$_{39}$	**LE** moderator the relationship between CU and ICPPD			H			
H$_{40}$	**SG** moderator the relationship between CU and ICPPD				IT		
H$_{41}$	**WS** moderator the relationship between CU and ICPPD					PS	
H$_{42}$	**IE** moderator the relationship between CU and ICPPD						H

3.8 Summary

This research was intended to examine the intention towards participation of the citizens in the public decision-making of the e-government initiatives in Iraq. Being a country with different cultures, educational backgrounds, job types, and behaviours, this study has employed the Theory of planned behaviour (TPB) as the primary theory in the research. This theory was selected to frame the research by using these factors in the hypotheses of the research. Besides that, the chapter further argued reasons for inclusion of the social influence and facilitating conditions from the UTAUT, compatibility and culture constructs in the study model of citizens' intention to participate in the public decision making of the e-government. Moreover, each of the six factors in the study model was discussed to achieve their relation upon which 42 indirect and direct relationships were hypothesised.

CHAPTER FOUR
RESEARCH METHODOLOGY

4.1 Introduction

This chapter discusses the detailed study methods utilised in this study which includes the study approach. This chapter is organised by the important steps that were undertaken in this research. In addition, this chapter provides information about the methodology design which includes the research design, nature of the research, research population, sampling (population sampling size and research tools), data collection and data analysis methods, and the design of the research instrument. Last but not least, this chapter offers the validity and reliability checks of the measurement instrument, then explains the data analysis tools. The chapter discusses the process of the data analysis using the Statistical Package for Social Science (SPSS) version 21.

4.2 Research Approaches

Research design refers to the detailed research outline that was undertaken within the desired research. These include: data collecting, data analyses, and decision report writing (Creswell, 2014; Mackey & Gass, 2013). Putting together a strategic plan or structure to investigate the answers to research questions or problems is a necessary step in any research design process. A research plan or model contains fundamental elements that inform of all the planned and necessary actions that are needed to be pursued in order to realise the research, successfully. Often, such a framework offers a comprehensive research outline from the evolution of the research (motivation, justification, research gap, hypotheses, etc.) to the implications of running the definitive analysis of the data, and validating the findings, and other imperative

processes (Creswell, 2014; Saunders et al., 2011). The quantitative research plan that was adopted by this research was intended to find the answers to the research questions this research were pursuing. It was based on the research objectives and questions; this study adopted the appropriate research design and implementation to attend to the questions posed in the research. A research design must be designed and operationalised, systematically. All research studies must consider and use all possible tools to design a good research plan (Ritchie, Lewis, Nicholls, & Ormston, 2013). This study was intended to examine new knowledge by virtue of a systematic process to realise a successful research (Marshall & Rossman, 2010). A good research design depends on the ease, clarity, and ability to answer all the research questions (Angrist & Pischke, 2010).

Moreover, the research's horizon indicates conducting a cross-sectional or longitudinal study (Sekaran, 2011). A cross-sectional that is also called one-shot study is performed when data is collected just once over a while of time like; months, weeks, or days for the reason of answering the study questions. However, the data collection at more than one spot in time is considered as longitudinal research (Creswell, 2014; Olsen & George, 2004; Sekaran, 2011). Longitudinal research needs more time to collect data, more cost, and more effort driven than cross-sectional study, for that in this study cross-sectional survey was used.

Likewise, based on the research model and justification and supported by a strong problem statement and literature from previous chapters, this study needed a good research design with a systematic process, suitable with the intended target country's landscape and environment to achieve the desired model for decision making in the Iraqi e-government initiatives. In particular, this research had to plan a research

design that was best suited to attain the citizens' intention towards the participation in the decision making towards the e-government initiatives. So, the suitable research design for this study was detected by the study of next section; types of research designs.

4.2.1 Types of Research Approach

According to Creswell (2014) and Saunders et al., (2011), there are two types of research design. These include the qualitative and quantitative research design.

The quantitative research Method is normally utilised to determine research problem(s) through generating numerical data that could be changed into usable statistics. It has been utilised to inform of and generalise the research results to a bigger sample population, and can be used for behaviour and opinions, to quantify attitudes, and for other user-defined variables.

On the other hand, ***the qualitative research Method*** is a research methodology that focuses on subjectivity and is based on an interpretive analysis. It has been utilised to understand the fundamental reasons, motivations, and opinions. The qualitative design has also been utilised to examine the directions in the opinions and thoughts, and to immerse deeper into any given problem.

Table 4.1

Comparison between the quantitative and qualitative research characteristics

	Quantitative research	Qualitative research
1	Explaining a research dilemma through explaining the directions or a need for a description of the connection amongst variables.	Exploring a dilemma and improving a detailed grasp of a central event.
2	Providing a main part for the literature through which indicates the research questions to be asked then justifies the research dilemma and builds up a necessity for the trend (researching hypotheses or questions and purpose statement) of the research.	The literature is the second player in the research but it will justify the dilemma.
3	Building up purposed statements, and researching hypotheses and questions that are particular, measurable, narrow, and observable.	Clarifying the research questions and the purpose in wide and general ways through the participants' experiences.
4	Collecting numeric information from a bigger number of citizens using tools with advanced questions and responses.	Collecting information established based on words from a teeny number of persons through participants' views.
5	Analysing directions, with variable utilisation of a statistical analysis, or comparing groups, and explaining search results via comparing them against past research and prior predictions.	Analysing the information for the characterisation and theme utilisation, text analysis and explaining the greater meaning of the result (analysis of the text of the person in the interview).
6	Writing reports on the research by using the utilisation standard; evaluating criteria and fixed structures, and taking an objective, non-biased approach.	Writing the statement utilising flexible, evaluative criteria and emerging structures, and by including the researchers' subjective reflection and bias.

Table 4.1 provided the definitions for both the quantitative and qualitative research designs, and the comparison on the characteristics of both types of methodologies. As iterated in previous chapters, the study has worked with a large number of citizens from different cultures and groups. In order to pursue this research successfully with the given research questions and objectives, the quantitative methodology was preferred to examine the information and provide new knowledge on the citizens' participation in the decision-making towards a successful planning and execution of the e-government initiatives.

4.2.2 Nature of the Research

The nature of the research refers to the way chosen by the study to mix various research components in a coherent and rigorous way. It also contained the design and writing of the research in the chosen methodology to solve the given research problems in this study (Creswell, 2014; Ostlund, Kidd, Wengstrom, & Rowa-Dewar, 2011; Ritchie et al., 2013). It was, therefore, imperative that before commencing with the research, decisions had to be made to harmonise the research intended with the intended methodology. Compatibility had to be made between the two. One has to understand the nature of research that a study will undertake so that the research and all the processes will help to gather and examine credible findings (Saunders et al., 2011).

According to Creswell (2014), there are three kinds of research methodologies. Each type is uniquely different and warrants specific processes and procedures. The first, quantitative research, contains experimental, survey, and correlational or archival types of research; the second, qualitative research, contains grounded, narrative or case study, and ethnographic types of research; and the third, which is often referred to as mix-methodology, contains a mixed method and action. Figure 4.1 illustrates the steps in detail.
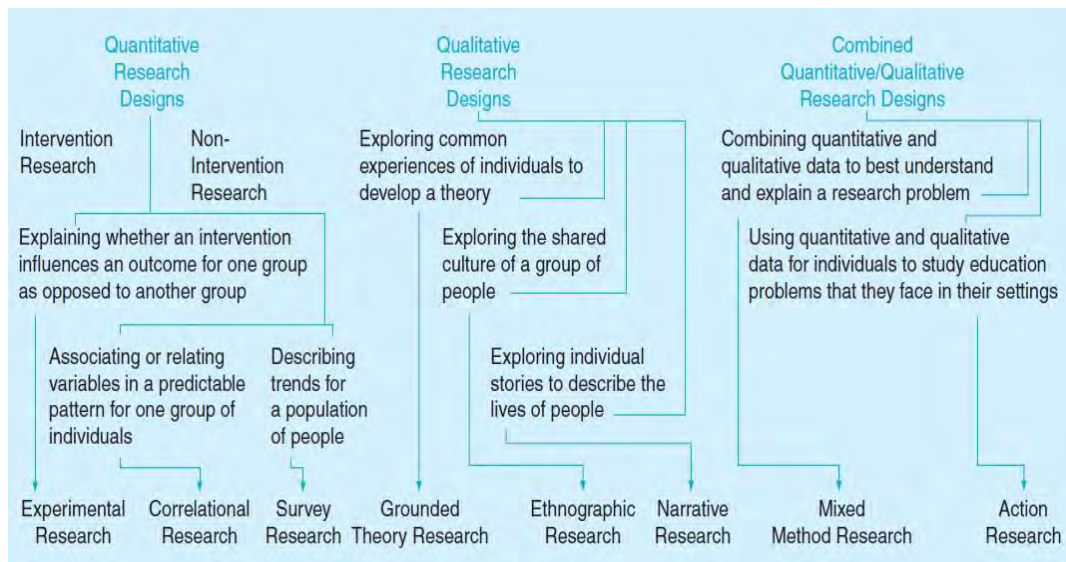
Figure 4.1. Types of the nature of the research designs

Source: (Creswell, 2014).

A specific research calls for the use and employment of a specific research methodology. Figure 4.1 showed the intricacy of the three methodologies. However, based on the research questions of the study and due to the research intended for this study, and its similarities with the past research iterated in the previous chapter (Chapter Two), when a research has to deal with many respondents (i.e., citizens) from a given population, it is more applicable and pragmatic to use a quantitative methodology. Moreover, with the purpose being to know the factors that will help to understand the citizens' intention to participate in the public decision-making of the e-government amongst a big population, the methodology that offers a positivist model, such as quantitative, is preferred as supported by Creswell (2014) and Mackey, et al. (2013).

4.2.3 Approach of the Research

The approach or strategy of the research clarifies the pattern of ideas, assumptions, and techniques which characterise quantitative research (Creswell, 2014). The deductive reasoning is a group of techniques for implementing testable theories in the actual world to evaluate their validity; on the other hand, inductive dialectics is a procedure of reasoning for which the premises of debate are approved to support the conclusion without ensuring it (Kothari, 2004; Lancaster, 2007). In other words, the inductive reasoning tends to make investigators observe certain phenomena and arrive at conclusions by logically setting up a general proposition founded on certain phenomena (Sekaran & Bougie, 2003). According to Sekaran (2011), the deductive reasoning begins with a common theory and is utilised for a specific situation under research (Sekaran, 2011). Consequently, present study is deductive in order for the hypothesis to be examined (quantitative research), which intend to test and use the IS, TPB and UTAUT theories in identifying the factors contributing to the citizens' intentions to participate in the public decision-making of the e-government and the relationship amongst the identified constructs. By mentioned the reason in problem of present study, this research tries to present an integration model. It has a further inclusive understanding of the intention to citizens' participate in public decision making of e-government, integrating TPB, UTAUT, compatibility, and culture in the context of the e-government. This study has three research questions are addressed: 1- What are the factors that influence the citizens' intention to participate in the public decision making of the e-government? 2- What are the citizens' self-knowledge characteristics that will moderate the relationship between the influencing factors and the citizens' intention to participate in the public decision making of the e-government? 3- What is the research model of the citizens' intention to participate

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in the public decision making of the e-government?. It is supposed that the results of present study will not only provide valuable information to advance the understanding the citizen's requirements or e-government adoption, but also give a solid theoretical research framework. However, the last part of the study, involved the validation of the model through statistical and content expert review. The analysis carried out was interpretive and qualitative.

4.3 Sampling Method

Most studies use surveys to explain the trends of the citizens in the population. The quantitative research uses the survey research design to investigate a specific sample of citizens, or portion of the population, to describe opinions and attitudes, and to investigate two or more variables, characteristics or behaviours. With the survey, researchers will be able to gather quantifiable data employing the questionnaires and analyse the data statistically to characterise the trends based on the feedback received from the survey. Consequently, this helps to test the hypothesis proposed by the research. The findings of the research will then be able to be cross-checked and be compared with past research, and be a reference for future research undertakings (Bloor, Sampson, Baker, & Dahlgren, 2013; Creswell, 2014; Riff, Lacy, & Fico, 2014).

The fact-finding methodology is a formal process used in sampling, and data collection. Research methodologies are selected to acquire and gather as much data as needed for research purposes. Research, observations, questionnaires, sampling requirements, preferences, and other techniques are used to collect the data of interest. It is imperative that the most suitable methodology is chosen to ensure that it provides the best data type and analysis. The survey research was convenient for this

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study as it was thought to be the best approach to obtain the information and knowledge on the citizen's intentions towards the participation in the public decision-making and its relevance to the e-government initiatives in the country.

4.3.1 Sampling Technique

Past researchers have confirmed that the technique of sampling in the research based on the quantitative method could be classified into sampling randomly and sampling non-randomly (Creswell, 2014; Kothari, 2011). Sampling randomly is also mentioned as probability sampling where each component of the population has independent and equal chances of being chosen for the research (Kothari, 2011; Sekaran & Bougie, 2003). Many researchers have argued that sampling randomly is helpful whilst managing an investigation on the testing of a theory as well as shape due to the result being non-inductive in regards to one component to another (Nan, Cong, Qingguo, & Xunhua, 2014; Zhang, Meng, Guo, Yin, & Luo, 2015; Zikmund, Babin, Carr, & Griffin, 2012). This implies that the rejection or selection of a component of the population will not impact other components in the same population. However, sampling non-randomly is utilised in the population because the accurate number of all the population is unknown and the chosen component depends on the consideration of the others (Christensen, Johnson, & Turner, 2011; Sekaran & Roger, 2013). Therefore, the technique of sampling randomly was appropriate in this research as the overall population number was known.

Furthermore, sampling randomly comprises of simple random sampling, stratified sampling and sampling in clusters, where they all supply independent choices from every member in the population (Sekaran & Bougie, 2003). Moreover, there is some variance amongst the techniques of sampling in the sampling randomly, based on

their accuracy, logic, time, and cost (Kothari, 2004). Both the sampling in a cluster and stratified sampling are tantamount to the precision of the strong correlation of a large volume of population and the characteristics of the population (J. W. Creswell, 2013). Indeed, the sampling in a cluster and stratified sampling have been debated as to being attributed with time consumption, on-cost effective, and geographical proximity, and these techniques did not fit with this study (Calabrese, Colonna, Lovisolo, Parata, & Ratti, 2011; Creswell, 2014; Sekaran & Roger, 2013). Therefore, this research employed the simple random sampling when selecting the participants (politicians, economists, IT professionals, and worker groups) due to its importance and effectiveness in the past studies which explained its relationship with the e-government, for the data gathering in the Karbala province of Iraq.

The sampling with the random sampling method was the best selected for this research because it supplied every component of the population independently and with equal chances of being selected, then simple random sampling is applied within each group (Creswell, 2014; Kothari, 2004; Sekaran & Bougie, 2003). This permitted the respondents of the research, who were politicians, economists, IT professionals, and workers groups, to support their stand on the intention to participate in the public-decision making of the Iraqi e-government. In addition to that, the simple random sampling was selected in this research as it permitted the sample of the population to perform the duties of their population (Kothari, 2004; Zikmund et al., 2012) (as politicians, economists, IT professionals, and worker groups) as found in the Karbala province of Iraq. Moreover, it is usually found that sampling with the simple random method is free from categorisation errors, and easy to get a representative group without requiring detailed information knowledge about the population (Lancaster, 2007; Ranjit, 2011; Zikmund et al., 2012). Thus, the

respondents of this research were free from any classification errors which may have happened if other techniques of sampling had been adopted, like cluster sampling and stratified sampling.

It is important for research, such as this one, to adopt a probability sampling by using the random sampling method. Sampling had to be made with great care because the respondents of this research were diverse in background and experiences. This was important because it was imperative to establish the public decision-making with the citizens' intentions to participate in the public decision-making of the e e-government so as to achieve good research outcomes (Al-Swidi et al., 2014; Ebbers, Jansen, & Deursen, 2016; Ly et al., 2015).

4.3.2 Sampling Design

Sampling has two kinds: *Probability* and *non-probability* sampling. The researchers can determine which kind of sampling they want through the available quantitative data of the participants, and the characteristics of the target population (Creswell, 2014; Kothari, 2011). This study used the Probability of sampling in the survey.

The researcher must determine the type of sample or what is generally known as the design of the sample. This research used the simple random sampling as the process of sampling in choosing the samples from the population for the suitable data collection (Frankfort & Nachmias, 2007; Kothari, 2004). This study took each Odd or Even number of the coded employees to be introduced into this type of sampling by employing random code numbers to pick up the unit with which to start. The organisations in Karbala give a random code to each employee male or female, old or young, and in any position of the work. For example, employee number one is a

female, 30 years old, engineer; employee number two is a female, 37 years old, accountant; employee number three is a male, 19 years old, driver; and so on. In this case, the study achieved the random selection (Kothari, 2004, 2011).

4.3.3 Sampling Frame

The sampling frame is debated as the lists of the components of the population from which a sample is drawn that could be individual, institutions, geographical areas or other units (Creswell, 2014; Kothari, 2004). The research works of Sarndal et al. (2003), Mackey et al. (2013), and Sekaran and Roger (2013) emphasised that a survey which dealing with individuals or people should be different registers of the components of the population, such as the admission register of employees, employees' attendance lists in the organisation, and directories of the telephone (Mackey & Gass, 2013; Sarndal, Swensson, & Wretman, 2003; Sekaran & Roger, 2013). However, investigators have emphasised that a sampling frame might be biased in the study once it contains foreign components which are not mutual to each member of the population in the study (Bryman & Bell, 2015; Morse, 2016; Sekaran & Roger, 2013).

This insinuated that a sampling frame should consist of the lists of components which are unique to each members of the survey population. This study aimed to moderate the citizens' self-knowledge characteristics in the public decision-making of the Iraqi e-government under the planning term of e-government; for this reason, the study selected the relevant social groups as mentioned in Chapter Two, in section 2.5.

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Dawes et al (2016) suggested that ─social, political, economic, and operational benefits are all possible with effects on the quality of life". For that reason, this study examined the different social groups' needs according to their thoughts. This is why four different groups were selected political, economic, technology, and workers (Dawes et al., 2016; Meijer & Bekkers, 2015). According to Scheaffer, et al., 2012, the sampling is not quite balanced amongst groups because each group has different population; for that reason Scheaffer's frame was applied to get the sample size of each population for each group, such as the political group (the members of the provincial council (27 members)), economical group (the members of the commerce chamber (350 members)), information technology group (IT departments' employees (185 members)), and workers group (the members of the general Federation of Iraq trade unions (600 members)). Therefore, the list of the four groups in the Karbala province of Iraq was determined from the office of the Karbala province.

For this study, the suitable method for the sampling frame, according to Scheaffer et al (2012) was the random sampling. A random sampling is one obtained by separating the population elements into non-overlapping groups, called strata. Then, a simple random sample is selected from each stratum, of the sample size [ni= (Ni/N) n]. This method of assigning sample sizes to the strata is called proportional allocation (Barbosa, Pitta, Senne, & Sozio, 2016; Scheaffer, Mendenhall, Ott, & Gerow, 2012; Wang, Ullah, & Khalil, 2016).

4.3.4 Location of the Sample

As explained in Chapter One section (1.7 Research Scope) and section (2.6 Overview of Karbala the Tourism and high Economic Region in Iraq) in Chapter Two. This study got approval to work in Karbala province of Iraq as a sample to

apply the model of this study with participation from various segments of the population, such as (politicians, economists, IT professionals, and workers). Initially, the research data collection was performed with the cooperation of the organisation which provided the code numbers of the employees and other details to enable this study to distribute the questionnaire systematically and randomly. The questionnaire sheets were distributed by the imposed operations of the organisation (The governorate administration had distributed the questionnaires to all of the groups). The questionnaire sheets for all of the groups were taken by the Karbala governorate, which had allocated someone who worked in the human resource department to assist in performing the survey and he determined the population of each group for the researcher. The Karbala governorate returned the completed questionnaire sheets after 30 days. Furthermore, the organisations in Karbala provided the study with official letters, which helped to approve the survey of the study. For more details see Appendix (G).

4.3.5 Sample Size and Population

The population is explained as the objects or individuals which meet the unquestionable requirements for an organism in a general group (Bryman & Bell, 2015). The population is considered as the entire group of observations under research. On the other hand, the population can be explained as the set of events or persons in time and a geographical boundary which are intended for examination by a researcher (Sekaran, 2011; Sekaran & Bougie, 2003). The data collection method is commonly related to the research methodology. In most research works, there exist two types of data, secondary and primary data. Data, which has already been collected, by other researchers for another principle, is called secondary data. Primary data is defined as data that an investigator collects on his\her own for the

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intended or ongoing research (Creswell, 2014; Hox & Boeije, 2005; Kothari, 2011; Saunders et al., 2011; Scheaffer, Mendenhall, Ott, & Gerow, 2011; Sekaran & Roger, 2013). This research used the primary data.

The study selected the mentioned groups depending on the previous studies and their important roles in the e-government. This study was unable to cover all of the relevant social groups. Nonaka (1994) referred to the relevant social group component of this concept being political, economic, and social groups. Here the intent was to identify the key players in the e-government that may include the political group, economical group, IT professional group, and worker group (Gil-Garcia, 2012; Olsen & Engen, 2007; Pinch & Bijker, 1984).

Iraq has 18 provinces without any state and Baghdad is the capital city of Iraq (Abdullah, 2014). This study took the province of Karbala as for the reason mentioned in section 2.6. The Karbala province includes: the respective provincial members with the total of the council province members being 27 respondents. In addition, each province had an IT department with a total of 185 IT employees who participated (employees working on the developing of the e-government). In addition to that, 350 respondents came from the commerce chamber. Last but not least, 600 respondents came from the members of the general Federation of Iraq trade unions (social group).Sufficient information sections and advertising were made available to help the responders to understand the study, and facilitate the work of the data collection to complete the questionnaire paper effectively. The Governorate administration distributed the questionnaires to all of the groups and then returned the questionnaire sheets to the researcher with official letters confirming that the surveys had been completed. Table 4.2 clarifies the participants of this research survey.

Sample size of the pilot study

Sample size of the pilot study, (Johansonand Brooks, 2010) recommended the samples size for a pilot study being N = 12 for each group in a research where two, three or four groups maybe expected. Other studies recommended that for the feasibility of the pilot study, a sample size as small as 10-30 for each group will, occasionally, be enough (Hill, 1998; Johanson & Brooks, 2010; Julious, 2005; Kieser & Wassmer, 1996). This study took 12 respondents for the politicians group because the total number of this group was only 27 persons. For the other groups, the study took 30 respondents for the economists, IT professionals, and workers. The justifications for the sample size of the pilot study were based on the reliability and validity of the instruments in the questionnaire. For this sample size, it was based on the precision about the variance and mean, rationale about the feasibility, and regulatory considerations (Johanson & Brooks, 2010; Julious, 2005; Zikmund et al., 2012). Table 4.2 shows the pilot sample size for each group in detail. Study took (each even number) of the coded employees to be introduced into this type of sampling by employing random code numbers to distribute the questionnaire (pilot study), as the study recommended.

Table 4.2

The participants of the survey

No	Population for each group	Sample size for the Pilot Study Even Number	Sample size for the Main Study Odd Number	The kind of group
1	27	12	12	Politicians (council province members).
2	185	30	80	IT professionals (IT department employees).
3	350	30	151	The economical persons (the members of the commerce chamber).
4	600	30	258	The members of the general Federation of Iraq trade unions.
Total	1162	102	501	Participants.

Sample size of the main study

Kothari (2011) suggested that the most efficient sample size is from 30 to 500 for any one population (Iravani, Zadehb, & Foroziac, 2012; Mohamad, Arifin, Samsuri, & Munir, 2014; Zikmund et al., 2012). For that, this study took the minimum sample size of 500. The sample size for each group was obtained by calculating the Scheaffer formula $n_i = (N_i/N) n$ (Scheaffer et al., 2012). Study took (each odd number) of the coded employees to be introduced into this type of sampling by employing random code numbers to distribute the questionnaire (main study), as the study recommended.

The basic drawing (simple random sampling) consists of selecting a group of n sampling units in such a path which each sample of size n has the same chance of being chosen by Scheaffer's sampling frame [$n_i = (N_i/N) n$].

(ni) is the sample size of each group, (Ni) is the population of each group, (N) is the total population for all groups, and (n) is the minimum sample size for the main study data collection (500). Table 4.2 shows the main sample size for each group, in detail:

(n Politicians)= 27/1162*500 = **12**

(n economical persons)= 350/1162*500 = **151**

(n IT professionals)= 185/1162*500 = **80**

(n Worker)= 600/1162*500 = **258**

Total= **501**.

4.4 Instrument Design

Researchers have emphasised that designing of the study instrument needs the understanding of several underlying suppositions that assist to formulate the best questions that are required to be responded to by the participants (Al-Swidi et al., 2014; Arendsen et al., 2014; Escobar et al., 2014). Redesigning of the study instrument for the information collection is needed in several cases in which the existing and past instruments are to be utilised in a scope that varies from past research (Escobar et al., 2014; Kothari, 2004; Previte et al., 2015). In addition to that, Kotheri (2004) argued that the object of the research, study dimensions, and concept need suitable understanding before the redesigning of the study instrument. Thus, the researcher afforded the objectives of the study with each other with their participants and dimensions in cause whilst designing the study instrument for this research.

4.4.1 Survey Technique

The research employed the survey technique for the data gathering because of its ability to output helpful figures and facts as answers to the questions of the study, and serve as a study approach to explore, give, and gather detailed characterisations of the present phenomena (Sekaran, 2011). The research respondents in the questionnaire had to complete the questionnaire by answering the questions listed. These included sections on the respondents' demographic or personal information. Once completed the respondents submitted the questionnaires back to the researcher (Kolachalam, 2012; Kort & Klijn, 2011).

Manual Distribution: This method refers to distributing the research survey manually to the respondents, and collecting them once the respective respondents had completed the surveys. This research employed the manual distribution by using the simple random sampling when selecting the participants.

Mailed questionnaires: The use of the mailed questionnaire has many benefits. It is easy to reach a group of people in a particular area of interest. It is easy to collect data with a reduced time and cost. The disadvantage of the mailed questionnaire is that the participant may not respond; also, the researcher may be unable to explain the questions to the participant.

Web-based questionnaires: The website survey too has benefits, but it also has drawbacks. It provides quick data collection and reduced time and cost through the use of social networks, and the researcher can do the survey in turbulent and unstable areas without having physical access to them. On the other side of the coin, there are technological problems with this approach; it may be regarded as junk mail, breach of Internet security, and worst of all, not all people use computers or the Internet.

Sekaran and Bougie (2003) argued that the researcher-based self-managed questionnaire was suitable for gathering data in this research due to its capacity to motivate and achieve high respondent response rate. Thus, mail questionnaire and electronic questionnaire methods of the survey were not applied because of their required availability and the low response rate attributed to the infrastructure in their fields.

4.4.2 Design of the Questionnaire

This section will provide the development of the questionnaire and the survey instrument. The researcher had to be careful when designing the questionnaire so that it would be reliable, effective, and valid instrument to get the data needed from the sample. Choosing a suitable instrument reduces the loss of time to complete the questionnaire (Kothari, 2011; Raczkowski, Kalat, & Nebes, 1974). A perfect questionnaire design reduces the errors in the answers and makes the response rate better (Mackey & Gass, 2013). The research involved many kinds of respondents from various backgrounds and professions. Therefore, time could be particularly important for them. It was imperative that the design of the research instrument (the questionnaire) was not too long. Government officials and businessmen are always busy and do not have time to take an interest in these kinds of academic surveys (Creswell, 2014). A good survey or questionnaire should involve the immediate gathering of information from the respondents with minimal time consumption.

Venkatesh et al. (2003) emphasised that the main instrument of data collection is an organised questionnaire. Therefore, Shoeb et al. (2007) and Raczkowski et al. (1974) stressed that an organised questionnaire is a list of questions given to the respondents in a prearranged order that adds usefulness to the research reliability by assuring that

each respondent is inquired of the same question (Raczkowski et al., 1974; Shoeb, Weinstein, & Mollica, 2007). Moreover, the structured questionnaire could be managed simultaneously by a huge number of respondents and be less time consuming, less expensive, and need less skills. Thus, the organised questionnaires utilised in this research consisted of a modified, pre-subedited, written group of statements (Creswell, 2014; Ergu & Kou, 2012; Kothari, 2011).

In addition, the research employed a designed questionnaire which was suitable for groups, then it examined the objectives of this study and was guided through the suggested hypotheses, the conceptual model of this study, and the adopted system of information (IS) theories. The sources of the elements to measure the constructs of the conceptual study model are displayed in Table 3.3. Ajzen (1991, 2011), Ajzen and Timko (1986), Venkatesh et al. (2012), Al-Swidi et al. (2014), Rogers (1981), and Balthazard and Cooke (2004) were utilised as the main sources of the elements for measuring several constructs in the model of the research of this work. Besides that, several other sources, of which their elements were found to be functional for measuring the constructs, were utilised in the questionnaire design and are displayed in Appendix (A) (source of the elements).

According to Katrina Korb, 2012, there are two methods for a Pre- existing instrument which can be utilized in a study. The first method is to pick the instrument almost verbatim which is called adopting the instrument. The second method is that the study can significantly modify the instrument which is called adapting (Korb, 2012). The present study used the first method. It picked the instrument almost verbatim (adopting the instrument) and applied this method on the cultural construct elements, which were taken from Bruder's study. Bruder et al.,

(2013) examined the predicted beliefs in specific conspiracy theories over and above other individual difference measures, which were near to the present study with inclusive understanding of the intention of the citizens' participation in the public decision making of the e-government. This was in ddition to the other constructs in the present study such as attitude towards act or behaviour, subjective norms, social Influence, facilitating condition, and compatibility. The present study also used the second method by significantly modifying the instrument (adapting the instrument) to be appropriate for the present study (Moore & Benbasat, 1991). Furthermore, the present study checked the instrument development with expert reviewers who checked the content of the instrument; for more information see section 4.4.5 Validation of the Questionnaire. Besides that, the present study used the pilot study which was deliberately taken in order to identify the feasibility of the instrument intended for the data gathering by testing the scale of reliability questionnaire, for more information see section 4.5.1.4 testing the Scale of the Reliability Questionnaire. The past studies that were used to collect the source of the elements for the study of measuring the constructs are shown in Appendix (A).

Indeed, the questionnaire design was utilised to measure the study constructs in the model of the research. As a result, the designed questionnaire included an introductive declaration on the constructs of the model of the conceptual study that was revised and set in an appropriate method by three academic supervisors and several experts in the area of research before the pilot study. For more details, see Appendix (F).

4.4.3 The Structure of the Questionnaire

The survey involved the gathering of information from the citizens. The kind of information that was gathered from the citizens contained various levels of attitude, beliefs, knowledge, preferences, and personalities. Questionnaires are largely employed to gather such information. The questionnaire was designed to provide the research with valuable information that was good for systematic and quantifiable analyses. The structure of the questionnaire (sheet) for this work contained three sections for the data collection: The first section A consists of the demographic information, the second section B relates to the hypothesis information, and the third section C is about the suggestions as depicted by Table 4.3. And, for more information, see Appendix (B) and (C) to view the questionnaire.

Table 4.3

Structure of the Questionnaire Design

Section A: Demographics	
✓ Demographic questionnaire. Describe the citizens or demographic data for each citizen or the demographic position in the research. This is to identify the relevant social groups to help this research in determining the needs of each group.	

Section B: Main part (The Hypothesis data)	
Part	**Independent Variables**
1	✓ Citizens' negative or positive feelings about the intention to participate in the public decision making of the e-government.
2	✓ Citizen's subjective expectation if he/she intends or does not intend to participate in the public decision making of the e-government.
3	✓ Citizen's influence on the behavioural intention in adopting the citizen's intention to participate in the public decision making of the e-government.
4	✓ Citizens' perceptions of the resources and available support for the citizen's intention to participate in the public decision making of the e-government.

Table 4.3 continued

5	✓ Citizen's degree of compatibility which affects the citizen's intention to participate in the public decision making of the e-government which is perceived to be consistent with the citizens needs.
6	✓ Identify the citizen's healthy behaviours in various cultures about adopting the citizen's intention to participate in the public decision making of the e-government. Dependent Variable

Dependent Variable
✓ The intention of the citizens to participate by the self-knowledge characteristics in the public decision-making of the Iraqi e-government.

Section C: Suggestions
✓ The suggestions part was for improving the questions and the study got feedback from the respondents to improve this research.

4.4.4 Translation of the Instrument to Arabic

The study instrument utilised in this research was translated to Arabic from the English language and checked for correction by expert translators from the competent office workers who worked in the Iraqi Translators' Association. Thus, the evidence of the translation of the study instrument by the competent office workers was performed to ensure that the translation was correct. Mr. Faiz R. Jasim the head of the managers of the consultative office for legal / authentication translation and member of the Iraqi translations' association Baghdad, provided validation on the Arabic copy (version) of the questionnaire. For more details, see Appendix (E), or for more information about the questionnaire see Appendix (B) and (C).

4.4.5 Validation of the Questionnaire

Zikmund, et al. (2012) discussed that the instrument for gathering data is required to be validated to make sure there is a good quality of data. Consequently, validity refers to how competently the instrument measures what it is designed for. There are some kinds of validity that contain face validity, content validity, and construct validity. For this reason, the researcher made sure that all of the types of validity were contained whilst validating the fulfillers of the questionnaire. Christensen et al. (2011) indicated the face validity as a way of checking whether the instrument shows the measures that it has been designed for (Christensen et al., 2011). The questionnaire was presented to academic experts and professionals to check the measurements and fulfil the requirement of the questionnaire. The academic experts' guidance to develop the questionnaire was accepted and contemplated on. The study selected three kinds of experts to check the questionnaire validity. The first were expert in the e- government area who had published many papers about e government and lectured in this field for many years; they checked and verified the content of the questionnaire. The second were expert in quantitative statics (scales, data collection, and analysis); they checked and verified the scales of the questionnaire. The third were expert in language; they translated the questionnaire from English to Arabic and the inverse of that, in addition to verifying the language of the questionnaire. As in the list below there were three content experts, two scales experts and one language expert.

1- Expert of questionnaire **content** (School of Computing, College of Art and Sciences CAS, UUM, Malaysia). Suggested to the study some corrections on the questionnaire and change some of questions, especially in the questions of Social Influence.

2- Expert of questionnaire **content** (School of Computer, University of Karbala, Iraq) provided valuable advice about the Iraqi e-government environment.

3- Expert of questionnaire **content** (Faculty of Computer and Information Technology, Al- Madinah international university, Malaysia) inserted some advice about the Iraqi e-government environment.

4- Expert of questionnaire **scales** (School of Quantitative Sciences, UUM, Malaysia) provided some advice about the questionnaire design and measurements develop.

5- Expert of questionnaire **scales** (School of Quantitative Sciences, UUM, Malaysia) advised me to make focus groups from each group one person to get the feedback and improve the questionnaire and he explained to the researcher many things.

6- Expert of questionnaire **language** is the head of manager of the consultative office for translation legal authentication translation / member of Iraqi translations' association Baghdad, provided validation on the Arabic copy (version) of the questionnaire.

The research takes their suggestions and observations were get hold of into consideration and displayed in Appendix (F).

4.4.6 Face validity

This is a form of validation of the questionnaire by interviews with one respondent from each group to be asked about their opinions, perceptions, and beliefs about the questionnaire and if it is understandable. Face validity is a qualitative measure of validity; it is not quantified with statistical methods. Of all validity measures, the

face validity is normally considered as the least scientific measure because untrained individuals but potential respondents are chosen on the basis of convenience. They are involved because this measure is subjective and not quantifiable (the researcher checks the questionnaire with some of the responders to give the researcher their opinions about the questionnaire to improve it) (Krueger, 2014; Wolff, Knodel, & Sittitrai, 1993).

The researcher trained four researcher's assistants to help the study in performing the pilot and main study of data collection in the survey. The main researcher assistant was Mr. Murtada from the IT department. The study recommended Mr. Murtada to make a meeting with one respondent from each group to check their understanding of the questionnaire before doing the pilot study. Mr. Murtada also enabled the researcher to explain the questionnaire by Skype. From that, the study got the feedback from these meetings to improve the questionnaire. For example, the economists suggested giving more space for the opinion section in the questionnaire to express their opinions. Also, when the respondents were asked about the 7 point Likert scale and what the number 4 meant in the scale, the respondents answered that the number 4 meant neutral. For that, the researcher wrote in the questionnaire above the number 4, moderately, to clarify it for the respondents. Based on these suggestions, the researcher revised the questionnaires intended for this study. The researcher asked the persons that conducted the focus groups to help their group when they answered the questionnaires in the pilot study and in the main study. For more details, see Appendix (H). It was recommended that the researcher take (each even number for pilot study) of the coded employees to be introduced into this type of sampling by employing random code numbers to distribute the questionnaire for data collection of pilot study, to avoid the repetition of respondents with the main

study. It was recommended for the research to take (each odd number for the main study) of the coded employees for the distribution of the questionnaire for the data collection of the main study, to avoid the repetition of respondents with the pilot study. The governorate sent official letters for each institution with a package contains the questionnaires and informed them to return the filled questionnaires back to the governorate supported by official letter with the same number of questionnaires that was sent to them, and then the researcher receives the data collection from the governorate. For more detail, see the Appendix (G). For that the returned questionnaires rate was 100 % but some of the questionnaires were damaged by filling it wrongly.

4.5 Data Gathering Approach

Data collection is an important aspect of any type of research. Inaccurate data collection can impact on the results of a study and ultimately lead to invalid or flawed findings. Data collection methods for impact evaluation vary along a continuum. The quantitative methods through the distribution of a questionnaire, manual or Internet survey are utilised to collect data from the citizens (Hox & Boeije, 2005). As referred in Section 4.4.6 face validity that study trained researcher's assistants to help the study in data collection

The data collection procedure employed in this study was the survey approach, which was distributed manually. The distribution of the questionnaire was achieved by going to the Governorate administration to obtain the data from the governors, or their deputies and members of the provincial council (political group) along with collecting data from the IT department in the Karbala governorate (IT group). In addition, the survey was distributed to the economist group (the members of the

commerce chamber), and worker group (the members of the general Federation of Iraq trade unions). The study selected the mentioned groups depending on the previous studies and their important roles in the e-government.

Sufficient information sections and advertising were made available to help the responders to understand the study, and facilitate the work of the data collection to complete the questionnaire paper, effectively. The Governorate administration had distributed the questionnaires to all of the groups, and then returned the questionnaire sheets to the researcher with official letters of confirmation that the survey had been completed. For more detail, see the Appendix (G).

4.5.1 Pilot Study

Sekaran (2003), Hertzog (2008), and Johanson et al. (2010) qualified a pilot study as the administration of a survey to a convenient and small sample which possesses near features with the aimed at sample in the final survey. The pilot study is deliberately taken in order to identify the feasibility of the instrument intended for the data gathering. Indeed, the pilot study is compulsory to be carry out because it works as a measure to locate the inadequacies, and access the reliability and reduce the biases of the measurement factors before giving out the questionnaires to the final participants (Hertzog, 2008; Johanson & Brooks, 2010; Sekaran & Bougie, 2003). Hertzog (2008) recommends that for the feasibility of the pilot study, samples sizes as small as 10-30 for each group are; occasionally, enough (Hill, 1998; Johanson & Brooks, 2010; Julious, 2005; Kieser & Wassmer, 1996). Kothari (2011) suggested that the most efficient sample size is from30 to 500 for any one population (Iravani et al., 2012; Mohamad et al., 2014; Zikmund et al., 2012). For more details, see Table 4.2 which clarifies that the simple size of the pilot study was 102 respondents.

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4.5.1.1 Procedure of Gathering the Data in the Pilot Study

At the beginning, a notice about the research was sent to the head manager of the IT department, Mr. Ahmad Abbas, on April 30th, 2017, to inform the required organisations of the four groups in the Karbala province for the collection of data, whilst the appointment was determined in May 2nd, 2017. The participants in the pilot study were given the summarised introduction about the study, objectives of the research, and the meaning of the intention of citizens' to participate in the public decision-making of the Iraqi e-government. This was carried out with the help of the IT and human resource departments in the Karbala governorate in Iraq. The researcher trained four researcher's assistants to help in performing the pilot and main studies of data collection in the survey. The researcher's assistants had experiences in the e-government, such as organisational structure, IT infrastructure, and making citizens ready to use IT through education. They had participated in many workshops about e-government, they also had years of experience about the administrations in the government (see Section 3.11.6 Face validity). Furthermore, to avoid the repetition of respondents with the main study, the even number plan (coded employees) was utilised to choose 12 participants from the politician group (the members of the provincial council); from the economist group, 30 participants (the members of the commerce chamber); from the IT professional group, 30 participants (IT department in the Karbala governorate's employees); and from the worker group, 30 participants (the members of the general Federation of Iraq trade unions). The appointment was constant for returning the questionnaires on May 9th, 2017. Finally, 102 (100%) questionnaires were returned to the Karbala governorate's Human resource department from May 2nd to 9th, 2017.

4.5.1.2 Data Preparation and analysis in Pilot Study

Checking mistakes and the correction of the mistakes is a major process before the test of a data group in order to make sure of the data quality achievement after the analysis (Creswell, 2014; Hair, 2010; Pallant, 2007). Thus, version (21) of the Statistical Package for Social Science (SPSS) was used to check the constructs, reliability, and pilot test.

4.5.1.3 Demographic results

The outcomes of the demographic test were as follows. The pilot test study was managed amongst 102 respondents for all of the groups. The responders included 12 politicians (11.8 %), 30 economists (29.4%), 30 technologists (29.4%), and 30 Workers (29.4%). For gender, 74 representing 72.5 % of the total were male respondents and 28 (27.5%) were female. About the age, four respondents (3.9%) were between 60 and 66 years old, seven respondents (6.9%) were between 53 and 59 years old, 11respondents (10.8%)were between 46 and 52 years old, 11respondents (10.8%) were between 18 and 24 years old, 12 respondents (11.8%) were between 39 and 45 years old, 27 respondents (26.5%) were between 25 and 31 years old, and 30 respondents (29.4%) were between 32 and 38 years old. In relation to their level of education, 48 respondents (47.1%) had bachelor's degrees, 22 respondents (21.6%) had vocational/technical school level, 11respondents (10.8%) had high school level, 11respondents (10.8%) had master's degrees, eight respondents (7.8%) had primary school level, and two respondents (2.0%) had Doctoral degrees. About the nature of the job, 48 respondents (47.1%) worked in the public sector, 32 respondents (31.4%) worked in the private sector, and 22 respondents (21.6) were working in their own businesses. For Internet experience, 85 respondents (83.3%) had Internet experience of between 5-6 years, 16 respondents

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(15.7%) had Internet experience of between 3-4 years, and one respondent (1.0%) had Internet experience of between 1-2 years.

4.5.1.4 Testing the Scale of Reliability (Questionnaire)

For the internal regularity of the elements, each variable in the research was investigated using the reliability data analysis of the approximated Cronbach's alpha (Cronbach, 1946; Cronbach, Rajaratnam, & Gleser, 1963; Crossley, Seri, Stern, Robertson, & Cavanna, 2014; Delshad, Sarbazi, Rezaei_Ghaleh, Ghanbarian, & Azizi, 2012; Grau, 2007).

The internal uniformity of the constructs was valued by employing Cronbach's alpha. This research took the Cronbach's alpha of 0.6 and greater than 0.6 as being reliable, based on the previous studies (Abu-Shanab, 2015; Cronbach et al., 1963; Khairi & Baridwan, 2015; Koning & Franses, 2003; Peterson, 1994; Zaidi, Siva, & Marir, 2014). Peterson, 1994, presented the reliability from Nunnally studies ―Nunnally changed his reliability recommendations from his 1967 edition of Psychometric Theory to his 1978 edition. In 1967, he recommended that the minimally acceptable reliability for preliminary research should be in the range of 0.5 to 0.6; where, in 1978 he increased the recommended level to 0.7". But, according to Abu-Shanab, 2015, in his study about (intentions to use e-government services), the reliability of the estimated constructs in his study with Cronbach's alpha in regards to the acceptable level of consistency (based on a threshold value of 0.6, he recommended the value of 0.8). Zaidi, et al., 2014, suggested in his study (e-government service performance) that the acceptable values for Cronbach's alpha is 0.6 and above but if the value is 0.9 then the strength of the association will be excellent. Furthermore, 35 items were utilised to measure the entire 6 constructs of

the conceptual study model in the pilot research of the study instrument as displayed in Table 4.4.

Table 4.4

The Measurement Items Distribution with Their Constructs

No	Construct	Number of Items utilised
i.	Attitude towards Act or Behaviour	6
ii.	Subjective Norms	6
iii.	Social Influence	4
iv.	Facilitating Conditions	5
v.	Compatibility	5
vi.	Culture	4
vii.	Behavioural Intention	5

Indeed, the outcomes of the pilot research test that appeared by the scale of the internal consistency had high Cronbach's alpha values. In addition to that, for the entire 6 constructs (exogenous variables and endogenous variable), their Cronbach's alpha values were higher than 0.6 and are displayed in Table 4.5 Consequently, the outcomes of the reliability test were accepted for, moreover, the analysis was built on several researchers' recommendations (Cronbach, 1946; Delshad et al., 2012; Grau, 2007; Raczkowski et al., 1974; Riff et al., 2014; Sekaran & Bougie, 2003). The KMO is desired to be 0.5 or above for sampling adequacy (Alsous et al., 2017; Kaiser, 1974; Olawale & Garwe, 2010; Sekaran & Roger, 2013).

Table 4.5

The Pilot research Reliability Exam

Variable Kinds	Variables Code	Cronbach's Alpha	KOM test
Exogenous Variables	ATB	**0.844**	**0.707**
	SN	**0.675**	**0.581**
	SI	**0.775**	**0.600**
	FC	**0.909**	**0.812**
	CO	**0.879**	**0.803**
	CU	**0.716**	**0.559**
Endogenous Variable	BI	**0.928**	**0.892**

About six items from the ATB variable were measured that disclosed which measuring instruments were valid at a Cronbach's Alpha of 0.844, which was 0.6 or above, and the KMO was about 0.707 which offered valid sampling adequacy. For the SN variable, six items were measured that disclosed which measuring instruments were valid at a Cronbach's Alpha of 0.675, which was 0.6 or above, and the KMO was about 0.581 which offered valid sampling adequacy. The SI variable had four items which were measured that disclosed which measuring instruments were valid at a Cronbach's Alpha of 0.775, which was 0.6 or above, and the KMO was about 0.600 which offered valid sampling adequacy. Regarding the FC variable, it had five items which were measured that disclosed which measuring instruments were valid at a Cronbach's Alpha of 0.909, which was 0.6 or above, and the KMO was about 0.812 which offered valid sampling adequacy. About the CO variable, it contained five items which were measured that disclosed which measuring instruments were valid at a Cronbach's Alpha of 0.879, which was 0.6 or above, and the KMO was about 0.803, which offered valid sampling adequacy. The CU variable contained four items which were measured that disclosed which measuring instruments were valid at a Cronbach's Alpha of 0.716, which was 0.6 or above, and the KMO was about 0.559 which offered valid sampling adequacy. The dependent variable BI contained five items which were measured that disclosed which measuring instruments were valid at a Cronbach's Alpha of 0.928, which was 0.6 or above, and the KMO was about 0.892 which offered valid sampling adequacy. The results of the pilot study in the first time were good as Table 4.5 shows that.

4.5.2 The Instrument's Final Validation

The final validation of the instrument for collecting the data was made by associate professor Dr. Azham Hussain an expert in the e-government area and was teaching

this subject for several years in UUM, Dr. Wiwied Virgiyanti an expert in e-government area and was also teaching this subject in UUM, and associate professor Dr. Najeeb Abbas Al-Sammarraie an expert in the e-government area and was teaching this subject for several years in MEDIU. They are all experts in their study areas of interest. All of them are experienced at validating the convenience of the procedure and instruments for gathering data. Furthermore, associate professor Dr. Suzilah Ismail an expert in quantitative statistics (scales, data collection, and analysis) and Mr. Nor Hisham Haron an expert in the quantitative statistics area and was teaching this subject in the School of Quantitative Sciences of UUM. They both evaluated the pilot study and verified it. Consequently, the instrument for gathering data was offered to them after the pilot research and during that time, all of them agreed with the phases, methods, and activities utilised for the data gathered from the participants in the pilot research and the main data collection in this study. For more details, see Appendix (F) and (G).

4.5.3 Gathering the Main Data

Gathering the main data for this research was managed from May 15th, 2017 to July 4th, 2017. Sufficient information sections and advertising were made available to help the responders to understand the study, and to facilitate the work of the data collection to complete the questionnaire paper, effectively. Governorate administration with help from the Human resource and IT departments had distributed the questionnaire to all of the groups, and then returned the questionnaire sheets to the researcher with official confirmation letters that the survey had been completed. The main data collection for this study was performed during 50 days.

Furthermore, the odd number plan (coded employees) was utilised to collect data in the main study to avoid the repetition of respondents with the pilot study. As mentioned previously, the population for the research respondents included the provincial council, IT department staff members, members of the commerce chamber, and members of the general Federation of Iraq trade unions in the province. As explained in section 3.10.5 and Table 4.2, a total of 501 respondents were used for this study to ascertain the probable validity of the intention of the citizens to participate in the public decision making of the e-government based on their experience and knowledge. Moreover, the content of the questionnaire needed in-depth information on the critical success elements related to the citizens' intention to participate in public decision-making of e-government content which could not be anticipated from different respondents.

4.6 Data Analysis

There are many interrelated processes that a research must pursue to analyse the data within a quantitative research design (Creswell, 2014b). This study, for example, was intended to generate various types of important information or data from the citizens or the administrators, and make many analyses by saving or recording the data, categorising the themes, and revisiting the data. Therefore, this study chose to obtain the data prescribed in the questionnaires. The process of the analysis of the data will be explained briefly. The first point was to make the data ready for the analysis. This involved identifying how to assign numeric scores to the information, assessing the kinds of scores to employ, choosing the statistical software, and inserting the information into the software.

In addition, it was also important that the database be cleaned to prepare for the analysis. When the analysis commenced, the researchers had to proceed with the descriptive analysis of the data by reporting the measures of the variation and central tendency. The measures of the centre tendency and permissible dispersion with each type of measurement scale. This research was under the interval analysis, the measurement of the seven-point Likert scale allowed the use of the interval analysis, (interval; median, range, percentile, and ranking).

After that, they had to make the sophisticated inferential or factor analysis to check the hypotheses. The next process was to write the report of the results when using figures and tables, and it was necessary to discuss the results and the key findings of the results. Finally, the study was able to explain the results through the information analysis. The summarisation of the results, comparison of the theories and past literature with the results, and finishing off with suggestions will be beneficial to future researchers. Below, the study will explain the various tools which were used. This section will explain briefly some of the data analysis techniques. The study will explain in detail in the next chapter other data analysis techniques used in the research.

4.7 Final verification of Revised Model and Recommendations

The model of study was designed based on the literature of past studies and existed theoretical models in IS. The researcher sent the revised model and recommendations which were resulted from the data analysis chapter to be evaluated by several experts. The study selected several experts to check the revised model and recommendations validity; some of them are professionals and have experience in e-government area and teaching this subject for several years with many publications

about this field, others have experience in information technology and information systems. As for the instruments used to collect the data, in Appendix (J), the experts agreed on the significance of each construct and its relationship in the revised model, and the advantages of the revised model and recommendations to future research. As listed below.

1- Content expert, Associated Professor Dr. Azham Hussain professional who has experience in the e-government area and was teaching this subject for several years in UUM, (School of Computing Sciences, College of Art and Sciences CAS, UUM, Malaysia).

2- Content expert, Associated Professor Dr. Najeeb Abbas Al-Sammarraie, a professional who has experience in the e-government area and was teaching this subject for several years in MEDIU (Faculty of Computer and Information Technology, MEDIU, Malaysia)

3- Specialists were consulted in the statistical field (Associated. Prof. Dr. Suzilah Ismail and Mr. Nor Hisham Haron). They have experience in the quantitative statistics area in the School of Quantitative Sciences in UUM. They helped in the present study to improve the analysis chapter. For more details see Appendix (J).

These assertions were used to encode the invariants about the behaviour of the system which we know should be true at all times. However, in practice, validation is often blended with verification, especially when measurement data is available for the model. If a comparison of system measurements and model results referred to the results produced by the model as being close to those obtained from the past studies, then the implemented model is assumed to be both a verified implementation of the

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assumptions and a valid representation of the model. Overall, the researcher met with the experts who validated the instrument before collecting the data. That was mentioned in Chapter Three and Four before the data collection. When the researcher completed Chapter Five, he did a presentation to explain the chapters of the study especially chapter Five, to clarify for the experts all the inputs and outputs of the model. After that, the researcher distributed the instruments to the experts; the instruments contained the conceptual model of the study and the recommendations of the study. Then, the experts verified the model and gave their advice and comments. The analyses for the content experts' validation were interpretive, for more information, see Appendix (J).

4.8 Summary

The purpose of this chapter was to describe the research methodology of this study, explain the sample selection, describe the procedures used in designing the instrument and collecting the data, and provide an explanation of the statistical procedures used to analyse the data. The Chapter Four made clear how the instrument of the research was developed as a method to measure the factors that have a possible effect on the decision-making content in the Iraqi e-government. This was to make sure of the reliability and validity of the instruments. The analysis results of this study are explained in Chapter Six.

CHAPTER FIVE
ANALYSIS AND FINDINGS

5.1 Introduction

This chapter is intended to share the findings and analysis of the study. As iterated in an earlier chapter, this research had three important objectives. (1) To identify the factors that influences the citizen's intention to participate in the decision making of the e-government. (2) To examine the citizens' self-knowledge characteristics that will moderate the relationship between the influence factors and the citizen's intention to participate in the public decision making of the e-government. And last but not least, (3) To propose a research model of the citizens' intention to participate in the public decision making of the e-government. The study's hypotheses and methodology development have been presented in Chapters Three and Four. As aforesaid in the previous chapter, the primary data was collected by employing the questionnaire as described in section 4.4 to section 4.6 in the previous chapter.

In this chapter, the response rate is presented in section 5.2. The respondent's demography is examined in section 5.3. The outcome of identifying the factors that influence the citizens' intentions to participate in the decision-making of the e-government is clarified in section 5.4. Subsequently, the reflection on examining the citizens' self-knowledge characteristics that moderate the relationship between the influence factors and the citizens' intentions to participate in the public decision-making of the e-government is elaborated in section 5.5.8. The identification of the extent of the citizens' self-knowledge characteristics that moderate the relationship between culture and the citizens' intentions to participate in the public decision-making of the e-government is dealt with in section 5.6. Last but not least, this

chapter is also intended to determine a model of the citizens' intentions to participate in the public decision-making of the e-government as presented in section 5.7. In the end, SPSS version 21 was applied to test and analyse the data.

5.2 Distribution of the Questionnaires

As mentioned previously in Chapter Four, the population for the research respondents included the provincial council members, IT department staff members, members of the chamber of commerce, and the members of the general federation of Iraq trade unions in the province. As explained in section 4.4.5, a total of 501 respondents were involved in this study to ascertain the probable validity of the citizens' comprehension on e-government initiatives based on their experience and knowledge. Moreover, the content of the questionnaire needed to be completed by the citizens without any affect. They had to choose the correct options that they deemed as the best possible answers to study the intention of the citizens to participate in the public decision-making of the e-government, which could not be anticipated from the different respondents. Table 5.1 provides information on the allocation and return rates of the questionnaires for all of the groups:

Table 5.1

Distribution of Questionnaires

Respondents	Distributed questionnaires	Returned questionnaires	Damaged questionnaires	Usable questionnaires
Politicians	12	12	0	12
Economists	151	151	7	144
IT	80	80	0	80
Workers	258	258	20	238
Total questionnaires	**501**	**501**	**27**	**474**

Based on Table 5.1, the response was 501 out of 501 (100 %), as stated by Sekaran and Bougie (2013), the response rate of 3.5 % and below is not sufficient for survey

research. Evidently, the returned questionnaires with the sample size for this research at a response rate of 100% was high (Sekaran & Roger, 2013). The reason for the high response rate was that the governorate sent official letters for each institution with a package containing the questionnaires and informed them to return the filled questionnaires back to the governorate supported by an official letter with the same number of questionnaires that was sent to them. For more details, see the Appendix (G). Thus, the usable questionnaire with the sample size for this research was at a rate of 94.6 %, the usable questionnaires for analysis were 474 because the damaged questionnaires were 27. Disregarding or a lack of seriousness in filling the questionnaire sheets by the respondents caused 27 damaged questionnaire sheets. Some examples for the damaged questionnaires were: answering the questions in the sheet of the questionnaire in pencil and deleting and rewriting the answer again with another selection, leaving some questions in the questionnaire sheet without filling in the answers, and the selection two answers for the same question of the questionnaire sheet.

The response rate average was found to be between 85% and 95% in the previous studies. So the response rate in this study was reasonable, especially in the field of IS studies (AlAwadhi & Morris, 2008; Allahawiah & Alsaraireh, 2014). The sampling and the random sampling were the best selected methods for this research because they supplied every component of the population independently with equal chances of being selected, then the simple random sampling was applied within each group, the distribution was mad amongst the social groups with different populations. According to Scheaffer, et al., 2012, the sampling is not quite balanced amongst groups because each group has different populations; for that reason, Scheaffer's

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frame was applied to get the sample size of each population for each group to avoid any bias (Creswell, 2014; Kothari, 2011; Scheaffer et al., 2012).

It was mentioned in section 4.4.6 about the face validity that, the study performed the data collection of the survey with the assistance of the IT department who did the face validity for all of the groups and gave guidance to the respondents to answer the questionnaires accurately. Moreover, the wide usage of the technology presently helped the respondents to answer the questionnaire correctly; all of these reasons led to getting a high response rate.

5.3 Profiles of the Respondents

Demographic data indicates that the information which is statistically economic and socio in nature such as population, income, employment and education, represent particular geographic locations. For example, when indicating the population demographic information, the research has characteristics such as area population growth, population or ethnicity density, birth rate and distribution (Al-Nahdi et al., 2015; Rojas et al., 2017). This section presents the respondents' general data. The data covered the respondents' groups, ages, gender, educational level, and nature of job. The sections from 5.3.1 to 5.3.6 examined the details and profiles of the respondents.

5.3.1 Respondents' Groups

The respondents' profiles are elaborated in this section. The researcher categorised the study's respondents as *Political citizens* into the Political specialisation, *Economic citizens* into the Economists specialisation, *Technical citizens* into the Technology specialisation, and *Worker citizens* into the occupational specialisation.

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The purpose of such categories was to examine various ideas from the different group types (respondents) to develop the decision-making model of the Iraqi e-government. Table 5.2 highlights the outcome and explanation.

Table 5.2

Respondents' Groups

Groups	Frequency	Percent %
Political	12	2.5
Economists	144	30.4
Technology	80	16.9
Workers	238	5.2
Total	**474**	**100.0**

Most of the participants were specialists of occupational workers. This was represented by 238 respondents (5.2%). Second to that were the participants who were economic specialists, which were represented by 144 or 30.4%. 80 respondents who participated were interested in technology and represented 16.9%. In addition, 12 respondents or 2.5% were political specialists. All of them had been working in their respective profession continuously. Therefore, they had sufficient experience and knowledge enabling them to respond and complete the questionnaire for this research.

5.3.2 Respondents' Gender

Table 5.3 shows that most of the study respondents were male. They represented 355 (74.9%) of the study sample size, whilst119 (25.1%) of the participants were female. This outcome reflects the fact that there was still a large disparity between the gender in jobs, between male and female workers, in Iraq, which is a common culture in

many countries in the Middle East. Bates, et al. (2014) and Kahn & Sempos (1989) supported and confirmed this outcome.

Table 5.3

Respondents' Gender

Respondents' Gender	Frequency	Percent %
Male	355	74.9
Female	119	25.1
Total	**474**	**100.0**

5.3.3 Respondents' Age

Table 5.4 examines the study's respondents' age groups. Most of the participants were under 25-31 years of age, which was represented by 140 respondents (29.5%), whilst 118 respondents (24.9%) were between 32-38 years. The third group related to the respondents between the ages of 18-24.79 of them represented this category (16.7%). 50 respondents were in the 39-45 age category (10.5%). The next category included the age group of 49-52 years where 35of the respondents represented this (7.4%), and 33 participants were in the 53-59 age group (7.0%). Last but not least, 119 respondents or 4.0% were between 60 and above years of age.

Table 5.4

Respondents' Ages

Respondents' Age	Frequency	Percent %
18-24	79	16.7
25-31	140	29.5
32-38	118	24.9
39-45	50	10.5
46-52	35	7.4
53-59	33	7.0
60 and above	19	4.0
Total	**474**	**100.0**

5.3.4 Respondents' Education Level

This section summarises the educational background of the respondents. The study's questionnaire offered seven options of educational levels. These included: Primary school, High school, Vocational/technical school, Bachelor's (BA), Master's (MSc), Doctoral (PhD) and other. Table 5.5 examines that 256 participants or 54.0% had a Bachelor's degree (BA) the highest number of respondents, coming after that was 89 participants or 20.7% who had Vocational/Technical certification, 54 participants or 11.4% had a Master's (MSc) degree, 41 participants (8.6%) had a high school (HS) certification, and 14 participants (3.0%) had attended primary school. In addition, 11 respondents (2.3%) had a Doctoral (PhD) degree.

Table 5.5

Respondents' Education Level

Respondents' Education Level	Frequency	Percent %
Primary school	14	3.0
High school	41	8.6
Vocational/Technical school	98	20.7
Bachelors	256	54.0
Master	54	11.4
Doctoral	11	2.3
Total	**474**	**100.0**

5.3.5 Respondents' Working Sector

Table 5.6 provides the work categories of the participants. Most of the participants were from the category of the public job; 202 respondents (42.6%) represented this category, whilst 115 respondents (24.3%) were from the private category, and157 respondents (33.1%) owned a family business.

Table 5.6

Respondents' Working Sector

Respondents' Working	Frequency	Percent %
Public	202	42.6
Private	115	24.3
Own	157	33.1
Total	**474**	**100.0**

5.3.6 Respondents' Internet Experience

Table 5.7 shows that most of the participants had five years and above of Internet experience. They represented 408 (86.1%) of the study's sample size, whilst60 (12.7%) of the participants had 3-4 years' experience; finally, 6 respondents (1.3%) were in the1-2 years' experience category.

Table 5.7

Respondents' Internet experience

Respondents' Ethnicity	Frequency	Percent %
1-2 EX	6	1.3
3-4 EX	60	12.7
5 and above	408	86.1
Total	**474**	**100.0**

Table 5.8 below outlines the outcome of the participants' profiles, which contained the participants' groups, gender, ages, education level, work, and Internet experience. The results of the demographics have been presented below in Table 5.8.

Table 5.8

Respondents' Profiles outcome (Summary)

Category	Minimum	Maximum	Frequency	Percent %
Sample			474	100.0
Respondents Groups	1	4		
Political			12	2.5
Economists			144	30.4
Technology			80	16.9
Workers			238	50.2
Total			474	100.0
Respondents' Gender	1	2		
Male			355	74.9
Female			119	25.1
Total			474	100.0
Respondents' Age	1	7		
18-24			79	16.7
25-31			140	29.5
32-38			118	24.9
39-45			50	10.5
46-52			35	7.4
53-59			33	7.0
60 and above			19	4.0
Total			474	100.0
Respondents' Education Level	1	6		
Primary school			14	3.0
High school			41	8.6
Vocational/Technical school			98	20.7
Bachelors			256	54.0
Master			54	11.4
Doctoral			11	2.3
Total			474	100.0
Respondents' Working	1	3		

Table 4.8 continued

Public			202	42.6
Private			115	24.3
Own			157	33.1
Total			474	100.0
Respondents' Experience	1	3		
1-2 years EX			6	1.3
3-4 years EX			60	12.7
5years and above EX			408	86.1
Total			474	100.0

The results supported the demographic variables and confirmed the results in the past studies. They also suggest that the demographic moderators do matter when clarifying people's willingness to adopt a new technology, with level of education being the most constant predictor. The demographic characteristics performed as

good predictors in the past studies, for example, accepting new technology is identified by the level of education, age, gender, and experience (Rojas et al., 2017; Venkatesh et al., 2016; Xie et al., 2017). The present study displayed that the demographic variables influenced on the results in this chapter section 5.5.8 by using a Process Andrew, using (demographic variables) as moderator variables that had influence over the final results for the citizens' intention to participate in the public decision making of the e-government.

5.4 Data Screening and Preparation

Screening and preparation of the Data are necessary steps which must be fulfilled before conducting the multivariate analysis; they assist in identifying possible non-compliance for underlying suppositions which are related to the implementation of multivariable techniques (Buttigieg & Ramette, 2014; Hair, 2010; Mertler & Reinhart, 2016). As well, data is prepared and screened in order to enhance the extensive understanding of the researchers' knowledge about the gathered data. The preparation and screening of the data in the multivariable analysis must not be performed without checking the missing data and outliers, and solving this problem through Boxplot, checking the reliability test through the KMO test of sphericity, and exploratory data analysis (Mertler & Reinhart, 2016; Pallant, 2007; Tabachnick & Fidell, 2007). Before the data analysis, this research utilised the data screening process to remove undesirable data which would have negatively damaged the analysis. This research employed the SPSS version 21 software for further analysis to achieve the objectives of this study.

5.4.1 Missing Data

Investigators have confirmed that the algorithm of the data test is intended for matrices of data with no missing facts which are needed for the proper processing of missing information in the survey, which will be returned if it exists (Johnson & Wichern, 2002; Kleinbaum, Kupper, Nizam, & Rosenberg, 2013). The missing facts are dropped usually in the common opinion about the missing facts of the returned questionnaires (Tabachnick & Fidell, 2007). In addition, Hair, et al. (2010) proposed that 15% or less of missing facts in any case can be deleted with a condition that the sample size is adequate. The entire number of 501 questionnaires that was returned in this research was free of missing facts, which was an outcome of ensuring that the respondents had filled in the questionnaire sheets properly in all of the organisations. More details about non-missing facts are shown in the Appendix (D).

5.4.2 Outlier Detection

Hair, et al. (2010) explained that outliers are monitored with a unique group of features identifiable as obviously unlike the other data observations. Moreover, Zikmund (2012) examined outliers as a value which exists outside the normal domain of the data. The existence of outliers can create inflated scores of the square, distort the statistical and estimated significance value (p value), and cause biasness and incorrect conclusions. After finding the outliers, they can be handled by employing the Boxplot or Mahalanobis Distance since it works for an effective and efficient technique of finding outliers by the settings of several predetermined thresholds, which will help in realising if certain grades could be classified as an outlier or not an outlier. Boxplot or Mahalanobis techniques are the distance between a particular status and the centroid of the remaining status (Zikmund et al., 2012). For this study, to achieve its outliers, the Boxplot statistical table was applied to

identify the optimal empirical value. Hair, et al. (2010) confirmed that the new SPSS software can be used after determining all of the values which are above the desired estimates and deleting them, and the accepted values will create the new sample which will be utilised in the analysis.

All of the variables were themed to the descriptive statistics in order to determine their characteristics. Specifically, the maximum, minimum, mean, and standard deviation rates were all computed. The exploratory data test was performed by using the Boxplot to check the finding's patterns to boost the hypothesis refinement and development. The Boxplot is one of several techniques used for the exploratory analysis of data (Behrens, 1997; Velleman & Hoaglin, 1981). The outcomes of these statistics of the descriptive outliers were given separately for each factor by the participation of 474 valid statuses in this research. The study was ranked on the scale of the seven-point Likert. The elucidation of the mean scores, which was the formula to collect the degree (Strongly Disagree, Disagree, Slightly Disagree, Moderately, Slightly Agree, Agree, and Strongly Agree). in this case one, two, and three were considered as negative (low), four was considered as Moderate, and five, six, and seven were considered as positive (high) (Zikmund et al., 2012).

Velleman, et al., 1981, and Filzmoser, 2016, suggested to not care for distinguishing two types of outliers with circle or star shapes (far out). A previous study has stressed that it is not acceptable to drop an observation just because it is an outlier. They can be legitimate observations and sometimes the most interesting ones (Selst & Jolicoeur, 1994). The increasing size of the data sets makes it more and more difficult to identify common structures in the data. Especially for high dimensional data, it is often impossible to see data structures by visualisations even with highly

sophisticated graphical tools, with a big sample size as in the present study with 501 respondents; the past studies advised to not delete these outlier data if they were determined between the point on the seven-point Likert scale. It is important to not remove genuine data, those points that are statistical outliers but are still within realistic bounds (Cox, 2017; Selst & Jolicoeur, 1994; Velleman & Hoaglin, 1981). Furthermore, the present study identified outliers between the points on the seven-point Likert scale (4 or 7) and it was important to not remove the genuine data that was located between the points of the seven-point Likert which could have been legitimate observations (Filzmoser, 2016; Velleman & Hoaglin, 1981). For more details, see Appendix (D).

5.4.2.1 Exploratory Data Analysis for Attitude towards Act or Behaviour (IV1)

Figure 5.1 has explained the relationship between the values in attitude towards act or behaviour. In the Boxplot test, it was observed that this factor had a strong relationship amongst the items in attitude towards behaviour. The construct used in the hypotheses was as follows: Attitude has a positive effect on the citizen' intentions to participate in the public decision-making in the e-government. Most of the answers were located from number 4 to 7 in the questionnaire; this means, four: moderately and seven: strongly agree. Furthermore, the data was clear for this factor without any critical outliers.
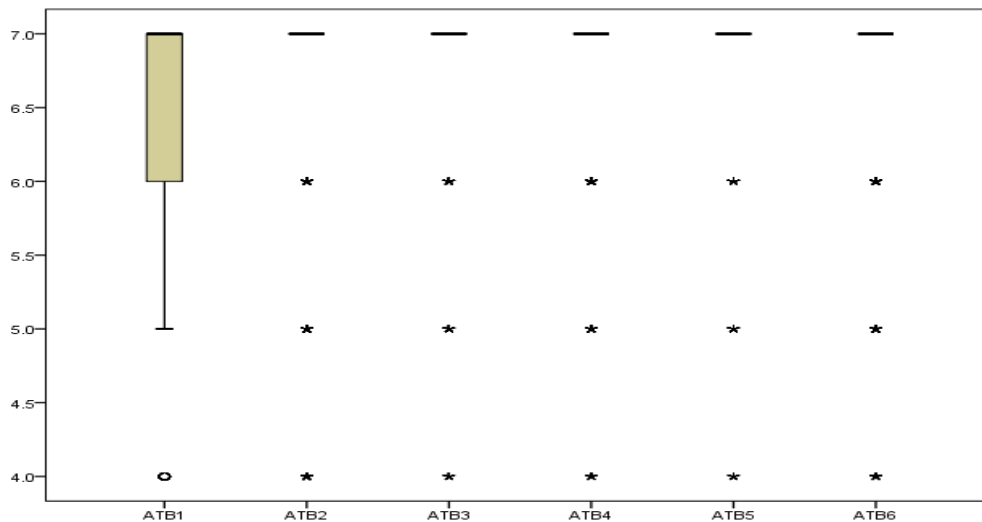
Figure 5.1. Exploratory data analysis for Attitude towards Act or Behaviour

The attitude towards act or behaviour factor agreed with the hypothesis "Attitude has a positive effect on the citizens' intentions to participate in the public decision-making in the e-government". Table 5.9 shows the respondents' answers on the items. Most of the respondents from all groups chose (4 to 7) strongly agree. It has been concluded that the respondents perhaps differed in the level of agreement on the construct from 4-7, but they did not differ in agreeing or disagreeing for all of the items.

Table 5.9

Statistics of Frequencies and Descriptive of the Variables of Attitude

Questions	N	1	2	3	4	5	6	7
ATB1	474	-	-	-	29(6.1%)	53(11.2%)	42 (8.9%)	350(73.8%)
ATB2	474	-	-	-	29(6.1%)	52(11.0%)	27(5.7%)	366(77.2%)
ATB3	474	-	-	-	10(2.1%)	17(3.6%)	25(5.3%)	422(89.0%)
ATB4	474	-	-	-	9(1.9%)	18(3.8%)	73(15.4%)	374(78.9%)
ATB5	474	-	-	-	9(1.9%)	18(3.8%)	22(4.6%)	425(89.7%)
ATB6	474	-	-	-	18(3.8%)	47(9.9%)	35(7.4%)	374(78.9%)

5.4.2.2 Exploratory Data Analysis for Subjective Norms (IV2)

The outcomes of the subjective norms exploratory data analysis explained the relationship between the values in the subjective norms. Figure 5.2 shows the Boxplot test; it was noticed that this factor had a significant relationship amongst the items in the subjective norms. The construct utilised in the hypotheses was, subjective norms have a positive effect on the citizens' intentions to participate in the public decision-making in the e-government. The Boxplot test found that all of the answers were located between the numbers 4 to 7, as it is clear from the figure that the lowest answers from were four (moderately) till seven (strongly agree). Moreover, this factor was clear without any critical outliers.
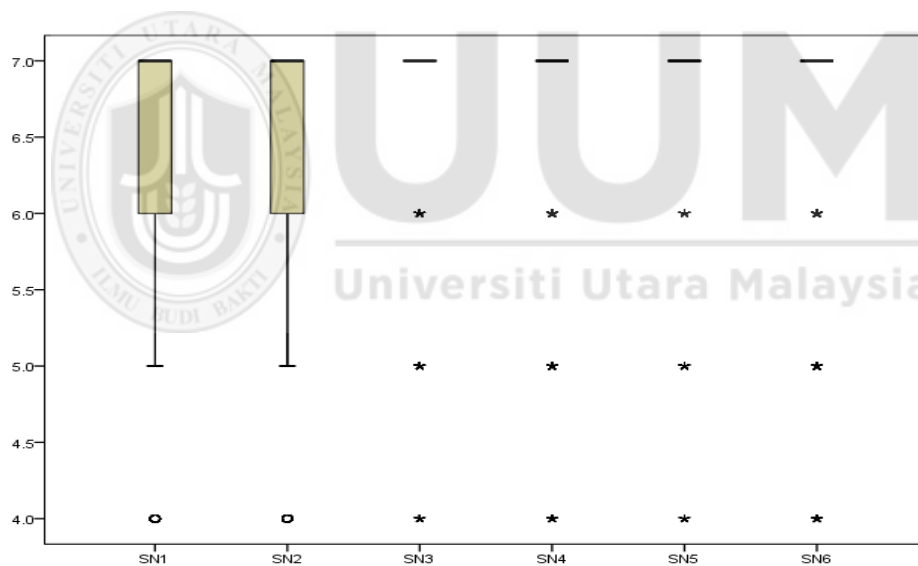
Figure 5.2. Exploratory data analysis for Subjective Norms

Table 5.10 showed that the answers of the respondents were from four (moderately) till seven (strongly agree). The hypothesis of the subjective norms factor "Subjective norms have a positive effect on the citizens' intentions to participate in the public decision-making in the e-government" was agreed on by the respondents. It has been summarised that the respondents did not differ in agreeing or disagreeing with all of

the items. Perhaps they did differ, however, in the level of agreement on the construct.

Table 5.10

Statistics of Frequencies and Descriptive to Variables of Subjective Norms

Questions	N	1	2	3	4	5	6	7
SN1	474	-	-	-	36(7.6%)	65(13.7%)	45 (9.5%)	328(69.2%)
SN2	474	-	-	-	38(8.0%)	64(13.5%)	26(5.5%)	346(73.70)
SN3	474	-	-	-	10(2.1%)	20(4.82)	24(5.1%)	420(88.6%)
SN4	474	-	-	-	10(2.1%)	20(4.82)	77(16.2%)	367(77.4%)
SN5	474	-	-	-	10(2.1%)	20(4.82)	22(4.6%)	422(89.0%)
SN6	474	-	-	-	18(3.8%)	46(9.7%)	38(8.0%)	372(78.5%)

5.4.2.3 Exploratory Data Analysis for Social Influence (IV3)

Figure 5.3 explained the hypothesis, social influence will have a positive influence on the citizens' intentions towards participation in public decision-making. It had a relationship between the values in social influence. From the outcomes of the Boxplot test, it was observed that this factor had a strong relationship amongst the items in social influence. Furthermore, the data clarified that in this factor, all of the answers were located from number four (moderately) till seven (strongly agree) without any critical outliers.
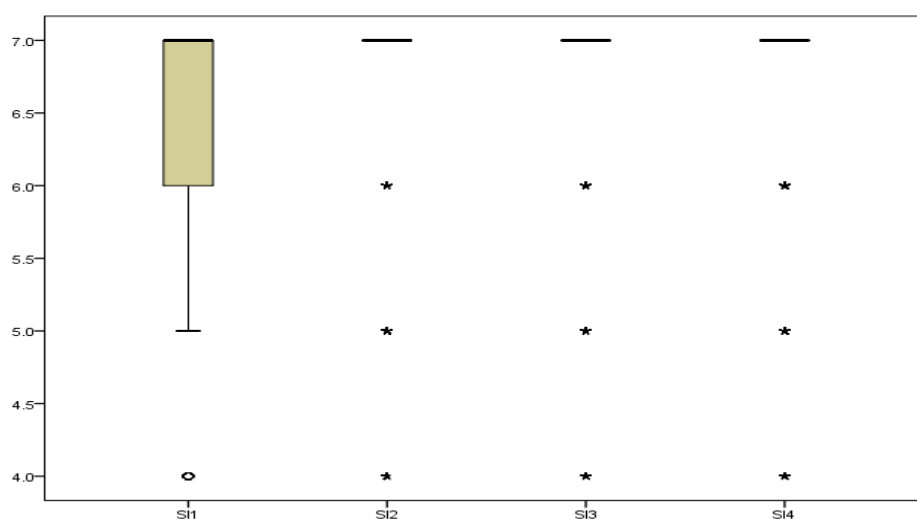
Figure 5.3. Exploratory data analysis for Social Influence

Table 5.11 shows that the social influence factor agreed with the hypothesis ―Social influence will have a positive influence on the citizens' intention towards participation in public decision-making ". Most answers about the items from the respondents from all groups were 4 moderately and 7 strongly agree. The respondents perhaps differed in the level of agreement on the construct, but all of the respondents agreed positively about this construct.

Table 5.11

Statistics of Frequencies and Description of the Variables of social influence

Questions	N	1	2	3	4	5	6	7
SI1	474	-	-	-	28(5.9%)	59(12.4%)	35 (7.4%)	352(74.3%)
SI2	474	-	-	-	28(5.9%)	58(12.2%)	23(4.9%)	365(77.0**%**)
SI3	474	-	-	-	12(2.5%)	26(5.5**%**)	22(4.6**%**)	414(87.3**%**)
SI4	474	-	-	-	12(2.5%)	26(5.5**%**)	57(12.0%)	379(80.0**%**)

5.4.2.4 Exploratory Data Analysis for Facilitating Conditions (IV4)

Figure 5.4 explains the relationship between the values in facilitating conditions. In the Boxplot test, it was observed that this factor had a strong relationship amongst the items in facilitating conditions. The construct used in the hypotheses was as follows: Facilitating conditions will have a positive influence on the behavioural intentions of citizens to participate in the public decision-making of the e-government. Most of the answers were located from number 4 to 7 in the Boxplot test; this means, four: moderately, and seven: strongly agree. Furthermore, the data was clear in this factor without any critical outliers.
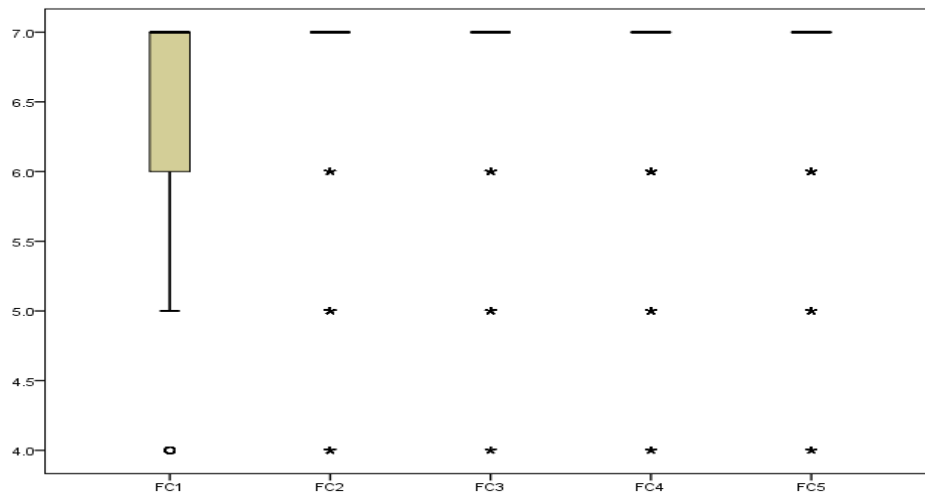
Figure 5.4. Exploratory data analysis for Facilitating Conditions

The facilitating conditions factor agreed with the hypothesis ―Facilitating conditions will have a positive influence on the behavioural intentions of citizens to participate in the public decision-making of the e-government". Table 5.12 shows the respondents‗ answers on the items. Most of the respondents from all groups chose from 4 to 7 agree. It has been concluded that the respondents perhaps differed in the level of agreement on the construct for 4 to 7, but they did not differ in agreeing or disagreeing for all of the items.

Table 5.12

Statistics of Frequencies and Description of the Variables of Facilitating Conditions

Questions	N	1	2	3	4	5	6	7
FC1	474	-	-	-	32(6.8%)	58(12.2%)	38(8.0%)	346(73.0%)
FC2	474	-	-	-	33(7.0%)	58(12.2%)	25(5.3%)	358(75.5%)
FC3	474	-	-	-	9(1.9%)	22(4.6%)	24(5.1%)	419(88.7%)
FC4	474	-	-	-	9(1.9%)	21(4.4%)	73(15.4%)	371(78.3%)
FC5	474	-	-	-	9(1.9%)	21(4.4%)	32(6.8%)	412(86.9%)

5.4.2.5 Exploratory Data Analysis for Compatibility (IV5)

Compatibility has been found to be positively related to the citizens‗ intention towards participation in the public decision-making in the e-government. Figure 5.5

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explained the relationship between the values of the study and compatibility. This hypothesis was tested by the Boxplot test; it was observed that this factor had a strong relationship amongst the items in compatibility. Most of the answers were located from number 4 to 7 in the Boxplot test; this means, four: moderately, and seven: strongly agree. Furthermore, the data was clear in this factor without any critical outliers.
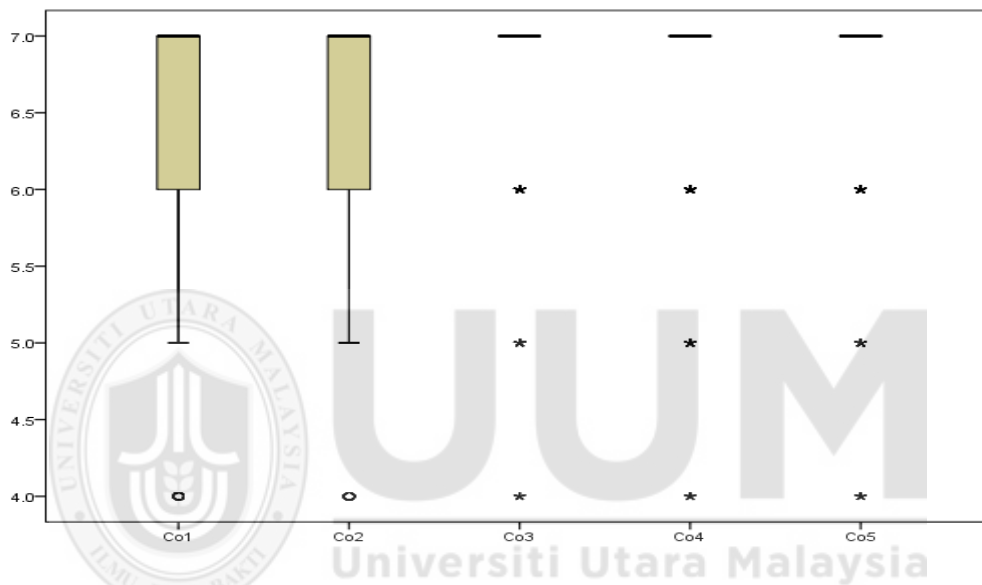
Figure 5.5. Exploratory data analysis for Compatibility

Table 5.13 shows that the answers of the respondents were from four (moderately) till seven (strongly agree). The hypothesis of the compatibility factor ―Perceived compatibility will be positively related to the citizens' intentions towards participation in the public decision-making in the e-government were" agreed on by the respondents. It has been summarised that the respondents did not differ in agreeing or disagreeing for all of the items. Perhaps they differed, however, in the level of agreement on the construct.

Table 5.13

Statistics of Frequencies and Description of the Variables of Compatibility

Questions	N	1	2	3	4	5	6	7
CO1	474	-	-	-	28(5.9%)	68(14.3%)	48(10.1%)	330(69.6%)
CO2	474	-	-	-	29(6.1%)	65(13.7%)	33(7.0%)	347(73.2%)
CO3	474	-	-	-	6(1.3%)	27(5.7%)	33(7.0%)	408(86.1%)
CO4	474	-	-	-	6(1.3%)	24(5.1%)	73(15.4%)	371(78.3%)
CO5	474	-	-	-	6(1.3%)	24(5.1%)	27(5.7%)	417(88.0%)

5.4.2.6 Exploratory Data Analysis for Culture (IV6)

The outcomes of the exploratory data analysis of culture explained the relationship between the values in culture. Figure 5.6 shows the Boxplot test, it was noticed that this factor had a significant relationship amongst the items in culture. The construct utilised in the hypotheses was culture has a positive effect on the citizens' intentions to participate in the public decision-making in the e-government. The Boxplot test found that all of the answers were located from number 4 moderately to 7 strongly agree); as, it is clear from this figure that the lowest answers were from four (moderately) till seven (strongly agree). Moreover, this factor was clear without any critical outliers.
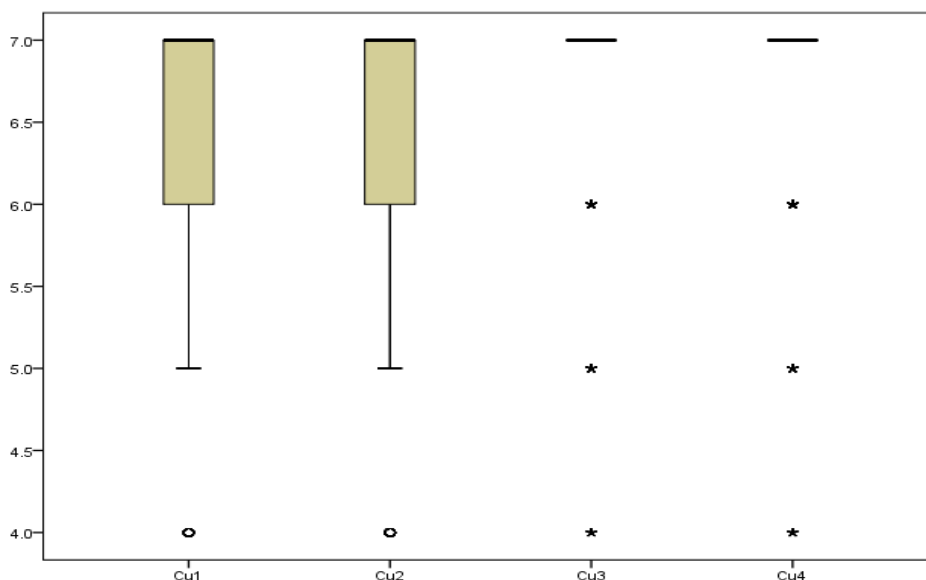
Figure 5.6. Exploratory data analysis for Culture

Table 5.14 shows most of the answers of the respondents on the items of the culture factor were 4 moderately and 7 strongly agree). The culture factor agreed with the hypothesis ―The culture will be positively related with the types of citizens' participation outcomes that promote the public decision-making in the e-government‗s success". The respondents perhaps differed in the level of agreement on the construct, but they all still agreed on the contents of this hypothesis.

Table 5.14

Statistics of Frequencies and Description of the Variables of Culture

Questions	N	1	2	3	4	5	6	7
CU1	474	-	-	-	30(6.3%)	61(12.9%)	44(9.3%)	339(71.5%)
CU2	474	-	-	-	31(6.5%)	60(12.7%)	30(6.3%)	353(74.5%)
CU3	474	-	-	-	7(1.5%)	20(4.2%)	26(5.5%)	421(88.8%)
CU4	474	-	-	-	7(1.5%)	20(4.2%)	75(15.8%)	372(78.5%)

5.4.2.7 Exploratory Data Analysis for Behavioural Intention (DV)

The results of the behavioural intention dependent factor‗s exploratory data analysis explained the relationship between the values in the behavioural intention dependent factor. Figure 5.7 shows the Boxplot analysis; it was noticed that this factor had a significant relationship amongst the items in behavioural intention. For the construct utilised in the hypothesis to study the citizens‗ intentions to participate in the public decision making in the e-government, the Boxplot test found that all of the answers were located from number 4 moderately and 7 strongly agree).This is clear from this figure as the lowest answers were from four (moderately) till seven (strongly agree). Moreover, this factor was clear without any critical outliers.
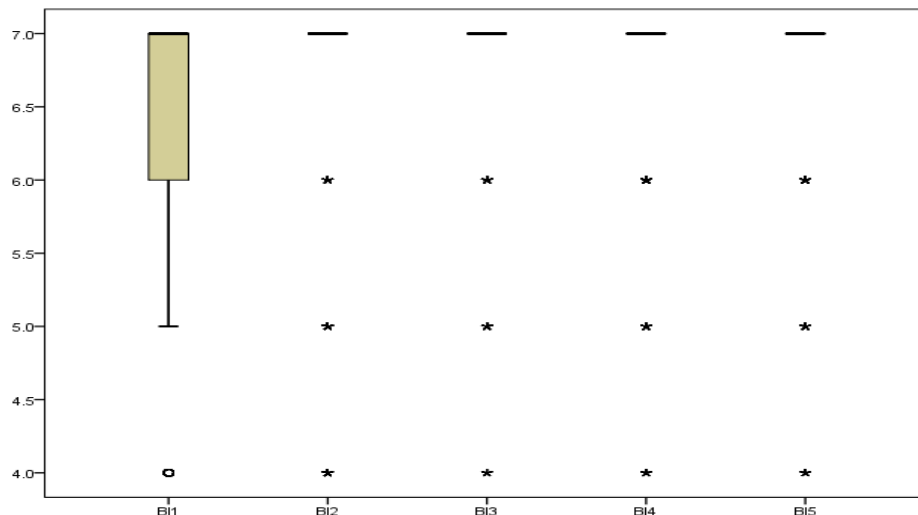
Figure 5.7. Exploratory data analysis for Behavioural Intention

Table 5.15 clarifies the outcomes of the respondents' answers on the items of the dependent variable in this study, the behavioural intention. Most of the respondents from all groups chose from 4 moderately to 7 strongly agree). It has been concluded that the respondents perhaps differed in the level of agreement on the construct (4-7), but they did not differ in agreeing or disagreeing with all of the items.
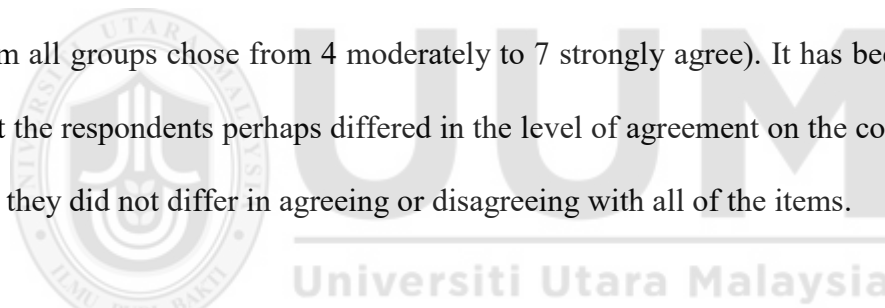
Table 5.15

Statistics of Frequencies and Description of the Variables of Behavioural Intention

Questions	N	1	2	3	4	5	6	7
BI1	474	-	-	-	30(6.3%)	61(12.9%)	37(7.8%)	346(73.0%)
BI2	474	-	-	-	31(6.5%)	60(12.7%)	27(5.7%)	356(75.1%)
BI3	474	-	-	-	7(1.5%)	22(4.6%)	25(5.3%)	420(88.6%)
BI4	474	-	-	-	7(1.5%)	21(4.4%)	74(15.6%)	372(78.5%)
BI5	474	-	-	-	7(1.5%)	21(4.4%)	34(7.2%)	412(86.49%)

5.5 Goodness of Measures

The goodness or quality and eligibility of the measurement tools were investigated by employing the reliability and validity tests, which are described in this chapter from section 5.5.1 to section 5.6.

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5.5.1 Validity

Zikmond, et al. (2012) and Sounders, et al. (2007) maintained that validity could be examined as the range to measure validity. It is important to perform a validity test to ensure that the tools applied in this research measured what this research intended to do. Sounders, et al. (2007) inserted that there are three types of validity exams. These are: the first type, content validity; the second type, construct validity; and the third type, criterion-related validity. The validity of the content for this research was explained in Chapter Four section 4.4.5. The second kind of validity is the validity of the construct which is intended to provide the evidence on how the research outcome was derived from the research instrument employed and designed for the research (Zikmund et al., 2012). In order to measure this kind of validity, this research used the factor analysis test and Cronbach's alpha. The third kind of validity used was the criterion-related validity which is intended to reflect the relation between several specified and scale scores, the measurable standard (Lamoureux et al., 2007; Zikmund et al., 2012).

5.5.2 Main Study of the Reliability Test (Cronbach's Alpha and KMO/ Bartlett's)

According to Moss and Pamela, reliability is defined as ―consistency‖ (Kulcsár, 2010). The main study was adopted to test the reliability by using Cronbach's Alpha test, sampling adequacy using Kaiser-Meyer-Olkin-KMO, and to check the suitability of the study model. The measurement of reliability that is known as Cronbach's alpha has domains from 0 to 1. In general, the value of 0.6 or above is the passable alpha estimate of a study (Abu-Shanab, 2015; Cronbach, 1946). The KMO is desired to be 0.5 or above for the sampling adequacy and the significance value < 0.002 (Alsous et al., 2017; Kaiser, 1974; Olawale & Garwe, 2010). Cronbach's Alpha

and Kaiser-Meyer-Olkin-KMO tests were used for this research to check the internal uniformity for the measurement elements. The reliability test was performed before the factor analysis, and the outcome of the reliability check for every factor was made abridged before every factor analysis.

Table 5.16

Reliability Measurement of the Main Study

No	Construct	No. of items	Cronbach's Alpha test	KMO test	Bartlett's Test Sig
1	ATB	6	0.914	0.816	0.000
2	SN	6	0.900	0.784	0.000
3	SI	4	0.860	0.609	0.000
4	FC	5	0.888	0.749	0.000
5	CO	5	0.880	0.746	0.000
6	CU	4	0.839	0.613	0.000
7	BI	5	0.881	0.743	0.000

Table 5.16 explains all of the reliability measurement factors in this study, which were: Attitude towards Act or Behaviour (ATB) was the first independent variable, containing six items (ATB1, ATB2, ATB3, ATB4, ATB5, and ATB6). The reliability test was performed and had the Cronbach's Alpha values at 0.914 for all of the six items, which were adequate for utilisation in the test of the main study. The KMO was 0.816 for the sampling adequacy, and Bartlett's test for the significance level recorded the desired 0.000.

Subjective Norms (SN) had six items (SN1, SN2, SN3, SN4, SN5, and SN6). All six of the items displayed reliable Cronbach's Alpha values of 0.900, which were acceptable enough to be utilised in the analysis of the main study. The KMO reached

the required value of 0.784 for the sampling adequacy in the main study; this shows that the KMO in the main study was higher than in the pilot study. Bartlett's test had a higher significance at 0.000.

Social Influence (SI) was the third variable in this study model; it contained four measuring items (SI1, SI2, SI3, and SI4). The outcome of the reliability test displayed the Cronbach's Alpha value of 0.860 and the KMO value of 0.609 for the sampling adequacy. Bartlett's test had a positive significance at 0.000.

Facilitating conditions (FC) was the fourth independent variable, containing five items (FC1, FC2, FC3, FC4, and FC5). The reliability test had Cronbach's Alpha values at 0.888 for all of the five items, which were adequate for utilisation in the test of the main study. The KMO was 0.749 for the sampling adequacy, and Bartlett's test for the significance level, recorded the desired 0.000.

Compatibility (CO) was the fifth independent variable, containing five items (CO1, CO2, CO3, CO4, and CO5). The reliability test had Cronbach's Alpha values at 0.880 for all of the five items, which were adequate for utilisation in the test of the main study. The KMO was 0.746 for the sampling adequacy, and Bartlett's test for the significance level, recorded the desired 0.000.

Culture (CU) was the sixth independent variable; it had four items (CU1, CU2, CU3, and CU4). All of the four items displayed reliable Cronbach's Alpha values at 0.839, which were acceptable enough to be utilised in the analysis of the main study and were higher than the values of the pilot test of this study. The KMO reached the required value of 0.613 for the sampling adequacy in the main study. This shows that

KMO in the main study was higher than in the pilot study. Bartlett's test had a higher significance 0.000.

Behavioural Intention (BI) was the dependent variable in the model of this study. Behavioural Intention had five items (BI1, BI2, BI3, BI4, and BI5). All of the five items displayed reliable Cronbach's Alpha values of 0.881, which were acceptable enough to be utilised in the analysis of the main study. The KMO was 0.743 for the sampling adequacy, and Bartlett's test for the significance level, recorded the desired value of 0.000.

The reliability test shows that all of the items in the independent variables (ATB, SN, SI, FC, CO, CU, and BI) were reliable and suitable enough to be used in the main study. Citizens' Intentions to participate in the public decision-making of the e-government as the dependent variable was confirmed as worthy of reliability and relevance in this study. The Cronbach's Alpha values for the constructs of this study in the independent and dependent variables ranged and were recorded from 0.839 to 0.914, which were sufficient for conducting the main study. The sampling adequacy test of KMO displayed a higher grade correlation amongst the variables, which ranged and recorded from 0.609 to 0.816. Finally, the items displayed a higher significance grade when the Bartlett's test value was 0.000 for all of the items in the constructs of this study.

5.5.3 Construct Validity

The factor analysis test is frequently used to rate the construct validity of a test or scale (Bock, Gibbons, & Muraki, 1988; Elliott & Hynan, 2011). Charles Spearman, Karl Pearson, and others explained the factor analysis test at the end of the 20th

century (Breslow, 1970; Johnson & Wichern, 2002; Wold, Esbensen, & Geladi, 1987). Zikmond, et al. and Pallant explained the factor analysis test as a type of information reduction path used to classify the essential elements from the authentic factors (Feir-Walsh & Toothaker, 1974; Zikmund et al., 2012). In summary, the factor analysis test is applied to reclassify and reduce a large number of elements into a smaller number of elements in new variables (Al-Khafaji et al., 2012; Pirkkalainen & Pawlowski, 2014). This research has different groups and different sample sizes with a different number of questions. It is for these reasons that the research used two methods to analysis the factors; first, the factor analysis and subsequently, the second method, the Cronbach's alpha were used to check the constructs of the main study's validity (Callen, Braithwaite, & Westbrook, 2008; Grau, 2007; Lin, Zhang, & Gray, 2005).

5.5.4 Factor Analysis (First Objective Research in This Study)

This section explains the analysis conducted which related with the first objective in the study. For checking the constructs of the main study's validity, there was a necessity for testing the data by factor analysis to check the validity and refine the new constructs that were not checked or were checked in other environmental studies. Kline (2014) and Grau (2007) explained that the factor test is prepared towards examining the data to be utilised in a study from the current theoretical opinion by qualifying the statistical data to load on the factors which are independent variables of theory and priori proposition which relates to the instruments of measurement to be utilised in the study (Grau, 2007; Kline, 2014).

Hair, et al. (2010) explained that, 0.30 is a minimum benchmark of factor loading. It can be reported as a significant and absolute value; but more importantly, when

loading results in a value of 0.40, and if the loading results in a value equal or greater than 0.50, it is described as quite significant. Nunnally (1979) clarified 0.50 as being the most suitable value in the factor analysis. Comrey and Lee (1992) explained that the factor loading value > 0.3 is a poor loading because 10% of the overlapping variance is from R2.If the loading value is> 0.4, it is fair (20% of the overlapping variance is from R2); if the loading value is > 0.5, it is good (30% of the overlapping variance is from R2); and if the loading value is > 0.6, it is very good (40% of the overlapping variance is from R2),Whilst a loading value > 0.7 is excellent (50% of the overlapping variance is from R2), and a loading value more than 0.8 is very excellent (Comrey & Lee, 1992; Kline, 2014; Nunnally, 1979; Thompson, 2004; Williams, Onsman, & Brown, 2010). For clean and powerful data, if the variables which made the problem were found, the researcher would have extracted them by examining their determinants at the bottom of the component matrix. At the exploratory step, the researcher conducted the factor analysis and the outcomes are presented below:

5.5.4.1 Factor Analysis outcomes for Attitude towards Act or Behaviour (ATB)

The factor analysis outcomes for the first independent variable, attitude towards act or behaviour (ATB), which was the first variable in the model of this study, show that the loading was confined between a minimum value of 0.803 and a maximum value of 0.938. The communalities table for the six measuring items of the ATB values ranged from 0.785 to 0.954. Hair, et al. (2010) recommended the official value as > 0.500 for the communalities. Therefore, all of the items in the ATB variable were capable of clarifying the variance values amongst the variables of the items with Cronbach's Alpha values of 0.914. The anti-image table was utilised to ascertain the level of the correlation amongst the variables. The anti-image

correlation value must be > 0.5 as recommended by Hair, et al. (2006). The anti-image table in the ATB variable for this study had values ranging from 0.747 to 0.946. Table 5.17 shows the positive result of the attitude towards act or behaviour (ATB) factor.

Table 5.17

Factor Analysis outcomes for Attitude towards Act or Behaviour (ATB)

Code	Loading(s)	Communalities	Cronbach's Alpha	Anti-Image Matrices
ATB1	0.938	0.937		0 .747
ATB2	0.919	0.924		0 .770
ATB3	0.903	0.954		0 .772
ATB4	0.929	0.899	0.914	0 .932
ATB5	0.892	0.940		0 .800
ATB6	0.803	0.785		0 .946

Note: Endpoint of the Likert Scale (1) Strongly Disagree and (7) Strongly Agree; n= 474

5.5.4.2 Factor Analysis outcomes for Subjective Norms (SN)

Table 5.18 explains the factor analysis result for the second independent variable, subjective norms (SN), in the model of this study. Loading, the first column in this table has values confined between a minimum value of 0.759 and a maximum value of 0.956. The second column, communalities, in this table contains the six measuring items of the SN values ranging from 0.746 to 0.957. Hair, et al. (2010) recommended the official value > 0.500 for communalities. The third column in this table clarifies the Cronbach's Alpha values of 0.900 for all of the items in the SN variable. The fourth column in this table, anti-image, was utilised to ascertain the level of correlation amongst the variables. The anti-image correlation value must be > 0.5 as

recommended by Hair, et al. (2006). The anti-image table for the SN variable for this study had values ranging from 0.701 to 0.925.

Table 5.18

Factor Analysis outcomes for Subjective Norms (SN)

Code	Loading(s)	Communalities	Cronbach's Alpha	Anti-Image Matrices
SN1	0.956	0.950		0.701
SN2	0.939	0.939		0.722
SN3	0.914	0.957		0.746
SN4	0.932	0.895	0.900	0.925
SN5	0.912	0.932		0.774
SN6	0.759	0.746		0.914

Note: Endpoint of the Likert Scale (1) Strongly Disagree and (7) Strongly Agree; n= 474

5.5.4.3 Factor Analysis outcomes for Social Influence (SI)

Table 5.19 shows the third independent variable, social influence (SI), from the factor analysis outcomes to study the reliability of this factor. Social influence (SI) which was the third variable in the model of this study had got a result in the loading column confined between a minimum value of 0.933 and a maximum value of 0.960. The communalities column in this table for the four measuring items of the values of SI ranged from 0.956 to 0.971. Hair, et al. (2010) recommended the official value > 0.500 for communalities. Subsequently, all of the items in the SI variable got Cronbach's Alpha values of 0.860. The anti-image column was utilised to ascertain the level of correlation amongst the variables. The anti-image correlation value must be > 0.5 as recommended by Hair, et al. (2006). The anti-image table in the SI variable for this study had values ranging from 0.599 to 0.625.

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Table 5.19

Factor Analysis outcomes for Social Influence (SI)

Code	Loading(s)	Communalities	Cronbach's Alpha	Anti-Image Matrices
SI1	0.958	0.971		0.602
SI2	0.951	0.970		0.611
SI3	0.933	0.956	0.860	0.625
SI4	0.960	0.961		0.599

Note: Endpoint of the Likert Scale (1) Strongly Disagree and (7) Strongly Agree; n= 747

5.5.4.4 Factor Analysis outcomes for Facilitating Conditions (FC)

Table 5.20 explains the factor analysis results for the fourth independent variable, facilitating conditions (FC), in the model of this study. This table shows that the loading was confined between a minimum value of 0.912 and a maximum value of 0.961. The communalities table for the five measuring items of the FC had values ranging from 0.914 to 0.983. Hair, et al. (2010) recommended the official value > 0.500 for communalities. Therefore, all of the items in the FC variable were capable of clarifying the variance values amongst the variables of the items with Cronbach's Alpha values of 0.888. The anti-image table was utilised to ascertain the level of correlation amongst the variables. The anti-image correlation value must be > 0.5 as recommended by Hair, et al. (2006). The anti-image table in the FC variable for this study had values ranging from 0.642 to 0.883.

Table 5.20

Factor Analysis outcomes for Facilitating Conditions (FC)

Code	Loading(s)	Communalities	Cronbach's Alpha	Anti-Image Matrices
FC1	0.961	0.983		0.642
FC2	0.951	0.982		0.654
FC3	0.912	0.943	0.888	0.795
FC4	0.941	0.914		0.883
FC5	0.927	0.941		0.789

Note: Endpoint of the Likert Scale (1) Strongly Disagree and (7) Strongly Agree; n= 747

5.5.4.5 Factor Analysis outcomes for Compatibility (CO)

Table 5.21 explains the factor analysis result for the fifth independent variable compatibility (CO) in the model of this study. Loading, the first column in this table, has values confined between a minimum value of 0.908 and a maximum value of 0.959. The second column, communalities, in this table contains the five measuring items of the CO values ranging from 0.959 to 0.973. Hair, et al. (2010) recommended the official value > 0.500 for communalities. The third column in this table clarifies the Cronbach's Alpha values of 0.880 for all of the items in the CO variable. The fourth column in this table, anti-image, was utilised to ascertain the level of correlation amongst the variables. He anti-image correlation value must be > 0.5 as recommended by Hair, et al. (2006). The anti-image table in the CO variable for this study had values ranging from 0.642 to 0.865.

Table 5.21

Factor Analysis outcomes for Compatibility (CO)

Code	Loading(s)	Communalities	Cronbach's Alpha	Anti-Image Matrices
CO1	0.959	0.973		0.642
CO2	0.948	0.972		0.654
CO3	0.922	0.940	0.880	0.770
CO4	0.937	0.902		0.865
CO5	0.908	0.921		0.811

Note: Endpoint of the Likert Scale (1) Strongly Disagree and (7) Strongly Agree; n= 747

5.5.4.6 Factor Analysis outcomes for Culture (CU)

Table 5.22 shows the sixth independent variable culture (CU) from the factor analysis result to study the reliability of this factor. Culture (CU) got results in the loading column confined between a minimum value of 0.899 and a maximum value of 0.959. The communalities column in this table for the four measuring items of CU had values ranging from 0.921 to 0.965. Hair, et al. (2010) recommended the official value > 0.500 for communalities. Subsequently, all the items in the CU variable got Cronbach's Alpha values of 0.839. The anti-image column was utilised to ascertain the level of the correlation amongst the variables. The anti-image correlation value must be > 0.5 as recommended by Hair, et al. (2006). The anti-image table in the CU variable for this study had values ranging from 0.592 to 0.646.

Table 5.22

Factor Analysis outcomes for Culture (CU)

Code	Loading(s)	Communalities	Cronbach's Alpha	Anti-Image Matrices
CU1	0.959	0.965		0.600
CU2	0.950	0.964		0.611
CU3	0.899	0.921	0.839	0.646
CU4	0.958	0.938		0.592

Note: Endpoint of the Likert Scale (1) Strongly Disagree and (7) Strongly Agree; n= 747

5.5.4.7 Factor Analysis outcomes for Behavioural Intention (BI)

Table 5.23 shows that the factor analysis result for the dependent variable in the model of this study, behavioural intention (BI), shows that the loading values were confined between a minimum value of 0.912 and a maximum value of 0.961. The communalities table for the five measuring items of the BI values ranged from 0.905 to 0.981. Hair, et al. (2010) recommended the official value > 0.500 for communalities. Therefore, all of the items in the BI variable were capable of clarifying the variance values amongst the variables of the items with Cronbach's Alpha values of 0.881. The anti-image table was utilised to ascertain the level of correlation amongst the variables. The anti-image correlation value must be > 0.5 as recommended by Hair, et al. (2006). The anti-image table in the BI variable for this study had values ranging from 0.637 to 0.792.

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Table 5.23

Factor Analysis outcomes for Behavioural Intention (BI)

Code	Loading(s)	Communalities	Cronbach's Alpha	Anti-Image Matrices
BI1	0.961	0.981		0.637
BI2	0.954	0.981		0.647
BI3	0.912	0.938	0.881	0.786
BI4	0.939	0.905		0.876
BI5	0.920	0.931		0.792

Note: Endpoint of the Likert Scale (1) Strongly Disagree and (7) Strongly Agree; n= 747

5.5.4.8 Outcomes of the Factors Analysis (First Research Objective in This Study)

Table 5.17 to Table 5.23 explained that the factor analysis technique was used to test (IV1, IV2, IV3, IV4, IV5, and IV6) to identify the factors that influence the citizens' intentions to participate in the decision-making of the e-government. Furthermore, the first objective in this study had been achieved. As referred to in the tables above, all of the Cronbach's Alpha values were greater than 0.6 and the loading factors were greater than 0.5 for all of the factors. From that, it has been concluded that the study achieved the first objective, successfully. For more details, see the Appendix (D).

5.5.5 The Exploratory data (Normality Distribution test)

In order to examine the level of agreement of the categories, the normality test was executed in the beginning to be sure of the numbers' accuracy and the possibility of performing the data analysis (Breslow, 1970; Elliott & Hynan, 2011; Feir-Walsh & Toothaker, 1974; Kulcsár, 2010). Thode (2002) suggested that if the Kolmogorov-Smirnov test values are both (Sig.) >0.05, it is a normal distribution. The Skewness and Kurtosis results for a normal distribution value must have both at zero or near

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zero (Ghasemi & Zahediasl, 2012; Lawson, Illia, Willoughby, & Lee, 2014; Rahimi & Alamdari, 2015; Thode, 2002).

5.5.5.1 Exploring the Normality Data of the Attitude toward Act or Behaviour

Table 5.24 explains that the Normality test contains the Shapiro-Wilkand the Kolmogorov-Smirnov tests for the attitude towards act or behaviour variable. This table clarified that the Shapiro-Wilk and K-S tests' p-values were both less than (0.05); the (Sig.) for the ATB was 0.000, so the outcomes were not clear.

Table 5.24

Normality Test for Attitude towards Act or Behaviour

	Tests of Normality							
	Kolmogorov-Smirnov[a]			Shapiro-Wilk			Skewness	Kurtosis
	Statistic	df	Sig.	Statistic	df	Sig.	Statistic	Statistic
ATB1	0.444	474	0.000	0.586	474	0.000	-1.643	1.312
ATB2	0.465	474	0.000	0.549	474	0.000	-1.759	1.626
ATB3	0.515	474	0.000	0.355	474	0.000	-3.293	11.191
ATB4	0.465	474	0.000	0.513	474	0.000	-2.459	6.080
ATB5	0.518	474	0.000	0.344	474	0.000	-3.465	11.582
ATB6	0.471	474	0.000	0.527	474	0.000	-1.981	2.665

a. Lilliefors Significance Correction
df= degrees of freedom

Table 5.25 clarified the kurtosis (6.414) and skewness (-2.618), but the standard normal distribution had kurtosis = 0 and skewness = 0, and the ATB Median for all of the items was 7.0000. The present study made a comparison between the Median items for the attitude towards act or behaviour variable and found a correlation relationship between the items, and the study was able to analyse the data with the non-parameter test (Breslow, 1970).

Table 5.25

Median Normality Test of the Attitude towards Act or Behaviour

Item	Std. Deviation	**Median**	Skewness	Kurtosis
ATB	0.64133	**7.0000**	-2.618	6.414

5.5.5.2 Exploring the Normality Data of the Subjective Norms

Table 5.26 shows that the Shapiro-Wilk and K-S tests' p-values were both less than (0.05) and the (Sig.) was 0.000; so, the results were not clear for the subjective norms variable.

Table 5.26

Normality Test for Subjective Norms

	Tests of Normality							
	Kolmogorov-Smirnov[a]			Shapiro-Wilk			Skewness	Kurtosis
	Statistic	df	Sig.	Statistic	df	Sig.	Statistic	Statistic
SN1	0.420	474	0.000	0.635	474	0.000	-1.355	0.365
SN2	0.444	474	0.000	0.598	474	0.000	-1.440	0.505
SN3	0.514	474	0.000	0.365	474	0.000	-3.254	10.027
SN4	0.457	474	0.000	0.532	474	0.000	-2.334	5.335
SN5	0.516	474	0.000	0.358	474	0.000	-3.299	10.289
SN6	0.468	474	0.000	0.531	474	0.000	-1.977	2.677

a. Lilliefors Significance Correction

Table 5.27 explains the kurtosis (5.830) and skewness (-2.517), whilst the standard normal distribution had kurtosis = 0 and skewness = 0. The Median of the items was compared in this variable; it was 7.0000. The subjective norms construct had a correlation relationship, and the study was able to analyse the data with the non-parameter test (Breslow, 1970).

Table 5.27

Median Normality Test of Subjective Norms

Item	Std. Deviation	**Median**	Skewness	Kurtosis
SN	0.65852	**7.0000**	-2.517	5.830

5.5.5.3 Exploring the Normality Data of the Social Influence

Table 5.28 clarifies that the (Sig.) for the social influence variable was 0.000, and the Shapiro-Wilk and K-S tests' p-values were both less than 0.05; for that, the results of the Normality test were not enough to check this variable. This study used the Non-Parametric Kruskal Wallis Test to check the homogeneity and normality for this variable.

Table 5.28

Normality Test for Social Influence

	Tests of Normality							
	Kolmogorov-Smirnov[a]			Shapiro-Wilk			Skewness	Kurtosis
	Statistic	df	Sig.	Statistic	df	Sig.	Statistic	Statistic
SI1	0.448	474	0.000	0.584	474	0.000	-1.603	1.128
SI2	0.465	474	0.000	0.553	474	0.000	-1.696	1.376
SI3	0.510	474	0.000	0.393	474	0.000	-2.924	7.642
SI4	0.471	474	0.000	0.503	474	0.000	-2.395	5.172

a. Lilliefors Significance Correction

Table 5.29 explains the social influence variable Median at 7.0000. This construct had a correlation relationship; for that, the data of this variable was able to be analysed with the non-parameter test (Breslow, 1970).

Table 5.29

Median Normality Test of the Social Influence

Item	Std. Deviation	**Median**	Skewness	Kurtosis
SN	0.69248	**7.0000**	-1.941	2.765

5.5.5.4 Exploring the Normality Data of the Facilitating Conditions

Table 5.30 explains the results of the facilitating conditions variable. The Shapiro-Wilk and K-S tests' p-values were both less than 0.05 and the (Sig.) was 0.000; so, the normality of the data was not clear for this variable.

Table 5.30

Normality Test for Facilitating Conditions

| | Tests of Normality | | | | | | | |
| | Kolmogorov-Smirnov[a] | | | Shapiro-Wilk | | | Skewness | Kurtosis |
	Statistic	df	Sig.	Statistic	df	Sig.	Statistic	Statistic
FC1	0.441	474	0.000	0.597	474	0.000	-1.545	0.931
FC2	0.457	474	0.000	0.570	474	0.000	-1.606	1.053
FC3	0.513	474	0.000	0.371	474	0.000	-3.185	9.551
FC4	0.462	474	0.000	0.523	474	0.000	-2.362	5.441
FC5	0.506	474	0.000	0.396	474	0.000	-3.923	8.962

a. Lilliefors Significance Correction

Table 5.31 shows the Median of facilitating conditions (7.0000), kurtosis (9.185), and skewness (-3.120). The present study compared the Median of the items and this construct had a correlation relationship; and, the study was able to analyse the data with the non-parameter test (Breslow, 1970).

Table 5.31

Median Normality Test of the Social Influence

Item	Std. Deviation	**Median**	Skewness	Kurtosis
SN	0.60954	**7.0000**	-3.120	9.185

5.5.5.5 Exploring the Normality Data of Compatibility

The Normality test contained the Shapiro-Wilk and Kolmogorov-Smirnov tests for the compatibility variable. Table 5.32 shows that the compatibility variable for the Normality data test results for the Shapiro-Wilk and K-S tests' p-values were both

less than 0.05 and also the (Sig.) was 0.000; so, the compatibility variable outcomes were not clear.

Table 5.32

Normality Test for Compatibility

| | Tests of Normality | | | | | | | |
| | Kolmogorov-Smirnov[a] | | | Shapiro-Wilk | | | Skewness | Kurtosis |
	Statistic	df	Sig.	Statistic	df	Sig.	Statistic	Statistic
Co1	0.422	474	0.000	0.633	474	0.000	-1.391	0.523
Co2	0.444	474	0.000	0.596	474	0.000	-1.507	0.793
Co3	0.504	474	0.000	0.416	474	0.000	-2.831	7.389
Co4	0.464	474	0.000	0.529	474	0.000	-2.261	4.866
Co5	0.512	474	0.000	0.381	474	0.000	-3.101	9.084

a. Lilliefors Significance Correction

Table 5.33 displays that the compatibility variable Median (7.0000), kurtosis (7.691), and skewness (-2.875) results showed that the compatibility construct had a correlation relationship and the study was able to analyse the data with the non-parameter test (Breslow, 1970).

Table 5.33

Median Normality Test of Compatibility

Item	Std. Deviation	**Median**	Skewness	Kurtosis
SN	0.59706	**7.0000**	-2.875	7.691

5.5.5.6 Exploring the Normality Data of Culture

The Shapiro-Wilk and Kolmogorov-Smirnov tests of Normality for the culture variable have been clarified in Table 5.34. The Shapiro-Wilk and K-S tests' p-values were both less than 0.05 and the value of the (Sig.) was 0.000; so, the outcomes of the culture variable were not clear. This study used the Non-Parametric Kruskal Wallis Test to check the homogeneity and normality for this variable.

Table 5.34

Normality Test for Culture

	Kolmogorov-Smirnov[a]			Shapiro-Wilk			Skewness	Kurtosis
	Statistic	df	Sig.	Statistic	df	Sig.	Statistic	Statistic
CU1	0.432	474	0.000	0.613	474	0.000	-1.491	0.805
CU2	0.451	474	0.000	0.582	474	0.000	-1.575	0.987
CU3	0.515	474	0.000	0.362	474	0.000	-3.320	10.691
CU4	0.464	474	0.000	0.522	474	0.000	-2.360	5.556

a. Lilliefors Significance Correction

Table 5.35 explains the kurtosis (9.351) and skewness (-3.126), whilst the standard normal distribution had kurtosis = 0 and skewness = 0. The Median of the items was compared in this variable; it was 7.0000. The culture construct had a correlation relationship and the data was analysed with the non-parameter test (Breslow, 1970).

Table 5.35

Median Normality Test of Culture

Item	Std. Deviation	**Median**	Skewness	Kurtosis
SN	0.67052	**7.0000**	-2.020	3.382

5.5.5.7 Exploring the Normality Data of the Behavioural Intention

The Normality test in the table below contains the Shapiro-Wilk and Kolmogorov-Smirnov tests for the behavioural intention variable. Table 5.36 clarifies that the Shapiro-Wilk and K-S tests' p-values were both less than 0.05, and the (Sig.) for the IB was 0.000; so, the outcomes were not clear.

Table 5.36

Normality Test for Behavioural Intention

	Tests of Normality							
	Kolmogorov-Smirnov[a]			Shapiro-Wilk			Skewness	Kurtosis
	Statistic	df	Sig.	Statistic	df	Sig.	Statistic	Statistic
BI1	0.441	474	0.000	0.598	474	0.000	-1.532	0.893
BI2	0.455	474	0.000	0.575	474	0.000	-1.593	1.028
BI3	0.514	474	0.000	0.368	474	0.000	-3.230	9.957
BI4	0.464	474	0.000	0.523	474	0.000	-2.344	5.418
BI5	0.506	474	0.000	0.397	474	0.000	-3.075	9.154

a. Lilliefors Significance Correction

Table 5.37 displays the kurtosis (9.413), skewness (-3.136) and Median of the items (7.0000). The present study compares the Median of the behavioural intention variable, and this construct had a correlation relationship; for that, the study used the non-parameter test to analyse the data (Breslow, 1970).

Table 5.37

Median Normality Test of Behavioural Intention

Item	Std. Deviation	**Median**	Skewness	Kurtosis
SN	0.58407	**7.0000**	-3.136	9.413

5.5.5.8 Outcomes of Exploring the Normality Data Tests

The outcomes of all of the variables showed that the Shapiro-Wilk and K-S tests' p-values were both 0.000 less than 0.5; for that, the study data had a non-normality distribution, but the Median values were 7.0000 for all of the variables. According to Thode (2002) and Ghasemi and Zahediasl (2012), the assessment of the assumption of normality should be taken into account for the parametric statistical tests, and non-normality using the non-parametric statistics. The next section displays the non-parametric test results.

5.5.6 Non Parametric Kruskal Wallis Test

When homogeneity and normality of variance assumptions are not satisfactory, the identical non-parametric Kruskal Wallis test is used (Chan, 2003; Theodorsson, 1986). The Kruskal-Wallis test is a non-parametric rank-based test which can be applied to identify if there are various statistically significant values amongst two or many groups of independent variables on an ordinal or continuous dependent variable. The (asymp.Sig.) value for the Kruskal-Wallis test rejected the null hypothesis if the p-value ≤ 0.05. At the Sig.= 0.05 level of significance, there existed enough evidence to conclude that there was a difference in the median test scores (and, hence, the mean test scores) amongst the four social groups (Elliott & Hynan, 2011; Feir-Walsh & Toothaker, 1974; Norusis, 2006; Theodorsson, 1986).

5.5.6.1 Non- Parametric Kruskal Wallis Test for the Attitude towards Act or Behaviour

It was noticed that the mean ranks for the groups were taken from the Kruskal Wallis test as clarified by Table 5.38.The groups did not vary significantly for the construct ‗Attitude towards Act or Behaviour' amongst the groups of politicians, economists, IT professionals, and workers.

Table 5.38

Rank Statistics of ATB

	Social Groups	N	Mean Rank
	Politicians	12	162.58
MATB	Economists	144	247.89
	IT Professionals	80	248.98
	Workers	238	231.13
	Total	474	

Table 5.39 displays that the statistic test (KW = Chi-Square = 12.543) was corrected in the case of existing ties in the data ranks. Since the p-value = 0.006 ≤ 0.05 = α, the test rejected the null hypothesis.

Table 5.39

Test Statistics of ATB

	MATB
Chi-Square	12.543
df	3
Asymp. Sig.	0.006

5.5.6.2 Non- Parametric Kruskal Wallis Test for the Subjective Norms

Table 5.40 shows the Kruskal Wallis test result. The four groups (politicians, economists, IT professionals, and workers) were not different, significantly, in the construct of ‗Subjective Norms'.

Table 5.40

Rank Statistics of SN

	Social Groups	N	Mean Rank
	Politicians	12	163.00
	Economists	144	241.61
MSN	IT Professionals	80	224.49
	Workers	238	243.14
	Total	474	

Table 5.41 shows that the p-value = 0.019 ≤ 0.05 = α, and the statistic test (KW = Chi-Square = 9.926) was corrected in the case of existing ties in the data ranks. For that, the test rejected the null hypothesis.

Table 5.41

Test Statistics of SN

	MSN
Chi-Square	9.926
df	3
Asymp. Sig.	.019

5.5.6.3 Non- Parametric Kruskal Wallis Test for the Social Influence

The mean ranks for the groups (politicians, economists, IT professionals, and workers) obtained from the Kruskal Wallis test are clear as shown by Table 5.42. The four groups did not vary, significantly, for the construct ‗Social Influence‘.

Table 5.42

Rank Statistics of SI

	Social Groups	N	Mean Rank
	Politicians	12	211.17
MSI	Economists	144	261.26
	IT Professionals	80	233.85
	Workers	238	225.68
	Total	474	

Table 5.43 clarifies that the test rejected the null hypothesis because the p-value = $0.006 \leq 0.05 = \alpha$, and the KW = Chi-Square = 12.535 was corrected in the case of existing ties in the data ranks.

Table 5.43

Test Statistics of SI

	MSI
Chi-Square	12.535
df	3
Asymp. Sig.	.006

5.5.6.4 Non- Parametric Kruskal Wallis Test for the Facilitating Conditions

It was noted that the mean ranks for the groups obtained from the Kruskal Wallis test, as illustrated by Table 5.44, showed that the groups were not different, significantly, for the construct ‗Facilitating Conditions‘ amongst the groups of politicians, economists, IT professionals, and workers.

Table 5.44

Rank Statistics of FC

	Social Groups	N	Mean Rank
	Politicians	12	149.63
	Economists	144	239.05
MFC	IT Professionals	80	244.35
	Workers	238	238.69
	Total	474	

The statistic test (KW = Chi-Square = 15.987) displayed in Table 5.45 was corrected in the case of existing ties in the data ranks. Since the p-value = $0.001 \leq 0.05 = \alpha$, the test rejected the null hypothesis.

Table 5.45

Test Statistics of FC

	MFC
Chi-Square	15.987
df	3
Asymp. Sig.	.001

5.5.6.5 Non- Parametric Kruskal Wallis Test for the Compatibility

Table 5.46 showed the Kruskal Wallis test results; the four groups (politicians, economists, IT professionals, and workers) were not different, significantly, in the construct of ‗Compatibility‗.

Table 5.46

Rank Statistics of CO

	Social Groups	N	Mean Rank
	Politicians	12	154.58
	Economists	144	242.48
MCO	IT Professionals	80	247.90
	Workers	238	235.17
	Total	474	

Table 5.47 clarified that the p-value = 0.002 ≤ 0.05 = α, and the statistic test (KW = Chi-Square = 14.331) was corrected in the case of existing ties in the data ranks. For that, the test rejected the null hypothesis.

Table 5.47

Test Statistics of CO

	MCO
Chi-Square	14.331
df	3
Asymp. Sig.	.002

5.5.6.6 Non- Parametric Kruskal Wallis Test for the Culture

From the Table 5.48 it was obvious that the mean ranks obtained from the Kruskal Wallis test for the groups clarified that the groups did not vary, significantly, for the construct ‗Culture' amongst the groups, politicians, economists, IT professionals, and workers.

Table 5.48

Rank Statistics of CU

	Social Groups	N	Mean Rank
	Politicians	12	210.67
MCU	Economists	144	257.51
	IT Professionals	80	227.97
	Workers	238	229.95
	Total	474	

Table 5.49 clarifies that the test rejected the null hypothesis because the p-value = 0.034 ≤ 0.05 = α, and the KW = Chi-Square = 8.691 was corrected in the case of existing ties in the data ranks.

Table 5.49

Test Statistics of CU

	MCU
Chi-Square	8.691
df	3
Asymp. Sig.	.034

5.5.6.7 Non- Parametric Kruskal Wallis Test for the Behavioural Intention

It was clear from Table 5.50 that, the four groups did not vary, significantly, for the construct ‗Behavioural Intention' amongst the groups (politicians, economists, IT professionals, and workers) as obtained from the Kruskal Wallis test.

Table 5.50

Rank Statistics of IB

	Social Groups	N	Mean Rank
MBI	Politicians	12	151.00
	Economists	144	238.99
	IT Professionals	80	244.25
	Workers	238	238.69
	Total	474	

Table 5.51 displays that the p-value = 0.001 ≤ 0.05 = α, and the KW = Chi-Square = 15.493 was corrected in the case of existing ties in the data ranks. The test rejected the null hypothesis.

Table 5.51

Test Statistics of IB

	MBI
Chi-Square	15.493
df	3
Asymp. Sig.	.001

5.5.6.8 Outcomes of Kruskal Wallis Test

Table 5.52 clarifiedthat the (political, economical, technology, and workers) had Median (7.0000), Std. Deviation was 0.61278. This result the study identifies that factors have significant relationship amongst the groups.

Table 5.52

Descriptive Statistics of all Independent Variable

	N	Mean	Std. Deviation	Median
Median of IV	474	6.7442	0.59516	7.0000
Social Groups	474	3.15	0.942	

Table 5.53 clarifies that the statistic test (KW = Chi-Square = 16.139) was corrected in the case of existing ties in the data ranks. For accuracy in the relationship amongst the groups, this study executed the Kruskal Wallis test. Nevertheless, the outcome was clear when the p-values were 0.001 and the (Sig.) was less than 0.005. Since the p-value $= 0.001 \leq 0.05 = \alpha$, the test rejected the null hypothesis. The non-parametric Kruskal Wallis results clarified that the data of this study was able to be analysed for further analysis.

Table 5.53

Test Statistics of all Independent Variable

	Independent Variable
Chi-Square	16.139
df	3
Asymp. Sig.	.001

The next section will explain the correlation relationship test to check the hypotheses.

5.5.7 Correlation Coefficient Data Analysis: Exploring the Relationships between the Variables (Scatter Matrix and Correlation Analysis)

The Scatter Matrix for the four independent variables appeared in the relationship with the dependent variable. Generally, each variable had points on this scatter matrix, showing that one or two points floated in space out of the points' convergence. This has indicated that the data was non-parametric. Figure 5.8 examines the relationship between the independent and dependent variables. The variables had significant strongly agree values, but they also had insignificant not agree values. Furthermore, the research identified the next Correlation analysis to be applied with the non-normal data non-parametric analysis (Bressan & Vitria, 2003; Kuo & Landgrebe, 2004). Figure 5.8 explains all of the variables: the DV of the Citizens' Intentions to participate in the public decision-making of the e-government (BI), IV1- Attitude towards Act or Behaviour (ATB), IV2- Subjective Norms (SN), V3- Social Influence (SI), V4- Facilitating Conditions (FC), V5- Compatibility (CO), and V6- Culture (CU).
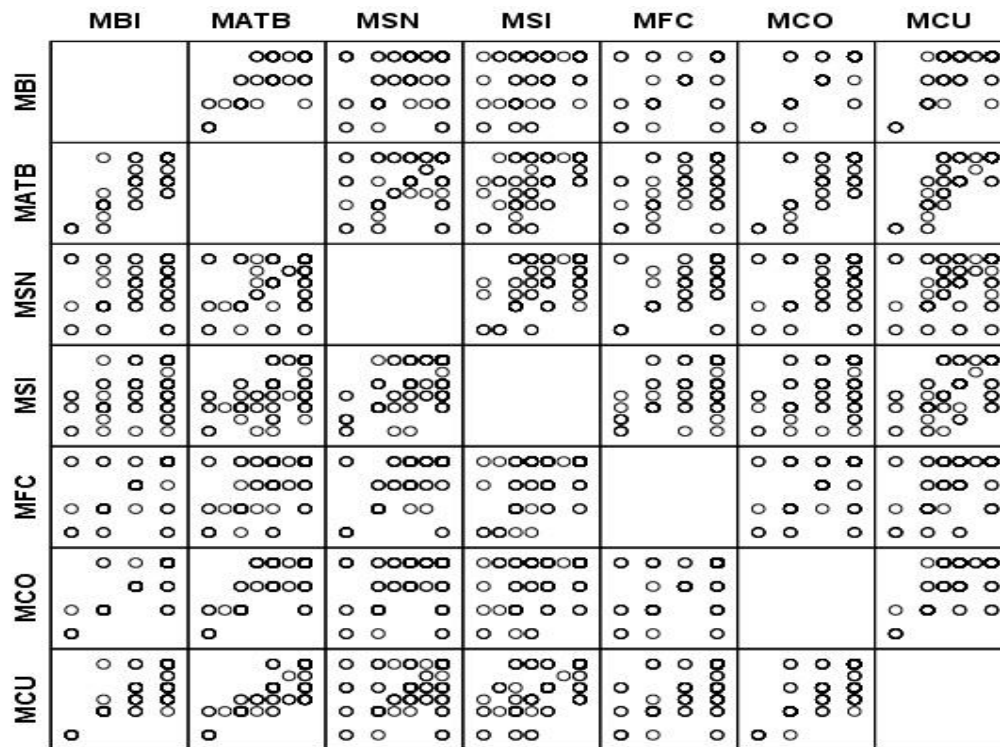
Figure 5.8. Scatter Matrix for independent and dependent variables

The Spearman Correlation analysis was utilised in this research to measure the strength of the alliance amongst the numerical variables (Hirsch & Slack, 1984; Steffens, Kölbl, Totsche, & Kögel-Knabner, 2008). Table 5.54 shows the Spearman Correlation amongst the research variables. The outcomes from the Spearman Correlation analysis amongst the variables, as explained in Table 5.54, display that, with the significance of levels of .001 and .05, the Citizens' Intentions to participate in the public decision-making of the e-government (DV) had a significantly correlated relationship with the (IV) variables.

Table 5.54

Correlation Spearman between the Research Variables

		MBI	MATB	MSN	MSI	MFC	MCO	MCU
MBI	**Pearson Correlation**	1	0.865**	0.563**	0.641**	0.775**	0.895**	0.802**
	Sig. (2-tailed)		0.000	0.000	0.000	0.000	0.000	0.000
	N		474	474	474	474	474	474
MATB	Pearson Correlation		1	.617**	.765**	.713**	.800**	.879**
	Sig. (2-tailed)			.000	.000	.000	.000	.000
	N			474	474	474	474	474
MSN	Pearson Correlation			1	.723**	.773**	.521**	.642**
	Sig. (2-tailed)				.000	.000	.000	.000
	N				474	474	474	474
MSI	Pearson Correlation				1	.685**	.616**	.791**
	Sig. (2-tailed)					.000	.000	.000
	N					474	474	474
MFC	Pearson Correlation					1	.678**	.650**
	Sig. (2-tailed)						.000	.000
	N						474	474
MCO	Pearson Correlation						1	.769**
	Sig. (2-tailed)							.000
	N							474
MCU	Pearson Correlation							1
	Sig. (2-tailed)							
	N							

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

The result of the accurate probability of a 1 error kind (p level) or the accurate significance of the analysis statistic would have rejected the null hypothesis if the p was less than the alpha ($p < \alpha = 0.05$, reject null hypothesis) or failed to reject the null hypothesis if the p was equal to or larger than the alpha ($p > \alpha = 0.05$, fail to reject null hypothesis) (Hirsch & Slack, 1984; Legendre, 2005). The summary of Table 5.55 displays the correlation amongst the strength of the relationship and the variables built on Guildford's rule of thumb. Table 5.55 shows that all of the (IV) variables achieving the ‗reject null hypothesis' were IV1, IV2, IV3, IV4, IV5, and IV6 = 0.000 < 0.05; also, the variables had a correlation relationship.

Table 5.55

Summary of the strength of the Relationship in the Correlation

Variable	Correlation coefficient With DV	Strength of Relation build on Gulidford's base of Thumb	Sig	Null hypothesis Reject
DV	1	Same variable	Same variable	Same variable
IV1	0.865**	High correlation relationship	0.000	Null hypothesis Reject
IV2	0.563**	Moderate correlation relationship	0.000	Null hypothesis Reject
IV3	0.641**	High correlation relationship	0.000	Null hypothesis Reject
IV4	0.775**	High correlation relationship	0.000	Null hypothesis Reject
IV5	0.895**	High correlation relationship	0.000	Null hypothesis Reject
IV6	0.802**	High correlation relationship	0.000	Null hypothesis Reject

5.5.7.1 Outcomes of the Correlation Relationship amongst the Variables

Table 5.54 clarifies that the independent variables, for each one (IV1= 0.865**), (IV2= 0.563**), (IV3= 0.641**), (IV4= 0.775**), (IV5= 0.895**), and (IV6= 0.802**), with the dependent variable was significantly correlated. Table 4.46 explains that all of the independent variables had a significant correlation relationship with the dependent variable. The correlation relationship technique was used to test the variables (IV1, IV2, IV3, IV4, IV5, and IV6) with the DV to get the

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positive relationships that achieved the first and third objectives in this study (To identify the citizens' intentions to participate in the public decision-making of the e-government). As referred to in Table 5.55, all of the variables rejected the null hypotheses (0.000) in the correlation relationship analysis for all of the independent with the dependent variables. From that, it has been concluded that the study achieved the first objective, successfully, and prepared to test the third objective with the multiple regression test.

5.5.8 Moderator Variables Using a Process by Andrew (Second Objective in the study)

This section explains the analysis conducted which was related with the second objective in the study. A moderator is a variable which specifies conditions under which an offered predictor is related to a result. A moderation impact could be (1) Reinforcing, where raising the moderator can increase the impact of the predictor (IV) of the result (DV); (2) Refining, where raising the moderator can decrease the impact of the predictor of the result; or (3) Against, where raising the moderator can reverse the impact of the predictor of the result (Andrew, 2012; Baron & Kenny, 1986; Frazier, Tix, & Barron, 2004). According to Andrew Hayes, creating mechanism process modelling in SPSS (version 2.16, released 5 July, 2016) utilises the regression-based path-analytic framework conditional process. Modeling is utilised when the study's goal is to explain the boundary conditions of the mechanisms or mechanism by which a variable transmits its impact on another (Andrew, 2012, 2017). For the significance amongst the moderators' variables and the factors, the p-value must be ≤ 0.001 in the initial (int_1) row, and the zero number must not be located between the values of the LLCI and the ULCI (Frazier et al., 2004; Hayes, 2013).

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5.5.8.1 Moderator Variables on the Attitude towards Act or Behaviour

The first step of the output of all of the variables in the test was indicating which was deemed as a dependent variable, the citizens' intentions to participate in the public decision-making of the e-government (BI); which was an independent variable, attitude towards act or behaviour (ATB); and which was a moderator, gender, age, level of education, social group, working sector, and Internet experiences (M). The total sample size (474) was also displayed. Then, the outcome from a regression was offered, which contained the interaction impact between the moderator and the independent variable.

Table 5.56 shows that the interaction between gender and attitude towards act or behaviour was not significant because p= 0.6333 and LLCI= -0.1175, ULCI= 0.0715; the value zero was located between the values of the LLCI and the ULCI. So this proves that there was a negative significance, indicating that there was no potential significant moderation between gender and attitude towards act or behaviour on the citizens' intentions to participate in the public decision-making of the e-government.

Table 5.56

Summary of Moderator Gender on ATB

			Model Summary			
R	R-sq	MSE	F	df1	df2	p
.8654	.7489	.0862	467.3445	3.0000	470.0000	.0000
			Model			
	coeff	se	t	p	LLCI	ULCI
Constant	1.2805	.4333	2.9550	.0033	.4290	2.1320
Gender	.1672	.3247	.5151	.6067	-.4707	.8052
MATB	.8171	.0641	12.7512	.0000	.6912	.9431
int_1	-.0230	.0481	-.4774	.6333	-.1175	.0715

Table 5.57 displays that the p-value= 0.0000 and the value zero were not located between LLCI=0.1373 and ULCI= 0.1803. From that, it was concluded that the interaction between age and attitude towards act or behaviour was significant, indicating that there was a potential significant moderation between age and attitude towards act or behaviour on the citizens' intentions to participate in the public decision-making of the e-government.

Table 5.57

Summary of Moderator Age on ATB

			Model Summary			
R	R-sq	MSE	F	df1	df2	p
.9153	.8378	.0557	808.9422	3.0000	470.0000	.0000
			Model			
	coeff	se	t	p	LLCI	ULCI
Constant	7.8581	4220	18.6208	.0000	7.0288	8.6873
Age	-1.1272	.0744	-15.1455	.0000	-1.2734	-.9809
MATB	-.1189	.0610	-1.9472	.0521	-.2388	.0011
int_1	.1588	.0109	14.5075	.0000	.1373	.1803

Figure 5.9. Scatter Matrix for Age

To test the hypothesis, Attitude has a positive effect on the citizens' intentions to participate in the public decision-making in the e-government, and more specifically, whether age moderates the relationship between the citizens' intentions to participate in the public decision-making of the e-government (BI) and attitude towards act or behaviour (ATB), a hierarchical multiple regression analysis was conducted. In the first part, two variables were included: attitude towards act or behaviour (ATB) and the citizens' intentions to participate in the public decision-making of the e-government (BI).

These variables were considered for a significant quantity of variances in the citizens' intentions to participate in the public decision-making of the e-government (BI), $R2= .8378$, $F= 808.9422$, $p < .0000$. To avoid potentially problematic high multi-collinearity with the interaction term, the variables were centred and an interaction term was made between attitude towards act or behaviour (ATB) and the citizens' intentions to participate in the public decision-making of the e-government (BI) (Aiken, West, & Reno, 1991; Cohen, Cohen, West, & Aiken, 2013).

The investigation of the interaction plot displayed an enhancing impact, which was that attitude towards act or behaviour and ages from 53 to 60 and above had a lower level of agreement and an average level of agreement with ages from 39 to 45 and 46 to 52, which increased to be higher from the ages of 18 to 38. Figure 5.9 shows that the older ones did not strongly agree, whilst the younger ones strongly agreed with an interaction between attitude towards act or behaviour (ATB) and the citizens' intentions to participate in the public decision-making of the e-government (BI).

Table 5.58 indicates that there was a possibility for significant moderation between education and attitude towards act or behaviour on the citizens' intentions to

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participate in the public decision-making of the e-government. This table shows that the value of p= 0.0000 and the value zero were not located between the values of LLCI= -0.1110 and ULCI= -0.0323. For that, the interaction between education and attitude towards act or behaviour was significant and proved that there was a positive significance.

Table 5.58

Summary of Moderator Education on ATB

			Model Summary			
R	R-sq	MSE	F	df1	df2	p
.8692	.7555	.0839	484.1390	3.0000	470.0000	.0000
			Model			
	coeff	se	t	p	LLCI	ULCI
Constant	-.1133	.4668	-.2426	.8084	-1.0306	.8041
Education	.4888	.1353	3.6120	.0003	.2229	.7547
MATB	1.0241	.0695	14.7275	.0000	.8874	1.1607
int_1	-.0717	.0200	-3.5802	.0004	-.1110	-.0323
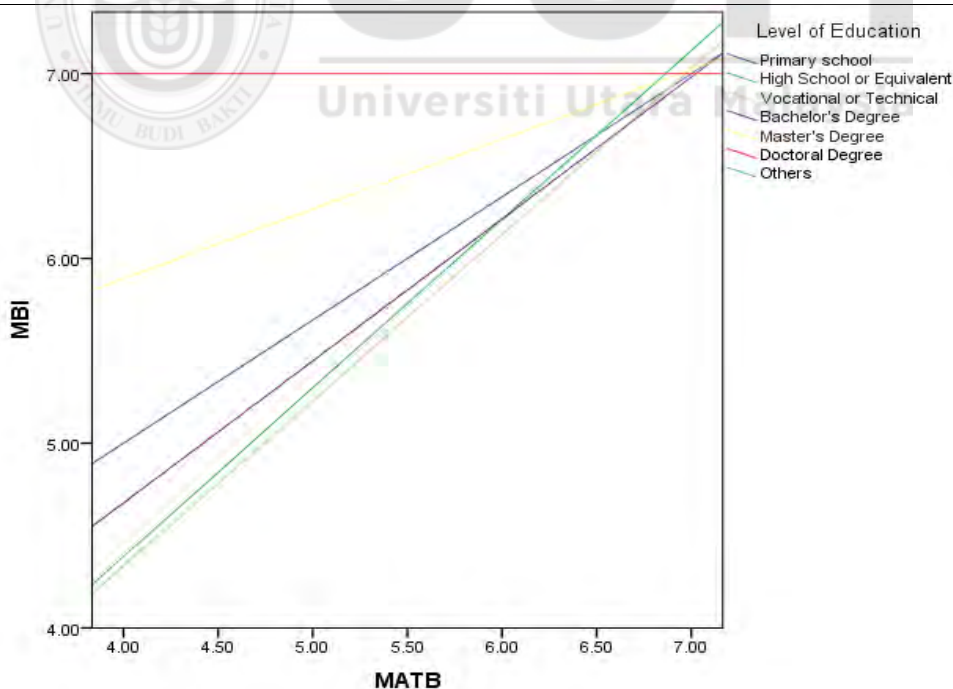
Figure 5.10. Scatter Matrix for Education

Figure 5.10 explained the influences of the education moderator on the relationship between attitude towards act or behaviour (ATB) and the citizens' intentions to

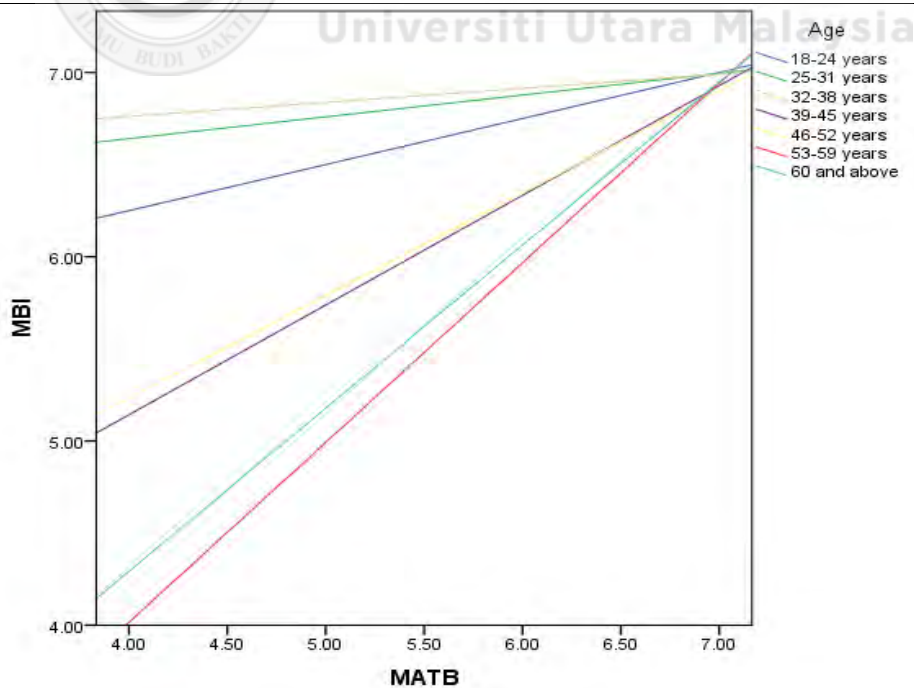participate in the public decision-making of the e-government (BI).This table showed the hypothesis, Attitude has a positive effect on the citizens' intentions to participate in the public decision-making of the e-government. The study used the hierarchical multiple regression analysis to test the level of education's influence on ATB, and the result of the "citizens' intentions to participate in the public decision-making of the e-government (BI)".

Table 5.58 explained the model summary. These variables were considered for a significant quantity of variances in the citizens' intentions to participate in the public decision-making of the e-government (BI); $R2= 0.7555$, $F= 484.1390$, and $p<0.0000$. To avoid potentially problematic high multi-collinearity with the interaction term, the variables were centred and an interaction term was made between attitude towards act or behaviour (ATB) and the citizens' intentions to participate in the public decision-making of the e-government (BI) (Aiken et al., 1991; Cohen et al., 2013).

Investigation of the interaction plot displayed an enhancing impact of attitude towards act or behaviour and education. There was an increase to a higher level of agreement for Doctoral Degree, after that was the Master's Degree, an average level of agreement was found with the Bachelor's Degree and Primary school, and a lower level of agreement was found with Vocational or Technical and high school or Equivalent. Figure 5.10 shows that the Vocational and high school level did not strongly agree, whilst the Doctoral Degree strongly agreed with an interaction between attitude towards act or behaviour (ATB) and the citizens' intentions to participate in the public decision-making of the e-government (BI). These proved that the level of education had a significant effect on the factors.

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Table 5.59 presented that for the values of the LLCI= -0.0614 and ULCI= 0.0231, the value zero was located between them and the value of p=0.3733. For that, this proved that there was a negative significance and the interaction between social group and attitude towards act or behaviour was not significant.

Table 5.59

Summary of Moderator Social groups on ATB

			Model Summary			
R	R-sq	MSE	F	df1	df2	p
.8668	.7513	.0854	473.3803	3.0000	470.0000	.0000
	coeff	se	Model t	p	LLCI	ULCI
Constant	.9559	.5048	1.8937	.0589	-.0360	1.9477
Social Group	.1574	.1446	1.0883	.2770	-.1268	.4415
MATB	.8543	.0748	11.4229	.0000	.7074	1.0013
int_1	-.0192	.0215	-.8912	.3733	-.0614	.0231

Table 5.60 displays the interaction between working and attitude towards act or behaviour as being not significant because p= 0.8411 and LLCI= -0.0540 and ULCI= 0.0440; the value zero was located between them and proved that there was a negative significance. For that, there was no potential significant moderation between working and attitude towards act or behaviour on the citizens' intentions to participate in the public decision-making of the e-government.

Table 5.60

Summary of Moderator Working Sector on ATB

			Model Summary			
R	R-sq	MSE	F	df1	df2	p
.8653	.7488	.0862	466.9848	3.0000	470.0000	.0000
	coeff	se	Model t	p	LLCI	ULCI
Constant	1.4170	.3584	3.9540	.0001	.7128	2.1211
Working Sec	.0385	.1693	.2275	.8202	-.2941	.3712
MATB	.7979	.0528	15.1245	.0000	.6942	.9015
int_1	-.0050	.0249	-.2006	.8411	-.0540	.0440

Table 5.61 shows the p-value= 0.0019, and the value zero was not located between LLCI=-0.1608 and ULCI= -0.0366. That proved that there was a positive significance; and, the interaction between experience and attitude towards act or behaviour was significant, indicating that there was a potential significant moderation between experience and attitude towards act or behaviour on the citizens' intentions to participate in the public decision-making of the e-government.

Table 5.61

Summary of Moderator Internet Experience on ATB

			Model Summary			
R	R-sq	MSE	F	df1	df2	p
.8698	.7565	.0836	486.8342	3.0000	470.0000	.0000
	coeff	se	Model t	p	LLCI	ULCI
Constant	-.2090	.5241	-.3988	.6902	-1.2390	.8209
Internet Exp	.7021	.2018	3.4797	.0005	.3056	1.0985
MATB	1.0259	.0837	12.2623	.0000	.8615	1.1903
int_1	-.0987	.0316	-3.1232	.0019	-.1608	-.0366
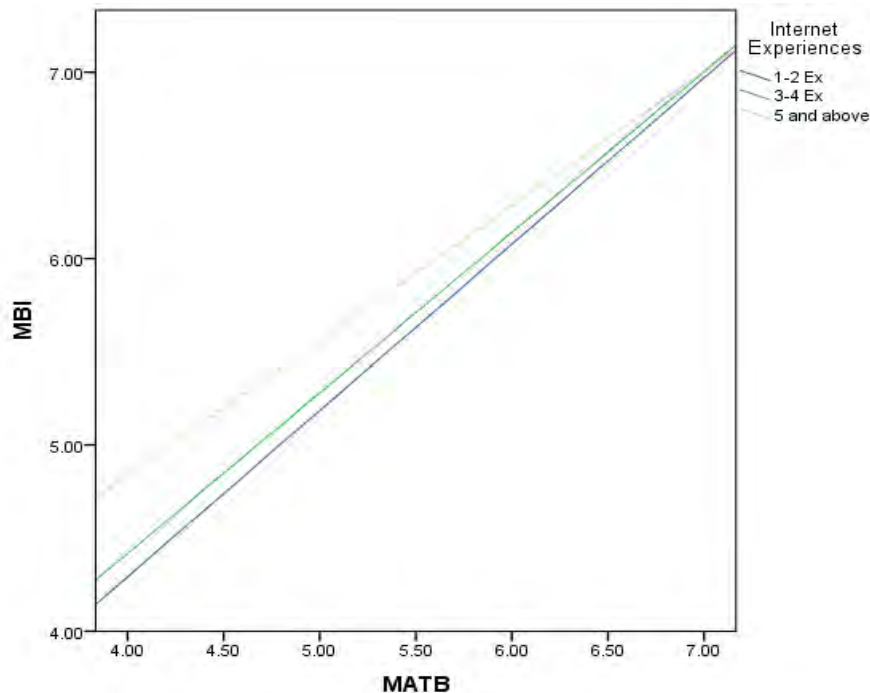
Figure 5.11. Scatter Matrix for Experience

To test the hypothesis of attitude has a positive effect on the citizens' intentions to participate in the public decision-making in the e-government, the study used the hierarchical multiple regression analysis. The result shown by Figure 5.11 ensures that the experience moderated the relationship between the citizens' intentions to participate in the public decision-making of the e-government (BI) and attitude towards act or behaviour (ATB).

These variables were considered for a significant quantity of variances in the citizens' intentions to participate in the public decision-making of the e-government (BI); $R2 = 0.7565$, $F= 486.8342$, and $p < 0.0000$. To avoid potentially problematic high multi-collinearity with the interaction term, the variables were centred and an interaction term was made between attitude towards act or behaviour (ATB) and the citizens' intentions to participate in the public decision-making of the e-government (BI) (Aiken et al., 1991; Cohen et al., 2013).

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Investigation of the interaction plot displayed an enhancing impact of attitude towards act or behaviour and experience; there was an increase to a higher level of agreement for 5 years' experience and above, and then there was a lower level of agreement with 3-4 years' experience and1-2 years' experience. Figure 5.11 shows that 3-4 years' experience and1-2 years' experience agreed, whilst the 5 years' experience and above strongly agreed with an interaction between attitude towards act or behaviour (ATB) and the citizens' intentions to participate in the public decision-making of the e-government (BI). These proved that the level of experience had a significant effect on the factors.

Figure 5.12 clarified that three of the six citizens' self-knowledge characteristics (moderators), which were age, level of education, and Internet experience, affected the first independent factor in the model of this study, the attitude towards act or behaviour (ATB). Thus, these three moderators influenced the result of the citizens' intentions to participate in the public decision-making of the e-government (dependent factor).
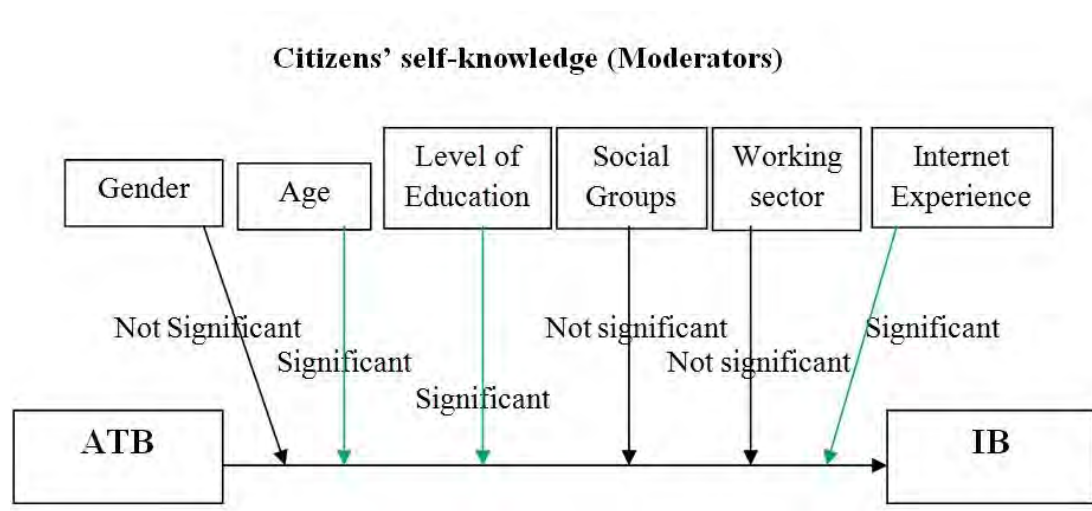
Figure 5.12. Summary of Moderators that had an Effect on ATB

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5.5.8.2 Moderator Variables on the Subjective Norms

The first step of the output of all of the variables in the test was indicating which was deemed as a dependent variable, the citizens' intentions to participate in the public decision-making of the e-government (BI); which was an independent variable, subjective norms (SN); and which was a moderator of gender, age, level of education, social group, and Internet experiences (M). The total sample size (474) was also displayed. Then, the outcome from a regression was offered, which contained the interaction impact between the moderator and the independent variable.

Table 5.62 shows that the interaction between gender and subjective norms was not significant because p= 0.7026 and LLCI= -0.11995 and ULCI= 0.1772, and the value zero was located between the values of the LLCI and the ULCI. So, this proves that there was a negative significance, indicating that there was no potential significant moderation between gender and subjective norms on the citizens' intentions to participate in the public decision-making of the e-government.

Table 5.62

Summary of Moderator Gender on SN

			Model Summary			
R	R-sq	MSE	F	df1	df2	p
.5632	.3172	.2344	72.7829	3.0000	470.0000	.0000
			Model			
	coeff	se	t	p	LLCI	ULCI
Constant	3.6863	.6895	5.3466	.0000	2.3315	5.0412
Gender	-.1873	.5082	-.3684	.7127	-1.1860	.8115
MSN	.4626	.1022	4.5249	.0000	.2617	.6635
int_1	.0288	.0755	.3820	.7026	-.1195	.1772

Table 5.63 offered the possibility of significant moderation between age and subjective norms on the citizens' intentions to participate in the public decision-

making of the e-government. This table shows the value of p=0.0000, and the value zero was not located between the values of the LLCI= -0.1062 and the ULCI= -0.1626. For that, the interaction between age and subjective norms was significant and proved that there was positive significance.

Table 5.63

Summary of Moderator Age on SN

			Model Summary			
R	R-sq	MSE	F	df1	df2	p
.7267	.5282	.1620	175.3648	3.0000	470.0000	.0000
	coeff	se	Model t	p	LLCI	ULCI
Constant	8.5633	.4622	18.5279	.0000	7.6551	9.4715
Age	-1.0227	.0952	-10.7376	.0000	-1.2098	-.8355
MSN	-.2003	.0675	-2.9683	.0031	-.3328	-.0677
int_1	.1344	.0143	9.3711	.0000	.1062	.1626
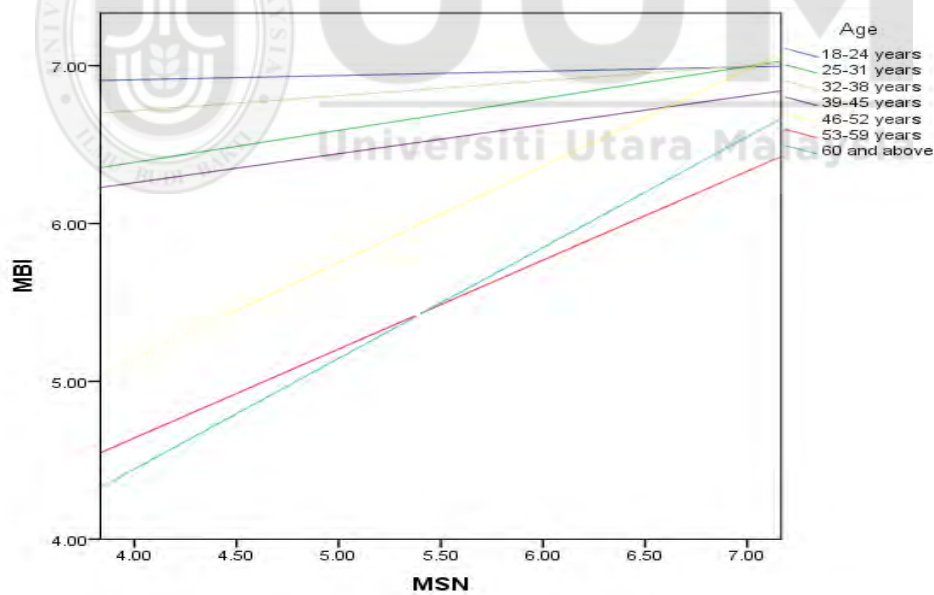
Figure 5.13. Scatter Matrix for Moderator Age on SN

To test the hypothesis, the subjective norms have a positive effect on the citizens' intentions to participate in the public decision-making in the e-government, specifically, whether age moderated the relationship between the citizens' intentions to participate in the public decision-making of the e-government (BI) and subjective

norms (SN), a hierarchical multiple regression analysis was conducted. Two variables were included: subjective norms (SN) and the citizens' intentions to participate in the public decision-making of the e-government (BI). These variables were considered for a significant quantity of variances in the citizens' intentions to participate in the public decision-making of the e-government (BI); $R^2 = 0.5282$, $F= 175.3648$, and $p<0.0000$. Investigation of the interaction plot displayed an enhancing impact of subjective norms and age; from 53 to 60 and above there was a lower level of agreement, an average level of agreement was found with ages from 39 to 45 and 46 to 52, and there was an increased to a higher level from ages 18 to 38. Figure 5.13 shows that the older ones did not strongly agree, whilst the younger ones strongly agreed with an interaction between subjective norms (SN) and the citizens' intentions to participate in the public decision-making of the e-government (BI).

Table 5.64 displays that the p-value= 0.2947, and the value zero was located between the LLCI=-0.0984 and the ULCI= 0.0299. From that, it has been concluded that the interaction between level of education and subjective norms was not significant, indicating that there was a potential for no significant moderation between education and subjective norms on the citizens' intentions to participate in the public decision-making of the e-government.

Table 5.64

Summary of Moderator Education on SN

			Model Summary			
R	R-sq	MSE	F	df1	df2	p
.5662	.3205	.2333	73.9063	3.0000	470.0000	.0000
	coeff	se	Model t	p	LLCI	ULCI
Constant	2.6458	.7426	3.5627	.0004	1.1865	4.1051
Education	.2563	.2197	1.1665	.2440	-.1755	.6881
MSN	.6047	.1111	5.4411	.0000	.3863	.8231
int_1	-.0342	.0326	-1.0491	.2947	-.0984	.0299

Table 5.65 presents the value of the LLCI= -0.2293 and the ULCI= -0.0997.The value zero was not located between them, and the value of p=0.0000. That proved that there was a positive significance and the interaction between social group and subjective norms was significant.

Table 5.65

Summary of Moderator Social Groups on SN

			Model Summary			
R	R-sq	MSE	F	df1	df2	p
.5928	.3514	.2227	84.8720	3.0000	470.0000	.0000
	coeff	se	Model t	p	LLCI	ULCI
Constant	-.1306	.7578	-.1723	.8632	-1.6197	1.3585
Social Group	1.0906	.2211	4.9321	.0000	.6561	1.5251
MSN	1.0390	.1131	9.1861	.0000	.8167	1.2613
int_1	-.1645	.0330	-4.9863	.0000	-.2293	-.0997
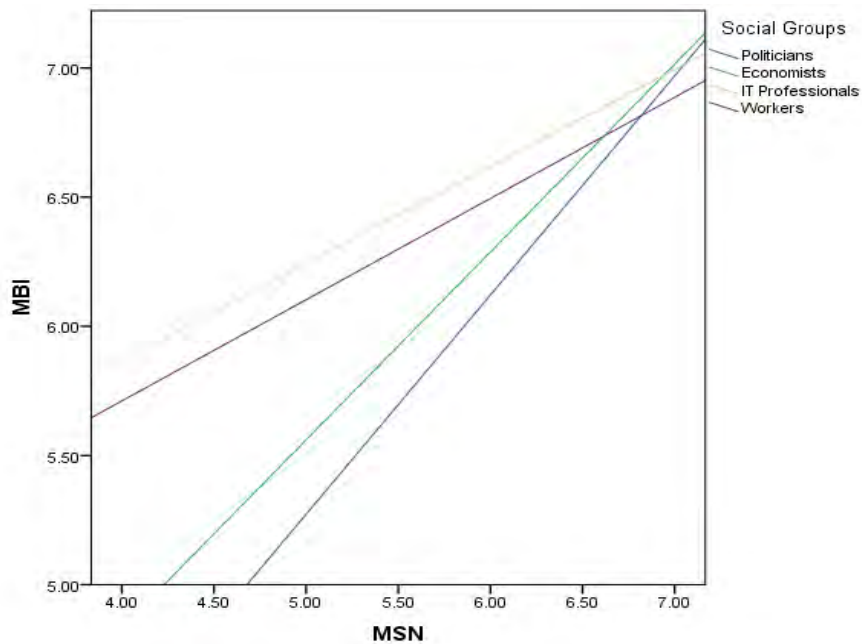
Figure 5.14. Scatter Matrix for Moderator Social Groups on SN

Figure 5.14 explained the influences of the social group moderator on the relationship between subjective norms (SN) and the citizens' intentions to participate in the public decision-making of the e-government (BI). This table showed that the hypothesis, subjective norms, has a positive effect on the citizens' intentions to participate in the public decision-making of the e-government. The study used the hierarchical multiple regression analysis to test the social group's influences on SN and the result of the "citizens' intentions to participate in the public decision-making of the e-government (BI)".These variables were considered for a significant quantity of variances in the citizens' intentions to participate in the public decision-making of the e-government (BI); $R^2 = 0.3514$, $F = 84.8720$, and $p < 0.0000$. Investigation of the interaction plot displayed an enhancing impact of subjective norms and social group; it increased to a higher level of agreement for the IT Professionals, and then for the Workers, and a lower level of agreement was found with the Economists and Politicians. Figure 5.14 shows that the economists and politicians did not strongly agree, whilst, the IT professionals and workers strongly agreed with an interaction

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between subjective norms (SN) and the citizens' intentions to participate in the public decision-making of the e-government (BI). These proved that social group had a significant effect on the factors.

Table 5.66 displays that the interaction between working and subjective norms was not significant because p= 0.5464, and the LLCI= -0.0575 and ULCI= 0.1085.The value zero was located between them and proved that there was a negative significance. For that, the indication was that there was no potential significant moderation between working and subjective norms on the citizens' intentions to participate in the public decision-making of the e-government.

Table 5.66

Summary of Moderator Working Sector on SN

			Model Summary			
R	R-sq	MSE	F	df1	df2	p
.5637	.3178	.2342	72.9859	3.0000	470.0000	.0000
			Model			
	coeff	se	t	p	LLCI	ULCI
Constant	3.7721	.6302	5.9856	.0000	2.5338	5.0105
Working Sec	-.1603	.2863	-.5600	.5758	-.7230	.4023
MSN	.4480	.0928	4.8274	.0000	.2656	.6304
int_1	.0255	.0423	.6037	.5464	-.0575	.1085

Table 5.67 shows that the p-value= 0.0014, and the value zero was not located between the LLCI= -0.2677 and the ULCI= -0.0643. That proved that there was a positive significance and the interaction between experience and subjective norms was significant, indicating that there was a potential significant moderation between experience and subjective norms on the citizens' intentions to participate in the public decision-making of the e-government.

Table 5.67

Summary of Moderator Internet Experience on SN

			Model Summary			
R	R-sq	MSE	F	df1	df2	p
.5869	.3444	.2251	82.3151	3.0000	470.0000	.0000
			Model			
	coeff	se	t	p	LLCI	ULCI
Constant	.5938	.8417	.7055	.4809	-1.0601	2.2477
Internet Exp	1.2055	.3248	3.7118	.0002	.5673	1.8437
MSN	.8881	.1374	6.4622	.0000	.6180	1.1581
int_1	-.1660	.0518	-3.2072	.0014	-.2677	-.0643
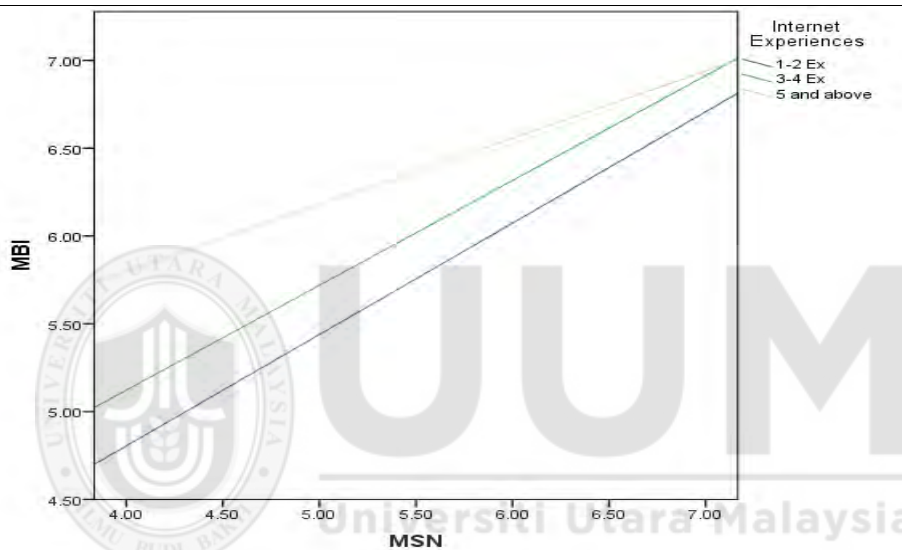
Figure 5.15. Scatter Matrix for Moderator Experience on SN

To test the hypothesis, subjective norms have a positive effect on the citizens'
intentions to participate in the public decision-making in the e-government, the study
used the hierarchical multiple regression analysis. The result shown in Figure 5.15
ensures that experience moderates the relationship between the citizens' intentions to
participate in the public decision-making of the e-government (BI) and subjective
norms (SN).

These variables were considered for a significant quantity of variances in the
citizens' intention to participate in the public decision-making of the e-government
(BI); $R2 = 0.3444$, $F= 82.3151$, and $p < 0.0000$. To avoid potentially problematic

high multi-collinearity with the interaction term, the variables were centred and an interaction term was made between subjective norms (SN) and the citizens' intentions to participate in the public decision-making of the e-government (BI) (Aiken et al., 1991; Cohen et al., 2013).

Investigation of the interaction plot displayed an enhancing impact of subjective norms and experience; it increased to a higher level of agreement for 5 years' experience and above, and then there was a lower level of agreement with 3-4 years' experience and1-2 years' experience. Figure 5.15 shows that the 3-4 years' experience and1-2 years' experience did not strongly agree, whilst the 5 years' experience and above strongly agreed with an interaction between subjective norms (SN) and the citizens' intentions to participate in the public decision-making of the e-government (BI). These proved that the level of experience had a significant effect on the factors.

Figure 5.16 displays that the second independent factor in the model of this research, which was subjective norms (SN), was affected by three of the six citizens' self-knowledge characteristics (moderators), which were age, social group, and Internet experience. Then, the outcome of the citizens' intentions to participate in the public decision-making of the e-government (dependent factor) was influenced.
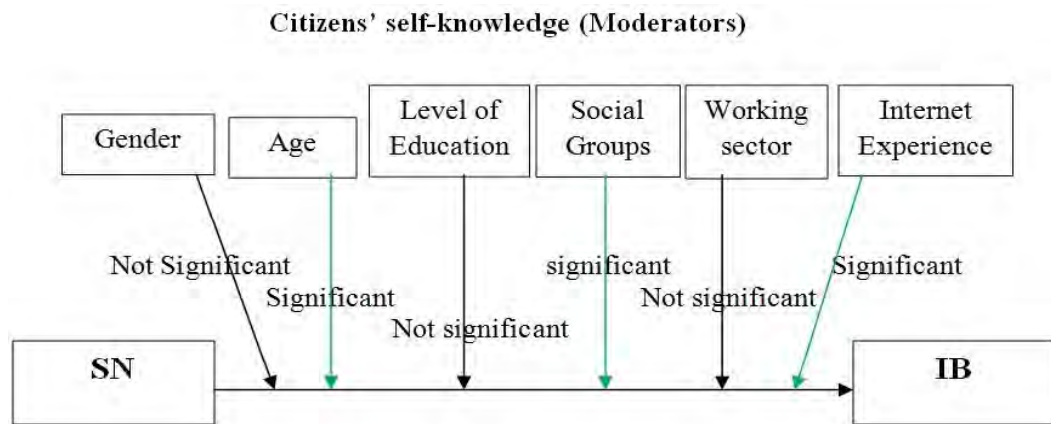
Figure 5.16. Summary of Moderators that had an Effect on SN

5.5.8.3 Moderator Variables on the Social Influence

The first step of the output of all of the variables in the test was indicating which was deemed as a dependent variable, the citizens' intentions to participate in the public decision-making of the e-government (BI); which was an independent variable, social influence (SI); and which was a moderator; gender, age, level of education, social group, and Internet experiences (M). The total sample size (474) was also displayed. Then, the outcome from a regression was offered which contained the interaction impact between the moderator and the independent variable.

Table 5.68 offers the p= 0.0657> p= 0.05, and the LLCI= -0.2422 and ULCI= 0.0076; the value zero was located between them. So, this proved there was a negative significance, indicating that there was no potential significant moderation between gender and social influence on the citizens' intentions to participate in the public decision-making of the e-government. The interaction between gender and social influence was not significant.

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Table 5.68

Summary of Moderator Gender on SI

			Model Summary			
R	R-sq	MSE	F	df1	df2	p
.6447	.4156	.2006	111.4118	3.0000	470.0000	.0000
	coeff	se	Model t	p	LLCI	ULCI
Constant	2.1107	.5981	3.5292	.0005	.9355	3.2859
Gender	.8156	.4234	1.9264	.0547	-.0164	1.6475
MSI	.6975	.0894	7.8005	.0000	.5218	.8732
int_1	-.1173	.0636	-1.8447	.0057	-.2422	-.0076

Table 5.69 shows that the interaction between age and social influence was significant because p= 0.0000, and the LLCI= 0.1600 and the ULCI= 0.2048.The value zero was not located between the values of the LLCI and the ULCI. So, this proved that there was a positive significance, indicating that was a potential significant moderation between age and social influence on the citizens' intentions to participate in the public decision-making of the e-government.

Table 5.69

Summary of Moderator Age on SI

			Model Summary			
R	R-sq	MSE	F	df1	df2	p
.8277	.6851	.1081	340.8916	3.0000	470.0000	.0000
	coeff	se	Model t	p	LLCI	ULCI
Constant	9.1737	.3477	26.3811	.0000	8.4904	9.8571
Age	-1.3092	.0747	-17.5227	.0000	-1.4560	-1.1624
MSI	-.3016	.0512	-5.8846	.0000	-.4023	-.2009
int_1	.1824	.0114	15.9864	.0000	.1600	.2048
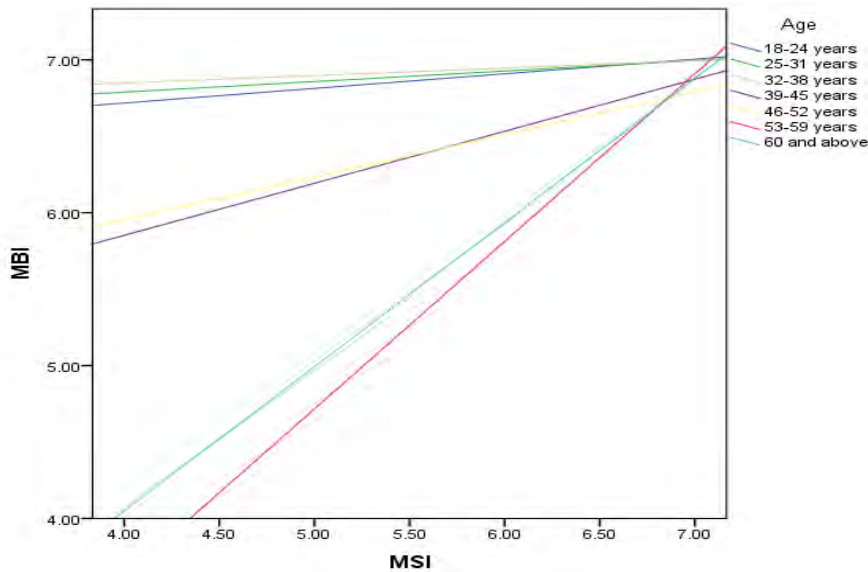
Figure 5.17. Scatter Matrix for Moderator Age on SI

Figure 5.17 explained the influences of the age moderator on the relationship between social influence (SI) and the citizens' intentions to participate in the public decision-making of the e-government (BI). This table showed the hypothesis, social influence has a positive effect on the citizens' intentions to participate in the public decision-making of the e-government. The study used the hierarchical multiple regression analysis to test age influences on SI and the result of the "citizens' intentions to participate in the public decision-making of the e-government (BI)". These variables were considered for a significant quantity of variances in the citizens' intentions to participate in the public decision-making of the e-government (BI); $R^2 = 0.3514$, F= 84.8720, and p< 0.0000. Figure 5.17 displayed an enhancing impact of social influence and ages from 53 to 60 and above with a lower level of agreement, an average level of agreement with ages from 39 to 45 and 46 to 52, and an increased that was strongly higher from ages 18 to 38. Figure 5.18 shows that the older ones did not strongly agree, whilst the younger ones strongly agreed with an interaction between social influence (SI) and the citizens' intentions to participate in the public decision-making of the e-government (BI).

Table 5.70 indicates that there was a possibility of a significant moderation between level of education and social influence on the citizens' intentions to participate in the public decision-making of the e-government. This table shows that the value of p= 0.0000, and the zero number was not located between the values of the LLCI= -0.1913 and the ULCI= -0.076. For that, the interaction between education and social influence was significant and proved that there was a positive significance.

Table 5.70

Summary of Moderator Education on SI

Model Summary						
R	R-sq	MSE	F	df1	df2	p
.6635	.4402	.1922	123.2037	3.0000	470.0000	.0000

Model						
	coeff	se	t	p	LLCI	ULCI
Constant	.0162	.6970	.0233	.9815	-1.3535	1.3859
Education	.9321	.1947	4.7878	.0000	.5496	1.3147
MSI	.9984	.1047	9.5382	.0000	.7927	1.2040
int_1	-.1341	.0291	-4.6069	.0000	-.1913	-.076
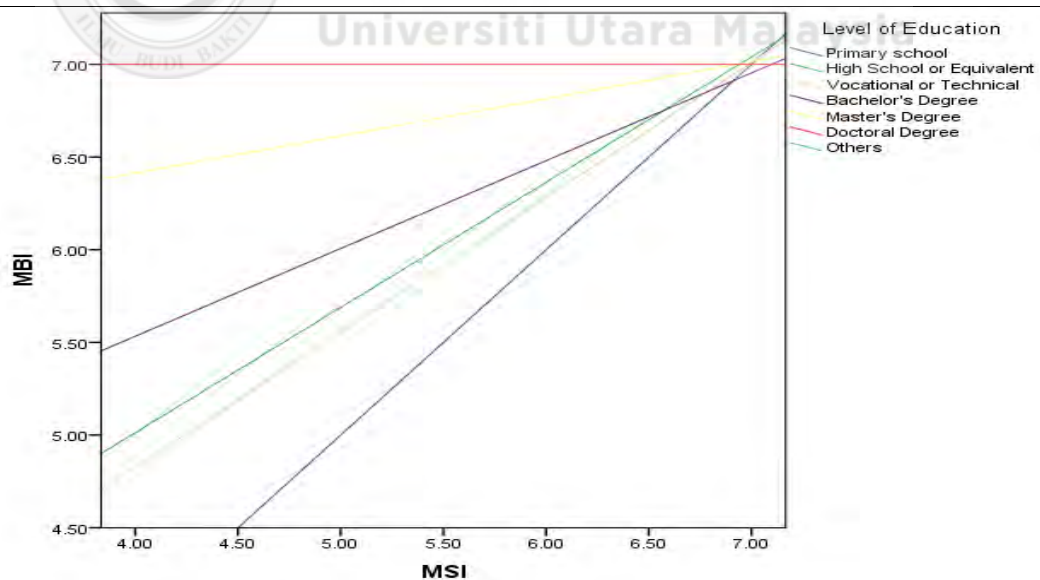
Figure 5.18. Scatter Matrix for Moderator Education on SI

To test the hypothesis that, the social influence will have a positive influence on the citizens' intentions towards participation in the public decision-making, and more

specifically, whether education moderates the relationship between the citizens'
intentions to participate in the public decision-making of the e-government (BI) and
social influence (SI), a hierarchical multiple regression analysis was conducted. In
the first part, two variables were included: social influence (SI) and the citizens'
intentions to participate in the public decision-making of the e-government (BI).
These variables were considered for a significant quantity of variances in the
citizens' intentions to participate in the public decision-making of the e-government
(BI); $R^2 = 0.4402$, F= 123.2037, and p <0.0000.

Investigation of the interaction plot displayed an enhancing impact of social
influence and education; it increased to a higher level of agreement for the Doctoral
Degree, then for the Master's Degree, and average level of agreement was found with
the Bachelor's Degree and Vocational or Technical, and a lower level of agreement
was found with Primary school and high school or Equivalent. Figure 5.18 shows
that Primary school did not strongly agree, whilst the Doctoral Degree strongly
agreed with an interaction between social influence (SI) and the citizens' intentions
to participate in the public decision-making of the e-government (BI). These proved
that the level of education had a significant effect on the factors.

Table 5.71 presents the values of the LLCI= -0.1505 and the ULCI= -0.0179 with the
value zero not being located between them, and the value of p= 0.0129. For that, this
proved that there was a positive significance and the interaction between social group
and social influence was not significant.

Table 5.71

Summary of Moderator Social Groups on SI

			Model Summary			
R	R-sq	MSE	F	df1	df2	p
.6510	.4238	.1978	115.2317	3.0000	470.0000	.0000
			Model			
	coeff	se	t	p	LLCI	ULCI
Constant	1.1312	.7819	1.4467	.1486	-.4053	2.6676
Social Group	.6109	.2271	2.6903	.0074	.1647	1.0571
MSI	.8267	.1156	7.1491	.0000	.5995	1.0539
int_1	-.0842	.0337	-2.4949	.0129	-.1505	-.0179
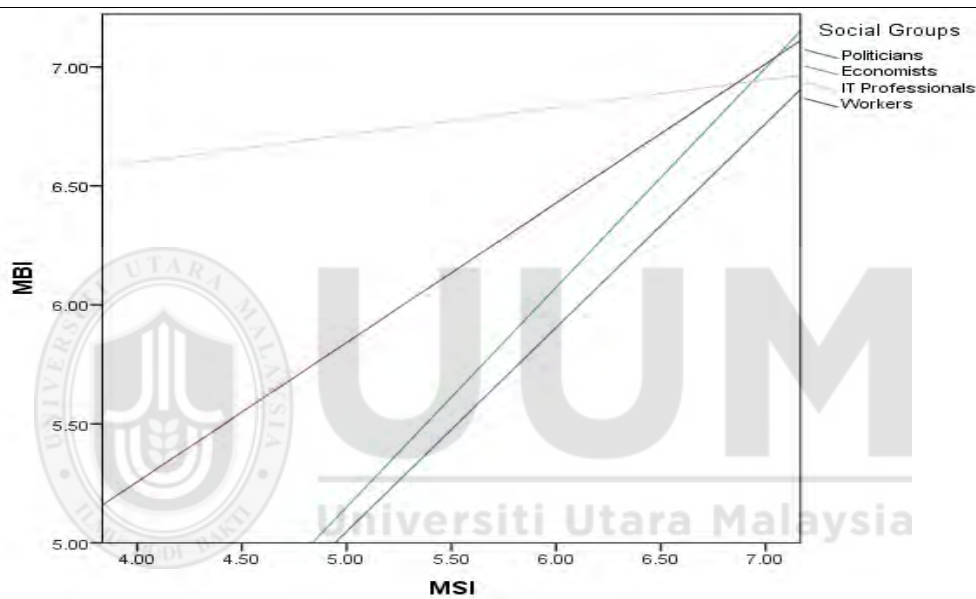
Figure 5.19. Scatter Matrix for Moderator Social Groups on SI

Figure 5.19 explained the influences of the social group moderator on the relationship between social influence (SI) and the citizens' intentions to participate in the public decision-making of the e-government (BI). This table showed that the hypothesis, social influence, had a positive effect on the citizens' intentions to participate in the public decision-making of the e-government. The study used the hierarchical multiple regression analysis to test the social group's influences on SI and the result of the "citizens' intentions to participate in the public decision-making of the e-government (BI)". These variables were considered for a significant quantity

of variances in the citizens' intentions to participate in the public decision-making of the e-government (BI); R2= 0.4238, F= 115.2317, and p< 0.0129.

Investigation of the interaction plot displayed an enhancing impact of social influence and social group; it increased to a higher level of agreement for the IT Professionals, then for the Workers, and a lower level of agreement was found with the Economists and Politicians. Figure 5.19 shows that the economists and politicians did not strongly agree, whilst the IT professionals and workers strongly agreed with an interaction between social influence (SI) and the citizens' intentions to participate in the public decision-making of the e-government (BI). These proved that social group had a significant effect on the factors.

Table 5.72 displays that the interaction between working and social influence was not significant because p= 0.0000, and LLCI= 0.0910 and ULCI= 0.2311.The zero number was not located between them and this proved that there was a positive significance. For that, there was a potential significant moderation between working and social influence on the citizens' intention to participate in the public decision-making of the e-government.

Table 5.72

Summary of Moderator Working Sector on SI

			Model Summary			
R	R-sq	MSE	F	df1	df2	p
.6603	.4360	.1978	121.1027	3.0000	470.0000	.0000
	coeff	se	Model t	p	LLCI	ULCI
Constant	5.1975	.4777	10.8810	.0000	4.2589	6.1361
Working Sec	-1.1021	.2405	-4.5829	.0000	-1.5746	-.6295
MSI	.2488	.0711	3.5017	.0005	.1092	.3885
int_1	.1610	.0357	4.5147	.0000	.0910	.2311
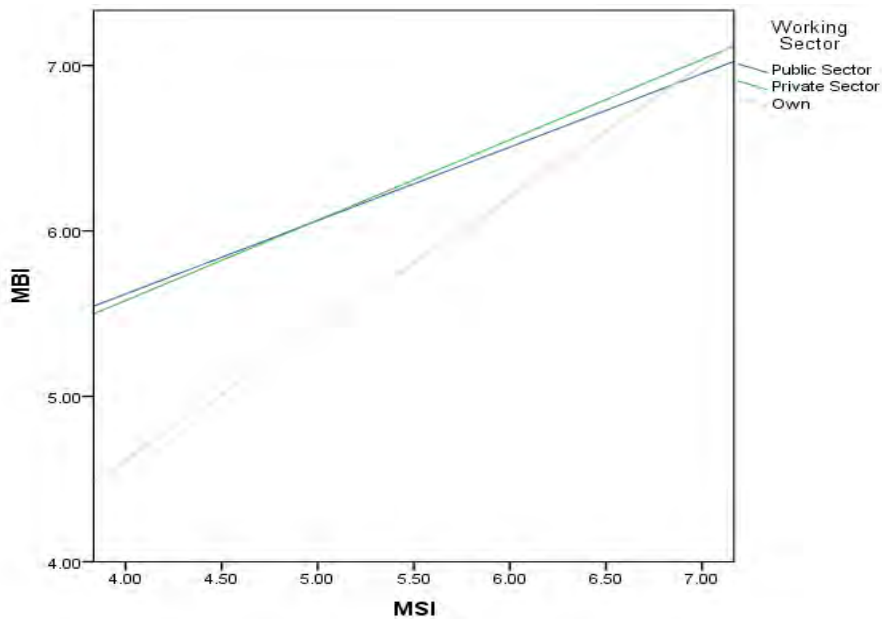
Figure 5.20. Scatter Matrix for Moderator Working Sector on SI

Figure 5.20 showed the hypothesis, social influence will have a positive influence on the citizens' intention towards participation in public decision-making, specifically, whether working sector moderates the relationship between the citizens' intentions to participate in the public decision-making of the e-government (BI) and social influence (SI). In this regard, a hierarchical multiple regression analysis was conducted. In the first part, two variables were included: social influence (SI) and the citizens' intentions to participate in the public decision-making of the e-government (BI). These variables were considered for a significant quantity of variances in the citizens' intentions to participate in the public decision making of the e-government (BI); R2 = 0.4360, F= 121.1027, and p <0.0000.

Figure 5.20 displayed an enhancing impact of social influence and worker; it increased to a higher level of agreement for the private sector, then for the public sector there is an average level of agreement with one's ownership. Figure 5.20 showed that own sector did not strongly agree, whilst the private sector strongly

agreed with an interaction between social influence (SI) and the citizens' intentions to participate in the public decision-making of the e-government (BI). These proved that working sector has a significant effect on the factors.

Table 5.73 shows the p-value= 0.0000, and the value zero was not located between the LLCI= -0.1608 and ULCI= -0.1756. That proved there was a positive significance and interaction between experience and social influence which was significant, indicating that there was a potential significant moderation between experience and social influence on the citizens' intentions to participate in the public decision-making of the e-government.

Table 5.73

Summary of Moderator Internet Experience on SI

			Model Summary			
R	R-sq	MSE	F	df1	df2	p
.6750	.4557	.1869	131.1452	3.0000	470.0000	.0000

			Model			
	coeff	se	t	p	LLCI	ULCI
Constant	-.9490	.8161	-1.1629	.2455	-2.5527	.6547
Internet Exp	1.6225	.3000	5.4076	.0000	1.0329	2.2121
MSI	1.1320	.1338	8.4618	.0000	.8691	1.3949
int_1	-.2316	.0485	-4.7786	.0000	-.3268	-.1364
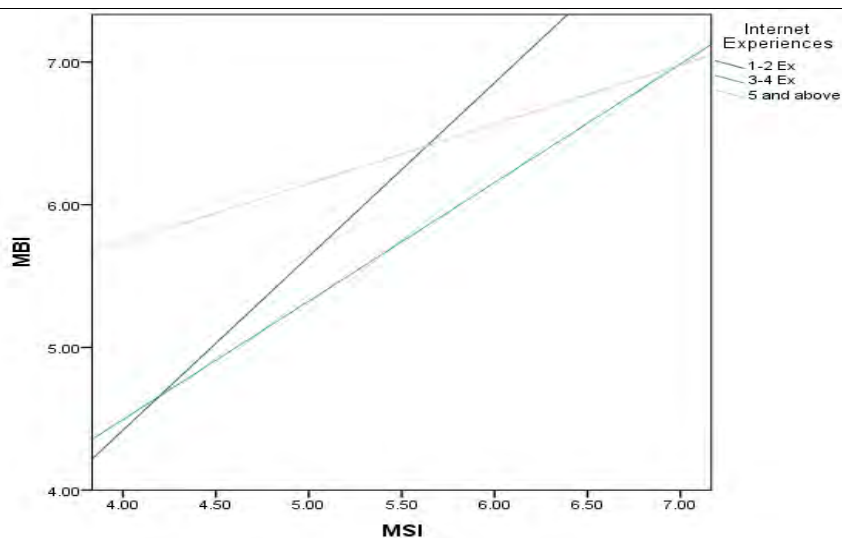
Figure 5.21. Scatter Matrix for Moderator experience on SI

Figure 5.21 explained that the influences of experience moderated the relationship between social influence (SI) and the citizens' intentions to participate in the public decision-making of the e-government (BI). This table showed the hypothesis, social influence has a positive effect on the citizens' intentions to participate in the public decision-making of the e-government. The study used the hierarchical multiple regression analysis to test experience's influences on SI and the result of the "citizens' intentions to participate in the public decision-making of the e-government (BI)".

These variables were considered for a significant quantity of variances in the citizens' intentions to participate in the public decision-making of the e-government (BI).Table 5.73 explained the R^2 = 0.4557, F= 131.1452, and p <0.0000.Investigation of the interaction plot displayed an enhancing impact of social influence and experience; it increased to a higher level of agreement for 5 years' experience and above, and an average level of agreement with 3-4 and 1-2 years' experience.

Figure 5.21 shows that the 5 years' experience and above was higher for strongly agreed with an interaction between social influence (SI) and the citizens' intentions to participate in the public decision-making of the e-government (BI). These proved that experience had a significant effect on the factors.

Figure 5.22 showed the impact of five moderators of the citizens' self-knowledge characteristics (age, level of education, social group, working sector, and Internet experience) on the third independent factor in the model of this study, social influence (SI). As a result, the dependent factor in this study, the citizens' intentions

to participate in the public decision-making of the e-government was affected by the five aforementioned moderators.

Citizens' self-knowledge (Moderators)
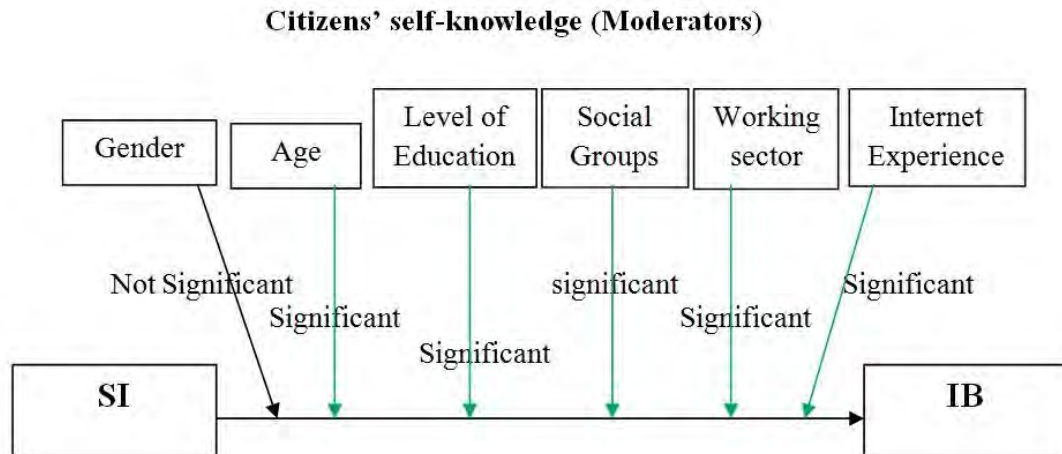
Figure 5.22. Summary of Moderators that have an Effect on SI

5.5.8.4 Moderator Variables on the Facilitating Conditions

The first step of the output of all of the variables in the test was indicating which was deemed as a dependent variable, the citizens' intentions to participate in the public decision-making of the e-government (BI); which was an independent variable, facilitating conditions (FC); and which was a moderator, gender, age, level of education, social group, and Internet experiences (M). The total sample size (474) was also displayed. Then, the outcome from a regression was offered which contained the interaction impact between the moderator and the independent variable.

Table 5.74 shows that the interaction between gender and facilitating conditions was significant because p= 0.026, and the LLCI= -0.3024 and the ULCI= -0.0643.The value zero was not located between the values of the LLCI and the ULCI. So, this proves that there was a positive significance, indicating that there was a potential

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significant moderation between gender and facilitating conditions on the citizens'

intentions to participate in the public decision-making of the e-government.

Table 5.74

Summary of Moderator Gender on FC

			Model Summary			
R	R-sq	MSE	F	df1	df2	p
.7804	.6090	.1342	244.0438	3.0000	470.0000	.0000
	coeff	se	Model t	p	LLCI	ULCI
Constant	.1145	.5673	.2018	.8401	-1.0003	1.2293
Gender	1.2622	.4121	3.0631	.0023	.4525	2.0719
MFC	.9810	.0832	11.7855	.0000	.8175	1.1446
int_1	-.1833	.0606	-3.0257	.0026	-.3024	-.0643
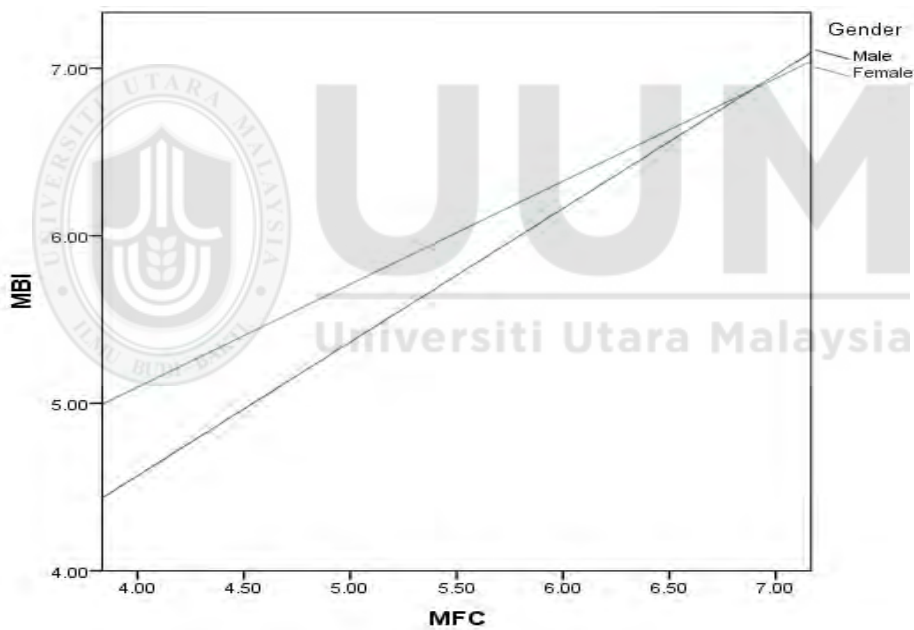
Figure 5.23. Scatter Matrix for Moderator Gender on FC

Figure 5.23 explained the influences of gender's moderation of the relationship

between facilitating conditions (FC) and the citizens' intentions to participate in the

public decision-making of the e-government (BI). This table showed that the

hypothesis, facilitating conditions, had a positive effect on the citizens' intentions to

participate in the public decision-making of the e-government. The study used the

hierarchical multiple regression analysis to test gender's influences on FC and the

result of the "citizens' intentions to participate in the public decision-making of the e-government (BI)".

Table 5.74 explained that these variables were considered for a significant quantity of variances in the citizens' intentions to participate in the public decision-making of the e-government (BI); $R2 = 0.3514$, $F= 84.8720$, and $p< 0.0000$. Investigation of the interaction plot displayed an enhancing impact of facilitating conditions and gender; it increased to a higher level of agreement for females and an average level of agreement for males.

Figure 5.23 shows that females had a higher amount of strongly agreed with an interaction between facilitating conditions (FC) and the citizens' intentions to participate in the public decision-making of the e-government (BI). These proved that gender had a significant effect on the factors. Investigation of the interaction plot displayed an enhancing impact of facilitating conditions and gender; it increased to a higher level of agreement for females and an average level of agreement males.

Table 5.75 displays the p-value= 0.0000, and the zero number was not located between the LLCI= 0.0993 and the ULCI= 0.1442. From that, it was concluded that the interaction between age and facilitating conditions (FC) was significant, indicating that there was a potential significant moderation between age and facilitating conditions on the citizens' intentions to participate in the public decision-making of the e-government.

Table 5.75

Summary of Moderator Age on FC

			Model Summary			
R	R-sq	MSE	F	df1	df2	p
.8526	.7269	.0938	416.9374	3.0000	470.0000	.0000
			Model			
	coeff	se	t	p	LLCI	ULCI
Constant	6.6428	.4080	16.2805	.0000	5.8410	7.4445
Age	-.9077	.0767	-11.8326	.0000	-1.0584	-.7570
MFC	.0665	.0591	1.1253	.2611	-.0496	.1826
int_1	.1217	.0114	10.6524	.0000	.0993	.1442
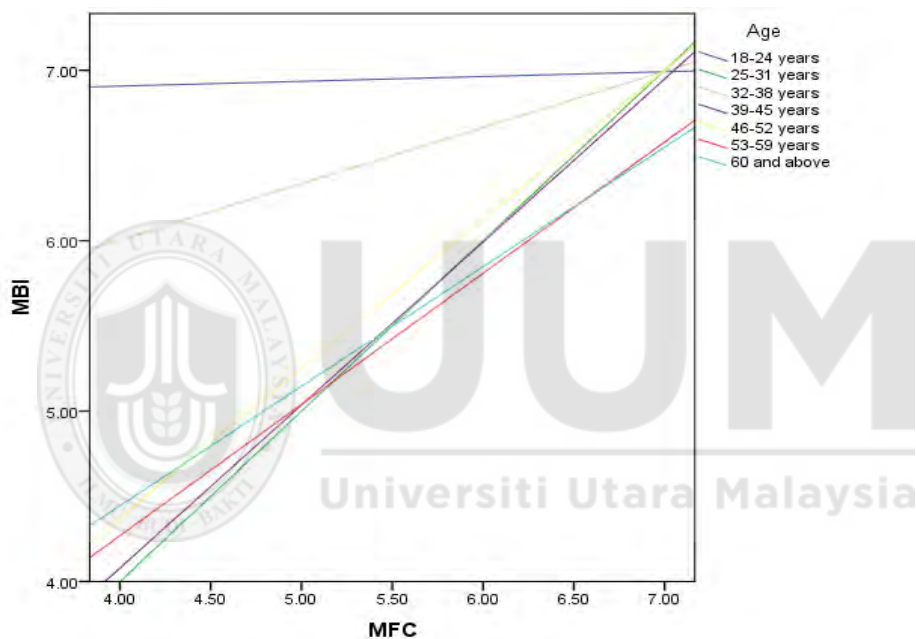
Figure 5.24. Scatter Matrix for Moderator Age on FC

Table 5.75 explained that these variables were considered for a significant quantity of variances in the citizens' intentions to participate in the public decision-making of the e-government (BI); R2 = 0.7269, F= 416.9374, and p < 0.0000. Figure 5.24 showed the hypothesis, facilitating conditions will have a positive influence on the behavioural intentions of the citizens for participation in the public decision-making of the e-government, and more specifically, whether age moderates the relationship between the citizens' intentions to participate in the public decision-making of thee-

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government (BI) and facilitating conditions (FC). In this regard a hierarchical multiple regression analysis was conducted. In the first part, two variables were included: facilitating conditions (FC) and the citizens' intentions to participate in the public decision-making of the e-government (BI).

Investigation of the interaction plot displayed an enhancing impact of facilitating conditions and age from 53 to 60 and above with a lower level of agreement, an average level of agreement was found with ages from 39 to 45 and 46 to 52, and increased to a strongly higher level from ages 18 to 38. Figure 5.24 shows that the older ones did not strongly agree, whilst the younger ones strongly agreed with an interaction between facilitating conditions (FC) and the citizens' intentions to participate in the public decision-making of the e-government (BI). These proved that age had a significant effect on the factors.

Table 5.76 indicates that there was a possibility of a significant moderation between education level and facilitating conditions (FC) on the citizens' intentions to participate in the public decision-making of the e-government. This table shows the value of p= 0.0035, and the value zero was not located between the values of the LLCI= 0.0268 and the ULCI= 0.1356. For that, the interaction between education and facilitating conditions was significant and proved that there was a positive significance.

Table 5.76

Summary of Moderator Education on FC

			Model Summary			
R	R-sq	MSE	F	df1	df2	p
.7800	.6083	.1345	243.3366	3.0000	470.0000	.0000
	coeff	se	Model t	p	LLCI	ULCI
Constant	3.4474	.6079	5.6706	.0000	2.2528	4.6420
Education	-.5532	.1893	-2.9226	.0036	-.9251	-.1812
MFC	.4934	.0896	5.5049	.0000	.3173	.6696
int_1	.0812	.0277	2.9324	.0035	.0268	.1356
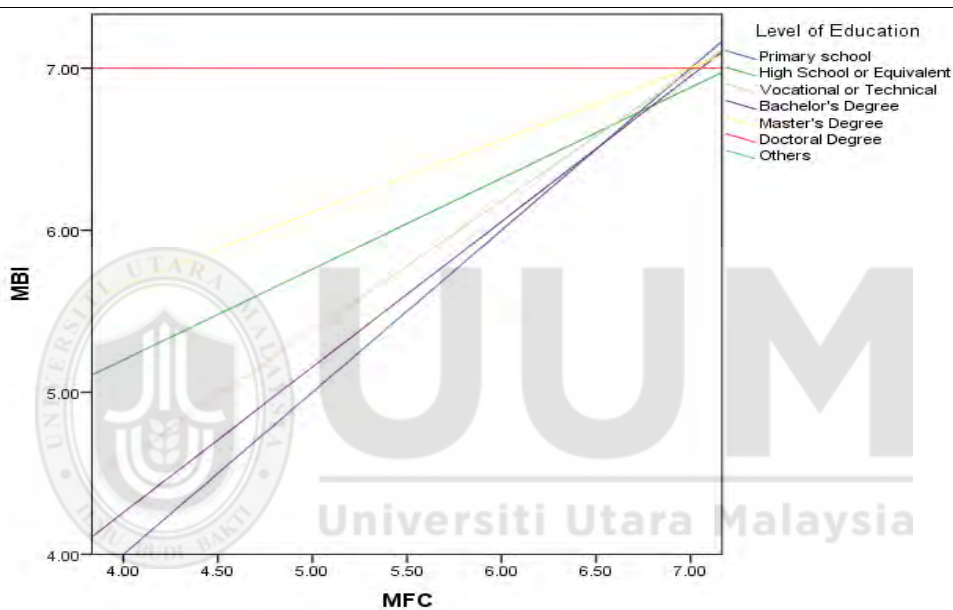
Figure 5.25. Scatter Matrix for Moderator Education on FC

Figure 5.25 explained the influences of the education level moderator on the relationship between facilitating conditions (FC) and the citizens' intentions to participate in the public decision-making of the e-government (BI). This table showed the hypothesis, facilitating conditions has a positive effect on the citizens' intentions to participate in the public decision-making of the e-government. The study used the hierarchical multiple regression analysis to test the gender influences on FC and the result of the "citizens' intentions to participate in the public decision-making of the e-government (BI)".

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Table 5.76 explains that these variables were considered for a significant quantity of variances in the citizens' intentions to participate in the public decision-making of the e-government (BI); R2= 0.6083, F= 243.3366, and p < 0.0000.Investigation of the interaction plot displayed an enhancing impact of social influence and education; it increased to a higher level of agreement for the Doctoral Degree, then for the Master's Degree, there was an average level of agreement with the Bachelor's Degree and Vocational or Technical, and a lower level of agreement was found with Primary school and high school or Equivalent. Figure 5.25 shows that the Primary school did not strongly agree, whilst the Doctoral Degree strongly agreed with an interaction between facilitating conditions (FC) and citizens' intentions to participate in the public decision-making of the e-government (BI). These proved that the level of education had a significant effect on the factors.

Table 5.77 presents the values of the LLCI= -0.1628 and the ULCI= -0.0574.The value zero was not located between them, and the value of p=0.0000. For that, this proved that there was a positive significance and the interaction between social group and facilitating conditions (FC) was significant.

Table 5.77

Summary of Moderator Social Group on FC

			Model Summary			
R	R-sq	MSE	F	df1	df2	p
.7842	.6150	.1322	250.2782	3.0000	470.0000	.0000
			Model			
	coeff	se	t	p	LLCI	ULCI
Constant	-.6890	.6280	-1.0971	.2731	-1.9229	.5450
Social Group	.7375	.1811	4.0727	.0001	.3817	1.0933
MFC	1.1075	.0929	11.9247	.0000	.9250	1. 2901
int_1	-.1101	.0268	-4.1084	.0000	-.1628	-.0574
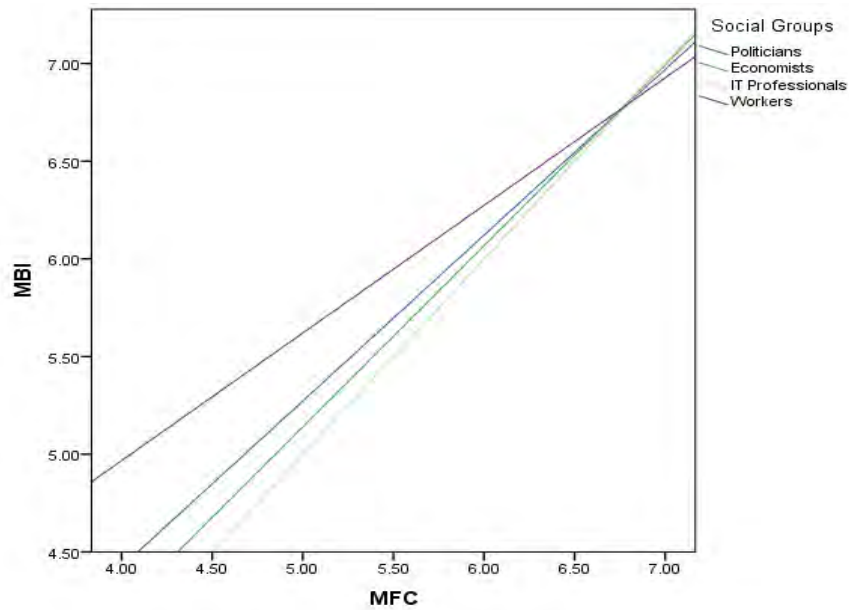
Figure 5.26. Scatter Matrix for Moderator Social groups on FC

To test the hypothesis that the facilitating conditions will have a positive influence on the behavioural intentions of citizens to participate in the public decision-making of the e-government, and more specifically, whether social group moderated the relationship between the citizens' intentions to participate in the public decision-making of the e-government (BI) and facilitating conditions (FC), a hierarchical multiple regression analysis was conducted. In the first part, two variables were included: facilitating conditions (FC) and the citizens' intentions to participate in the public decision-making of the e-government (BI). These variables were considered for a significant quantity of variances in the citizens' intentions to participate in the public decision-making of the e-government (BI); $R^2 = 0.6150$, $F = 250.2782$, and $p < 0.0000$. Investigation of the interaction plot displayed an enhancing impact of facilitating conditions and social group; it increased to a higher level of agreement for workers, then for the politicians, an average level of agreement was found with the economists, and a lower level of agreement was found with the IT professionals. Figure 5.26 shows that the workers strongly agreed with an interaction between

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facilitating conditions (FC) and the citizens' intentions to participate in the public decision-making of the e-government (BI). These proved that social group had a significant effect on the factors.

Table 5.78 displays that the interaction between working and facilitating conditions was not significant because p= 0.4979, and the LLCI= -0.0456 and ULCI= 0.0938.The value zero was located between them and proved that there was a negative significance. For that, there was no potential significant moderation between working and facilitating conditions on the citizens' intentions to participate in the public decision-making of the e-government.

Table 5.78

Summary of Moderator working Sector on FC

			Model Summary			
R	R-sq	MSE	F	df1	df2	p
.7763	.6026	.1364	237.5617	3.0000	470.0000	.0000
			Model			
	coeff	se	t	p	LLCI	ULCI
Constant	2.0458	.5447	3.7560	.0002	.9755	3.1161
Working Sec	-.1422	.2425	-.5863	.5579	-.6187	.3343
MFC	.6942	.0795	8.7322	.0000	.5380	.8504
int_1	.0241	.0355	.6784	.4979	-.0456	.0938

Table 5.79 shows that the p-value= 0.0002 and the value zero was not located between the LLCI=-0.2422 and the ULCI= -0.0767. That proved that there was a positive significance, and the interaction between experience and facilitating conditions was significant, indicating that there was a potential significant moderation between experience and facilitating conditions on the citizens' intentions to participate in the public decision-making of the e-government.

Table 5.79

Summary of Moderator Internet Experience on FC

			Model Summary			
R	R-sq	MSE	F	df1	df2	p
.7874	.6200	.1305	255.6185	3.0000	470.0000	.0000
			Model			
	coeff	se	t	p	LLCI	ULCI
Constant	-1.0520	.7136	-1.4742	.1411	-2.4542	.3502
Internet Exp	1.1465	.2716	4.2217	.0000	.6129	1.6802
MFC	1.1312	.1125	10.0508	.0000	.9100	1.3523
int_1	-.1595	.0421	-3.7862	.0002	-.2422	-.0767
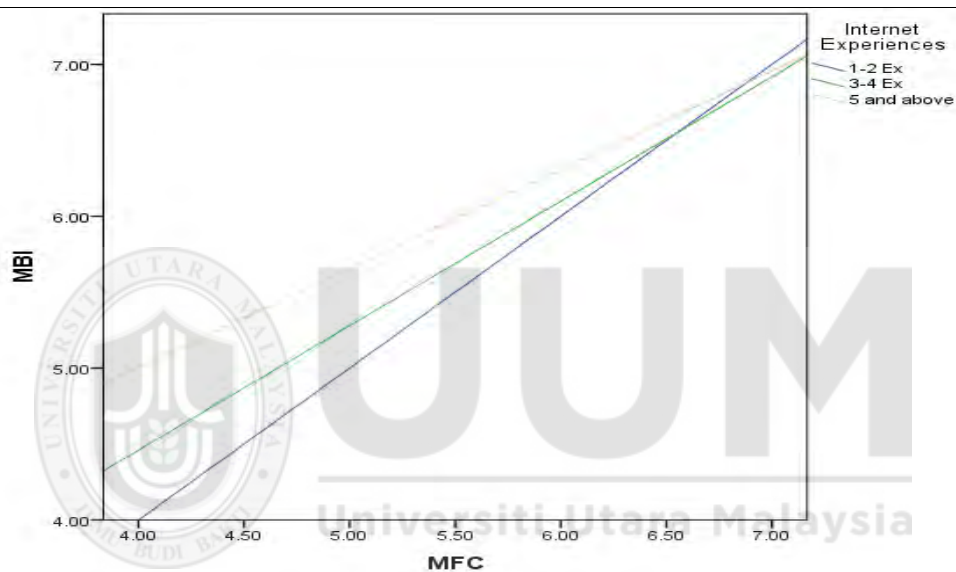
Figure 5.27. Scatter Matrix for Moderator Experience on FC

Figure 5.27 explained the influences of the experience moderator on the relationship between facilitating conditions (FC) and the citizens' intentions to participate in the public decision-making of the e-government (BI). This figure showed the hypothesis, facilitating conditions have a positive effect on the citizens' intentions to participate in the public decision-making of the e-government. The study used the hierarchical multiple regression analysis to test the experience influences on FC and the result of the "citizens' intentions to participate in the public decision-making of the e-government (BI)". Figure 5.27 shows that the 3-4 years' experience and1-2 years' experience did not strongly agree, whilst the 5 years' experience and above strongly

agreed with an interaction between facilitating conditions (FC) and the citizens'

intentions to participate in the public decision-making of the e-government (BI).

These proved that social group had a significant effect on the factors.

These variables were considered for a significant quantity of variances in the

citizens' intentions to participate in the public decision-making of the e-government

(BI); R^2= 0.6200, F= 255.6185, and $p < 0.0000$. Investigation of the interaction plot

displayed an enhancing impact of facilitating conditions and experience; it increased

to a higher level of agreement for 5 years' experience and above, and then there was

a lower level of agreement with 3-4 years' experience and 1-2 years' experience.

Figure 5.28 clarified that five of the six citizens' self-knowledge characteristics

(moderators), which were gender, age, level of education, social group, and Internet

experience), affected the fourth independent factor in the model of this study, the

facilitating conditions (FC). Thus, these five moderators influenced the result of the

citizens' intentions to participate in the public decision-making of the e-government

(dependent factor).
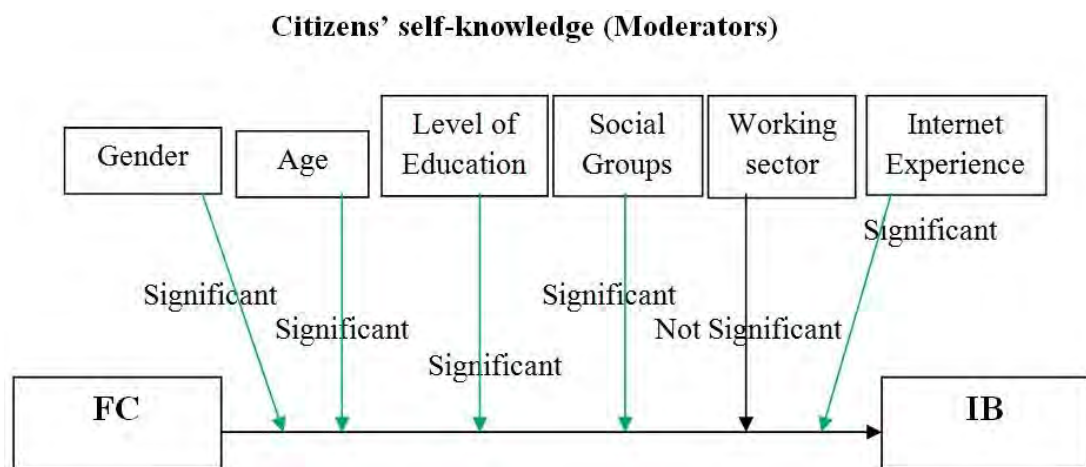
Figure 5.28. Summary of the Moderators that had an Effect on FC

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5.5.8.5 Moderator Variables on the Compatibility

The first step of the output of all of the variables in the test was indicating which was deemed as a dependent variable, the citizens' intentions to participate in the public decision-making of the e-government (BI); which was an independent variable, Compatibility (CO); and which was a moderator, gender, age, and level of education, social group, and Internet experiences (M). The total sample size (474) was also displayed. Then the outcome from a regression was offered, which contained the interaction impact between the moderator and the independent variable.

Table 5.80 shows that the interaction between gender and compatibility was significant because p= 0.0147, and the LLCI= 0.0233 and the ULCI= 0.2129.The value zero was not located between the values of the LLCI and the ULCI. So, this proved that there was positive significance, indicating that there was a potential significant moderation between gender and compatibility on the citizens' intentions to participate in the public decision-making of the e-government.

Table 5.80

Summary of Moderator Gender on CO

			Model Summary			
R	R-sq	MSE	F	df1	df2	p
.8964	.8036	.0674	640.9061	3.0000	470.0000	.0000
			Model			
	coeff	se	t	p	LLCI	ULCI
Constant	1.8845	.4237	4.4482	.0000	1.0520	2.7170
Gender	-.8365	.3289	-2.5431	.0113	-1.4829	-.1901
MCO	.7314	.0622	11.7611	.0000	.6092	.8536
int_1	.1181	.0482	2.4484	.0147	.0233	.2129
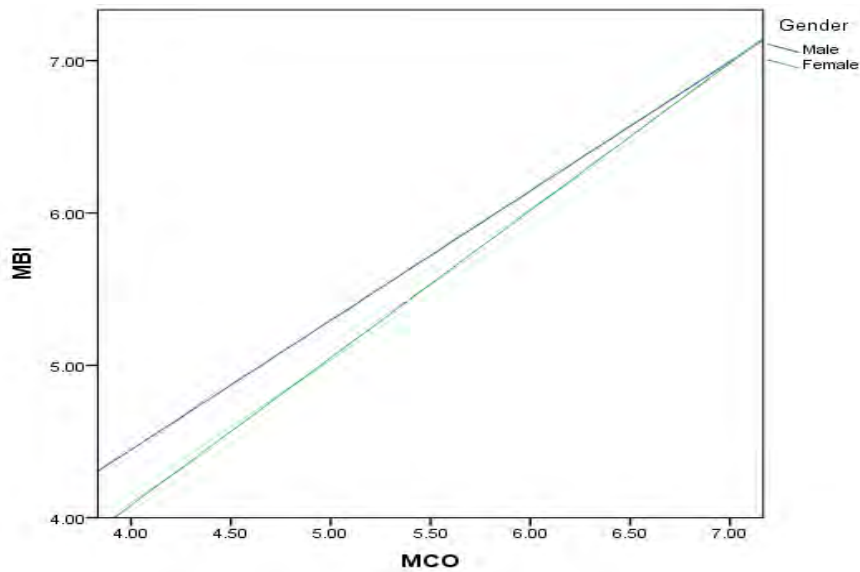
Figure 5.29. Scatter Matrix for Moderator Gender on CO

Figure 5.29 clarified that the gender moderator affected the independent variable of compatibility (CO) and the citizens' intentions to participate in the public decision-making of the e-government (BI). To test the hypothesis, the perceived compatibility will be positively related to the citizens' intentions towards participation in the public decision-making in the e-government, and more specifically, whether gender moderated the relationship between the citizens' intentions to participate in the public decision-making of the e-government (BI) and compatibility (CO), a hierarchical multiple regression analysis was conducted. Figure 5.29 shows that males had a higher value for strongly agreed with an interaction between compatibility (CO) and the citizens' intentions to participate in the public decision-making of the e-government (BI).

These proved that gender had a significant effect on the factors. These variables were considered for a significant quantity of variances in the citizens' intentions to participate in the public decision-making of the e-government (BI); $R2 = 0.8036$, $F= 640.9061$, and $p < 0.0000$. Investigation of the interaction plot displayed an enhancing

impact of compatibility and gender; it increased to a higher level of agreement for males and an average level of agreement for females.

Table 5.81 displayed the p-value= 0.0000, and the value zero was not located between the LLCI=0.1477 and the ULCI= 0.1864. From that, it was concluded that the interaction between age and facilitating conditions (FC) was significant, indicating that there was a potential significant moderation between age and facilitating conditions on the citizens' intentions to participate in the public decision-making of the e-government.

Table 5.81

Summary of Moderator age on CO

			Model Summary			
R	R-sq	MSE	F	df1	df2	p
.9404	.8843	.0397	1197.3305	3.0000	470.0000	.0000
			Model			
	coeff	se	t	p	LLCI	ULCI
Constant	7.5338	.3818	19.7319	.0000	6.7836	8.2841
Age	-1.1826	.0671	-17.6182	.0000	-1.3145	-1.0507
MCO	-.0741	.0550	-1.3466	.1788	-.1822	.0340
int_1	.1670	.0098	16.9994	.0000	.1477	.1864
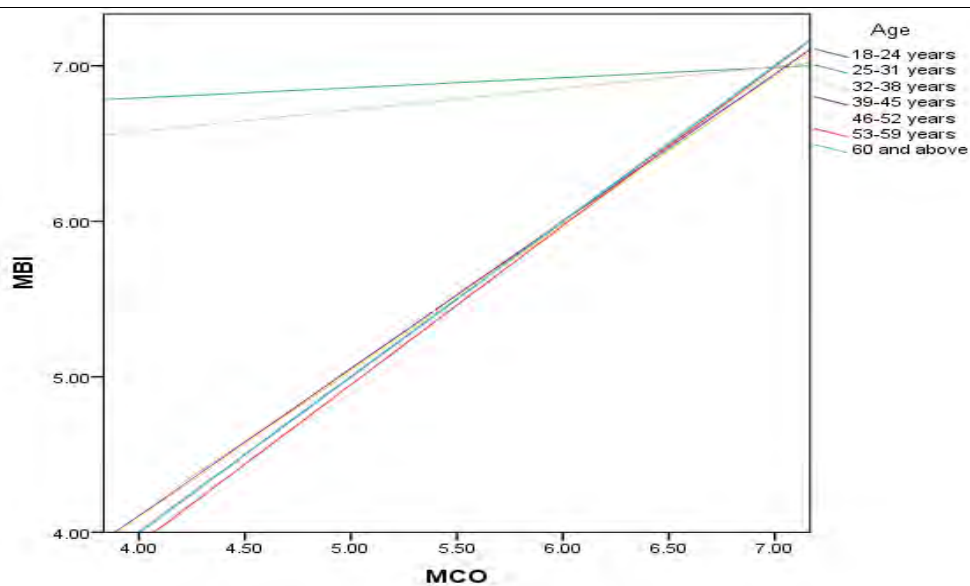
Figure 5.30. Scatter Matrix for Moderator Age on CO

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Figure 5.30 displayed whether age moderated the relationship between the citizens'

intentions to participate in the public decision-making of the e-government (BI) and

compatibility (CO). To determine this, a hierarchical multiple regression analysis

was conducted. To test the hypothesis, the perceived compatibility will be positively

related with the citizens' intentions towards participation in the public decision-

making in the e-government. Figure 4.30 shows that 25-31 years old and 32-38 years

old had higher values for strongly agreed, and 18-24 years old, 39-45 years old, 46-

52 years old, 53-59 years old, and 60 and above had an average strongly agreed with

an interaction between compatibility (CO) and the citizens' intentions to participate

in the public decision-making of the e-government (BI). These proved that age had a

significant effect on the factors. These variables were considered for a significant

quantity of variances in the citizens' intentions to participate in the public decision-

making of the e-government (BI); R^2 =0.8843, F= 1197.3305, and p < 0.0000.

Investigation of the interaction plot displayed an enhancing impact of compatibility

and age; it increased to a higher level of agreement for males and an average level of

agreement for females.

Table 5.82 indicates that there was a possibility of the significant moderation

between education level and facilitating conditions on the citizens' intention to

participate in the public decision-making of the e-government. This table shows the

value of p= 0.0000, and the value zero was not located between the values of the

LLCI= -0.1654 and the ULCI= -0.0932. For that, the interaction between education

and facilitating conditions was significant and proved that there was a positive

significance.

Table 5.82

Summary of Moderator Education on CO

			Model Summary			
R	R-sq	MSE	F	df1	df2	p
.9058	.8205	.0616	716.3258	3.0000	470.0000	.0000
			Model			
	coeff	se	t	p	LLCI	ULCI
Constant	-2.1161	.4368	-4.8442	.0000	-2.9744	-1.2577
Education	.8979	.1251	7.1750	.0000	.6520	1.1438
MCO	1.3046	.0644	20.2509	.0000	1.1780	1.4312
int_1	-.1293	.0184	-7.0388	.0000	-.1654	-.0932
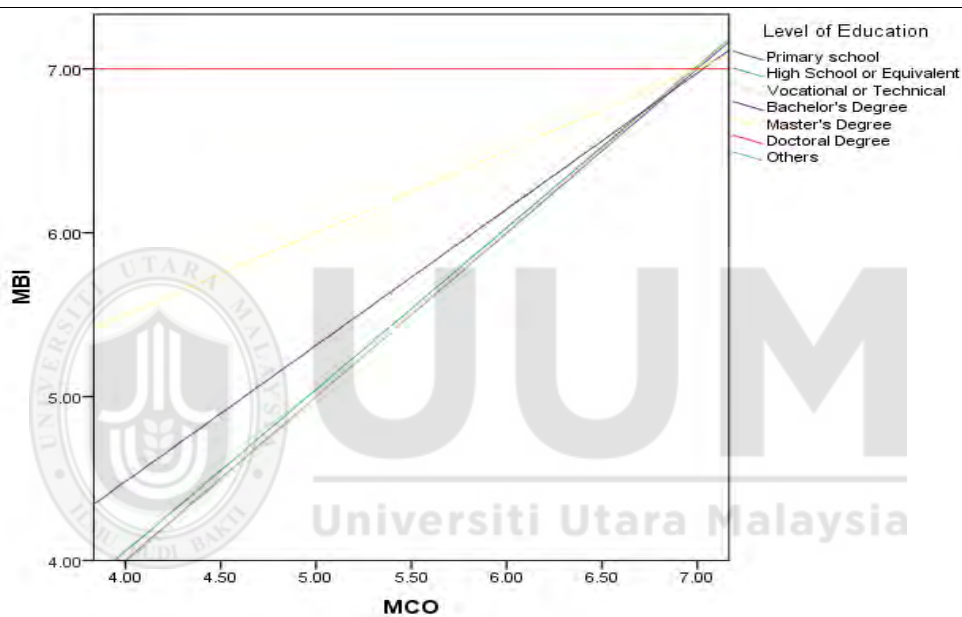
Figure 5.31. Scatter Matrix for Moderator Education on CO

To test the hypothesis that the perceived compatibility will be positively related to the citizens' intentions towards participation in the public decision-making in the e-government, and more specifically, whether education level moderates the relationship between the citizens' intentions to participate in the public decision-making of the e-government (BI) and compatibility (CO), a hierarchical multiple regression analysis was conducted. In the first part, two variables were included: compatibility (CO) and the citizens' intentions to participate in the public decision-making of the e-government (BI).

These variables were considered for a significant quantity of variances in the citizens' intentions to participate in the public decision-making of the e-government (BI); R2 =0.8205, F= 46.8971, and p < 0.0000. Investigation of the interaction plot displayed an enhancing impact of compatibility and education; it increased to a higher level of agreement for the Doctoral Degree, then for the Master's Degree, an average level of agreement was found with the Bachelor's Degree and Vocational or Technical, and a lower level of agreement was found with Primary school and high school or Equivalent.

Figure 5.31 shows that the Primary school did not strongly agree, whilst the Doctoral Degree strongly agreed with an interaction between compatibility (CO) and the citizens' intentions to participate in the public decision-making of the e-government (BI). These proved that education had a significant effect on the factors.

Table 5.83 presents the values of the LLCI= -0.1172 and the ULCI= -.0377.The zero number was not located between them, and the value of p=0.0001. For that, this proved that there was a positive significance and the interaction between social group and facilitating conditions was significant.

Table 5.83

Summary of Moderator Social Groups on CO

Model Summary						
R	R-sq	MSE	F	df1	df2	p
.8984	.8071	.0662	655.5036	3.0000	470.0000	.0000
			Model			
	coeff	se	t	p	LLCI	ULCI
Constant	-.9528	.4820	-1.9766	.0487	-1.9000	-.0056
Social Group	.5371	.1368	3.9273	.0001	.2683	.8058
MCO	1.1375	.0712	15.9825	.0000	.9977	1.2774
int_1	-.0774	.0202	-3.8267	.0001	-.1172	-.0377
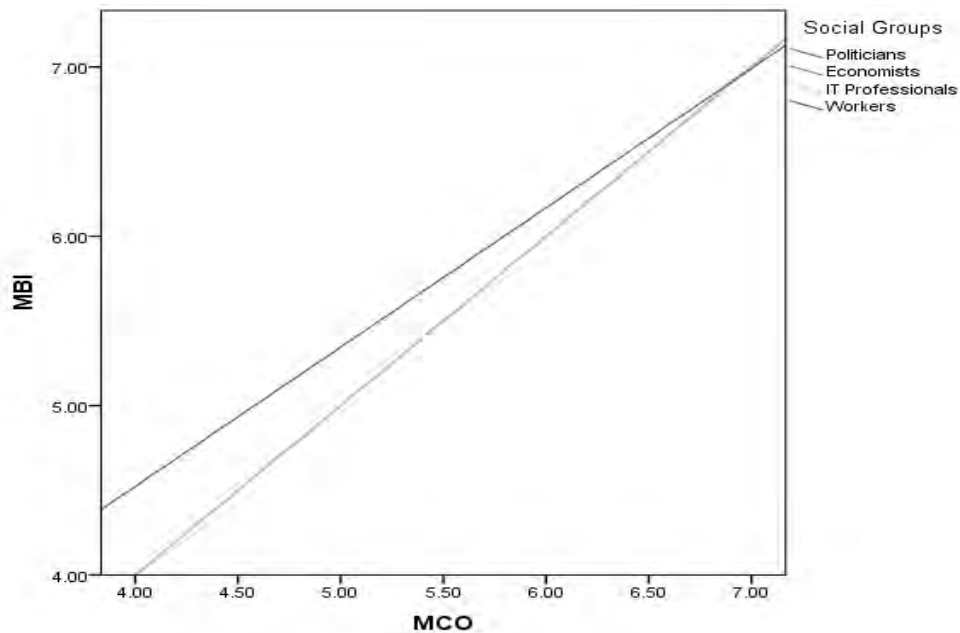
Figure 5.32. Scatter Matrix for Moderator Social Groups on CO

Figure 5.32 shows that the politicians, IT professionals, and economists strongly agreed with an interaction between compatibility (CO) and the citizens' intentions to participate in the public decision-making of the e-government (BI). These proved that social group had a significant effect on the factors. To test the hypothesis, the perceived compatibility will be positively related to the citizens' intentions towards participation in the public decision-making in the e-government, and more specifically, whether social group moderated the relationship between the citizens' intentions to participate in the public decision-making of the e-government (BI) and compatibility (CO), a hierarchical multiple regression analysis was conducted.

Investigation of the interaction plot displayed an enhancing impact of compatibility and social group; it increased to a higher level of agreement for workers, then the politicians, IT professionals, and economists answered with a high level of agreement, and a lower level of agreement was found with workers. Table 5.83 explained that these variables were considered for a significant quantity of variances

in the citizens' intentions to participate in the public decision-making of the e-government (BI); the values of R2 = 0.8071, F= 655.5036, and p<0.0000.

Table 5.84 displayed that the interaction between working and facilitating conditions was not significant because p= 0.5464, and LLCI= -0.0325 and the ULCI= 0.0613. The value zero was located between them, and proved that there was a negative significance. For that, there was no potential significant moderation between working and facilitating conditions on the citizens' intentions to participate in the public decision-making of the e-government.

Table 5.84

Summary of Moderator Working Sector on CO

Model Summary						
R	R-sq	MSE	F	df1	df2	p
.8948	.8007	.0684	629.3008	3.0000	470.0000	.0000

Model						
	coeff	se	t	p	LLCI	ULCI
Constant	1.0656	.3412	3.1230	.0019	.3951	1.7362
Working Sct	-.1041	.1626	-.6403	.5223	-.4235	.2153
MCO	.8475	.0501	16.9277	.0000	.7491	.9459
int_1	.0144	.0239	.6036	.5464	-.0325	.0613

Table 5.85 shows the p-value= 0.0388, and the value zero was not located between the LLCI= -0.1246 and the ULCI= -0.0033. That proved that there was a positive significance and the interaction between Internet experience and facilitating conditions was significant, indicating that there was a potential significant moderation between experience and facilitating conditions on the citizens' intentions to participate in the public decision making of the e-government.

Table 5.85

Summary of Moderator Internet Experience on CO

			Model Summary			
R	R-sq	MSE	F	df1	df2	p
.8958	.8025	.0678	636.7081	3.0000	470.0000	.0000
			Model			
	coeff	se	t	p	LLCI	ULCI
Constant	-.1889	.5109	-.3698	.7117	-1.1928	.8149
Internet Exp	.4340	.1989	2.1815	.0296	.0431	.8249
MCO	1.0313	.0809	12.7523	.0000	.8724	1.1902
int_1	-.0640	.0309	-2.0724	.0388	-.1246	-.0033
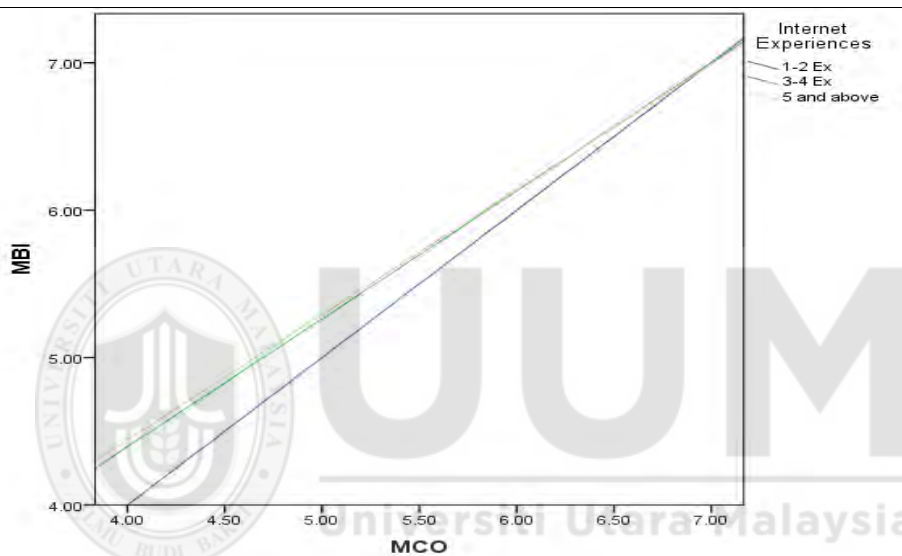
Figure 5.33. Scatter Matrix for Moderator Internet Experience on CO

Figure 5.33 displayed an enhancing impact of compatibility and experience; it increased to a higher level of agreement for 5 years' experience and above, and an average level of agreement with 3-4 and 1-2 years' experience. To test the hypothesis, the perceived compatibility will be positively related to the citizens' intentions towards participation in the public decision-making in the e-government, and more specifically, whether Internet experience moderated the relationship between the citizens' intentions to participate in the public decision-making of the e-government (BI) and compatibility (CO), a hierarchical multiple regression analysis was conducted.

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These variables were considered for a significant quantity of variances in the citizens' intentions to participate in the public decision-making of the e-government (BI); R2 =0.8025, F= 636.7081, and p< 0.0000. Figure 5.34 shows that the 5 years' and above experience strongly agreed with an interaction between compatibility (CO) and the citizens' intention to participate in the public decision-making of the e-government (BI). These proved that Internet experience had a significant effect on the factors.

Figure 5.34 displayed that the fifth independent factor in the model of this research, which was compatibility (CO), was affected by five of the six citizens' self-knowledge characteristics (moderators), which were gender, age, level of education, social group, and Internet experience. Then, the outcome of the citizens' intention to participate in the public decision-making of the e-government (dependent factor) was influenced.
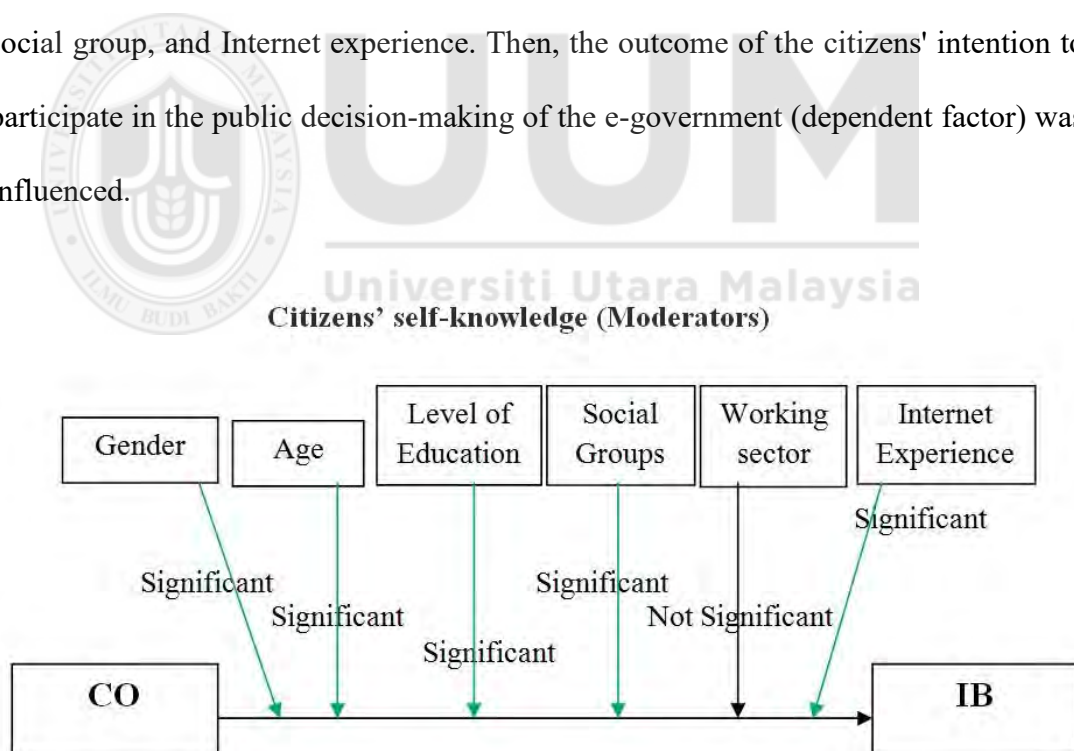
Figure 5.34. Summary of Moderators that had an Effect on CO

5.5.8.6 Moderator Variables on the Culture

The first step of the output of all of the variables in the test was indicating which was deemed as a dependent variable, the citizens' intentions to participate in the public

decision-making of the e-government (BI); which was an independent variable of Culture (CU); and which was a moderator of gender, age, level of education, social group, and Internet experiences (M). The total sample size (474) was also displayed. Then, the outcome from a regression was offered which contained the interaction impact between the moderator and the independent variable.

Table 5.86 shows that the interaction between Gender and culture was significant because p= 0.1858, and the LLCI= -.1769 and the ULCI= .0344.The value zero was located between the values of the LLCI and the ULCI. So, this proved that there was a negative significance, indicating that there was no potential significant moderation between gender and culture on the citizens' intentions to participate in the public decision-making of the e-government.

Table 5.86

Summary of Moderator Gender on CU

			Model Summary			
R	R-sq	MSE	F	df1	df2	p
.8029	.6446	.1220	284.1406	3.0000	470.0000	.0000
			Model			
	coeff	se	t	p	LLCI	ULCI
Constant	1.5232	.4859	3.1346	.0018	.5683	2.4781
Gender	.4844	.3596	1.3470	.1786	-.2223	1.1911
MCU	.7895	.0725	10.8844	.0000	.6469	.9320
int_1	-.0712	.0538	-1.3250	.1858	-.1769	.0344

Table 5.87 displays that the p-value= 0.0000, and the value zero was not located between the LLCI=0.1714 and the ULCI= 0.2123. From that, it was concluded that the interaction between age and culture was significant, indicating that there was a potential significant moderation between age and culture on the citizens' intentions to participate in the public decision-making of the e-government.

Table 5.87

Summary of Moderator Age on CU

			Model Summary			
R	R-sq	MSE	F	df1	df2	p
.8988	.8079	.0660	658.8100	3.0000	470.0000	.0000

	coeff	se	Model t	p	LLCI	ULCI
Constant	9.0503	.3665	24.6938	.0000	8.3301	9.7704
Age	-1.3409	.0696	-19.2773	.0000	-1.4776	-1.2042
MCU	-.2937	.0534	-5.5027	.0000	-.3986	-.1888
int_1	.1919	.0104	18.4536	.0000	.1714	.2123
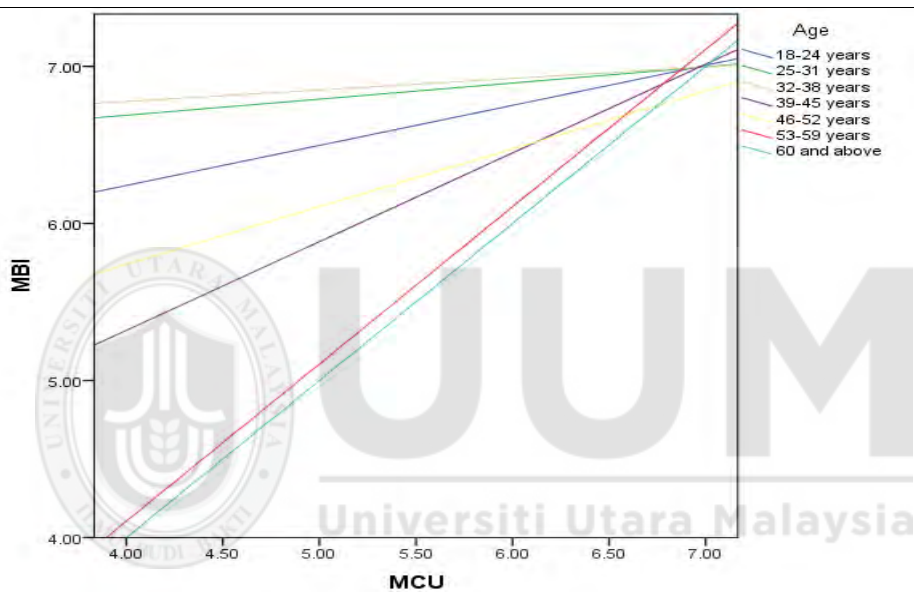
Figure 5.35. Scatter Matrix for Moderator Age on CU

To test the hypothesis that the perceived culture will be positively related to the citizens' intentions towards participation in the public decision-making in the e-government, and more specifically, whether age moderated the relationship between the citizens' intentions to participate in the public decision-making of the e-government (BI) and culture (CU), a hierarchical multiple regression analysis was conducted. In the first part, two variables were included: culture (CU) and the citizens' intentions to participate in the public decision-making of the e-government (BI). These variables were considered for a significant quantity of variances in the

citizens' intentions to participate in the public decision-making of the e-government (BI); R2 = 0.8079, F= 658.8100, and p < 0.0000.

Investigation of the interaction plot displayed an enhancing impact of subjective norms and age, from 53 to 60 and above it was found to have a lower level of agreement, an average level of agreement was found with ages from 39 to 45 and 46 to 52, and it increased to a higher level from the age 18 to 38. Figure 5.35 shows that the older ones did not strongly agree, whilst the younger ones strongly agreed with an interaction between culture (CU) and the citizens' intentions to participate in the public decision-making of the e-government (BI).

Table 5.88 indicates that there was a possibility of a significant moderation between education level and culture on the citizens' intentions to participate in the public decision-making of the e-government. This table shows that the value of p= 0.0000, and the value zero was not located between the values of the LLCI= -0.2111 and the ULCI= -0.1201. For that, the interaction between education level and culture was significant, and proved that there was a positive significance.

Table 5.88

Summary of Moderator Education on CU

Model Summary						
R	R-sq	MSE	F	df1	df2	p
.8252	.6810	.1095	334.4900	3.0000	470.0000	.0000
			Model			
	coeff	se	t	p	LLCI	ULCI
Constant	-1.7479	.5537	-3.1569	.0017	-2.8360	-.6599
Education	1.1371	.1551	7.3299	.0000	.8322	1.4419
MCU	1.2651	.0830	15.2376	.0000	1.1020	1.4283
int_1	-.1656	.0232	-7.1475	.0000	-.2111	-.1201
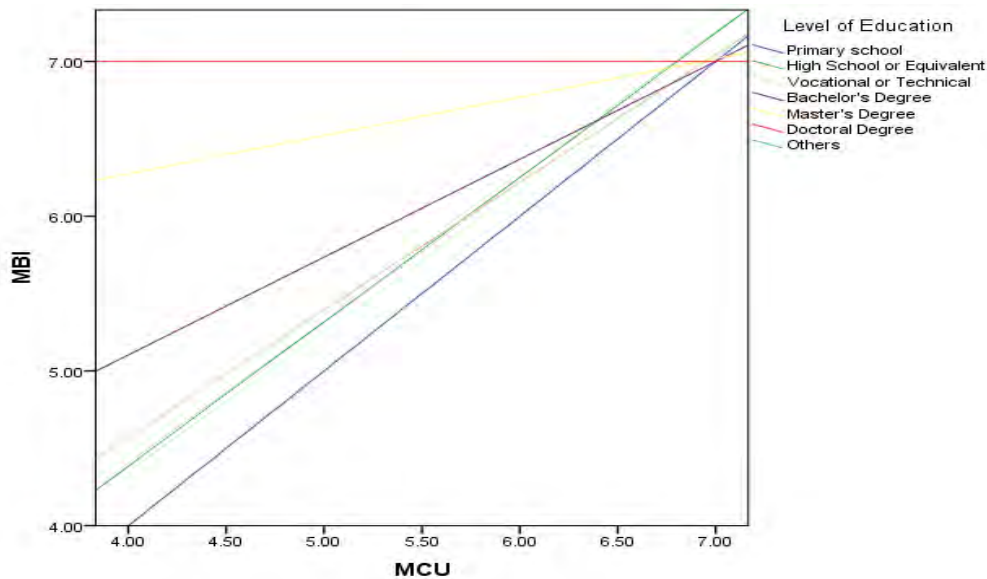
Figure 5.36. Scatter Matrix for Moderator Education on CU

Figure 5.36 showed that the Primary school did not strongly agree, whilst the Doctoral Degree strongly agreed with an interaction between culture (CU) and the citizens' intentions to participate in the public decision-making of the e-government (BI). These proved that education had a significant effect on the factors. To test the hypothesis, the culture will be positively related to the citizens' intentions towards participation in the public decision-making in the e-government, and more specifically, whether education moderated the relationship between the citizens' intentions to participate in the public decision-making of the e-government (BI) and culture (CU), a hierarchical multiple regression analysis was conducted.

These variables were considered for a significant quantity of variances in the citizens' intentions to participate in the public decision-making of the e-government (BI); $R^2 = 0.6810$, F= 334.4900, and $p < 0.0000$.Investigation of the interaction plot displayed an enhancing impact of compatibility and education; it increased to a higher level of agreement for the Doctoral Degree, then for the Master's Degree, an average level of agreement was found with the Bachelor's Degree and Vocational or

Technical, and a lower level of agreement was found with Primary school and high school or Equivalent.

Table 5.89 presents the values of the LLCI= -0.1068 and the ULCI= -0.0030.The value zero was not located between them, and the value of p= 0.0384. For that, this proved that there was a positive significance, and the interaction between social group and culture was significant.

Table 5.89

Summary of Moderator Social Groups on CU

			Model Summary			
R	R-sq	MSE	F	df1	df2	p
.8087	.6540	.1188	296.1072	3.0000	470.0000	.0000
			Model			
	coeff	se	t	p	LLCI	ULCI
Constant	.6586	.6292	1.0466	.2958	-.5779	1.8951
Social Group	.4223	.1779	2.3731	.0180	.0726	.7719
MCU	.8938	.0931	9.6007	.0000	.7109	1.0768
int_1	-.0549	.0264	-2.0768	.0384	-.1068	-.0030
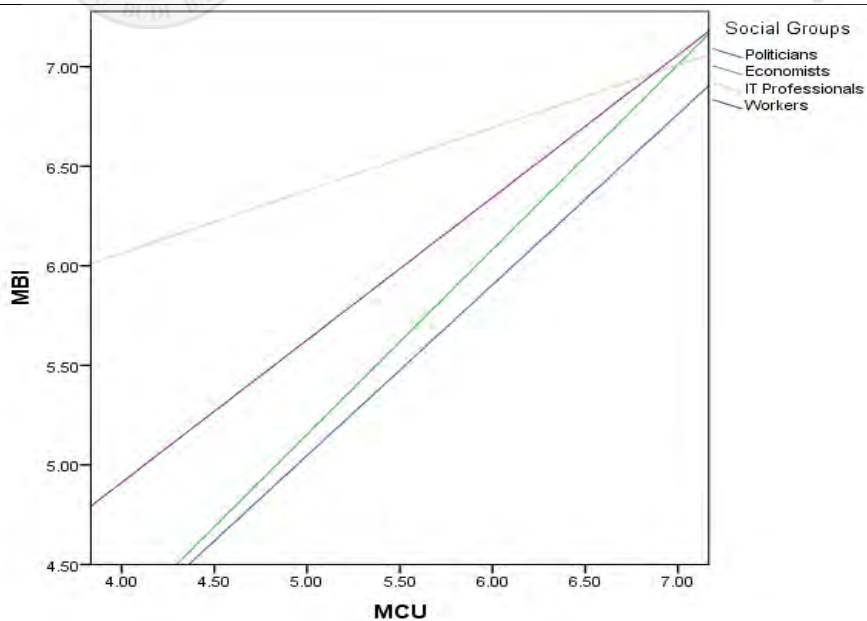
Figure 5.37. Scatter Matrix for Moderator Social Groups on CU

Table 5.89 showed that the variables were considered for a significant quantity of variances in the citizens' intentions to participate in the public decision making of e-government (BI); R2= 0.6540, F= 296.1072, and p<0.0000. Furthermore, Figure 5.37 explained that to test the hypothesis that the perceived culture will be positively related to the citizens' intentions towards participation in the public decision-making in the e-government, and more specifically, whether social group moderated the relationship between the citizens' intentions to participate in the public decision-making of the e-government (BI) and culture (CU), a hierarchical multiple regression analysis was conducted.

Figure 5.37 displayed that the politicians, IT professionals, and economists strongly agreed with an interaction between culture (CU) and the citizens' intentions to participate in the public decision-making of the e-government (BI). These proved that social group had a significant effect on the factors. Two variables were included: culture (CU) and the citizens' intentions to participate in the public decision-making of the e-government (BI). Investigation of the interaction plot displayed an enhancing impact of culture and social group; it increased to a higher level of agreement for the IT professionals, then for the workers and economists there was a lower level of agreement with the politicians.

Table 5.90 displays that the interaction between working and culture was significant because p= 0.0157, and the LLCI= 0.0131 and the ULCI= 0.1255.The value zero was not located between them, and this proved that there was a positive significance. For that, there was a potential significant moderation between working and culture on the citizens' intentions to participate in the public decision-making of the e-government.

Table 5.90

Summary of Moderator Working Sector on CU

			Model Summary			
R	R-sq	MSE	F	df1	df2	p
.8054	.6487	.1206	289.2935	3.0000	470.0000	.0000

	coeff	se	Model t	p	LLCI	ULCI
Constant	3.0471	.3934	7.7459	.0000	2.2741	3.8202
Working Stc	-.4878	.1929	-2.5286	.0118	-.8668	-.1087
MCU	.5699	.0585	9.7433	.0000	.4550	.6848
int_1	.0693	.0286	2.4235	.0157	.0131	.1255
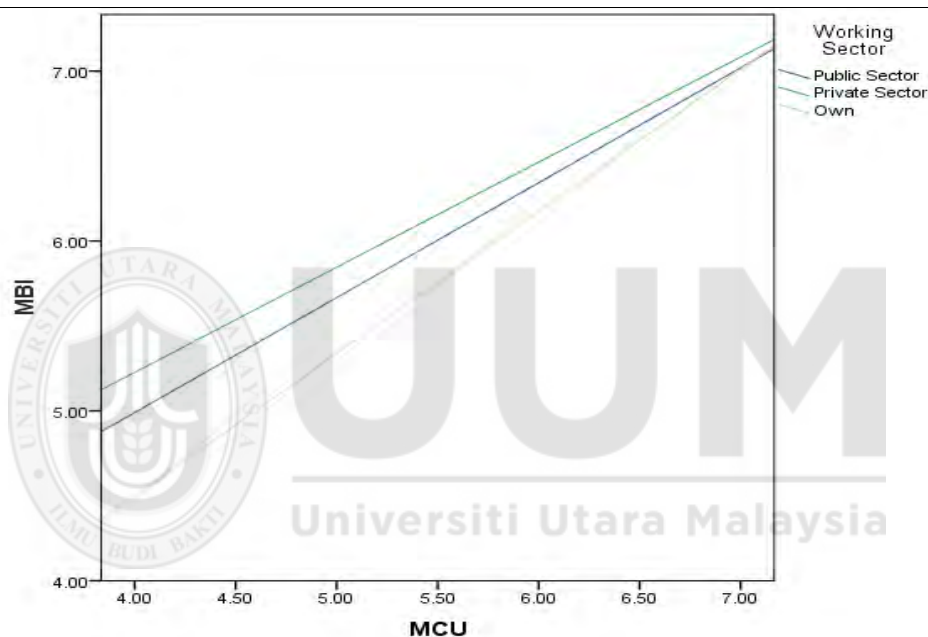
Figure 5.38. Scatter Matrix for Moderator Working Sector on CU

Figure 5.38 displayed the test of the hypothesis, culture will have a positive influence on the citizens' intentions towards participation in the public decision-making, and more specifically, whether working sector moderated the relationship between the citizens' intentions to participate in the public decision-making of the e-government (BI) and culture (CU). A hierarchical multiple regression analysis was conducted get these results. These variables were considered for a significant quantity of variances in the citizens' intentions to participate in the public decision-making of the e-government (BI); $R2 = 0.6487$, F= 289.2935, and p < 0.0000.

Figure 5.38 showed that the politicians did not strongly agree, whilst the IT professionals strongly agreed with an interaction between culture (CU) and the citizens' intentions to participate in the public decision-making of the e-government (BI). These proved that the working sector had a significant effect on the factors. Two variables were included: culture (CU) and the citizens' intentions to participate in the public decision-making of the e-government (BI). Investigation of the interaction plot displayed an enhancing impact of social influence and working sector; it increased to a higher level of agreement for the private Sector, then for the public Sector, and there was an average level of agreement with those who owned.

Table 5.91 showed that the p-value= 0.0000, and the value zero was not located between the LLCI= -0.2835 and the ULCI= 0.1311. That proved that there was a positive significance and the interaction between experience and culture was significant, indicating that there was a potential significant moderation between experience and culture on the citizens' intentions to participate in the public decision-making of the e-government.

Table 5.91

Summary of Moderator Internet Experience on CU

			Model Summary			
R	R-sq	MSE	F	df1	df2	p
.8208	.6737	.1120	323.4848	3.0000	470.0000	.0000
			Model			
	coeff	se	t	p	LLCI	ULCI
Constant	-1.5267	.6536	-2.3360	.0199	-2.8110	-.2424
Internet Exp	1.4397	.2430	5.9247	.0000	.9622	1.9171
MCU	1.2263	.1058	11.5961	.0000	1.0185	1.4341
int_1	-.2073	.0388	-5.3469	.0000	-.2835	-.1311
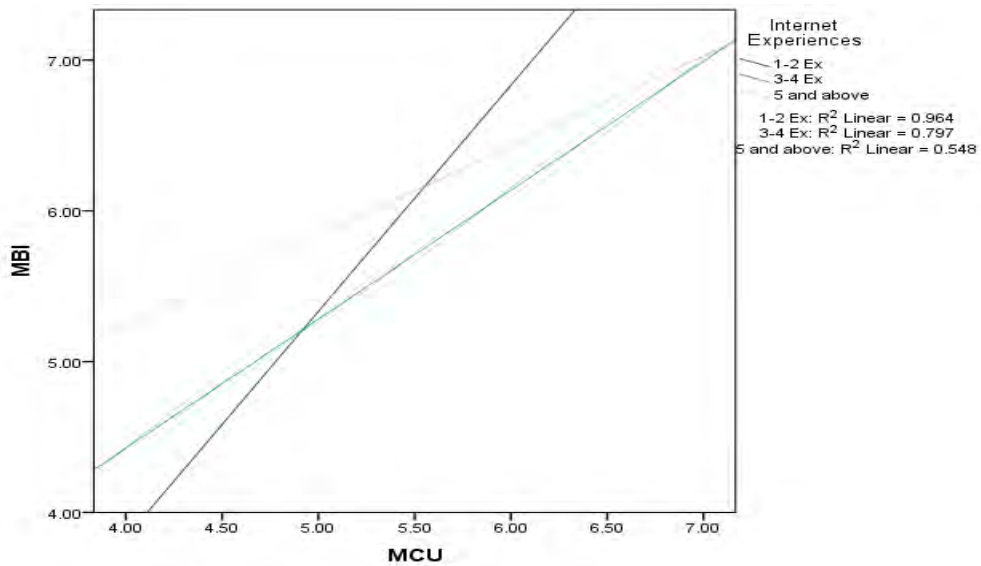
Figure 5.39. Scatter Matrix for Moderator Experience on CU

Figure 5.39 shows that the 5 years' experience and above strongly agreed with an interaction between culture (CU) and the citizens' intentions to participate in the public decision-making of the e-government (BI). These proved that Internet experience had a significant effect on the factors. Investigation of the interaction plot displayed an enhancing impact of culture and experience; it increased to a higher level of agreement for 5 years' experience and above, and an average level of agreement with 3-4 and 1-2 years' experience. To test the hypothesis, the perceived culture will be positively related to the citizens' intentions towards participation in the public decision-making in the e-government, and more specifically, whether Internet experience moderated the relationship between the citizens' intentions to participate in the public decision-making of the e-government (BI) and culture(CU), a hierarchical multiple regression analysis was conducted. These variables were considered for a significant quantity of variances in the citizens' intentions to participate in the public decision-making of the e-government (BI); $R2 = 0.8208$, $F = 323.4848$, and $p < 0.0000$. Figure 5.40 shows the impact of five moderators of the citizens' self-knowledge characteristics (age, level of education, social group,

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working sector, and Internet experience) on the sixth independent factor in the model of this study, culture (CU). As a result, the dependent factor in this study, the citizens' intentions to participate in the public decision-making of the e-government was affected by the five aforementioned moderators.
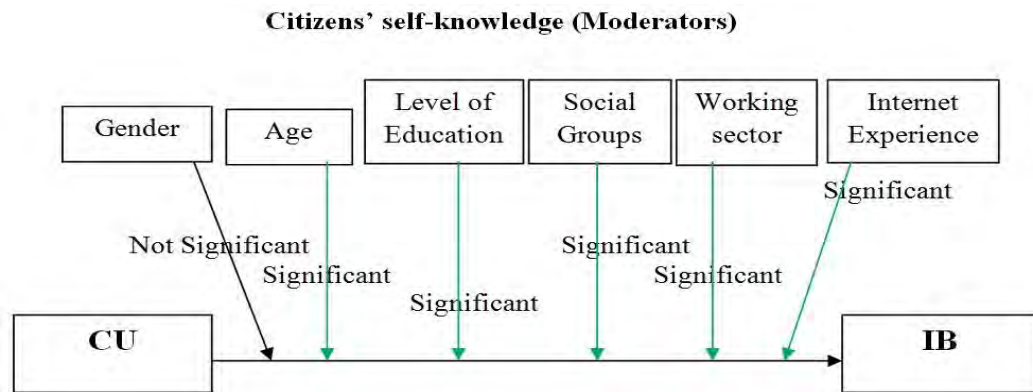
Figure 5.40. Summary of Moderators that had an Effect on CU

5.5.8.7 Outcomes of Moderator Variables on IV (Second Objective in the study)

Figure 5.41 clarified that the moderating factors (citizens' self-knowledge characteristics) were examined to see how they impacted on the relationships amongst the independent variables and the citizens' intentions to participate in the public decision-making of the e-government (the dependent variable). In this research, the moderators, which were the citizens' self-knowledge characteristics, indicated the respondent's gender, age, level of education, social group, Internet experience, and working sector to investigate the affect of the moderating factors. The significance of the dissimilarities expected from the moderating factors was tested by the analysis of variance regression test.
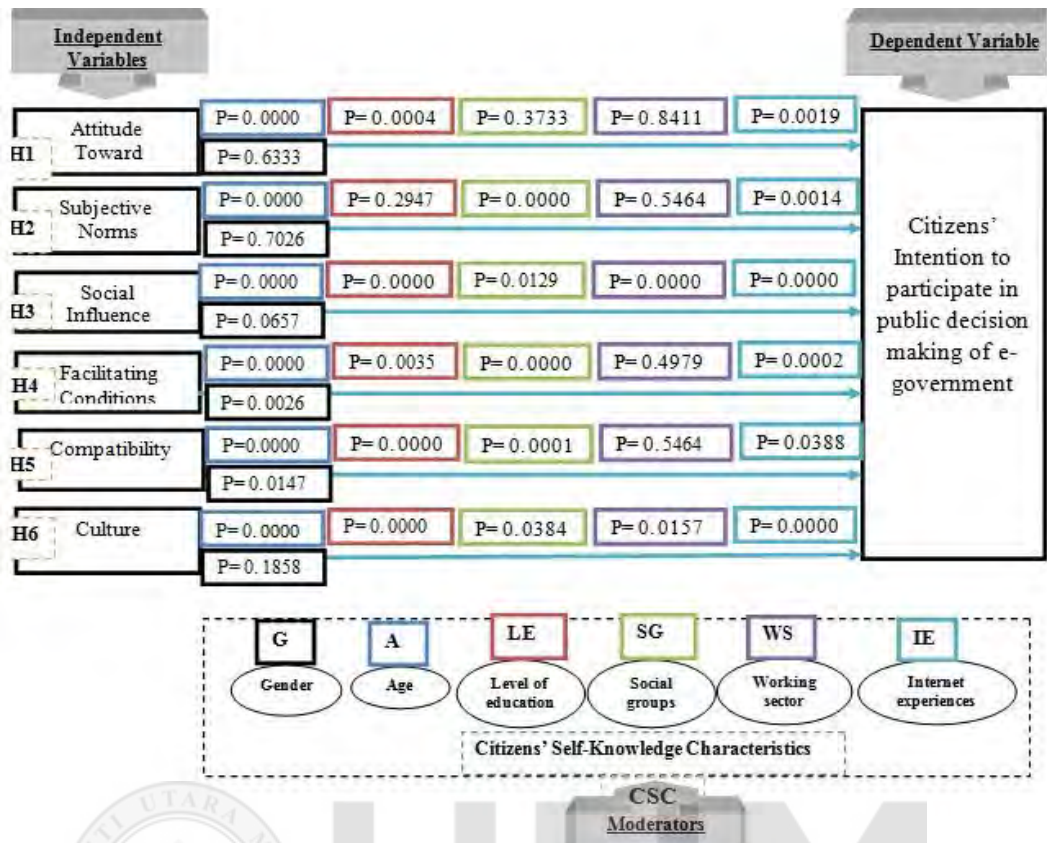
Figure 5.41. Summary of Moderators (citizens' self-knowledge) that had an Effect between the IV and DV

Figure 5.41 showed the interactions of the moderators' effects between attitude towards act or behaviour (ATB) and the citizens' intention to participate in the public decision-making of the e-government (BI). It was observed that the moderator of gender had no significant action with the value of 0.6333. It was detected that the moderator of the respondents' age had a significant influence with the value of 0.0000. Then, the moderator of the level of education had a significant effect with the value of 0.0004. Besides that, it was noticed that the moderator of the social group had no significant impact with the value of 0.3733. As well, the moderator of the working sector had not significant influence with the value of 0.8411. Whilst, the Internet experience of the respondents had a significant effect with the value of 0.0019.

The moderators impacted on the factor of subjective norms (SN), thus it impacted on the result of the citizens' intentions to participate in the public decision-making of the e-government (BI). There was no significant influence from the moderator of gender on subjective norms because this moderator had the value of 0.7026. It was detected that, the moderator of the respondents' age had a significant influence, with the value of 0.0000, on the subjective norms factor. The third moderator, the level of education, did not impact on subjective norms with the value of 0.2947. Besides that, there was a significant impact on the subjective norms with the value of 0.0000from the moderator of the social group. As well the moderator of the working sector had no significant influence on the subjective norms with the value of 0.5464. As well, subjective norm was affected by the moderator of the Internet experience, which had a significant effect with the value of 0.0014.

The outcome of the citizens' intentions to participate in the public decision-making of the e-government (BI) was influenced by the moderators which affected the social influences (SI). From the value of 0.0657 of the moderator of gender, it was observed that there was no significant impact on the social influences factor. The moderator of the respondents' age had the value of 0.0000 which significantly influenced the social influences factor. Then, the moderator of the level of education had a significant effect on the social influences factor with the value of 0.0000. In addition, it was obvious that the moderator of the social group with the value of 0.0129 had a significant impact on the factor of social influences. The moderator of the working sector with the value of 0.0000 significantly impacted on the social influences factor. Besides that, the Internet experience of the respondents with the value of 0.0000 had a significant effect on the social influences factor.

The moderators' effects between facilitating conditions (FC) and the citizens' intentions to participate in the public decision-making of the e-government (BI) has also been examined. It was observed that the moderator of gender had a significant action with the value of 0.0026. It was detected that the moderator of the respondents' age had a significant influence with the value of 0.0000. Then, the moderator of the level of education had a significant effect with the value of 0.0035. Besides that, it was noticed that the moderator of the social group had a significant impact with the value of 0.0000. As well, the moderator of the working sector had no significant influence with the value of 0.4979. Whilst, the Internet experience of the respondents had a significant affect with the value of 0.0002.

The moderators impacted on the factor of compatibility (CO), thus it impacted on the result of the citizens' intention to participate in the public decision-making of the e-government (BI). There was a significant influence from the moderator of *gender* on compatibility because this moderator had the value of 0.0147. It was detected that the moderator of the respondents' *age* had a significant influence with the value of 0.0000 on the compatibility factor. The third moderator, the *level of education,* did not impact on compatibility with the value of 0.0000. Besides that, there was a significant impact on the compatibility with the value of 0.0001 from the moderator of the *social group*. As well, the moderator of the *working sector* had no significant influence on the compatibility with the value of 0.5464. Whilst, the compatibility was affected by the moderator of *Internet experience,* which had a significant effect with the value of 0.0388.

The outcome of the citizens' intentions to participate in the public decision-making of the e-government (BI) was influenced by the moderators which affected the

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culture (CU). From the value of 0.1858 of the moderator of gender, it was observed that there was no significant impact on the culture factor. The moderator of the respondents' age had the value of 0.0000 which significantly influenced the culture factor. Then, the moderator of the level of education had a significant effect on the culture factor with the value of 0.0000. In addition, it was obvious that the moderator of the social group with the value of 0.0384 had a significant impact on the factor of culture. The moderator of the working sector with the value of 0.0157 significantly impacted on the culture factor. Besides that, the Internet experience of the respondents with the value of 0.0000 had a significant effect on the culture factor.

5.6 Model (Equation) Regression

Regression analysis is an expansion of the analysis of the simple linear test in regression. Research was used to predict the value of a dependent variable (DV) based on the value of independent variables (IV) (Hair, 2010; Tibshirani & Wasserman, 2013). The hypotheses of attitude towards act or behaviour (ATB), subjective norms (SN), social influence (SI), facilitating conditions (FC), compatibility (CO), and culture (CU) with the DV of the citizens' intentions to participate in the public decision-making of the e-government (BI) were tested using multiple regressions. These are debated in subsections 5.6.1 to 5.6.5.

5.6.1 Test of Assumptions

The normality test, linearity test, outliers test, homoscedasticity test and multi-collianarity test should be achieved before using the multiple regression analysis (Hair, 2010; Tabachnick & Fidell, 2007).

5.6.2 Normality Test

Test of normality is applied to explain a symmetrical, bell-shaped curve, that has the largest frequency of results in the middle, with less frequencies towards the extremes (Gravetter & Wallnau, 2009). According to Pallant (2007), the normality test can be estimated to some range by obtaining the kurtosis and skewness (Hair, 2010). The normality test exists when the kurtosis' and skewness' averages are +9.413/-3.136. Table 4.92 offers the outcomes of the test of normality.

From Table 5.92, it can be seen that all of the factors were normally distributed as all of the outcomes of the skewness and kurtosis were in the range of +9.4113 / - 3.136.

Table 5.92

The Statistics of the Kurtosis and Sekwnss Averages for the Continuous Variables

Variables	No	Min	Max	Median	Std. Deviation	Skewness	Std. Error	Kurtosis	Std. Error
IB	474	4	7	7.0000	0.58407	-3.136	0.112	9.413	0.224
ATB	474	4	7	7.0000	0.58407	-3.136	0.112	9.413	0.224
SN	474	4	7	7.0000	0.58407	-3.136	0.112	9.413	0.224
SI	474	4	7	7.0000	0.58407	-3.136	0.112	9.413	0.224
FC	474	4	7	7.0000	0.58407	-3.136	0.112	9.413	0.224
CO	474	4	7	7.0000	0.58407	-3.136	0.112	9.413	0.224
CU	474	4	7	7.0000	0.58407	-3.136	0.112	9.413	0.224

This specifies that the information was suitable and ready for the multiple regression tests. The histogram for the Normality, as clarified in Figure 5.42, supplies extra evidence for the test of normality.
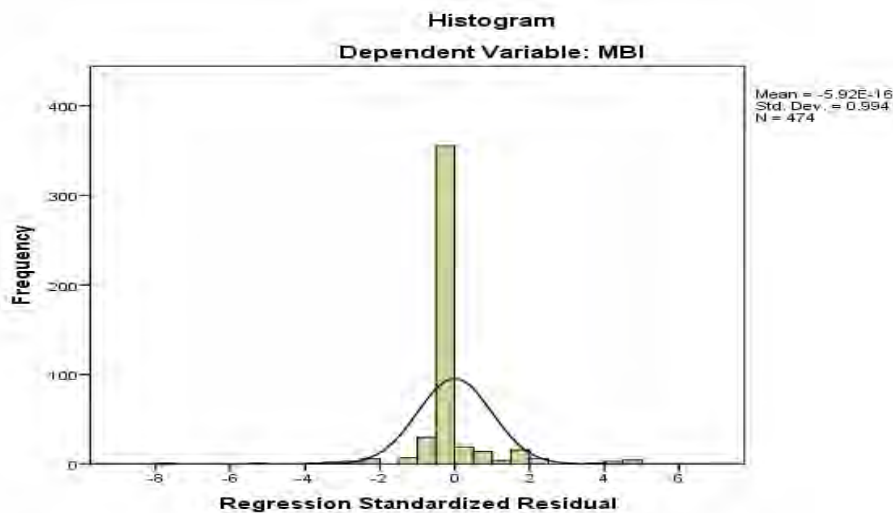
Figure 5.42. The Histogram of a Normal Distribution

5.6.3 Linearity Test and Homogeneity Test

Linearity is the other assumption for the test of multiple regressions. Tabachnick and Fidell (2007) explained linearity as the level of how the relation between the factors can be described in a straight line (Tabachnick & Fidell, 2007). This is shown in detail in Figure 5.43 with a Normal Q-Q Plot.
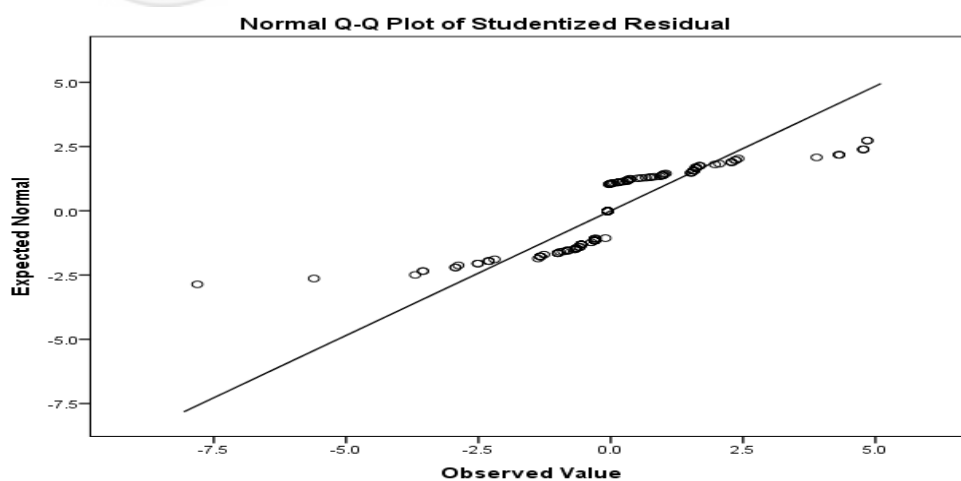
Figure 5.43. The Normal of Q-Q Plot

The outcomes explained in Figure 5.43 show that the kurtosis' and skewness' averages were around zero and Figure 5.44 explains that the value starting from zero

and ended at zero provided a good reason to utilise the multiple regression test to study the relation between the independent and dependent variables.

The homoscedasticity shows when the rates of the differences for the dependent variable focus in only a border domain of the independent variable (Hair, 2010). This assumption was tested by utilising a residual plot to make sure that there was no type of decreasing or increasing residual. As explained in Figure 5.44, the homoscedasticity assumption was satisfied and there was no concern with utilising the test of multiple regression.
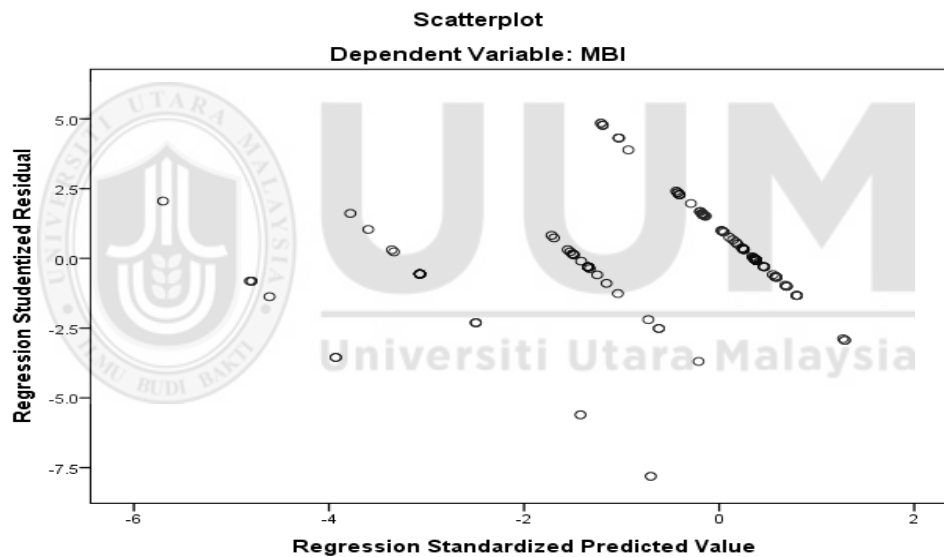
Figure 5.44. The Scatterplot

5.6.4 Multicollinearity Test

Hair and his partners (2010) stated that: multi-collinearity is recognised in the analysis when variables can clarify other variables. Multi-collinearity can be known when there is a high level of correlation between the independent variables and the dependent variable (Tabachnick & Fidell, 2007).

To perform a standard (simultaneous) registration test, all of the independent variables together clarified in Tables 5.93 and 5.94 that, the R square explained 89.8% of the variance in the (BI) dependent variable, the citizens' intentions to participate in the public decision-making of the e-government, which was highly significant at 0.0000, as indicated by the F-value of 685.782 in Table 5.94. Thus, in this research, the independent variables were examined to define the presence of multi-collinearity. The outcomes are explained in Tables 5.93 and 5.94.

Table 5.93

Model Summary

Model	R	R Square R^2	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.948[a]	.898	.897	.18766	1.823

a. Predictors: (Constant), MCU, MSN, MCO, MFC, MSI, MATB
b. Dependent Variable: MBI

Table 5.94

Model ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	144.912	6	24.152	685.782	.000[b]
	Residual	16.447	467	.035		
	Total	161.359	473			

Table 5.95 presents an examination of the t-values which indicate that ATB, SN, SI, FC, CO, and CU contributed to the production of (BI) the citizens' intentions to participate in the public decision-making of the e-government. Table 5.95 explains that all of the factors coefficients, and that they were significant.

Table 5.95

Model Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1 (Constant)	.332	.109		3.053	.002	.118	.546		
MATB	.292	.033	.321	8.897	.000	.228	.357	.168	5.967
MSN	-.110	.023	-.124	-4.705	.000	-.156	-.064	.314	3.188
MSI	-.115	.024	-.136	-4.879	.000	-.161	-.069	.279	3.581
MFC	.327	.027	.341	12.125	.000	.274	.380	.276	3.622
MCO	.435	.026	.445	16.573	.000	.384	.487	.303	3.301
MCU	.125	.031	.144	4.045	.000	.064	.186	.173	5.778

5.6.5 Using Multiple Regression to Test the Model

Multiple regression tests were utilised in order to test the relation between (BI) the citizens' intentions to participate in the public decision-making of the e-government as the dependent variable and the relationship between attitude towards act or behaviour (ATB), subjective norms (SN), social influence (SI), facilitating conditions (FC), compatibility (CO), and culture (CU) as the independent variables. The multiple regression data analysis provides many points that clarify one relationship. For instance, the R value specifies how well a group of variables are fit to foretell a particular result. Furthermore, Sig. if codes: 0 ***, 0.001 **, 0.01 *, 0.05, 0.1, and 1 appear for significant levels, the rate 0.1 also represents a significant level, the studies have accepted R (-1<r<1) as positive, but if the r=0 it was a very weak negative (Ang, Davies, & Finlay, 2001; Serrano Cinca, Mar Molinero, & Gallizo Larraz, 2001; Speed, 1994). The reasons to accept 0.1 as a significant level depends on the research's sample size (Speed, 1994).

In the analysis above, the R² rate of this study was 0.898 as clarified in Table 5.93. So, that means the relationship between the citizens' intentions to participate in the public decision-making of the e-government would contribute to attitude towards act or behaviour (ATB), subjective norms (SN), social influence (SI), facilitating conditions (FC), compatibility (CO), and culture (CU).The independent variables explained 89.8 percent of the difference or variance of the citizens' intentions to participate in the public decision-making of the e-government's dependent variable. The other point that the multiple regression data analysis gives is the adjusted R² rate (Pallant, 2007). The adjusted R² data statistic rectifies the R² rate to give a good estimate of the correct population rate. In this research, the adjusted R² rate for the Model was 89.7. The model was the Durbin-Watson at a level of 1.823 with the predictors: MCU, MSN, MCO, MFC, MSI, and MATB. Table 5.96 clarifies the outcome in detail.

Table 5.96

Summary of the Model

Model	R	R Square R^2	Adjusted R Square	Std. Error of the Estimate
1	.895[a]	.800	.800	.26120
2	.929[b]	.862	.862	.21710
3	.940[c]	.883	.883	.20008
4	.944[d]	.891	.890	.19329
5	.946[e]	.895	.893	.19072
6	.948[f]	.898	.897	.18766

Performing the Stepwise method registration test, for checking the independents variables, is a way of fitting the models of regression in which the selection of the predictive variables is made by automatic steps (Aiken et al., 1991; Hayes, 2013).

Table 5.97 shows that the Stepwise method took four factors from the study model that were succeeding in the method process and got significant values of 0.0000, which were for the ATB, SN, SI, FC, CO, and CU.

Table 5.97

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	129.156	1	129.156	1893.060	.000[b]
	Residual	32.203	472	.068		
	Total	161.359	473			
2	Regression	139.160	2	69.580	1476.324	.000[c]
	Residual	22.199	471	.047		
	Total	161.359	473			
3	Regression	142.543	3	47.514	1186.878	.000[d]
	Residual	18.816	470	.040		
	Total	161.359	473			
4	Regression	143.837	4	35.959	962.499	.000[e]
	Residual	17.522	469	.037		
	Total	161.359	473			
5	Regression	144.336	5	28.867	793.618	.000[f]
	Residual	17.023	468	.036		
	Total	161.359	473			
6	Regression	144.912	6	24.152	685.782	.000[g]
	Residual	16.447	467	.035		
	Total	161.359	473			

a. Dependent Variable: MBI
b. Predictors: (Constant), MCO
c. Predictors: (Constant), MCO, MATB
d. Predictors: (Constant), MCO, MATB, MFC
e. Predictors: (Constant), MCO, MATB, MFC, MSN
f. Predictors: (Constant), MCO, MATB, MFC, MSN, MSI
g. Predictors: (Constant), MCO, MATB, MFC, MSN, MSI, MCU

Table 5.98 clarifies the coefficients of the model. The MCO factor was generated from the first model with a significant value of 0.000, the second model generated the MCO and the MATB factors with significant values for both at 0.000, the third model generated the MCO, MATB, and MFC factors with significant values for all

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at 0.000, the fourth model generated the MCO, MATB, MFC, and MSN factors with significant values for all at 0.000, the fifth model generated the MCO, MATB, MFC, MSN, and MSI factors with significant values for all at 0.000, and the last model generated the MCO, MATB, MFC, MSN, MSI, and MCU factors with significant values at 0.000.

Table 5.98

Coefficients of the Model

Model		Unstandardised Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.865	.137		6.319	.000
	MCO	.875	.020	.895	43.509	.000
2	(Constant)	.523	.116		4.495	.000
	MCO	.550	.028	.562	19.730	.000
	MATB	.378	.026	.415	14.569	.000
3	(Constant)	.177	.114		1.555	.121
	MCO	.488	.027	.498	18.341	.000
	MATB	.286	.026	.314	11.039	.000
	MFC	.205	.022	.213	9.193	.000
4	(Constant)	.305	.112		2.730	.007
	MCO	.468	.026	.479	18.090	.000
	MATB	.315	.026	.346	12.353	.000
	MFC	.302	.027	.315	11.129	.000
	MSN	-.128	.022	-.144	-5.884	.000
5	(Constant)	.312	.110		2.824	.005
	MCO	.466	.026	.476	18.232	.000
	MATB	.363	.028	.399	12.834	.000
	MFC	.304	.027	.317	11.354	.000
	MSN	-.093	.023	-.105	-3.971	.000
	MSI	-.084	.023	-.099	-3.703	.000
6	(Constant)	.332	.109		3.053	.002
	MCO	.435	.026	.445	16.573	.000
	MATB	.292	.033	.321	8.897	.000
	MFC	.327	.027	.341	12.125	.000
	MSN	-.110	.023	-.124	-4.705	.000
	MSI	-.115	.024	-.136	-4.879	.000
	MCU	.125	.031	.144	4.045	.000

The collinearity statistics tolerance and the partial correlation tests explained the excluded factors in the model of the study. Table 5.98 showed the predictors in the model (Constant): MCO, MATB, MFC, MSN, MSI, and MCU.

5.6.6 The Results of the Hypotheses Test in the Study

As clarified in this chapter, the study's hypotheses H1 to H6 were tested using the Non-Parametric - Kruskal Wallis test and Correlation relationship test, and all of the hypotheses or factors had positive results. Then, the model of the study was tested by performing a multiple regression data analysis to revise the model. The results the test of the model of the study were positive and supported the six hypotheses as shown in the Coefficients of the Model's table and in sequence (as in the table): compatibility (CO), attitude towards act or behaviour (ATB), facilitating conditions(FC), subjective norms (SN), social influence (SI), and culture (CU). The number of presented hypotheses was 42 as explained in Table 5.99; the six hypotheses, which had positive results from the research, supported the study's model. The six hypotheses were found and had different levels of agreement, but did not significantly influence the proposed model. However, for the multiple regression data analysis, the dependent variable and independent variables were significant and supported. Table 5.99 below offers the specifics. The sections above have debated this in depth.

Table 5.99

The outcomes of the Hypotheses Test for the Research

H. Number	Short Statement of Hypotheses	Remarks
H1	**Attitude has a positive effect on the citizens' intentions to participate in the public decision-making in the e-government.** **H7.** Attitude towards Act or Behaviour influences the behavioural intention to participate in the public decision-making of the e-government more strongly for men than for women. **H8.** Attitude towards Act or Behaviour influences the behavioural intention to participate in the public decision-making of the e-government more strongly for younger people than for older people. **H9.** Attitude towards Act or Behaviour influences the behavioural intention to participate in the public decision-making of the e-government more strongly for a higher level of education than for a lower level of education. **H10.** Attitude towards Act or Behaviour influences the behavioural intention to participate in the public decision-making of the e-government more strongly for political groups than other social groups. **H11.** Attitude towards Act or Behaviour influences the behavioural intention to participate in the public decision-making of the e-government more strongly for a higher level of experiences than a lower level of experiences. **H12.** Attitude towards Act or Behaviour influences the behavioural intention to participate in the public decision-making of the e-government more strongly for the private sector than the public sector.	**Supported**
H2	**Subjective norms have a positive effect on the citizens' intentions to participate in the public decision-making in the e-government.** **H14.** Subjective norms influence the behavioural intention to participate in the public decision-making of the e-government more strongly for younger people than for older people. **H15.** Subjective norms influence the behavioural intention to participate in the public decision-making of the e-government more strongly for a higher level of education than for a lower level of education. **H16.** Subjective norms influence the behavioural intention to participate in the public decision-making of the e-government more strongly for IT groups than other social groups. **H17.** Subjective norms influence the behavioural intention to participate in the public decision-making of the e-government more strongly for the private sector than the public sector. **H18.** Subjective norms influence the behavioural intention to participate in the public decision-making of the e-government more strongly for a higher level	**Supported**

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Table5.99 continued

of experiences than a lower level of experiences.

	Social influence will have a positive influence on the intentions of the citizens to participate in the public decision-making.		
H3	**H19.** Social influence influences the behavioural intention to participate in the public decision-making of the e-government more strongly for men than for women. **H20.** Social influence influences the behavioural intention to participate in the public decision-making of the e-government more strongly for younger people than for older people. **H21.** Social influence influences the behavioural intention to participate in the public decision-making of the e-government more strongly for a higher level of education than for a lower level of education. **H22.** Social influence influences the behavioural intention to participate in the public decision-making of the e-government more strongly for economic groups than other social groups. **H23.** Social influence influences the behavioural intention to participate in the public decision-making of the e-government more strongly for the private sector than the public sector. **H24.** Social influence influences the behavioural intention to participate in the public decision-making of the e-government more strongly for a higher level of experiences than a lower level of experiences.	**Supported**	
	Facilitating conditions will have a positive influence on the behavioural intentions of citizens to participate in the public decision-making of the e-government.		
H4	**H25.** Facilitating conditions influence the behavioural intention to participate in the public decision-making of the e-government more strongly for men than for women. **H26.** Facilitating conditions influence the behavioural intention to participate in the public decision-making of the e-government more strongly for younger people than for older people. **H27.** Facilitating conditions influence the behavioural intention to participate in the public decision-making of the e-government more strongly for a higher level of education than for a lower level of education. **H28.** Facilitating conditions influences the behavioural intention to participate in the public decision-making of the e-government more strongly for worker groups than other social groups. **H29.** Facilitating conditions influence the behavioural intention to participate in the public decision-making of the e-government more strongly for the private sector than the public sector. **H30.** Facilitating conditions influence the behavioural	**Supported**	

Table 5.99 continued

	intention to participate in the public decision-making of the e-government more strongly for a higher level of experiences than a lower level of experiences.	
	Perceived compatibility will be positively related to the intention of the citizens to participate in the public decision-making in the e-government.	
	H31. Compatibility influences the behavioural intention to participate in the public decision-making of the e-government more strongly for men than for women.	
	H32. Compatibility influences the behavioural intention to participate in the public decision-making of the e-government more strongly for younger people than for older people.	
H5	**H33.** Compatibility influences the behavioural intention to participate in the public decision-making of the e-government more strongly for a higher level of education than for a lower level of education.	**Supported**
	H34. Compatibility influences the behavioural intention to participate in the public decision-making of the e-government more strongly for worker groups than other social groups.	
	H35. Compatibility influences the behavioural intention to participate in the public decision-making of the e-government more strongly for the private sector than the public sector.	
	H36. Compatibility influences the behavioural intention to participate in the public decision-making of the e-government more strongly for a higher level of experiences than a lower level of experiences.	
	Culture will be positively related with the type of citizens' participation outcomes that promote the public decision-making in the e-government's success.	
	H37. Culture influences the behavioural intention to participate in the public decision-making of the e-government more strongly for men than for women.	
	H38. Culture influences the behavioural intention to participate in the public decision-making of the e-government more strongly for younger people than for older people.	
H6	**H39.** Culture influences the behavioural intention to participate in the public decision-making of the e-government more strongly for a higher level of education than for a lower level of education.	**Supported**
	H40. Culture influences the behavioural intention to participate in the public decision-making of the e-government more strongly for worker groups than other social groups.	
	H41. Culture influences the behavioural intention to participate in the public decision-making of the e-government more strongly for the private sector than the public sector.	

Table 5.99 continued

H42. Culture influences the behavioural intention to participate in the public decision-making of the e-government more strongly for a higher level of experiences than a lower level of experiences.

5.6.7 Conclusion of the Multiple Regression (Third Objective)

Table 5.85 explained that the model coefficients were significant amongst all of the independent variables with the dependent variable, the citizens' intentions to participate in the public decision-making of the e-government (BI). The independent variables that had significant values were: attitude towards act or behaviour, ATB= 0.000; subjective norms, SN= 0.000; social influence, SI= 0.009; facilitating conditions, FC= 0.000; compatibility, CO= 0.000; and culture, CU= 0.000. The Multiple Regression test arranged the factors according to the level of significance. The multiple regression technique was used to test (IV1, IV2, IV3, IV4, IV5, and IV6) with the DV to get the positive model that achieved the third objective in this study (To examine the citizens' intentions to participate in the public decision-making of the e-government). As referred to in the tables above, the tests of the model of the study using the regression analysis found four independent variables with the dependent variable which were supported, and the third objective of this study was checked successfully by using the Multiple Regression test and good results were found.

5.7 Summary

Chapter Five has summarised the results that were obtained from the data analysis of this study which aimed to identify the factors that have an impact on the citizens' intentions to participate in the public decision-making of the e-government. The study also discussed the non-respondent bias. The approximated response rate was

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94.6%. This chapter also presented the descriptive statistics to examine the research findings as obtained from the respondents. An attempt was also made to check the construct validity. With regards to the hypotheses tests for H1 to H6, the non-Parametric- Kruskal Wallis test, Correlation, and multiple regression data analysis were employed to check the level of agreement amongst all of the independent variables with the dependent variable of the citizens' intentions to participate in the public decision-making of the e-government which was elaborated on. The outcomes, conclusions, and discussion are provided in Chapters Six and Seven.

CHAPTER SIX
RESULTS

6.1 Introduction

Chapter Six discusses the outcomes of this study. As aforementioned in Chapters Two and three, this research had six independent variables. These included: attitude towards act or behaviour (ATB), subjective norms (SN), social influence (SI), facilitating condition (FC), compatibility (CO), and culture (CU). Also, it included six moderator variables (citizens' self-knowledge characteristics): gender, age, level of education, social group, working sector, and Internet experiences. This chapter first discussed the objectives of this study which were to identify the factors that influence the citizens' intentions to participate in the decision-making of the e-government, to examine the citizens' self-knowledge characteristics that will moderate the relationship between the influencing factors and the citizens' intentions to participate in the public decision-making of the e-government, and to determine a model of the citizens' intentions to participate in the public decision-making of the e-government. The study discussed the conclusion of the outcome and the summary of the findings made by this research. This has been followed by the suggestions and study limitations for future studies in the area of the decision-making model in the e-government.

6.2 Revised Model of the Study

This section briefly explains the post-analysis model as shown in Figure 6.1. The black circle indicates that is not a significant relationship between the variable and moderator. Each square indicates that is significant relationship between the moderator and the variable.
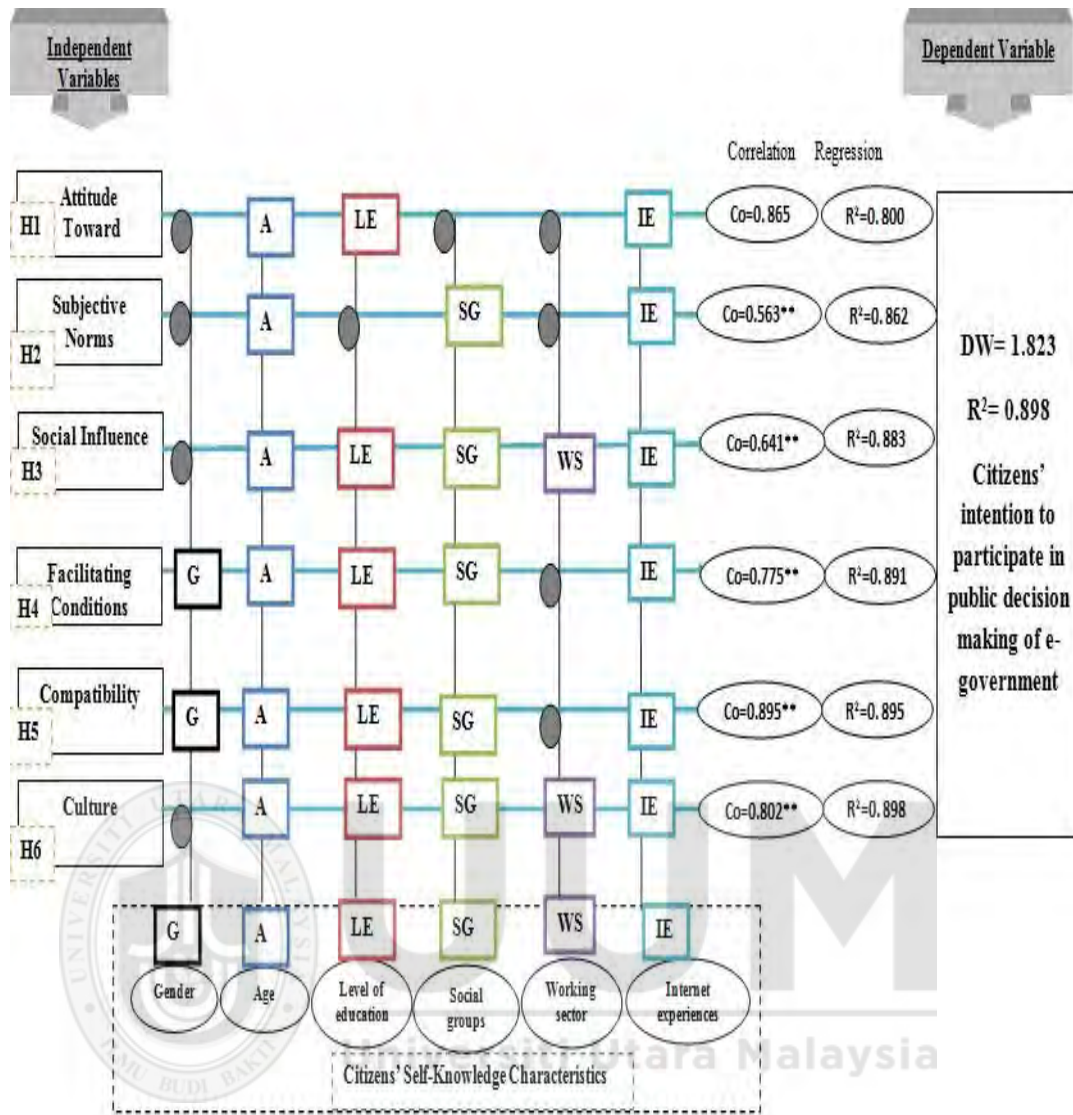
Figure 6.1. Revised Model of the Study

Figure 6.1 explains all the results in the independent variables after the data analysis process. It also shows that each of the moderators (citizens' self-knowledge characteristics) had influence on the factors of attitude towards act or behaviour, subjective norms, social influence, facilitating condition, and culture. The model used the citizens' intention to participate in the public decision making of the e-government in the planning stage (user requirements). This model contributed in identifying the citizens requirements before the implementation of the e-government in the public decision making; for example: the citizens' needs in the public decisions (the providing of information quality, security of personal information,

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changing the personal information, kinds of the provided government services, and etc...) using the citizens requirements in the planning stage to identify the important public decisions which improve the e-government services.

The study's revised model was verified by two content experts who supplied this study with a lot of advice from the beginning as was mentioned in Chapter Four section 4.4.5. An instrument was used to collect feedback from; Associate Professor Dr. Azham Hussain in his survey model and the recommendation validation form, in which he approved of the model of the study after doing his corrections in two meetings. The first expert agreed with all the recommendations in Chapter Six.

Whilst, Associate Professor Dr. Najeeb Abbas Al-Sammarraie approved of the model of the study after several meetings and after completing his corrections. He also had some suggestions about the research. He commented that" it is very interesting research, all the e-government decisions are supposed to be transparent so they will reflect the social influences of the citizens". He did not agree with the recommendations 5, 7, 10, and 11so he gave some advice to improve these recommendations (Internet experts are part of IT professionals and all of them are citizens), his last suggestion was about the influences of the uneducated citizens on the e-government and what are the strategies that can handle this case. Thus, the finale recommendations in Chapter Six were modified according to the second expert suggestions. For more information see Appendix (J). The recommendations of the expert's helped the present study to identify the contributions; limitations and future work of this study by determining it is strengths and weaknesses. For more information see the sections (7.5 and 7.6).

6.3 Discussion of the Main Effect Hypotheses Research Results

This section links the results of the dependent variable and the independent variables with the influence of the moderators on the dependent variable that have been represented by practical cases. Chapters Two and three have explained that there were six independent variables. After using Cronbach's alpha and the factor analysis test, the same variables were found. This section discusses the factor analysis of the study which clarified the factors that were significantly related with this study, as well as discussing the effect of the moderator factors on the variables of the study. The present study inspected the impact of the independent variables; (attitude towards behaviour (ATB), subjective norms (SN), social influence (SI), facilitating condition (FC), compatibility (CO), and culture (CU)) on the dependent variable that is, the citizens' intention to participate in the public decision making of the e-government.

6.3.1 Attitude towards act or behaviour (ATB) -H1

H1. Attitude has a positive effect on the citizens' intentions to participate in the public decision-making in the e-government. In the context of this study, attitude towards Act or Behaviour is a person's negative or positive feelings about executing the purposed behavior (Ajzen, 1991). From this point, the study identified the attitude of the citizens' intentions to participate in the public decision-making of the e-government. This study made a mix between all of the experiences of the players from the four social groups (politicians, economists, IT professionals, and workers) through their knowledge characteristics, to improve the e-government by engaging the citizens' self-knowledge characteristics in the public decision-making. From the factor analysis, the study identified the good items from the attitude towards act or

behaviour (ATB). This factor's items achieved successful and good results in the loading tables when the factor was tested by using the factor analysis; for more details see section 5.5.4.1.

Alharbi et al., 2016 explained that their model was constructed on the basis of the Theory of Planned Behaviour (TPB) and they found that attitudes positively affected the citizens' intentions to engage in the e-democracy in Jordan. Mishra et al., 2014, indicated that the attitudes toward specific behaviours were found to be the best predictors of the behavioural intention. Also, their work examined the beliefs and behaviours of IT users in green computing. They also found that the ATB is a more dominant factor than the SN in determining the intention to practice green computing. The first main hypothesis in the present study, which was "attitude has a positive effect on the citizens' intentions to participate in the public decision-making in the e-government", was examined using the Kruskal Wallis test which resulted in positive asymptotic significance. The results showed that social group was significantly asymptotic for the construct _Attitude towards act or behaviour' between the groups of politicians, economists, IT professionals, and workers; for more details see section 5.5.6.1. The study examined the strength of the relationship between the variables through the Correlation relationship test. The results were positive and rejected the null hypothesis with a strong correlation relationship between the (ATB) and (DV) variables in the model of this study; for more details see section 4.5.7. Finally, the hypothesis was examined by the multiple regression analysis for the purpose of determining the importance of this hypothesis in the model of this study. The results of the ATB hypothesis were supported in the model of study because the ATB variable was significant with the DV variable. The findings of the Regression analysis are presented in subsection 5.6.4.

Xie, et al., 2017 and Rana, et al., 2015 displayed that attitude had a positive significant influence on the behavioural intention and indicated the significant relationships between attitude and intention in the e-government. The following studies conform to the result of the attitude factor in this study (Ajzen, 2011; Alharbi et al., 2016; Hujran et al., 2015; Mishra et al., 2014; Rauch & Hulsink, 2015; Rojas et al., 2017).

6.3.2 Subjective norms (SN) -H2

According to Ajzen (1991), a subjective norm is the person's understanding that most individuals who are important to her/him believe that she/he could or could not execute the behaviour in question. This study made a mix between all of the experiences of the players from four social groups (politicians, economists, IT professionals, and workers) through their knowledge characteristics, to enhance the e-government by engaging the citizens' self-knowledge characteristics in the public decision-making. From this point, the study identified the subjective norms for the citizens' intentions to participate in the public decision-making of the e-government. The study identified the good items from the subjective norms (SN) factor by using the factor analysis. When the factor was tested with the factor analysis, this factor's items achieved successful and good results in the loading tables; for more details, see section 5.5.4.2. The present study's results were confirmed by past studies. Alharbi et al., 2016, showed that their results suggested that the factor subjective norms had a significant impact on the citizens' intentions to engage in the e-participation activities. Mishra et al., 2014 reported that the significant influence of the subjective norms on IT professionals' behavioural intentions revealed that people, who are considered important by IT professionals, should be expected to provide motivation for the adoption of green information technology.

The second main hypothesis in the present study was "subjective norms have a positive effect on the citizens' intentions to participate in the public decision-making in the e-government". It was examined by using the Kruskal Wallis test which resulted in positive asymptotic significance and the results showed that the four groups were significantly asymptotic for the construct _Subjective Norms' between the groups of politicians, economists, IT professionals, and workers; for more detail, see section 5.5.6.2.

The study examined the strength of the relationship between the variables through the Correlation relationship test, the results were positive and rejected the null hypothesis with a strong correlation relationship between the SN variable and the DV in the model of this study; for more details, see section 5.5.7. Finally, the subjective norms hypothesis was examined by using the multiple regression analysis for the purpose of determining the importance of this hypothesis in the model of this study. The results of the SN hypothesis were supported in the model of the study because the SN variable was significant with the DV. The findings of the Regression analysis are presented in subsection 5.6.4. Xie et al., 2017 and Wu et al., 2015 showed that the subjective norms determine the recognition of behavioural intention and has a significant influence on the behavioural intention in the e-government (Al-Swidi et al., 2014; Alharbi & Kang, 2014; Alharbi et al., 2016; Mishra et al., 2014; Rana, Dwivedi, & Lal, 2015).

6.3.3 Social Influence (SI) -H3

According to Venkatesh et al. (2003), social influence is the extent to which the technology is perceived by the user to be important enough that she or he must employ a particular technology. Therefore, this research identified the social

influence (SI) of the citizens' intentions to participate in the public decision-making of the e-government. This research mixed all of the experiences of the four social groups (politicians, economists, IT professionals, and workers) by engaging their knowledge characteristics of gender, age, level of education, social group, working sector, and Internet experiences to improve the e-government by engaging the citizens' self-knowledge characteristics in the public decision-making. Through the factor analysis, the study determined the good items from the social influence (SI). This factor's items achieved successful and good results in the loading tables when the factor was tested with the factor analysis; for more details, see section 5.5.4.3.

Rana and Dwivedi, 2015, presented their study result about the social influence that plays an essential role towards understanding the adoption of the online public grievance redressal system in the e-government. Kurfalı, et al., 2017, explained that the social influence, which measures the effect of the social environment's attitude on the individual, was found to be statistically significant on the behavioural intention. Furthermore, social influence was found to have a positive effect on the behavioural intention to use the e-government services. the present study results confirmed by the past studies, the third main hypothesis of "social influence will have a positive influence on the intentions of the citizens to participate in the public decision-making" was examined using the Kruskal Wallis test which resulted in positive asymptotic significance and the results showed that social group was significantly asymptotic for the construct ‗Social Influence' between the groups which were politicians, economists, IT professionals, and workers; for more details, see section 4.5.6.3. Weerakkodya et al., 2013 and Slade et al., 2014 clarified that social influence has a positive influence on the behavioural intention to use the e-government. The following studies supported the result of this study about the social influence factor

(Escobar et al., 2014; Rana & Dwivedi, 2015; Shafi & Weerakkody, 2009; Susanto & Goodwin, 2013; Venkatesh et al., 2016). The study examined the strength of the relationship between the variables through the Correlation relationship test. The results were positive and rejected the null hypothesis with a strong correlation relationship between the SI variable and the DV in the model of this study; for more details, see section 5.5.7. Finally, the hypothesis was examined by using the multiple regression analysis for the purpose of determining the importance of this hypothesis in the model of this study. The results of the SI hypothesis were supported in the model of the study because the SI variable was significant with the DV variable. The findings of the Regression analysis are presented in subsection 5.6.4.

6.3.4 Facilitating Condition (FC) -H4

Facilitating condition is explained as the level at which a user is convinced that a technical and organisational infrastructure exists for supporting the citizens' intention to participate in public decision making of e-government (Venkatesh et al., 2003; Venkatesh et al., 2012). This study made a mix between all of the experiences of the players from the four social groups (politicians, economists, IT professionals, and workers) through their knowledge characteristics which consisted of the six moderators, which were gender, age, level of education, social group, working sector, and Internet experiences to enhance the e-government by engaging the citizens' self-knowledge characteristics in the public decision-making. From this point, the study identified the facilitating condition for the citizens' intentions to participate in the public decision-making of the e-government. Elsheikh and Azzeh, 2014, showed that facilitating conditions had no significance on the usage of the behaviour of the e tax filing and payment system in Mauritius, as an example of an e-government service. Facilitating conditions has had an impact on the citizens but not

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at the required level to be significantly influential on the success of the e-government delivery.

The present study explained the fourth main hypothesis was "facilitating conditions have a positive effect on the citizens' intentions to participate in the public decision-making of the e-government". The study identified the good items from the facilitating condition (FC) factor by using the factor analysis. When the factor was examined with the factor analysis, this factor's items achieved successful and good results in the loading tables; for more details, see section 5.5.4.4. It was examined by using the Kruskal Wallis test which resulted in a positive asymptotic significance and the results showed that the four groups were significantly asymptotic for the construct _Facilitating Conditions' between the groups of politicians, economists, IT professionals, and workers; for more details, see section 5.5.6.4. The present study explained that the facilitating conditions had a significant impact in the model of the study, contrary to Elsheikh and Azzeh's study. Furthermore, the present study observed many of the previous studies which conformed that the facilitating conditions being an important factor in their models. Weerakkodya et al., 2013 showed in their study that there was a significant relationship between the facilitating conditions and the usage of behaviour that influences the adoption of the e-government services. Slade et al., 2014 explained in their study that the facilitating conditions affect both the behavioural intention and use behaviour. Weerakkodya's and Slade's studies conformed to the result of the facilitating conditions factor in this study to improve the e-government (Decman, 2015; Escobar et al., 2014; Masrom et al., 2014b; Venkatesh et al., 2016; Weerakkody et al., 2013).

The study examined the strength of the relationship between the variables through the Correlation relationship test. The results were positive and rejected the null hypothesis with a strong correlation relationship between the FC variables and the DV in the model of this study; for more details, see section 5.5.7. Finally, the facilitating conditions hypothesis was examined by using the multiple regression analysis for the purpose of determining the importance of this hypothesis in the model of this study. The results of the FC hypothesis were supported in the model of the study because the FC variable was significant with the DV. The findings of the Regression analysis are presented in subsection 5.6.4.

6.3.5 Compatibility (CO) -H5

According to Moore and Benbasat (1991), compatibility is the range in which an innovation is displayed as being consistent with the existing values, experiences, and needs of future users. From this point, the study identified the compatibility for the citizens' intentions to participate in the public decision-making of the e-government. Wang, et al., 2017, showed the interaction between the personalisation and the technological compatibility in influencing the customers' e-service usage. In addition, they presented the compatibility with previous e-banking experiences as a contingent factor since the users differed in their level of experience with this type of service. The present study made a mix of all of the experiences of the players from the four groups (politicians, economists, IT professionals, and workers) through their knowledge characteristics which consisted of the six moderators, which were gender, age, level of education, social group, working sector, and Internet experiences to enhance the e-government by engaging the citizens' self-knowledge characteristics in the public decision-making. From the factor analysis, the study identified the good items from the compatibility (CO) factor. This factor's items achieved successful and

good results in the loading tables when the factor was tested with the factor analysis; for more details, see section 5.5.4.5.

The outcome of this section on the compatibility factor effect supported this study in accordance to Wang et al., 2017 and Maillet et al., 2015,which explained that the compatibility factor enabled a researcher to get the existing values, experiences, and future needs of the citizens in the e-government in order to enhance the e-government (Carter & Belanger, 2005; Choudrie, 2016; Hsu & Chiu, 2007; Maillet et al., 2015; Wang et al., 2017). The present study explained the fifth main hypothesis of "compatibility will be positively related to the intentions of the citizens to participate in the public decision-making in the e-government" was examined using the Kruskal Wallis Test which resulted in a positive asymptotic significance and the results showed that social group was significantly asymptotic for the construct ‗Compatibility' between the groups of politicians, economists, IT professionals, and workers; for more details, see section 5.5.6.5.

Choudrie, 2016, explained that compatibility had indeed the most significant relationship with the usage of the intentions to ensure successful participants recruitment in the e-government. The present study examined the strength of the relationships between the variables through the Correlation relationship test, the results were positive and rejected the null hypothesis with a strong correlation relationship between the CO variable and the DV in the model of this study; for more details, see section 5.5.7. Finally, the hypothesis was examined by using the multiple regression analysis for the purpose of determining the importance of this hypothesis in the model of this study. The results of the CO hypothesis were supported in the

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model of study because the CO variable was significant with the DV. The findings of the Regression analysis are presented in subsection 5.6.4.

6.3.6 Culture (CU) -H6

Culture is the individuals' beliefs, behaviour, and knowledge which form collectivistic and individualistic infrastructures (Bruder et al., 2013; Efrat, 2014; Sharma et al., 1994; Straub et al., 2004; Tylor, 1871; Zhao et al., 2014). From this point the study identified the culture (CU) for the citizens' intentions to participate in the public decision-making of the e-government. This study made a mix of all of the experiences of the players from the four groups (politicians, economists, IT professionals, and workers) through their knowledge characteristics which consisted of the six moderators, which were gender, age, level of education, social group, working sector, and Internet experiences, to enhance the e-government by engaging the citizens' self-knowledge characteristics in the public decision-making. From the factor analysis, the study identified the good items from the CU factor. This factor's items achieved successful and good results in the loading tables when the factor was tested with the factor analysis; for more details, see section 5.5.4.6. Elsheikh and Azzeh, 2014, clarified that their study also pointed to other factors such as culture, which were not included in this context, but in the future studies there is a need for them to be included in this context (Elsheikh & Azzeh, 2014).

The sixth main hypothesis of "culture will be positively related with the type of citizens' participation outcomes that promote the public decision-making in the e-government's success" was examined using the Kruskal Wallis test which resulted in positive asymptotic significance and the results showed that social group was significantly asymptotic for the construct ‗Culture‘ between the groups of politicians,

economists, IT professionals, and workers; for more details, see section 5.5.6.6. The study examined the strength of the relationships between the variables through the Correlation relationship test. The results were positive and rejected the null hypothesis with a strong correlation relationship between the CU variable and the DV in the model of this study; for more details, see section 5.5.7. Finally, the hypothesis was examined by using the multiple regression analysis for the purpose of determining the importance of this hypothesis in the model of this study. The results of the CU hypothesis were supported strongly in the model of the study because the CU variable was significant with the DV. The findings of the Regression analysis are presented in subsection 5.6.4.

The findings of this section on culture factor influences supported the research by Efrat (2014) and the UN report (2016), which clarified that the culture factor plays an important role in the e-government by having an effect on politicians, economists, and social groups. The following studies conform with the result of the culture factor in this study (Hujran et al., 2015; Li et al., 2015; Rufin et al., 2014; UN, 2016; Welch & Feeney, 2014; Zhao et al., 2014; Zhao et al., 2015).

6.4 Discussion of Moderating Effect Hypotheses

A moderating variable grants strength or direction by its effect on the relationship between the dependent variable and the independent variables (Hayes, 2013; Sharma et al., 1994). In addition, studies have debated that the moderation impact does not only grant the strength of the impact on the relationship but also confirms the significance of the relationship which was not immediately detected (Al-Nahdi et al., 2015; Hayes, 2013; Hayes & Rockwood, 2016; Usman et al., 2014). Thus, the present study inspected the impact of the moderating variables on the variables

relationship in the study model. The moderating variables in the study model were (gender, age, level of education, social groups, working sector, and Internet experience) and the citizen's intention to participate in the public decision making of the e-government. Therefore, gender was grouped into (female and male), age was grouped into (18-24 till 60 years and above), level of education was grouped into (primary school, high school, technical school, bachelor, Master, and doctoral degree), social group was grouped into (politicians, economists, IT professionals, and workers group), working sector was grouped into (public, private, and own sector), and Internet experiences was grouped into (1-2 years till 5 years and above), whilst the citizens' intention to participate in the e government was grouped into low and high participation.

6.4.1 Impact of Gender Differences as Moderator

ATB influences the IB more by Gender (H1.7), the result of the interaction between gender and attitudes toward act or behaviour was not significant. So, this proves that there was no significance, indicating that there was no potential significant interaction between the moderator of gender and attitude towards act or behaviour on the citizens' intentions to participate in the public decision-making of the e-government. Baker, et al., 2007, said that gender has been reported to be a significant moderator of the influences of the attitude on the behavioural intention. Other studies, Rauch and Hulsink, 2015, and Niehaves and Plattfaut, 2014, explained that gender was not related with intention and had low significance. The present study result showed that the gender moderator showed no different attitudes between the males and females and no effect on the variables of this sub hypothesis. So, it was ignored and excluded from this factor in the model of the study. The findings of the gender moderator analysis are presented in subsection 5.5.8.1.

SN influences the IB more by Gender (H2.13): The dependent variable of citizens'
intentions to participate in the public decision-making of the e-government (BI) was
influenced by the independent variable of subjective norms (SN). Baker, et al., 2007,
referred to the effects of gender on information technology implementation. Mishra,
et al., 2014, explained that gender diversity was not found to be significant on
subjective norms in the terms of green information technology adoption. The present
study result showed that, the interaction between gender and subjective norms was
not significant. So, this proves that there was a negative significance, indicating that
there was no potential significant interaction between the moderator of gender
variable and subjective norms; it also did not change the result of (IB) the citizens'
intentions to participate in the public decision-making of the e-government. So, it
was ignored and excluded from this factor. The findings of the gender moderator
analysis are presented in subsection 5.5.8.2.

SI influences the IB more by Gender (H3.19): The dependent variable of the citizens'
intentions to participate in the public decision-making of the e-government (BI) was
influenced by the independent variable of social influence (SI). Ibrahim, et al., 2016,
explained that gender did not impact on the social influence to have an effect on the
intention result. The present study result showed that the interaction between gender
and social influence was not significant. So, that indicates that there was no potential
significant interaction between the moderator of gender and social influence. Clearly,
the result of the gender moderator had no different social influence between the
males and females and did not have an effect on the variables of this sub hypothesis.
The findings of the gender moderator analysis are presented in subsection 5.5.8.3.

FC influences the IB more by Gender (H4.25): The dependent variable of the citizens' intentions to participate in the public decision-making of the e-government (BI) was influenced by the independent variable of facilitating conditions (FC). Venkatesh, et al., 2016, explained that the gender moderating the impacts of facilitating conditions on behavioral expectation experience moderating the impacts of behavioral intention and behavioral expectation on use. The present study result showed that the interaction between gender and facilitating conditions was significant. So, that indicates that there was a potential significant interaction between the moderator of gender and the facilitating conditions. In addition, the males and females had different level of agreement; and, the males had a lower level of agreement whilst the females strongly agreed with an interaction between the facilitating conditions (FC) and the citizens' intentions to participate in the public decision-making of the e-government (BI). The findings of the gender moderator analysis are presented in subsection 5.5.8.4.

Lawson, et al., 2016, referred to their approach as consisting of gender influence, age, values, beliefs, type of government, institutions and structures; gender had an impact on the interaction between the adoption factors and the intention to use the e-government. CO influences the IB more by Gender H5.31: The dependent variable of the citizens' intentions to participate in the public decision-making of the e-government (BI) was influenced by the independent variable of compatibility (CO). Clearly, the result of the gender moderator had different amounts of compatibility between the males and the females and had an effect on the variables of this sub hypothesis. The result of the interaction between gender and compatibility was significant. So, that indicates that there was a potential significant interaction between the moderator of gender and the compatibility. The result was that the

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citizens' intention to participate in the public decision-making of the e-government was affected. In addition, the males and females had different levels of agreement. The females had a lower level of agreement whilst the males strongly agreed with an interaction between CO and the citizens' intentions to participate in the public decision-making of the e-government (BI). The findings of the gender moderator analysis are presented in subsection 5.5.8.5.

Elsheikh and Azzeh, et al., 2014, explained that the Arab culture characterised by openness to the outside world more than ever, was also amongst the success factors for the wide delivery of citizen-centric e-government services. So the influence of gender on the e-government services had a significant impact but not with all the e-government services. The present study result showed that the interaction between gender and culture was not significant. So, that indicates that there was not a potential significant interaction between the moderator of gender and culture. CU influences the IB more by Gender (H6.37): The dependent variable of the citizens' intentions to participate in the public decision-making of the e-government (BI) was influenced by the independent variable of culture (CU). The result was that the citizens' intention to participate in the public decision-making of the e-government was not affected. Clearly, the result of the gender moderator had no different culture between the males and the females and did not have an effect on the variables of this sub hypothesis. In addition, the males and females did not have any different interaction between culture (CU) and the citizens' intentions to participate in the public decision-making of the e-government (BI). The findings of the gender moderator analysis are presented in subsection 5.5.8.6.

6.4.2 Impact of Age Differences as Moderator

ATB influences the IB more by Age (H1.8): The variable attitude towards act or behaviour (ATB) influenced the dependent variable of citizens' intentions to participate in the public decision-making of the e-government (BI) by the effect of the moderator of Age. The behavioural intention to participate in the public decision-making of the e-government was influenced by the sub hypothesis attitude towards act or behaviour. Kabbar, 2016, showed that an individual's age would influence the strength of the relationship between the attitude and the behavioural intentions. The present study result explained that there was a positive significance, thus indicating that there was a significant interaction between the moderator of age and the attitude towards act or behaviour variable which had an effect on the citizens' intentions to participate in the public decision-making of the e-government. It was more strongly influenced for younger people than for older people. For more information see, the result of the data analysis in section 5.5.8.1. In addition, older people had a lower level of agreement whilst the younger people strongly agreed with an interaction between attitude towards act or behaviour (ATB) and citizens' intentions to participate in the public decision-making of the e-government (BI).

SN influences the IB more by Age (H2.14): The independent variable of subjective norms (SN) influenced the dependent variable of citizens' intentions to participate in the public decision-making of the e-government (BI) by the effect of the moderator of Age. Baker et al., 2007, showed the non-significance of age as a moderating variable on the attitude and the subjective norm as they affected the behavioural intention to use technology. Venkatesh et al., 2016, explained that age had a significant impact as a moderating variable on the attitude and the subjective norm as

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they affected the behavioural intention to use technology. As with the present study's result in section 5.5.8.2., explained that there was a positive significance, thus indicating that there was a significant interaction between the moderator of age and the subjective norms variable which had an effect on the citizens' intentions to participate in the public decision-making of the e-government. In addition, older people had a lower level of agreement whilst the younger people strongly agreed with an interaction between the subjective norms (SN) and the citizens' intentions to participate in the public decision-making of the e-government (BI). So, this factor was taken into consideration and the study recommended focusing on this moderator factor.

Venkatesh et al., 2016, interpreted that age had an important effect on social influence as it impacts on the behavioral intention to use technology. SI influences the IB more by Age (H3.20): The study observed from the result in section 5.5.8.3 that, the moderator of age affected the interaction between the social influence (SI) variable and the dependent variable, the citizens' intentions to participate in the public decision-making of the e-government (BI). The present study result showed that the intentions of the citizens to participate in the public decision-making of the e-government were influenced by the sub hypothesis, social influence. It was more strongly influenced for the younger people than for the older people. In addition, the older people had a lower level of agreement whilst the younger people strongly agreed with an interaction between the social influence (SI) and the citizens' intentions to participate in the public decision-making of the e-government (BI). So, this factor was taken into consideration and the study recommended focusing on this moderator factor. The findings of the gender moderator analysis are presented in subsection 5.5.8.3.

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FC influences the IB more by Age (H4.26): The independent variable of facilitating conditions (FC) influenced the dependent variable of the citizens' intentions to participate in the public decision-making of the e-government (BI) by the effect of the moderator of Age. Venkatesh et al., 2016, presented that age had a value to influence as a moderating variable on facilitating conditions as they impact behavioral intention to use technology. The present study result explained that there was a positive significance, thus indicating that there was a significant interaction between the moderator of age and the facilitating conditions variable which had an effect on the citizens' intentions to participate in the public decision-making of the e-government. It was clear that the result of the age moderator had different FC between the younger people and the older people and had an effect on the variables of this sub hypothesis. In addition, the older people had a lower level of agreement whilst the younger people strongly agreed to an interaction between the facilitating conditions (FC) and the citizens' intentions to participate in the public decision-making of the e-government (BI). The findings of the gender moderator analysis are presented in subsection 5.5.8.4.

Choudrie, 2016, showed that an individual's age would influence the strength of the relationship between compatibility and behavioural intentions. CO influences the IB more by Age (H5.32): The independent variable of compatibility (CO) influenced the dependent variable of the citizens' intentions to participate in the public decision-making of the e-government (BI) by the effect of the moderator of Age. The present study result that the result of the age moderator had different amounts of CO between the younger people and the older people and had an effect on the variables of this sub hypothesis. In addition, the older people had a lower level of agreement whilst the younger people strongly agreed with an interaction between compatibility (CO) and

the citizens' intentions to participate in the public decision-making of the e-government (BI). So, this factor was taken into consideration and the study recommended focusing on this moderator factor. The findings of the gender moderator analysis are presented in subsection 5.5.8.5.

The intention of the citizens to participate in the public decision-making of the e-government was influenced by the sub hypothesis, culture. It was more strongly influenced for the younger people than for the older people. CU influences the IB more by Age (H6.38): The study observed from the result in section 5.5.8.6 that, the moderator of age affected the interaction between the culture (CU) variable and the dependent variable of the citizens' intentions to participate in the public decision-making of the e-government (BI). In addition, the older people had a lower level of agreement whilst the younger people strongly agreed with an interaction between culture (CU) and the citizens' intentions to participate in the public decision-making of the e-government (BI). So, this factor was taken into consideration and the study recommended focusing on this moderator factor.

6.4.3 Impact of Level of Education Differences as Moderator

Baker et al., 2007, showed that they expected to find little or no effect of age or level of education on the importance of attitude as influencing behavioural intention. Baker suggested that, with increasing levels of education, the influence of perceived attitude on intention to use technology was muted. The first independent variable in this study, ATB influences the IB more by Level of Education (H1.9): The present study result of the interaction between level of education and attitude towards act or behaviour, the first independent variable in this study, was significant. The sub hypothesis attitude towards act or behaviour influenced the behavioural intention to

participate in the public decision-making of the e-government more strongly for a higher level of education than for a lower level of education. The level of education factor was taken into consideration and the study recommended focusing on this moderator factor. The findings of the level of education moderator analysis showed that the lower level of education had a lower level of agreement whilst the higher level of education strongly agreed with an interaction between the attitude towards act or behaviour (ATB) and the citizens' intention to participate in the public decision-making of the e-government (BI). For more details, see subsection 5.5.8.1.

SN influences the IB more by Level of Education (H2.15): The second independent variable in this study (Baker et al., 2007) showed that it was expected to find little or no effect of age or the level of education on the importance of the subjective norm in influencing the behavioural intention. Baker study suggested that, with increasing levels of education, the influence of perceived subjective norm on the intention to use technology was muted. The present study result of the interaction between the level of education and the subjective norms, the second independent variable in this study, was not significant. The sub hypothesis subjective norms did not influence the citizens' intentions to participate in the public decision-making of the e-government. The level of education moderator had no different subjective norms (SN) between the higher level of education and lower level of education and had no effect on the variables of this sub hypothesis. The level of education moderator was ignored and excluded from this factor. For more details, see subsection 5.5.8.2.

SI influences the IB more by Level of Education (H3.21): The third independent variable in this study, social influence (SI), was influenced by the moderator of level of education, then the outcome of the (BI) dependent variable changed. Venkatesh et

al., 2016; Decman, 2015; and Ibrahim, et al., 2016, explained that these new moderation mechanisms included individual differences in the level of education that impacted on social influences, which had an effect on behavioral intention and habit as a new predictor of both intention and technology use. The present study result of the interaction between the level of education and social influence (SI), the independent variable in this study, was significant. As a result, there was a significant interaction between the levels of education in the sub hypothesis, social influence (SI). The level of the education moderator had different social influence between the higher level of education and the lower level of education and affected the variables of this sub hypothesis. So, the level of education factor was taken into consideration and the study recommended focusing on this moderator factor.

Venkatesh, et al., 2016; Decman, 2015; and Ibrahim, et al., 2016, clarified that the individual differences in the level of education had an effect on facilitating conditions which impacted on the behavioral intention to technology use. Facilitating conditions (FC) influences the IB more by Level of Education (H4.27): The fourth independent variable in this study, facilitating conditions (FC). The present study result of the interaction between the level of education and the facilitating conditions, the fourth independent variable in this study, was significant. The sub hypothesis, facilitating conditions, influenced the behavioural intention to participate in the public decision-making of the e-government more strongly for a higher level of education than for a lower level of education. The level of education factor was taken into consideration and the study recommended focusing on this moderator factor. The findings of the level of education moderator analysis showed that the lower level of education had a lower level of agreement whilst the higher level of education strongly agreed with an interaction between the facilitating conditions

(FC) and the citizens' intentions to participate in the public decision-making of the e-government (BI). For more details, see subsection 5.5.8.4.

Tarhini, et al., 2016; and Ibrahim, et al., 2016, explained that the moderator included individual differences in the level of education that impacted on compatibility which had an effect on the behavioural intention to use technology. Fifth independent variable in this study, compatibility (CO) (H5.33), the present study explained the result of the level of education factor was taken into consideration and the study recommended focusing on this moderator factor. The findings of the level of education moderator analysis showed that the lower level of education had a lower level of agreement whilst the higher level of education strongly agreed with an interaction between compatibility (CO) and the citizens' intentions to participate in the public decision-making of the e-government (BI). For more details, see subsection 5.5.8.5.

CU influences the IB more by Level of Education (H6.39): The third independent variable in this study, culture (CU), the present study result of the interaction between the level of education and culture, the independent variable in this study, was significant. The sub hypothesis (CU) influenced the intentions of the citizens to participate in the public decision-making of the e-government. In addition, the lower level of education had a lower level of agreement whilst the higher level of education, such as PhD degree and Master degree, strongly agreed with an interaction between culture and the citizens' intentions to participate in the public decision-making of the e-government (BI). So, the level of education factor was taken into consideration and the study recommended focusing on this moderator

factor. The findings of the level of education moderator analysis are presented in subsection 5.5.8.6.

6.4.4 Impact of Social Groups Differences as Moderator

ATB influences the IB more by Social Groups (H1.10): The moderator of social group had an impact on the interaction between the ATB variable and (BI) the dependent variable. The present study result of the interaction between the social group and the attitude towards act or behaviour was not significant, indicating that there was no potential significance between the moderator of social group and the attitude towards act or behaviour on the citizens' intentions to participate in the public decision-making of the e-government. Therefore, the result of the social group moderator did not have different attitudes between the politicians, economists, IT professionals, and worker groups, thus it did not have an effect on the variables of this sub hypothesis. So, it was ignored and excluded from this factor. The findings of the social group moderator analysis are presented in subsection 5.5.8.1.

Mishra, et al., 2014; Alharbi, et al., 2015 referred to the subjective norms (SN) as having a strong positive effect on the behavioural intention of IT professionals in the adoption of green information technology. SN influences the IB more by Social Groups (H2.16): The present study findings of the social group moderator analysis showed that the politicians had a lower level of agreement whilst the IT professionals strongly agreed with an interaction between the subjective norms (SN) and the citizens' intentions to participate in the public decision making of the e-government (BI). Therefore, the result of the social group moderator showed different subjective norms (SN) between the groups of the politicians, economists, IT professionals, and

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workers which also had an effect on the variables of this sub hypothesis. The findings of the social group moderator analysis are presented in subsection 5.5.8.2.

According to Ibrahim, et al., 2016; Krishnaraju, et al., 2016; and Al Awadhi and Morris, 2008, personalising the effect on social influence and facilitating condition will have a significant impact on the behavioral intention to use information technology in the e-government domain. SI influences the IB more by Social Groups (H3.22): The moderator of social group had an impact on the interaction between the SI variable and (BI) the dependent variable. The present study findings of the social group moderator analysis showed that the politicians had a lower level of agreement whilst the IT professionals strongly agreed with an interaction between the social influence (SI) and the citizens' intentions to participate in the public decision-making of the e-government (BI).

FC influences the IB more by Social Groups (H4.28): The dependent variable of the citizens' intentions to participate in the public decision-making of the e-government (BI) was influenced by the independent variable of facilitating conditions (FC). Ibrahim, et al., 2016; Krishnaraju, et al., 2016; and Al Awadhi and Morris, 2008, explained that the personalisation variables affecting the facilitating condition will have an important effect on the behavioural intention to use the information technology in the e-government domain. In addition, IT professionals and economists had lower levels of agreement whilst the workers and politicians strongly agreed with an interaction between the facilitating conditions (FC) and the citizens' intentions to participate in the public decision-making of the e-government (BI). So, the social group factor was taken into consideration and the study recommended focusing on this moderator factor (workers).

CO influences the IB more by Social Groups (H5.34): The dependent variable of the citizens' intentions to participate in the public decision-making of the e-government (BI) was influenced by the independent variable of compatibility (CO). The sub hypothesis, compatibility, influenced the behavioural intention to participate in the public decision-making of the e-government more strongly for the worker group than the other social groups. The present study result of the interaction between social group and compatibility was significant. So, this proved that there was a positive significance, indicating that there was a potential significant moderation between the moderator of social group variable and the compatibility on the citizens' intentions to participate in the public decision-making of the e-government. In addition, the IT professionals and economists had lower levels of agreement whilst the workers and politicians strongly agreed with an interaction between compatibility (CO) and the citizens' intentions to participate in the public decision-making of the e-government (BI). So, the social group factor was taken into consideration and the study recommended focusing on this moderator factor (workers).

Baker et al., 2008 reported that culture with strong group identification among its people and strict religious adherence were the characteristics of Arabic countries. The moderator of social group had an impact on the interaction between the CU variable and (BI) the dependent variable. The present study result of the interaction between social group and culture (CU) was significant. The result was that there was an effect on the citizens' intentions to participate in the public decision-making of the e-government. Therefore, the result of the social group moderator had different cultures between the politicians, economists, IT professionals, and workers which had an effect on the variables of this sub hypothesis. The findings of the social group moderator analysis showed that the politicians had a lower level of agreement whilst

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the IT professionals strongly agreed with an interaction between CU and the citizens' intentions to participate in the public decision-making of the e-government (BI).

6.4.5 Impact of Working Sector Differences as Moderator

(H1.11) the dependent variable (BI) was influenced by the independent variable (ATB). The sub hypothesis moderator of working sector did not influence the interaction between the Attitude towards Act or Behaviour and the intention to participate in the public decision-making of the e-government. Hujran, et al., 2015, presented that the users' attitudes and behavioural intentions toward the usage of e-government services was not integrated with other working sector and social-related factors. Its fundamental constructs did not fully reflect the variety of the user's task. The present study result of the interaction between working sector and attitude towards act or behaviour was not significant. So, this proves that there was no potential significant interaction between the moderator of working sector and the attitude towards act or behaviour. Thus, there was not any change on the result of the citizens' intentions to participate in the public decision-making of the e-government. It was clear that the result of the working sector moderator did not have different attitudes between the private sector and public sector and did not have an effect on the variables of this sub hypothesis. So, this moderator was ignored and excluded from this factor.

The sub hypothesis (H2.17) moderator of working sector did not influence the interaction between the subjective norms (SN) and the intention to participate in the public decision-making of the e-government. The result of the interaction between working sector and subjective norms was not significant. So, this proved that there was no potential significant interaction between the moderator of working sector and

subjective norms. So, there was not any change on the result of the citizens' intentions to participate in the public decision-making of the e-government. It was clear that the result of the working sector moderator had no different subjective norms (SN) between the private sector and public sector and did not have an effect on the variables of this sub hypothesis. So, this moderator was ignored and excluded from this factor. The findings of the working sector moderator analysis are presented in subsection 5.5.8.2.

SI influences the IB more by Working Sector (H3.23), the dependent variable (BI) was influenced by the independent variable (SI). The sub hypothesis moderator of working sector influenced the interaction between the social influence (SI) and the citizens' intentions to participate in the public decision-making of the e-government. The result of the interaction between working sector and social influence (SI) was significant. So, this proved that there was a potential significant interaction between the moderator of working sector and the social influence. So, the result of the citizens' intentions to participate in the public decision-making of the e-government was changed. It was clear that the result of the working sector moderator had different social influence between the private sector and the public sector and had an effect on the variables of this sub hypothesis. The private sector had a lower level of agreement whilst the public sector strongly agreed with an interaction between the SI and BI. The findings of the working sector moderator analysis are presented in subsection 5.5.8.3.

The moderator (H4.29) working sector had an effect, positive or negative, on the ATB variable, then the outcome of the BI changed positively or negatively. According to Montani, et al., 2015, the job might also have an impact on the

behavioural intention, because it reflects the personal knowledge and expertise, which are highly conducive to the idea development and implementation. This study result of the interaction between working sector and facilitating conditions was not significant. So, this proved that there was no potential significant interaction between the moderator of working sector and the facilitating conditions. So, there was not any change on the result of the citizens' intentions to participate in the public decision-making of the e-government. It was clear that the result of the working sector moderator had no different FC between the private sector and public sector and did not have an effect on the variables of this sub hypothesis. So, this moderator was ignored and excluded from this factor.

CO influences the IB more by Working Sector (H5.35): The dependent variable (BI) was influenced by the independent variable, compatibility (CO). The sub hypothesis moderator of working sector did not influence the interaction between compatibility (CO) and the intention to participate in the public decision-making of the e-government. This study result of the interaction between working sector and compatibility was not significant. So, this proved that there was no potential significant interaction between the moderator of working sector and compatibility. So, there was not any change in the result of the citizens' intentions to participate in the public decision making of the e-government. It was clear that the result of the working sector moderator had no different amounts of compatibility (CO) between the private sector and public sector and did not have an effect on the variables of this sub hypothesis. So, this moderator was ignored and excluded from this factor.

The dependent variable (BI) was influenced by the independent variable, culture (CU) (H6.41): The sub hypothesis moderator of working sector influenced the

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interaction between culture (CU) and the citizens' intentions to participate in the public decision-making of the e-government. The present study result of the interaction between working sector and CU was significant. So, this proved that there was a potential significant interaction between the moderator of working sector and culture. So, the result of the citizens' intentions to participate in the public decision-making of the e-government changed. The private sector had a lower level of agreement whilst the public sector strongly agreed with an interaction between CU and the (BI).

6.4.6 Impact of Internet Experience Differences as Moderator

(H1.12): The independent variable of attitude towards act or behaviour influenced the dependent variable of citizens' intentions to participate in the public decision-making of the e-government by the effect of the moderator of Internet experiences. The result of the interaction between the Internet experiences moderator and the attitude towards act or behaviour was significant. The present study result explained that there was a positive significance, thus indicating that there was a significant interaction between the moderator of Internet experiences and the attitude towards act or behaviour variable which had an effect on the citizens' intentions to participate in the public decision-making of the e-government. It was clear that the result of the Internet experiences moderator showed different attitudes between a higher level of experiences and a lower level of experiences and had an effect on the variables of this sub hypothesis. So, the level of Internet experiences factor was taken into consideration and the study recommended focusing on this moderator factor.

SN influences the IB more by Internet Experiences (H2.18): The independent variable of subjective norms influenced the dependent variable of the citizens'

intentions to participate in the public decision-making of the e-government by the effect of the moderator of Internet experiences. The present study result explained that there was a positive significance, thus indicating that there was a significant interaction between the moderator of Internet experiences and the subjective norms variable which had an effect on the citizens' intentions to participate in the public decision-making of the e-government. It was clear that the result of the Internet experiences moderator had different SN between a higher level of experiences and a lower level of experiences and had an effect on the variables of this sub hypothesis. In addition, the lower level of Internet experiences had a lower level of agreement whilst the higher level of Internet experiences strongly agreed with an interaction between the subjective norms (SN) and the citizens' intentions to participate in the public decision-making of the e-government (BI). So, the level of the Internet experiences factor was taken into consideration and the study recommended focusing on this moderator factor.

Venkatesh, et al., 2008, showed that the Internet experience moderated the impacts of the motivation value on the intention and use respectively. Internet experience was related to predicting behavioural intention to use a technology and actual technology use primarily in the organisational contexts. (H3.24): The independent variable of social influence had an influence on the dependent variable of the citizens' intentions to participate in the public decision-making of the e-government by the effect of the moderator of Internet experiences. The present study result explained that there was a significant interaction between the moderator of Internet experiences and the social influence variable which had an effect on the citizens' intentions to participate in the public decision-making of the e-government. It was clear that the result of the Internet experiences moderator had different social influence (SI) between a higher

level of experiences and a lower level of experiences and had an effect on the variables of this sub hypothesis. So, the level of Internet experiences factor was taken into consideration and the study recommended focusing on this moderator factor.

According to Al Awadhi and Morris, 2008, the predictor variables of behavioural intention and facilitating conditions and their interactions with the moderator Internet experience were used to predict the use of behaviour for the e-government services. The result was moderated to high level of experience in the usage of theInternet-based transactions. (H4.30), the independent variable of facilitating conditions influenced the dependent variable of the citizens' intentions to participate in the public decision-making of the e-government by the effect of the moderator of Internet experiences. The present study result of the interaction between the Internet experiences moderator and the facilitating conditions was significant. This study explained that there was a positive significance, thus indicating that there was a significant interaction between the moderator of Internet experiences and the facilitating conditions variable which had an effect on the citizens' intentions to participate in the public decision-making of the e-government. So, the level of Internet experiences factor was taken into consideration and the study recommended focusing on this moderator factor.

(H5.36): The independent variable of compatibility (CO) influenced the dependent variable of the citizens' intention to participate in the public decision-making of the e-government by the effect of the moderator of Internet experiences. The dependent variable (BI) was influenced by the sub hypothesis, the independent variable (CO). It was more strongly influenced for a higher level of experiences than a lower level of experiences. This study explained that there was a positive significance, thus

indicating that there was a significant interaction between the moderator of Internet experiences and the compatibility variable which had an effect on the citizens' intentions to participate in the public decision-making of the e-government. It was clear that the result of the Internet experiences moderator had different amounts of compatibility (CO) between a higher level of experiences and a lower level of experiences and had an effect on the variables of this sub hypothesis. So, the level of Internet experiences factor was taken into consideration and the study recommended focusing on this moderator factor.

CU influences the IB more by Internet experiences H6.42: The independent variable of culture (CU) influenced the dependent variable of the citizens' intentions to participate in the public decision-making of the e-government by the effect of the moderator of Internet experiences. The present study result explained that there was a significant interaction between the moderator of Internet experiences and the culture variable which had an effect on the citizens' intentions to participate in the public decision-making of the e-government. It was clear that the result of the Internet experiences moderator had a different CU between a higher level of experiences and a lower level of experiences and had an effect on the variables of this sub hypothesis. So, the level of Internet experiences factor was taken into consideration and the study recommended focusing on this moderator factor.

6.5 Summary

Chapter Six has presented the outcomes that had been observed in Chapter Five. In this chapter, the study showed the refined model that explained the factors after the factors' analysis test. In another part on this chapter, the study explained the study's hypotheses test outcomes, which displayed that six main hypotheses were accepted

by the study model. The aim of this research has been to supply evidence regarding the factors that have an impact on the citizens' intentions to participate in the public decision-making of the e-government. The world has faced many challenges over the last 5 years because terrorism and sabotage has frequently caused the loss of the information from the administrations which have stimulated the people to start using the e-government. However, the citizens need more flexibility when using the e-government (Al-khafaji et al., 2014; Allahawiah & Alsaraireh, 2014).

The relationships amongst the citizens' intentions to participate in the public decision-making of the e-government (dependent variable) and the independent variables consisted of six main variables with 36 moderator variables. For that, the study created 42 hypotheses that contained six main hypotheses and 36 sub hypotheses. In addition, the study contained three research questions that were developed to achieve the objectives which were (What are the factors that influence the citizens' intentions to participate in the public decision-making of the e-government?, What are the citizens' self-knowledge characteristics that will moderate the relationship between the influencing factors and the citizens' intentions to participate in the public decision-making of the e-government?, and What is the model of the citizens' intentions to participate in the public decision-making of the e-government?). The research questions were examined by employing factor analyses, Kruskal Wallis Test for the analysis, correlation relationship test, moderator test using regression, and testing of the model of the study by using multiple linear regressions. The study collected data from the respondents. The questionnaire was distributed to the four groups and the data was analysed using the SPSS V.21 software.

In the factor analysis, the study identified the good items from the six factors. The items achieved successful and good results in the loading tables when the factor was tested with the factor analysis. In the Kruskal Wallis Test, the study showed that for the politicians, economists, IT professionals, and workers, there were good, significant relationships amongst the groups. The study achieved successful and good results in the non-parametric Kruskal Wallis test. In the correlation relationship test, the study clarified that the independent variables had significant correlation relationships with the dependent variable and rejected the null hypotheses for all of the independent variables. In the multiple linear regression test, the study explained that the coefficients of the model of the study were significant amongst all of the independent variables with the dependent variable. The study model was tested by using the regression analysis which found that six independent variables: attitude towards act or behaviour (ATB), subjective norms (SN), social influence (SI), facilitating conditions (FC), compatibility (CO), and culture (CU)), with the dependent variable were supported.

The moderator variables were analysed by using the regression test. The study explained that by the results in Chapter Six, each moderator affected some independent variables in this study. From this point, the study concluded each moderator's effect in detail; Gender had an effect on facilitating conditions (FC) and compatibility (CO); just two factors. Age had an effect on attitude towards act or behaviour (ATB), subjective norms (SN), social influence (SI), facilitating conditions (FC), compatibility (CO), and culture (CU); all of the factors. Level of education had an effect on attitude towards act or behaviour (ATB), social influence (SI), facilitating conditions (FC), compatibility (CO), and culture (CU); just five factors. Social group had an effect on subjective norms (SN), social influence (SI),

facilitating conditions (FC), compatibility (CO), and culture (CU); just five factors. Working sector had an effect only on two factors: social influences (SI) and culture (CU). Internet experience had an effect on attitude towards act or behaviour (ATB), subjective norms (SN), social influence (SI), facilitating conditions (FC), compatibility (CO), and culture (CU); all of the factors. From the aforementioned, it is clear that the age and Internet experiences moderators (citizens' self-knowledge characteristics) had an effect on all of the six main factors.

CHAPTER SEVEN
CONCLUSION

7.1 Introduction

This chapter addresses the outline of the results which leads to the achievement, of the study objectives and questions of the research. Hence, the contributions of the research together with study limitations and suggestions for future study are highlighted.

7.2 Achieving the Research Objectives

This section discusses the objectives that have been achieved in this study.

7.2.1 First objective of this Study

The factors were selected from the literature review, as these factors addressed the issues in the problem statement. The Factor Analysis Test in the pilot study helped to support the factors, and finally, the main study's analysis confirmed the factors for the study. Wu, et al., 2015, presented their study objective which was ―To identify factors that may affect behavioural intentions toward such models". Their study's results showed that all the independent variables had significant effects on behavioural intention. Several studies have shown that the behavioural intention was a powerful predictive mechanism and it was easy to identify the factors using the quantitative method (Kurfalı et al., 2017; Rana, Dwivedi, & Lal, 2015; Setiawati & Pratiwi, 2015; Wu et al., 2015). The aim of a quantitative study is to employ and develop hypotheses pertaining to phenomena and mathematical models, theories, and behavioural intention. (Kothari, 2011; Newman & Benz, 1998). The first objective of this study (to identify the factors that influence the citizens' intentions to

participate in the decision-making of the e-government) has been studied using the quantitative method because it provides the fundamental connection between the empirical observation and the mathematical expression of the quantitative relationships (Setiawati & Pratiwi, 2015; Shareef et al., 2016; Wu et al., 2015; Xie et al., 2017).

Wu, et al., 2015; and Setiawati & Pratiwi, 2015, clarified in their studies' results that the attitudes and the subjective norms showed that all the independent variables had significant effects on the behavioural intention, and determined the recognition of the behavioural intention. However, the behavioural intention had no relation with the perceived behavioural control of perspective. Behavioural attitudes refer to a person's subjective understanding and appraisal of a specific behaviour. The results of the present study corresponded with the past studies, because both the attitudes and the subjective norms had significant effects on the behavioural intention. Table 5.54 shows that the correlation amongst the strength of the relationship and the variables was built on Guildford's rule of thumb.

Weerakkody, et al., 2013, referred to the findings of their study as showing that there was a significant relationship between the facilitating condition and the intention to use the e-government, proving that it can influence the adoption of the e-government services. On the other hand, Kurfal et al., 2017, clarified in their study's results that the social influence, and the facilitating conditions were found to have a positive effect on the behavioural intention to use the e-government services. The result of the present study showed in the factor analysis that the reliability of these factors was good with significant strongly agreeing values and the social influence, with the

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facilitating conditions affecting the citizens' intention to participate in the public decision making of the e-government.

Jayashree, et al., 2016, referred to compatibility as having often been found to have the most significant relationship with the use of intention. This is not surprising as compatibility has often been found to have the most significant relationship with the use of intention in other contexts, including e-government, e-services, and e-commerce. The result of the present study presented that compatibility had a significant relationship with the citizens' intentions to participate in the public decision making of the e-government that agreed with the past studies results which adapted the compatibility factor for futher studies.

Bruder, et al., 2013; and Efrat's, 2014, studies findings suggested that the present study established a synergetic relationship between the different dimensions of the culture: dimensions which had an impact on innovation, negatively, when operating individually, and may impact it, positively, when combined with others (Bruder et al., 2013; Jackson & Wong, 2015; Li et al., 2015; Sehli et al., 2016). Zhao, 2014, showed that the impact of the cultural factors on the e-government diffusion may vary across the different social groups, economics, and political environments. The present study presented contributions to both cross-cultural and e-government with their influences on the citizens' intention to participate in the public decision making of the e-government. The present stud's results clarified that the culture factor had a significant impact on the citizen's intention to participate in the public decision making of the e-government.

The first objective of this study (to identify the factors that influence the citizens' intentions to participate in the decision-making of the e-government) was achieved

successfully. Sections 5.5.4 to 5.5.4.8 in Chapter Five explained this with the numbers of the values in the tables by using the factor analysis to check the variables of this study. This research focused on the citizens' intention to participate in public decision-making and used that knowledge to obtain what citizens need in the e-government, especially in the decision making of the e-government.

Employing the citizens' self-knowledge characteristics in public decision-making gives the citizens the right to participate in the decision-making but, indirectly. Shifting the e-government to knowledge and employing the knowledge of society to serve the citizens helps the e-government to improve the performance of the decision-making model. Engaging the knowledge of the citizens, such as the attitude towards act or behaviour (ATB), subjective norms (SN), social influence (SI), facilitating condition (FC), compatibility (CO), and culture (CU), which come from the human knowledge and environment of the place where the human was born, as well as their behaviours, beliefs, and history has a positive potential impact on the public decision-making in the e-government. This objective was to provide proof regarding the citizens' self-knowledge in the public decision-making in the e-government that has an effect on the improvement of the e-government.

7.2.2 Second Objective of this Study

This study examined the citizen's self-knowledge characteristics of four different social groups, and how they moderated the influencing factors on intention to participate. Kurfalı, et al., 2017, suggested that in order to increase the explanatory power of the proposed models, the moderating effects of age, gender, and Internet experience should be measured to adopt the e-government services. Moreover, Venkatesh et al., 2016, reported that the various combinations of the moderators

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were theorised and found to moderate various models relationships. The moderators, such as age, gender, Internet experience, voluntariness, etc were related to predicting behavioural intention to use the technology and the actual technology, which was used primarily in the organisational contexts. Venkatesh's study showed that adding new variables such as exogenous, endogenous, and moderation will add importance when investigating new outcomes that enhance the intention to use technology (Al-Nahdi et al., 2015; Baker et al., 2007; Ibrahim et al., 2016; Jun et al., 2014; Kurfalı et al., 2017; Montani et al., 2015; Niehaves & Plattfaut, 2014; Venkatesh et al., 2016). The present study's results showed that the moderator factors helped to enhance the e-government by the citizens' involvement in the public decision-making in the usage of the proposed study model to study the influences of the moderators on the independent variables that impacted on the dependent variables results which represented the citizens' opinions in the future.

Venkatesh, et al., 2016, and Kurfalı, et al., 2017, presented the results of their studies that were significantly impacted by the moderators, such as gender, age, Internet experience, and the education level of the intention to use technology. For that reason, the present study focused on these six moderator factors. The present study results showed that gender had a significant impact on the variable facilitating condition and compatibility, and it had no significant impact on attitude towards act or behaviour, subjective norms, social influence, and culture. Therefore, this variable must be studied to improve the citizens' intentions to participate in the public decision-making of the e-government. In addition, the results showed that age had a significant impact on the variables of attitude towards act or behaviour, subjective norms, social influence, facilitating condition, compatibility, and culture. The age variable had a higher priority in this study because it influenced all the main

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variables of this study. The literature review of this study clarified that the age moderator had a significant influence. So, this study was supported by the past studies in the literature review. The result also showed that the level of the education variable had a significant impact on the variables of attitude towards act or behaviour, social influence, facilitating condition, compatibility, and culture. Only the subjective norms variable had not been affected by the level of education. Also, this study has explained that the level of education had an important impact as it was focused on in past studies. Besides that, the results showed that the Internet experiences had a significant impact on all of the main variables of attitude towards act or behaviour, subjective norms, social influence, facilitating condition, compatibility, and culture. The Internet experiences variable had a higher priority in this study. As a result, this study suggests taking the Internet experiences moderator as the majority in the future studies.

On other hand, Ibrahim, et al., 2016, and Krishnaraju and Sugumaran, 2015, showed in their studies results that the web personalisation (social group or the personalisation of each user) will have a significant influence on the behavioural intention to use the based services of the e-government. Montani et al., 2015, reported that the working sector or nature of job tenure might also have an impact on the behavioural intention, because they reflected personal knowledge and expertise, which are highly conducive to the ideas of development and implementation. The present study with other two new factors social groups and working sector or jobs confirmed the results of the previous studies. Social group contributed to the improvement of the political process, economic process, managerial information technology, and employee participation, as was clarified in the previous research. So, the results showed that the social group moderator had a significant impact on the

variables of subjective norms, social influence, facilitating condition, compatibility, and culture. Only the attitude towards act or behaviour variable had not been affected by social group. As well, the results showed that working sector had no significant impact on the variables of attitude towards act or behaviour, subjective norms, facilitating condition, and compatibility. Only social influence and culture had been affected by working sector.

This research is indeed the first step taken in establishing an e-government by employing the citizens' self-knowledge characteristics. During the several phases of the study, various concerns arose. The first concern was whether the users would become more advanced and demanding in the usage of e-services, the second was whether the development would be a constraint to them. The study supported by the citizens for factors that are significance. The second objective in this study was to examine the citizens' self-knowledge characteristics that would moderate the relationship between the influencing factors and the citizens' intentions to participate in the public decision-making of the e-government". It was achieved successfully. Sections 5.5.8 to 5.5.8.7 in Chapter Five explained the effects of the moderators on the variables with the numbers of the values in the tables by moderation using the process formula by Andrew to check the impact that could be reinforcing and increasing the impact of the predictor (independent variables) of the result (dependent variables).The future of e-government is dependent on ICT as well as the government policy with the stakeholders. These and other contributory factors are important in determining the form and structure of future public decision-making in the e-government. For that, this study used the moderators of self-knowledge characteristics on the main factors. This study has been conducted so as to identify the level of acceptance of the citizens' intentions to participate in the public decision-

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making of the e-government. The researchers also took into consideration other factors like citizens' involvement in the public decision-making of the e-government which would contribute to the positive moderator factors of gender, age, level of education, social group, working sector, and Internet experiences.

7.2.3 Third Objective of this Study

Xie et al., 2017, presented the contribution of their study by attempting to propose an integrated model. Their study had as more comprehensive understanding of the intention to reuse the e-government services, integrating the TAM, TPB, trust, and risk in the context of the Chinese e-government. Their study's result did not have a large number of external factors, which may have led to the omission of some equally important factors. Xie's study suggested that the future research should extend to a model with more external factors and examined the roles in e-government adoption. Wu, et al., 2015, showed the exploration of government employees' behavioural intention under the theory of planned behaviour to adopt a new management model that employed the innovative mechanisms of urban governance. Wu suggested that the future research should perform cross-city case studies, and improve the mechanisms for the acceptance of the innovative tools.

According to Xie, et al., 2017, and Wu, et al., 2015, the present study declared that the updated TPB and UTAUT models were the most adequate to evaluate IS success in predicting the behavioural intention. The present study results have showns that the six hypotheses (attitude towards act or behaviour, subjective norms, facilitating conditions, social influence, compatibility and culture) as shown in the coefficients of the model had positive results in Chapter Five of this study. The study has contributed to the organism of the knowledge by merging the concepts of the theory

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of planned behaviour (TPB), two concepts from the UTAUT with another two factors which were compatibility and culture. However, a few past studies had observed the contributing factors of the intention of the citizens to participate in the e-government, but not with the public decision making through moderating factors, such as the citizens' self-knowledge characteristics (gender, age, level of education, social group, working sector, or Internet experiences). The model of this study recognized the individuals in the communities to know the citizens intention (participate, use, and apply) toward technology. This research will assist in providing the factors that contribute to the citizens' participation in the public decision making of the e-government to the researchers in the informatics field of the e-government. To propose the research model of the citizens' intention to participate in the public decision making of the e-government, the third objective was stated in this study.

Moreover, there is the contribution of providing a model that will help the government to examine the intention of the citizens to participate in the public decision making of the e-government through the moderating factors, such as the citizens' self-knowledge characteristics in the planning stage to develop the e-government. All the e-governments in the world would provide the opportunity to their citizens to participate in the public decision making, it would enhance the e-government services and increase the cooperation between the citizens and the governments. The citizens' self-knowledge characteristics have made available the opportunities for the government to improve the performance of the e-government by reducing time and cost. This operation will minimise the issues relative to the e-government initiatives and promote inclusivity and an engaging partnership between the government and its citizens. Motivating the government to believe in the citizens

is the major factor in the e-government initiatives which needs time and more studies to be conducted.

The third objective (To propose research model of citizens' intention to participate in the public decision making of the e-government) was achieved successfully. Section 5.6 in Chapter Five explained this with the numbers of the values in the tables by using the multiple regression analysis between the variables of this study. Present and previous circumstances have also been reviewed such that all the potential circumstances have been dealt with to achieve a perfect research. Similar cases in advanced and developing countries have also been studied. The research has suggested a solid basis for the management of the components and for the achievement of a successful integrated e-government that works successfully in all kinds of situations and circumstances.

7.3 Contributions

The literature of this research contributed to the identification of the good points to investigate the citizens' intentions to participate in the public decision-making of the e-government in no small measure. For example, the research contributed on both theoretical and practical levels. A detailed clarification of these contributions is provided as presented below.

7.3.1 Theoretical Contribution

This research has successfully examined the model of this study for the citizens' intentions to participate in the public decision-making of the e-government as displayed in the revised model of the study in Figure 6.1. The revised model of the study displays a suitable model which is able to be utilised in the citizens' intentions

to participate in the e-government studies where the perception of the four different social groups are considered. In many multi ethnicity and multicultural societies, the views of all the citizens are important as they may differ as shown in this study. The citizen's self-knowledge moderating factors for age and Internet experiences showed that this information will be useful for policy formulation and the level of education and social groups have also influenced on the six main factors. It is necessary to focus on the four moderators (age, Internet experience, level of education and social groups) when the governments want to enhance their e-government and develop their e-service.

TPB theory has played an important role in these attempts to predict and explain human behaviour. Various theoretical frameworks have been proposed to deal with the psychological involved processes, but the TPB is a distinct theory in human and behaviour decision processes. The study took two factors from the TPB, subjective norms and attitude with behavioural intention, and excluded the factor of perceived behavioural control because this study focuses on the behavioural intention (Ajzen, 2006; Rana, Dwivedi, Lal, et al., 2015; Xie et al., 2017).

The UTAUT has refined the related contingencies and the critical factors of the prediction of the behavioural intention to a technological usage primarily in the organisational contexts and the usage of technology. In extensive research work about the acceptance of the technology employees, the UTAUT explained about seventy percent of the variance in the behavioural intention to use the technology, and about fifty percent of the variance in the technology usage. For that reason, this study focused on two important factors in the UTAUT; social influence and facilitating conditions. This is for the reason that facilitating conditions and social

influence impacted on the behavioural intention towards technology usage. The facilitating conditions factor has many advantages like supporting the provided training which will be freely obtainable within an organisation. The social influence is the scope of the consumers' perception which is significant from one to another and in their belief of using a particular technology. All of these were important for this study to examine the citizen's intention (Alshehri et al., 2013; Rodrigues et al., 2016; Venkatesh et al., 2016).

Moreover, the research is able to integrate two important IS theories (IS Theory of planned behaviour and UTAUT) with other factors in producing the study model for the citizens' intentions to participate in the public decision-making of the e-government. The IS theory of planned behaviour and UTAUT theory have been suggested by the past studies as theories that do not limit their impact on the citizens' intentions to participate in technology but also on the citizens' intentions to participate in the public decision-making of the e-government. Therefore, utilising these two theories to form the study model for this research serves as the groundwork for the informatics researchers in the area of citizens' participation in the e-government whilst researching the success of technology in citizens' participation.

Moreover, the integration of the two theories with other factors has contributed to this research with the combination of different explanations from the theory of planned behaviour and the UTAUT theory as good factors towards examining the citizens' intentions to participate in the public decision-making of the e-government. Past researchers have debated that, for the study model to be accepted to supply a solution in IS research, it must show that its predictive reliance (R^2) in Regression is more than zero (Bazargan et al., 2017; Hair, 2010; Hayes & Rockwood, 2016; KIT,

2014). In the context of this research, the R2 as shown in Table 5.93 had values which were more than zero. This displays that the integration of the two theories (theory of planned behaviour and (UTAUT)) will help the IS area and e-government researchers in solving the problems related to the citizens' intentions to participate in the public decision-making of the e-government. A related contribution is the inclusion of the citizens' self-knowledge characteristics as moderators on the linkage between the theory of planned behaviour and (UTAUT) and the citizens' intentions to participate in the public decision-making of the e-government, which strengthens achieving the citizens' intentions to participate in the public decision-making amongst the citizens in the e-government.

Another contribution which has been made in the research is the implication of culture and compatibility variables to the integrated model towards the citizens' intentions to participate in the public decision-making of the e-government. Compatibility has been given as a variable which can lead to the success of IS being usable anywhere. Hence, the implication of compatibility in the study model is a contribution to the main body of knowledge for the IS investigators in the e-government. A linked contribution is the implication of the citizens' self-knowledge characteristics towards intention as moderators on the relationships between compatibility and the citizens' intentions to participate in the public decision-making of the e-government. The citizens' self-knowledge characteristics influenced on the compatibility then changed the outcomes of the DV of the model in this study.

7.3.2 Methodological Contribution

As for the research methodology, this research has other contributions, which are the validation and development of the survey tools and instrument. As the study stated in

Chapter Four, the research instrument and tools were developed based on past studies and literature of information systems and the e-government. The research instrument was developed and distributed to a group of people to get their suggestions and clarifications. The present study picked the instrument almost verbatim (adopting the instrument) and applied this method on the cultural construct elements, which were taken from Bruder, et al. (2013) study. The other constructs in the present study were attitude towards act or behaviour, subjective norms, social Influence, facilitating condition, and compatibility. The present study used the second method that significantly modified the instrument (adapting the instrument) to be appropriate for the present study (Al-Swidi et al., 2014; Alharbi et al., 2016; Kurfalı et al., 2017; Moore & Benbasat, 1991; Rana, Dwivedi, & Lal, 2015; Venkatesh et al., 2012; Weerakkody et al., 2013).

Al-Rawashdeh (2011) says that, in the association for information systems (AIS) research field, this effort is contemplated as a contribution to scientific applications. Straub (2004) emphasised that investigators who have the potential to involve more exertion to validate and create instrumentation for initiating theoretical factors are theoretically connected to the measurement change and examining the strength of the factors. Furthermore, the outcomes which were created utilised Cronbach's alpha and the factor analysis provided a new evaluation for the attributes which could be utilised for estimating the citizens' intentions to participate in the decision-making of e-governments. Founded on the above debate, it is understandable that developing instruments in the information system field is considered as a large contribution to research methodology (Moore & Benbasat, 1991).

The contribution of this study is that it closes the gap between the citizens and e-governments through examining the citizens' intentions to participate in the public decision-making of the e-government and employing the citizens' self-knowledge characteristics as moderators on the factors of the study model. There are a lot of studies that have been conducted on e-governments, but this study focuses on the citizens' self-knowledge characteristics to examine the citizens' intentions to participate in the public decision-making of the e-government. Moreover, the findings of the study contribute to the academia and theory.

7.3.3 Practical Contribution

This study has, moreover, established the contribution of providing a model that would help, the intention of the citizens to participate in the public decision making of the e-government through moderating factors, such as the citizens' self-knowledge characteristics of different social groups. If all the e-governments in the world would provide the opportunity to their citizens to participate in the public decision making, it would enhance the e-government service and increase the cooperation between the citizens and the government. The citizens' self-knowledge characteristics have made available the opportunities for the government to improve the performance of the e-government by reducing the time and cost (Bryer, 2013; Jayashree et al., 2016; Masrom et al., 2014a; UN, 2016).

Furthermore, allowing the citizens to participate in the public decision making of the e-government is considered to be decisive for social development, economics and a better quality of life (UN, 2014). Hence, the research has recommended major needs for the decision maker in e-government such as regulatory of e-government to ensure that providers of decisions abide to the citizens' self-knowledge characteristics while

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dealing with the citizens. This is because there would be no benefits for both citizens and the decision makers of e-government if citizens stop utilizing the e-government soon after the adoption in most of the countries.

Through the study of the citizens self knowledge characteristics, the government will obtain advantages from these citizens characteristics by determining the citizens' requirements. The model of this study contained three parts. (1) independent variables such as attitude towards act, subjective norms, social influence, facilitating condition, compatibility, and culture and (2) the moderators as the citizen's self-knowledge characteristics will impact on the independent variables, either positively or negatively. And finally, these two variables will affect on the (3) dependent variable, citizens' intention to participate in public decision making of the e-government.

7.4 Practical recommendations

This study presented the opinions, concerns, and recommendations of a wide range of researchers in Chapter Two of this study. Many past studies included discussions about the behavioural intention. This research has identified the points that need to be followed in order to increase the intentions of the citizens to participate in the public decision-making of the e-government and has given recommendations to the decision makers. The practical recommendations have been drawn from the outcomes of this study and the analyses of the data that were collected from several groups of citizens. This study used the citizen's requirements in the planning stage in the life cycle of the e-government system to enhance the public decision making of the e-government. On other hand this study also included a review of past works that agreed or did not agree with the results of the present study, such as the age variable

in the present study had a significant impact on the behavioural intention from the younger rather than the older generation. According to Ibrahim, et al., 2016, in their study's results, age had significantly affected the impact of user behaviour with respect to the behavioural intention. Kurfalı, et al., 2017, reported that the attitude of the individual was found to be statistically significant on the behavioural intention, this result supported the present study's result. This study established these basic recommendations through the results that were obtained from the past studies and the results of this study to help the governments.

This study has six recommendations about the main factors and six recommendations about the moderators' variables. For decision makers in the government, the results can be of the utmost importance to reach more citizens. To convince more people to use e-government, potential users must be informed of the possible benefits that e-government can provide to them especially in their work life. Finally, the study offers some recommendations.

7.4.1 Recommendations based on the Main Factors

1. Attitude towards Act or Behaviour: This study revealed that if the governments have good attitudes towards their citizens and support the citizens in participating in the e-government, the results will be better attitudes of the citizens about the e-government and participation in the e-government.

2. Subjective Norms: This study revealed that if the citizens participate in the e-government, their communities will be linked to the world and there will, finally, be a positive influence on the intentions of the citizens to participate in the public decision-making of the e-government.

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3. Social Influence: This study has shown that social influence takes place when a person's opinions, emotions, or behaviours are influenced by others. This factor was under the influence of all of the moderator variables. The study of communities and their influences on the intentions of citizens to participate in the public decision-making of the e-government improves the e-government and technologies in these areas.

4. Facilitating Conditions: This study has shown that the facilitating conditions must ensure that the priority is given to the gender, age, level of education, social group, working sector, and Internet experiences in terms of their opinions. They should ensure engagement with all of the citizens' groups and increase their participation in different aspects of the e-government.

5. Compatibility: This study has shown that the compatibility amongst all of the social groups of citizens in their opinions increases the good services in the e-government since most of the social communities have problems related to gender, age, and level of education, and the government needs to reach for compatibility amongst these social groups.

6. Culture: This study revealed that culture gives a supportive environment in terms of the study of the social behaviour and norms found in citizens by the participation in the public decision-making of the e-government, and this gives the decision makers the chance to improve the service.

7.4.2 Recommendations based on Moderator Factors

7. Disseminate the idea of the citizens' participation in the public decision-making of the e-government between the males and females, and support the females because they had the highest level of agreement for the most variables of the study model. This research reveals that if the female group is

blessed with the citizen's participation in the public decision-making model, their communities would be activated and, eventually, it would have a positive impact on the citizens' participation in the public decision-making of the e-government.

8. The study presented that a large proportion of the youth had a higher level of agreement about the factors of the study model. This leads to the fact that the youth have a great effect on the communities and, commonly, they are the most effective part of the different aspects of the society. For that reason, the decision makers must give the youth greater importance and encourage them to participate in the e-government. Eventually, the youth will have a positive impact on the citizens' participation in the public decision-making of the e-government.

9. Disseminate and educate the citizens about the need to participate in the e-government. The study presents that a proportion of the higher level of educated citizens had a higher level of agreement about the factors of the study model. Eventually, the higher levels of educated citizens will have a positive effect on the citizens' participation in the public decision-making of the e-government. For that reason, the decision makers must give the higher levels of educated citizens' greater importance and encourage them to participate in the e-government.

10. The decision makers must engage the IT professionals and other workers to participate in the e-government because the result showed they highly support the intentions to participate. This will have a positive effect on the citizens' participation in the public decision-making of the e-government. IT professionals are specialised in the e-government infrastructure and they have ideas about developing the e-government.

11. The decision makers must support the citizens with high Internet experience to participate in the e-government because the result showed that they have a higher level of agreement. They will have a positive effect on the citizens' participation in the public decision-making of the e-government, as they have greater experience in web design and usage.

7.5 Limitations of the research

1. Lack of the potential to include all the social groups for time and cost reasons, this research used only four social groups to gather the data and did not cover all the social groups.

2. Being a research conducted on the citizens' intention to participate in the public decision making of the e-government, further studies are necessary to confirm the acquired outcomes in this study.

3. This research used the cross-sectional research for a survey study in capturing the respondents' perceptions over a certain period of time due to time factors and cost effectiveness. Consequently, the study found it hard to gather data at multiple times.

4. Data collection in this study was carried out by the usage of self-administered questionnaires, which means that the data might have been influenced by error of the same source bias. However, the self-administered questionnaires awarded the researchers with a high rate of responses in this study.

7.6 The Future Research Suggestions

For future work, it is believed that the proposed solution of the citizen's intention to participate in the public decision making of the e-government in the planning stage must be expanded and tested in different developing countries (Jayashree et al.,

2016; Setiawati & Pratiwi, 2015; Xie et al., 2017). In addition, further work is needed in the implementation and design of the citizen's intention to make the most of the citizens advantages as a tool to assist in the citizens' participation in e-government by enhancing public understanding of the benefits and use of such technology (Bataineh & Abu-Shanab, 2016; Wu et al., 2015).

To beat the limitations in this research, the researcher suggests some future study directions as with the following:

1. The study suggests that there should be additional studies in order to test the model of the study for the citizens' intentions to participate in the public decision-making of the e-government in various places to compare the obtained outcomes.
2. In addition to compatibility and culture, other more relevant and powerful factors that fit with explaining the citizens' intentions to participate in the e-government should be utilised in future studies.
3. The future research should consider other set of social groups of the society in order to emphasise the relationship between the proposed contributing factors.
4. The influence of other self-knowledge characteristics of the citizens should be considered in future studies to increase the citizens' intentions to participate in the e-government.
5. In conclusion, a longitudinal research horizon has been proposed to be utilised in future studies since citizens' culture is a factor that is characterised as being accumulated over time.

7.7 Summary

Chapter Seven has presented the outcomes that had been observed in Chapter Five. Chapter Seven consisted of the explanations of the outcomes. The outcomes of this research provided acumen into the factors that have a significant impact on the citizens' intentions to participate in the public decision-making of the e-government. Then, the academic and theoretical contributions were summarised. In addition, the conclusions, recommendations, limitations and future studies have been shown in chapter seven.

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Appendix A **Sources of Questionnaire**

Questionnaire Studies That Were Used To Collect the Source of the Elements
(Questionnaire) For the Study

Factor and definition	Authors' and theory	cod	Old questions	New questions
Attitude toward Act or Behaviuor . An personal's negative or positive feelings about executing the purposed behaviour	(Ajzen & Timko, 1986; Mishra et al., 2014)	ATB	ATB1: Practicing Green Information Technology is convenient for me ATB2: Practicing Green Information Technology is necessary for me ATB3: Practicing Green Information Technology is worth it	ATB1: Practicing citizens' participation in public decision making of e-government is convenient for me ATB2: Practicing citizens' participation in public decision making of e-government is necessary for me ATB3: Practicing citizens' participation in public decision making of e-government is worth it
	(Lin, Fofanah, & Liang, 2011b; Xie et al., 2017)	ATB	ATB1: Using e-Government and the internet is a good idea. ATB2: Using e-Government in the Gambia is a pleasant idea. ATB3: Using e-Government is a positive idea.	ATB1: The intention of the citizens' participation in public decision making of e-government is a good idea. ATB2: The intention of the citizens' participation in public decision making of e-government in the Iraq is a pleasant idea. ATB3: The intention of the citizens' participation in public decision making of e-government is a positive idea.

	(Wu & Chen, 2005)	ATB	ATB1: Using OITD for income tax declaration would be a good idea. ATB2: Using OITD for income tax declaration would be a wise idea. ATB3: I like the idea of using OITD for income tax declaration. ATB4: Using OITD for income tax declaration would be a pleasant experience.	ATB1: intention of citizens for participating in public decision making of e-government would be a good idea. ATB2: intention of citizens for participating in public decision making of e-government would be a wise idea. ATB3: I like the idea of intention of citizens for participating in public decision making of e-government. ATB4: intention of citizens for participating in public decision making of e-government would be a pleasant experience.
	(Hujran et al., 2015)	ATB	ATB1: Using the e-government portal and/or Ministry's website(s) to access government services is a good idea. ATB2: I like the use of e-government portal and/or Ministry's website(s) to access government services. ATB3: Using the e-government portal and/or Ministry's website(s) to access government services would be pleasant.	ATB1: citizens' participation in public decision making of e-government is a good idea. ATB2: I like to participate in public decision making of e-government. ATB3: citizens' participation in public decision making of e-government would be pleasant.

Subjective Norms. The person's understanding that most individual who are important to him believe she/he could or could not execute the behaviour in question.	(Ajzen, 2006; Ajzen & Timko, 1986)	SN	SN1: I think that my colleagues expect me to practice Green Information Technology SN2: I think that people who are important to me practice Green Information Technology SN3: I think that people who are important to me expect me to practice Green Information Technology.	SN1: I think that my colleagues expect me to practice participating in public decision making of e-government. SN2: I think that people who are important to me practice participating in public decision making of e-government. SN3: I think that people who are important to me expect participating in public decision making of e-government.
	(Sang, Lee, & Lee, 2009)	SN	SN1: People who influence my behaviour (work) think that I should use e-Government systems. SN2: People who are important to me think that I should use e-Government systems.	SN1: People who influence my behaviour (work) think that I should participate in public decision making of e-government. SN2: People who are important to me think that I should participate in public decision making of e-government.
	(Wu & Chen, 2005)	SN	SN1: People who are important to me would think that I should use OITD. SN2: People who influence me would think that I should use OITD. SN3: People whose opinions are valued to me would prefer that I should use OITD.	SN1: People who are important to me would think that I should participate in public decision making of e-government. SN2: People who influence me would think that I should participate in public decision making of e-government. SN3: People whose opinions are valued to

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				me would prefer that I should participate in public decision making of e-government.
	(Alharbi et al., 2016)	SN	SN1: People who influence me think that I should use e-participation in e-government websites. SN2: People important to me think that I should use e-participation in e-government websites. SN3: People whose opinions I value would prefer that I use e-participation in e-government websites. SN4: People who influence my decisions think that I should use e-participation in e-government websites	SN1: People who influence me think that I should participate in public decision making of e-government. SN2: People important to me think that I should participate in public decision making of e-government. SN3: People whose opinions I value would prefer that I participate in public decision making of e-government. SN4: People who influence my decisions think that I should participate in public decision making of e-government.
Behavioral Intention. The person's' intention to participant in a definite behavior.	(Ajzen, 2006; Ajzen & Timko, 1986; Mishra et al., 2014)	BI	BI 1: I intend to consider Green Information Technology when buying a new hardware BI 2: I intend to consider Green Information Technology when buying a new software BI 3: I intend to consider Green Information Technology depending on the type of my ICT usage. BI 4: I intend to consider	BI 1: I intend to consider participating in public decision making of e-government when buying a new hardware BI 2: I intend to consider participating in public decision making of e-government when buying a new software BI 3: I intend to consider participating in public decision making of e-

			Green Information Technology depending on the place of my ICT usage.	government depending on the type of my ICT usage. BI 4: I intend to consider participating in public decision making of e-government depending on the place of my ICT usage.
	(Ajzen, 2006; Ajzen & Timko, 1986; Weerakkody et al., 2013)	BI	BI1: I intend to use the Traffic website in future BI2: I intend to use the Traffic department website directly BI3: I intend to use the Traffic department website through intermediaries (e-offices) in the future.	BI1: I intend to participate in public decision making of e-government in future BI2: I intend to participate in public decision making of e-government directly BI3: I intend to participate in public decision making of e-government through intermediaries (e-offices) in the future.
	(Venkatesh et al., 2012)	BI	BI1. I intend to continue using mobile Internet in the future. BI2. I will always try to use mobile Internet in my daily life. BI3. I plan to continue to use mobile Internet frequently.	BI1. I intend to participate in public decision making of e-government in the future. BI2. I will always try to participate in public decision making of e-government in my daily life. BI3. I plan to participate in public decision making of e-government frequently.

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	(Lin et al., 2011b)	BI	BI1: I intend to use the e-Government system in the next two years to come. BI2: I intend to use the e-Government system on a regular basis in the future. BI3: I intend to use the e-Government information system in my next application of passport and national identity card. BI4: I will strongly recommend others to use e-Government and information technology services.	BI1: I intend to participate in public decision making of e-government in the next two years to come. BI2: I intend to participate in public decision making of e-government on a regular basis in the future. BI3: I intend to participate in public decision making of e-government in my next application of passport and national identity card. BI4: I will strongly recommend others to participate in public decision making of e-government.
	(Gupta, Dasgupta, & Gupta, 2008)	BI	BI1: I intend to use the Internet in the next 2 months BI2: I predict I would use the Internet in the 2 months BI3: I plan to use the Internet in the next 2 months	BI1: I intend to participate in public decision making of e-government in the next 2 months. BI2: I predict I would participate in public decision making of e-government in the 2 months. BI3: I plan to participate in public decision making of e-government in the next 2 months.
	(AlAwadhi & Morris, 2008)	BI	I intend to use the system in the next <n> months. I predict I will use the system in the next <n>	I intend to participate in public decision making of e-government in the next <n> months.

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			months. I plan to use the system in the next \<n\> months.	I predict I will participate in public decision making of e-government in the next \<n\> months. I plan to participate in public decision making of e-government in the next \<n\> months.
	(Alharbi et al., 2016)	BI	BI1: I would engage in e-participation provided in e-government websites to participate in decision making. BI2: Engaging in E-participation activities is something that I would do. BI3: I would not hesitate to engage in e-participation activities on e-government websites to interact with government agencies.	BI1: I would engage in e-participation provided in e-government websites to participate in decision making. BI2: Engaging in E-participation activities is something that I would do. BI3: I would not hesitate to engage in e-participation activities on e-government websites to interact with government agencies.
Social Influence. The understanding of a person where important others like relatives and rivals believes the person should adopt the	(Venkatesh et al., 2012; Weerakkody et al., 2013)	SI	SI1: People who influence my behaviour think I should use the online Traffic department services SI2: I would use the e-government services if my friends use them SI3: My Friends think intermediaries (e-offices) are helpful for using the Traffic department online service SI4: The intermediaries (e-offices) encourage the use of online Traffic department services SI5: People who are	SI1: People who influence my behaviour think I should participate in public decision making of e-government. SI2: I would participate in public decision making if my friends participate in public decision making. SI3: My friends think citizens' participation in public decision making is helpful for improving the e-government service.

innovation or technology.			important to me think that I should use the Traffic department website facilities Facilitating.	SI4: The citizens' participation in public decision making encourage the citizens to e-participate in e-government SI5: People who are important to me think that I should participate in public decision making of e-government.
	(Escobar et al., 2014; Venkatesh et al., 2012)	SI	SI1: People who are important to me think that I should use Facebook. SI2: People who influence my behaviour think that I should use Facebook. SI3: People whose opinions I value prefer that I use Facebook.	SI1: People who are important to me think that I should participate in public decision making of e-government. SI2: People who influence my behaviour think that I should participate in public decision making of e-government. SI3: People whose opinions I value prefer that I participate in public decision making of e-government.
	(Venkatesh et al., 2012)	SI	SI1. People who are important to me think that I should use mobile Internet. SI2. People who influence my behaviour think that I should use mobile Internet. SI3. People whose opinions that I value prefer that I use mobile Internet.	SI1. People who are important to me think that I should participate in public decision making of e-government. SI2. People who influence my behaviour think that I should participate in public decision making of e-government. SI3. People whose opinions that I value

				prefer that I participate in public decision making of e-government.
	(Gupta et al., 2008)	SI	SI1: People who are important to me think that I should use the Internet SI2: People who influence my behaviour think that I should use the Internet SI3: The senior management and staff of my organization have been helpful in the use of the Internet SI4: In general, my organization has supported use of the Internet.	SI1: People who are important to me think that I should participate in public decision making of e-government. SI2: People who influence my behaviour think that I should participate in public decision making of e-government. SI3: The senior management and staff of my organization have been helpful in the participate in public decision making of e-government. SI4: In general, my organization has supported participate in public decision making of e-government.
	(Shafi & Weerakkody, 2009)	SI	SI1. Important people to me think I should use the online government system. SI2. I would use online government services if I needed to SI3. I would use online government services if my friends and colleagues used them SI4. People around me who use the e-government system have more prestige.	SI1. Important people to me think I should participate in public decision making of e-government. SI2. I would participate in public decision making of e-government if I needed to SI3. I would participate in public decision making of e-government if my friends and colleagues participated it

				SI4. People around me who participate in public decision making of e-government have more prestige.
Facilitating conditions. The availability of resources like money, time, and other resources needed to participate in a behaviour.	(Venkatesh et al., 2012; Weerakkody et al., 2013)	FC	FC1: I have the computer devise necessary to use the Traffic department website FC2: I have access to the internet to use the Traffic department website FC3: I have the internet experience necessary to use the Traffic department website FC4: Given the resources, opportunities and knowledge it takes to use the Traffic department website, it would be easy forme to use the Traffic department website FC5: Guidance was available to me in the selection of the system FC6: A specific person (or group) is available for me in the intermediaries (e-offices) to provide assistance with Traffic department website difficulties.	FC1: I have the computer devise necessary to participate in public decision making of e-government. FC2: I have access to the internet to participate in public decision making of e-government. FC3: I have the internet experience necessary to participate in public decision making of e-government. FC4: Given the resources, opportunities and knowledge it takes to participate in public decision making of e-government, it would be easy forme to participate in public decision making of e-government. FC5: Guidance was available to me in the selection of the participate in public decision making of e-government FC6: A specific person (or group) is available for me in the intermediaries (e-offices) to provide assistance

				with participate in public decision making of e-government.
	(Escobar et al., 2014; Venkatesh et al., 2012)	FC	FC1: I have the resources necessary to use Facebook. FC2: I have the knowledge necessary to use Facebook. FC3: I feel comfortable using Facebook.	FC1: I have the resources necessary to participate in public decision making of e-government. FC2: I have the knowledge necessary to participate in public decision making of e-government. FC3: I feel comfortable participate in public decision making of e-government.
	(Venkatesh et al., 2012)	FC	FC1. I have the resources necessary to use mobile Internet. FC2. I have the knowledge necessary to use mobile Internet. FC3. Mobile Internet is compatible with other technologies I use. FC4. I can get help from others when I have	FC1. I have the resources necessary to participate in public decision making of e-government. FC2. I have the knowledge necessary to participate in public decision making of e-government. FC3. participating in public decision making

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			difficulties using mobile Internet.	of e-government is compatible with other technologies I participate. FC4. I can get help from others when I have difficulties in participating in public decision making of e-government.
	(Gupta et al., 2008)	FC	FC1: I have the knowledge necessary to use the Internet. FC2: A specific person (or group) is available for assistance with Internet difficulties FC3: I have the resources necessary to use the Internet. FC4: The Internet is not compatible with other systems I use.	FC1: I have the knowledge necessary to participate in public decision making of e-government. FC2: A specific person (or group) is available for assistance with participation difficulties FC3: I have the resources necessary to participate in public decision making of e-government. FC4: The participation in public decision making of e-government is not compatible with other systems I participate.
	(AlAwadhi & Morris, 2008)	FC	I have enough Internet experience to use online services. I would not like to carry out my business with government online. I would find it difficult to use online services due to lack of time.	I have enough participation experience to participate in public decision making of e-government. I would not like to carry out my business with government online. I would find it difficult to participate in public decision making of e-government due to lack

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				of time.
Compatibility. The degree to that an innovation or technology is perceived as regular with the needs of potential adopters, past experiences, and existing values	(Moore & Benbasat, 1991)	Co	Co1: using a personal work stations (PWS) is compatible with all aspect of my work Co2: using a personal work stations (PWS) is completely compatible with my current situation Co:3 I think that using a personal work stations (PWS) fits well with the way I like to work Co4: Using a personal work stations (PWS) fits into my work style.	Co1: participation in public decision making of e-government is compatible with all aspects of my work Co2: participation in public decision making of e-government is completely compatible with my current situation Co:3 I think that participation in public decision making of e-government fits well with the way I like to work Co4: participation in public decision making of e-government fits my work style.
	(Bradford & Florin, 2003)	Co	Co1: The Enterprise resource planning (ERP) application was compatible with legacy system software that was retained (minimal interfacing). Co2: The Enterprise resource planning (ERP) application was compatible with existing hardware.	Co1: The citizens' participation in public decision making of e-government was compatible with legacy system software that was retained (minimal interfacing). Co2: The citizens' participation in public decision making of e-government was compatible with existing hardware.
	(Sang et al., 2009)	Co	Co1: I think using e-Government systems would fit well with the way that I	Co1: I think participation in public decision making of e-government

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			like to gather information from government agencies. Co2: I think using e-Government systems would fit well with the way that I like to interact with government agencies. Co3: Using e-Government systems to interact with government agencies would fit into my lifestyle. Co4: Using e-Government systems to interact with government agencies would be compatible with how I like to do things.	would fit well with the way that I like to gather information from government agencies. Co2: I think participation in public decision making of e-government would fit well with the way that I like to interact with government agencies. Co3: Participation in public decision making of e-government to interact with government agencies would fit into my lifestyle. Co4: Participation in public decision making of e-government to interact with government agencies would be compatible with how I like to do things.
Cultures. The collectivistic and individualistic infrastructure, however, should shed light on how motivation and cognition	(Bruder et al., 2013)	Cu	C1: I think that many very important things happen in the world, which the public is never informed about. C2: I think that politicians usually do not tell us the true motives for their decisions. C3: I think that government agencies closely monitor all citizens. C4: I think that events which superficially seem to lack a connection are often there sult of secret activities. C:5 I think that there are secret organizations that	Cu1: I think the citizens' participation in public decision making of e-government, does not impact on my culture. Cu2: I think that citizens' culture usually does not effect on the citizens' participation in public decision making of e-government. Cu3: I think that government culture agencies do not effect on the citizens' participation

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might identify healthy behaviours in various cultures.			greatly influence political decisions	in public decision making of e-government. Cu4: I think that the impact of the citizens' participation in public decision making of e-government will be positive.
	(Warkentin, Gefen, Pavlou, & Rose, 2002). Culture is likely to contribute to the adoption or resistance to e-Government.	Cu	Higher power distance positively influences intentions to engage in e-Government. Higher uncertainty avoidance will reinforce the positive effect of citizen trust on intentions to engage in e- Government.	
MODERATORS **Hypotheses**				
Age, Gender	(Wang et al., 2009)		Hypothesis 8: Social influence influences behavioural intention to use m-learning more strongly for women than for men. Hypothesis 9: Social influence influences behavioural intention to use m-learning more strongly for older than for younger people.	H1. Subjective norm influences behavioural intention to participate in public decision making of e-government more strongly for men than for women. H2. Subjective norm influences behavioural intention to participate in public decision making of e-government more strongly for younger than for older people. H3. Subjective norm influences behavioural
	(Chen, 2010)		H2b: Gender is a moderator for organizational commitment.	

Internet experience	(Chang & Chen, 2008)		H6. Internet experience moderates the influence of (a) customer interface quality on customer satisfaction; (b) customer interface quality on e-loyalty; and (c) customer interface quality on switching costs.	intention to participate in public decision making of e-government more strongly for higher level of education than for lower level of education.
Level education	(Chen, 2010)		H1b: Level of education is not a moderator for organizational	H4. Subjective norm influences behavioural intention to participate in public decision making of e-government more strongly for worker group than other social groups. H5. Subjective norm influences behavioural intention to participate in public decision making of e-government more strongly for higher level of experiences than lower level of experiences.

Appendix B Questionnaire (English)

Final Questionnaire (English)

CITIZENS' SELF-KNOWLEDGE AS MODERATOR THAT INFLUENCES CITIZENS' INTENTION TO PARTICIPATE IN E-GOVERNMENT PUBLIC DECISION

General Information

This research was to develop a model based on the factors that influence Citizens' Intention to Participate in E-Government Public Decision Making. The study is intended to benefit the country's future pursuit of e-government initiatives. *Citizens' Self-Knowledge* is the behaviours, various levels of education, cultures, nature of jobs, experiences, and environments. All these characteristics may contribute to identify the intention of the citizens' participation in public decision making of e-government. Your willingness to participate and complete the questionnaire is highly appreciated and would contribute towards the completion and success in attaining the study's objectives.

Instruction

It is recommended that you complete the questionnaire personally for the impartiality of the information. Choose the correct options that you deem as the best possible answers. Your contributions play a significant role in the success of this research. Your participation will be treated with utmost privacy. Finally, the researcher appreciates your comments, criticisms and/or suggestions that is supportive to this survey.

Thank you for participating in this survey.
Sincerely,

Researcher,	Supervisor,
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Section A

The term social groups in this section comprises of **political group** (Governors and their deputies with the members of the provincial council, not appointed but they were elected), **economists group** (The members of Commerce Chamber), **IT professional group** (IT departments employees), and **workers group** (The members of General Federation of Iraq Trade Unions).

Please tick (√) in the appropriate box

1. Gender   Male: ☐   Female: ☐

2. Age

18-24 years: ☐   25-31 years: ☐   32-38 years: ☐   39-45 years: ☐

46-52 years: ☐   53-59 years: ☐   60 years and above ☐

3. Level of education

Primary school: ☐   High school or equivalent: ☐

Vocational/technical school (2 years): ☐   Bachelor's degree: ☐

Master's degree: ☐   Doctoral degree: ☐

Others: ☐   please specify _____

4. Social groups Please tick (√) in the space of your group

Politicians group: ☐   Economists group: ☐

IT Professionals group: ☐   Workers group: ☐

4. Working sector

Public Sector: ☐   Private Sector: ☐   Own: ☐   Please specify ___

4. Internet Experiences

1-2 years: ☐   3-4 years: ☐   5 years and above: ☐

Section B

Please tick (√) in the space provided using the following scale.

Moderately

Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree

Part (1): Attitude toward Act or Behaviour

No	Items	1	2	3	4	5	6	7
1	I prefer to participate in public decision making of e-government because it improves the services to serve the citizens.							
2	I prefer to participate in public decision making of e-government because it is environment friendly.							
3	I believe that citizens' participation in public decision making is quite justified.							
4	It is exciting for me to participate in public decision making.							
5	The intention of the citizens' participation in public decision making of e-government is a good idea.							
6	Citizens' participation in public decision making of e-government is necessary for me.							

Part (2): Subjective Norms

No	Items	1	2	3	4	5	6	7
1	The trend of participating in public decision making							

No	Items							
	among citizens around me is increasing.							
2	People around me generally believe that it is better for citizens to participate in public decision making of e-government.							
3	My close friends and family members would appreciate if I participate in public decision making of e-government.							
4	I would get all the required support (time, information related) from friends and family too.							
5	I think that my colleagues expect me to practice participating in public decision making of e-government.							
6	I think that people who are important to me practice participating in public decision making of e-government.							

Part (3): Social Influence

No	Items	1	2	3	4	5	6	7
1	People who influence my behaviour suggested me that I should participate in public decision making of e-government.							
2	I would participate in public decision making if my friends participate in the public decision making.							
3	My friends' thing citizens' participation in public decision making is helpful for improving the e-							

	government service.							
4	People who are important to me suggested me that I should participate in public decision making of e-government.							

Part (4): Facilitating conditions

No	Items	1	2	3	4	5	6	7
1	I have the resources necessary to participate in public decision making of e-government.							
2	I have the knowledge necessary to participate in public decision making of e-government.							
3	Citizens' participation is compatible with other technologies I intend to use.							
4	I can get help from others when I have difficulties to participate in public decision making of e-government.							
5	A specific person (or group) is available for me in the intermediaries (e-offices) to provide assistance with participation in public decision making of e-government.							

Part (5): Compatibility

No	Items	1	2	3	4	5	6	7
1	Participation in public decision making of e-government is compatible with all aspects of my work.							

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No	Items	1	2	3	4	5	6	7
2	Participation in public decision making of e-government is completely compatible with my current situation.							
3	I think that participation in public decision making of e-government fits well with the way I like to work.							
4	Participation in public decision making of e-government fits my work style.							
5	I think participation in public decision making of e-government would fit well with the way that I like to gather information from government agencies.							

Part (6): Cultures

No	Items	1	2	3	4	5	6	7
1	I think that many very important things happen in the world, which the public is never informed about.							
2	I think that politicians usually do not tell us the true motives for their decisions.							
3	I think that government agencies do not effect on the citizens' participation in public decision making of e-government.							
4	I think that the impact of the citizens' participation in public decision making of e-government will be positive.							

Part (7): Behavioural Intention

No	Items	1	2	3	4	5	6	7
1	I would look for participation in public decision making of e-government.							
2	I am willing to participate in public decision making of e-government in future.							
3	I am willing to participate in public decision making of e-government on regular basis.							
4	I would also recommend others to participate in public decision making of e-government.							
5	I intend to participate in public decision making of e-government directly							

Section C

Suggestions and Opinion

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Thank you

Appendix C **Questionnaire (Arabic)**

Final Questionnaire (Arabic)

اسـخـباو ّ:اشـزاف ىهپـف ّ اـذاحُ نهمىاطىُه ٔ ًـمَناخأنثُزاث فِ وتُمشـاركت ىُمىاطىُه ٔ فِصىغ قراحُكىم ٔ
ولاكخزووُ ّ:ك   نپـزاق

مپـمىت ًـامت

زاىُ ذشِز طيرينهمزرطيسو ذِاٌ اكٍ اِ اٌُ ـذخف ِ رظذ ف اٌاطئ كِىشف ّ ازايذُف ِ طُّامشاس فِ
جبدسا داذىٔ ىزشندىعٌلىخ. ا ٔ غشعِ ّ ٔ زفبدحِ ـ عكِرُ ف ِ اٌغِ مجَرجبدسا داذىخ
ىزشنّيخ.

ٔهـيـزـفَـاـذاث ٔ ىهـاطى ُه ٔ كُّـش اجِ ظ ٔ غزيا دِخفخِ اٌكپيم، وطيبع خطّىئف اجُشا د زشنند ذ ٔ
اٌكٔ زبكّي ازِ يز ٔ رَبوغب ٔ و ٔ زاحظبىئضرٌ طىر نموذ طرغ اٌمشاس فِ اذىٔ ىزشنّيخ
كٌلشلىخ. زرعٔ ذادو ٔ رَّشىسوخ أٌ عىٌٔب زجيا ٔ ذِ رَمذير كجير، و عقوٌغب ٔ ف ِ إنجاز ونجاح فِردمىك أ ذاف
انساٌغخ.

حپ ٔ ُماث

ِ اٌغِ ذغ ٔ اوّب ٔ زجيٌ ش خطيا للحيادفِ اٌ ٔ كپِب د. اخٔ يار الخيارات الصحيحخ ازِ كٔ قِشـنٔفـٌأض اٌ ٔ تِي
ا ٔ ىخِرِغب ٔ ىبوئرِكپت دَسانبيب فِرخبح زا اٌجنش. عِ ززُاكِبِ ٔ غِ رِشـىسوزئـتز اٌ ٔ خظ طىخ. أخيرا، يطِت
اٌهبـشـركِيقا زٌشـادبر د ازِ عقوٌغبـكّذ زِ اٌنساٌطِ.

فِغِيٌك اٌش زشان فِ زط

لامشـزف	نـلاباحث
ِغِـكّـنٔثف غِ اُنوزنس اٌ سـصـيرٔ	طبُّت اُنوزنٌا ِ ىِ دغُِّكـجذ الرحيم
ويخ اٌذعجبٔ د	ويخ اٌذبٔ جبد
جبكپخِرٌبس ماليزئ	جبكپخِرٌبس ماليزئ
006049285209	00060165066418
rozail174@uum.edu.my	Makyhss@yahoo.com

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فیلڈ زأنف

شّ أفنب   زّبکّیچ را   د اّظِخ اّجّبکّخ الساُسُت) اّذفظین ونوٹ ّ ِغّلّضبءِج ظ اّذفظّ ،ُ یعینواّی رُ
انتخٹ ُ (، ِجّلّخ خصادَتّگ)لّضبءِغّنوّلنجبسحّ(، ِجّحّکّءینّیجُا ھُّکّہماث) ظفیّ لغُر یّ نجیا
اُ کِبّ د(، ِجّخ الهمال) أ   رذبدّگّبيّّہّبب دُکِّبي فکِلّشاق).

یرجی ّضّغگّ خ)√(فِ اّّنّّخّ اِبّعت

1 ناجیس

وش [ ]   انثی [ ]

2 نایپمز

18-24 عِ ، [ ]   25-31 عِ ، [ ]   32-38 عِ ، [ ]   39-45عِ ، [ ]
46-52 عِ ، [ ]   53-59 عِ ، [ ]   60 عِبّف ق [ ]

3مُ چِک ین یخ سم

لوّذاءُ [ ]   کّذادیر ُ [ ]
(اّ عِ 2 کِذ / ِ ِ [ ]   خِیو [ ]
بِجغتیر [ ]   اّ نزو د [ ]
اخش [ ]   عّ اّطس _____

4- کُّماخّجا ثاگّیّجمّلا

أ- يوِساُنا گ جّّاُ [ ]   ة- ضّادّ عُ گ جّّ اُ [ ]
ط- جّ ئّوکّخّنگ جّّ اُ [ ]   د- هّماپّئّنگ جّّ اُ [ ]

4-مم یعِاطل

صّغ عبطل [ ]   یِ ِ یّ عبطل [ ]
گّّ ثّصّخ [ ]   ضّخ اّطس _____

5- جُوز فِ زبّخّا

2-1 عِ ، [ ]   4-3 عِ ، [ ]   5 عِبّف ق [ ]

الفرع باء

يرجى و   خ)√(ف ؤُلّب ْ اّخ ظطنٹبعخذ ا اّمهِط اّزب ّ.

لذخچم

كپارضٻشرفٻ	بمافكبٻشرذ	7	6	5	4	3	2	1	كپارضٻشرفٻ

لاجزء)1(: لمٻلفحجلي لاماوٻن أوناسهن

7	6	5	4	3	2	1	نكٻلٻاصٻز	كّذذ
							اّفض ّثراّبسوخف طغاّمشراس اُّنى ٻ ٹ ُٹ ذٻ ْخ عٻزشٹبٻخ ذ ٴيحسد ٓ اُخذٻبد ُخذخ اّ ٓاطيٻ ٓ.	1
							اّفض ّثراّبسوخف طغاّمشراس اُّنى ٻ ٹ ُٹ ذٻ ْخ عٻزشٹبٻخ ذ ٴ طذٻق ُچٻخ.	2
							گنومذ ٻثراّبسوخف اّ ٓاطيٻ ٓف طغاّمشراس اُّكپٻشٻشسح رّبٻب.	3
							ٻ ٹ اّ ٓتٻرثبّ غخ ُّ أثلّبسننف طغاّمشراس اُّكپبَ.	4
							إنٻٹٻبسوخ اّ ٓاطيٻ ٓف طغاّمشراس اُّنى ٻ ٹ ُٹ ذٻ ْخ عٻزشٹبٻخفٻشح جٻدة.	5
							ٻثلّبسوخ اّ ٓاطيٻ ٓف طغاّمشراس اُّنى ٻ ٹ ُٹ ذٻ ْخ عٻزشٹبٻخ أثضشٹ سٻئبّ غخ ُّ.	6

لاجزء)2(: لمٻقذذلاذاخّت

7	6	5	4	3	2	1	نكٻلٻاصٻز	كّذذ
							يتزايدراجبّثراّبسوخف طغاّمشراس اُّكپبثيٻ ٓ اّ ٓاطيٻ ٓ ٻ ٹ دّ ُّ.	1

	7	6	5	4	3	2	1	زصائكڤن	رقم

7	6	5	4	3	2	1		
							إبط د ّک بّکڤزمدْ أدَ ضَ طري ّشبسوخف طڠامشراسٱکڤبَ ّ ذٯنّيخ ٯزشّنيخ.	2
							أنطلبئ ّمشثيد فٱشادأعشرِ نڤس إزٯابس وذفِ طڠامشراس ٱ ّنى ّ ّ ذٯنّخ ٯزشّنيخ.	3
							عف أدظکّ ٍ وّاذکُ ّطّ ة)ٱ لذ ّ ٱ ّکِزٮد راد ٱ ظٖخ(ّٱ نظلبءکْلبئخطٯب.	4
							ڬنومذ طس ِ يزلٯٮْ ّ ٍ أشلٮسنفِ طڠامشراس ٱ ّنى ّ ّ ذٯنّخ ٯزشّنيخ.	5
							ڬنومذ أ إبط أزيّ ّ ّ ّنٮٌغخ ّّبسعّشّلٮسوخ فِ طڠامشراسٱکڤبَ ّٱ ّذٯنّخ ٯزشّنيخ.	6

ڤابڬئن كتيڬ: ڤڠاۤئثٮۤز اۤجخ ماكڤٍ

7	6	5	4	3	2	1	زصائكڤن	رقم
							إبط أزيّ ڤيۤشّکّ ٍ ع ّ ٯلزشحَ ّ أنني يجت أ ٮسنفِ طڠامشراسٱکڤبَ ّٱ ّذٯنّخ ٯزشّنيخ.	1
							ّ أد أشلٮسنفِ طڠامشراسٱکڤبَ إزٯابسن أنظلبئِ فِ طڠامشراسٱکڤبَ.	2
							أنظلبئشبسوخ ٱ ّاطٯ ٱ ّاطٯ فِ طڠامشراس ٱکڤبَ ّ فيدّزدغيّ خذخ اّذٯنّخ ٯزشّنيخ.	3
							إبط أزيّ ّ ّنٮٌغخ الزشح ّ أشلٮسنفِ طڠامشراسٱکڤبَ ّٱ ّذٯنّخ ٯزشّنيخ.	4

الجزء الراٮغ: حسهُم الظظوف

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7	6	5	4	3	2	1	زصائكپن	ذذتَّ
							ءَدّاٰتلدٰا خَّشُبسوخفٖ طٖغٰامشراسٰائٰى نۡ ٖ خۡ ٖذٌيۡخ عزشّيۡخ.	1
							ءَدّاٰكگيفخا خَّشُبسوخفٖ طٖغٰامشراسٰائٰى نۡ ٖ خۡ ٖذٌيۡخ عزشّيۡخ.	2
							زرٰافلٖقسبسوخٖا ٓٱطٖيۡ ٖغٰ لُٰى ّٰجياتٰا ش ازٖ گّٰنضٰاعٖخذاٖ ٗ.	3
							يّٰى نۡ ٖٱ ُنۡظٖيۡگ نۡ ٖٱغۡبّگۡذحٖ ٖ الآخريٖ ٖگٖنۡبٖ يۡ ٗ ءَدّٰ طٖكۡتۡبدفّٖشۡابسوخفٖ طٖغٰامشراسٰائٰى نۡ ٖ خۡ ٖذٌيۡخ عزشّيۡخ.	4
							بۡنۡشخضٖ ٖذذد) ءٖ جۡ گۡخ(زبح ُفٖ ٱ ّغۡبء)ئٰبوت عزشّيۡخ(ّتقديم ٱغۡبّگۡذحفّٖشۡابسوخفٖ طٖغٰامشراسٰائٰى نۡ ٖ خۡ ٖذٌيۡخ عزشّيۡخ.	5

لٰاجزء)5(نۡخٖءفٖك

7	6	5	4	3	2	1	زصائكپن	ذذتَّ
							إشۡاٰبسوخفٖ طٖغٰامشراسٰائٰى نۡ ٖ خۡفٖ ٱۡذٌيۡخ عزشّيۡخروفٖك ٖغٖ جٖ يٖع جٰانبگۡ ّٖ.	1
							إشۡاٰبسوخفٖ طٖغٰامشراسٰائٰى نۡ ٖ خۡ ٖذٌيۡخ عزشّيۡخروفٖكرّٖيب ٖغٖ ضكٖپٖ دۡنب ُٖ.	2
							گّٰونمذ أشۡاٰبسوخفٖ طٖغٰامشراسٰائٰى نۡ ٖ خۡ ٖذٌيۡخ عزشّيۡخزبعنتشرى ٗ جيدٖ غٰاطشريخ از أدت كگپ ّٰثٰب.	3

7	6	5	4	3	2	1	زصاٴىڎٮن	ڎذَگ
							خِشیَْذ خْذِ ۇٴنى طِغْامشراٴس بَكاٴسراٴمشطِ فْخوسٮباٴشرٴ	4
							.ڕ ّتگَ أع تعاٴنى	
							فِرِ ۇٴنى اٴشراٴمشطِ فْخوسٮباٴشراٴث ذموٴنگَّ	5
							زِراٴ خیمشطاٴغِ جیدً ىشٴتٮعتشخزٮنیَْشز خیَْذاٴ	
							.خیَْذاٴ بْلوٴ رِ بدِرٴپاكِ اّٴغجّ أ تدأ	

7	6	5	4	3	2	1	زصاٴىڎٮن	ڎذَگ
							بٴكِفسذذراجذخ بٴلوٴ سٮِ اٴ رِ نُٮثٮُل أ ذموٴنگَّ	1
							.بمٮطِبٴتگٴسرٴ ّجاٴ إ متٮيُ رِزاٴٴ،	
							خیمٮینُٴغاٴ نُننٴاٴقٴ خٮشنجٮخ حدٴبَﯔكٮساٴيغٴا أ ذموٴنگَّ	2
							.رٴ اٴللٴشمُّ	
							خوسٮبُشٮ گَﯔشصوٴخیَْذاٴ خیَْذاٴ بٴلوٴ أ ذموٴنگَّ	3
							.خیَْشز خیَْذٴ رِ نُٮٴ اٴشراٴمشطِ فَ ىطٴاٴ 3ٴ	
							شراٴمشطِ فَ ىطٴاٴ 3ٴ خوسٮبشیﯓأراٴ ذموٴنگَّ	4
							ايجابيا ٴعدٮي خیَْشزٴ خیَْذٴ رُِّ نُٮٴ اٴ	

7	6	5	4	3	2	1	زصاٴىڎٮن	ڎذَگ
							خیَْذٴ رُِّ نُٮٴ اٴشراٴمشطِ فخوسٮبراٴتگشَّكَ شدُّعٴ	1
							.خیَْشزٴ	
							خیَْذٴ رَِّ بَكاٴسراٴمشطِ فخوسٮبُّشذاﯔعِزٴ ّ گَناٴ	2
							ٴ جغّٴ فخیَْشزٴ	
							خیَْذٴ رَِّ بَكاٴسراٴمشطِ فخوسٮبُّشذاﯔعِزٴ ّ گَناٴوأ	3

						ءزشَنيخَگ اٍعبط زظ.	
						أٰدٰ أٰ أٰ طٍر الآخرٍ طٰيٰبٰتّنّبٰسوخفٍ طٍغأٰمشٰلس اٌنٰى نٍرٌ ذٰيٰخ ءزشَنيخ.	4
						گَنٰضّنّٰبٰسوخفٍ طٍغأٰمشٰلس اٌنٰى نٍرٌ ذٰيٰخ ءزشَخّخَششح.	5

ان<u>فَزعحاء</u>

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ش<u>ل</u>کا ان<u>ك</u>م

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Appendix D **Translator's Letters**

Verifications Letters: the Translator's Letter

AISHAH ROSE MARIE'S ENGLISH PROOFREADING SERVICE

EMAIL: proofreading2011@gmail.com   CONTACT NUMBER: 019-4255509
ADDRESS: No. 21 Persiaran Iskandar Perdana 51, Seksyen 6, Bandar Seri Iskandar, 32610 Seri, Iskandar, Perak, Malaysia

8 OCT. 2017

To whom it may concern,

I, Noraishah Rose Marie Bt. Abdullah (American), have proofread the thesis entitled **Citizens' Self-knowledge As Moderator That Influences Citizens' Intention To Participate In E-government Public Decision** for Maky H. **Abdulraheem (95795).** I can be contacted at 019-4255509 or by email at proofreading2011@gmail.com if there are any questions.

Sincerely,

Nh

_____

(NORAISHAH ROSE MARIE BT. ABDULLAH)

Appendix E **Experts Verifications for Questionnaire**

Expert Reviewers

AWANG HAD SALLEH
GRADUATE SCHOOL OF ARTS AND SCIENCES
UUM College of Arts and Sciences
Universiti Utara Malaysia
06010 UUM SINTOK
KEDAH DARUL AMAN
MALAYSIA

Tel: 604-928 5299/5266/5251
Faks (Fax): 604-928 5297
Laman Web (Web): http://ahsgs.uum.edu.my

"MUAFAKAT KEDAH"

UUM/CAS/ AHSGS/95795

May 28, 2017

Karbala Iraq Goverment

Dear Sir/Madam

DATA COLLECTION FOR PROJECT PAPER/ THESIS

This is to certify that **Mr. Maky H. Abdulraheem** (matric number: **95795**) is a full time postgraduate student in Doctor of Philosophy (Information Technology) at UUM College of Arts and Sciences.
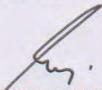
He needs to do his field study and data collection for his project paper/thesis in order to fulfill the partial requirements of his graduate studies.

We sincerely hope that your organization will be able to assist him in the data collection and the distribution of the questionnaires for his research.

Thank you.

"KNOWLEDGE , VIRTUE, SERVICE"

Yours faithfully

MOHD KHAIRY MUKHTARUDDIN
Senior Assistant Registrar
for Dean
Awang Had Salleh Graduate School of Arts and Sciences
UUM College of Arts and Sciences

Universiti Pengurusan Terkemuka
The Eminent Management University

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Verification of (Dr. Wiwied Virgiyanti) on questionnaire: (School of Computer Sciences, College of Art and Sciences CAS, UUM, Malaysia). She suggested some corrections on the questionnaire and change some of the questions, especially in the questions of Social Influence.

UUM
Universiti Utara Malaysia

CITIZENS' SELF-KNOWLEDGE A MODERATOR THAT INFLUENCES CITIZENS' INTENTION TO PARTICIPATE IN E-GOVERNMENT DECISION: KARBALA, IRAQ

General Information

This research was to develop a model based on the factors that influence Citizens' Intention to Participate in E-Government Public Decision Making. The study is intended to benefit the country's future pursuit of e-government initiatives. *Citizens' Self-Knowledge* is the behaviours, various levels of education, cultures, nature of jobs, experiences, and environments. All these characteristics may contribute to identify the intention of the citizens' participation in public decision making of e-government. Your willingness to participate and complete the questionnaire is highly appreciated and would contribute towards the completion and success in attaining the study's objectives.
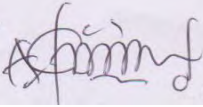
Instruction

It is recommended that you complete the questionnaire personally for the impartiality of the information. Choose the correct options that you deem as the best possible answers. Your contributions play a significant role in the success of this research. Your participation will be treated with utmost privacy. Finally, the researcher appreciates your comments, criticisms and/or suggestions that is supportive to this survey.

Thank you for participating in this survey.

Sincerely,

Researcher,	Supervisor,
Maky H.Abdulraheem	Assoc. Prof. Dr. Wan Rozaini Bt Sheik Osman
Ph. D Student	School of Computing, CAS
School of Computing, CAS	University Utara Malaysia
University Utara Malaysia	006049285209 → +60-4-9285209
Makyhss@yahoo.com	rozail174@uum.edu.my

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Verified by: _____ (DR. WIWIED VIRGIYANTI).

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Verification of (Assoc. Prof. Dr. Azham Hussain) on questionnaire: (School of Computer Sciences, College of Art and Sciences CAS, UUM, Malaysia). He suggested some corrections on the questionnaire.

CITIZENS' SELF-KNOWLEDGE AS MODERATOR FACTORS THAT INFLUENCE CITIZEN INTENTION TO PARTICIPATE IN E-GOVERNMENT DECISION: KARBALA IRAQ

General Information

This research was to develop a model based on the factors that influence Citizen Intention to Participate in E-Government Public Decision Making. The study is intended to benefit the country's future pursuit of e-government initiatives. *Citizens' Self-Knowledge* is the behaviours, various levels of education, cultures, nature of jobs, experiences, and environments. All these characteristics may contribute to intention to citizens' participation in public decision making of e-government. Your willingness to participate and complete the questionnaire is highly appreciated and would contribute towards the completion and success in attaining the study's objectives.

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Thank you for participating in this survey

Sincerely

Researcher	Supervisor
Maky H.Abdulraheem	Assoc. Prof. Dr. Wan Rozaini Bt Sheik Osman
School of computing, CAS	School of computing, CAS
University Utara Malaysia	University Utara Malaysia
Makyhss@yahoo.com	rozai174@uum.edu.my

I have check this questionnaire.

Verified.

DR. AZHAM BIN HUSSAIN
Assoc. Professor
School of Computing
UUM College of Arts and Sciences
Universiti Utara Malaysia

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Verification of (Assoc. Prof. Dr. Suzilah Ismail) on questionnaire: (School of Quantitative Sciences, UUM, Malaysia). She provided some advices about the questionnaire design and measurements develop.

UUM
Universiti Utara Malaysia

CITIZENS' SELF-KNOWLEDGE AS MODERATOR THAT INFLUENCES CITIZENS' INTENTION TO PARTICIPATE IN E-GOVERNMENT DECISION: KARBALA, IRAQ

General Information

This research was to develop a model based on the factors that influence Citizens' Intention to Participate in E-Government Public Decision Making. The study is intended to benefit the country's future pursuit of e-government initiatives. *Citizens' Self-Knowledge* is the behaviours, various levels of education, cultures, nature of jobs, experiences, and environments. All these characteristics may contribute to identify the intention of the citizens' participation in public decision making of e-government. Your willingness to participate and complete the questionnaire is highly appreciated and would contribute towards the completion and success in attaining the study's objectives.

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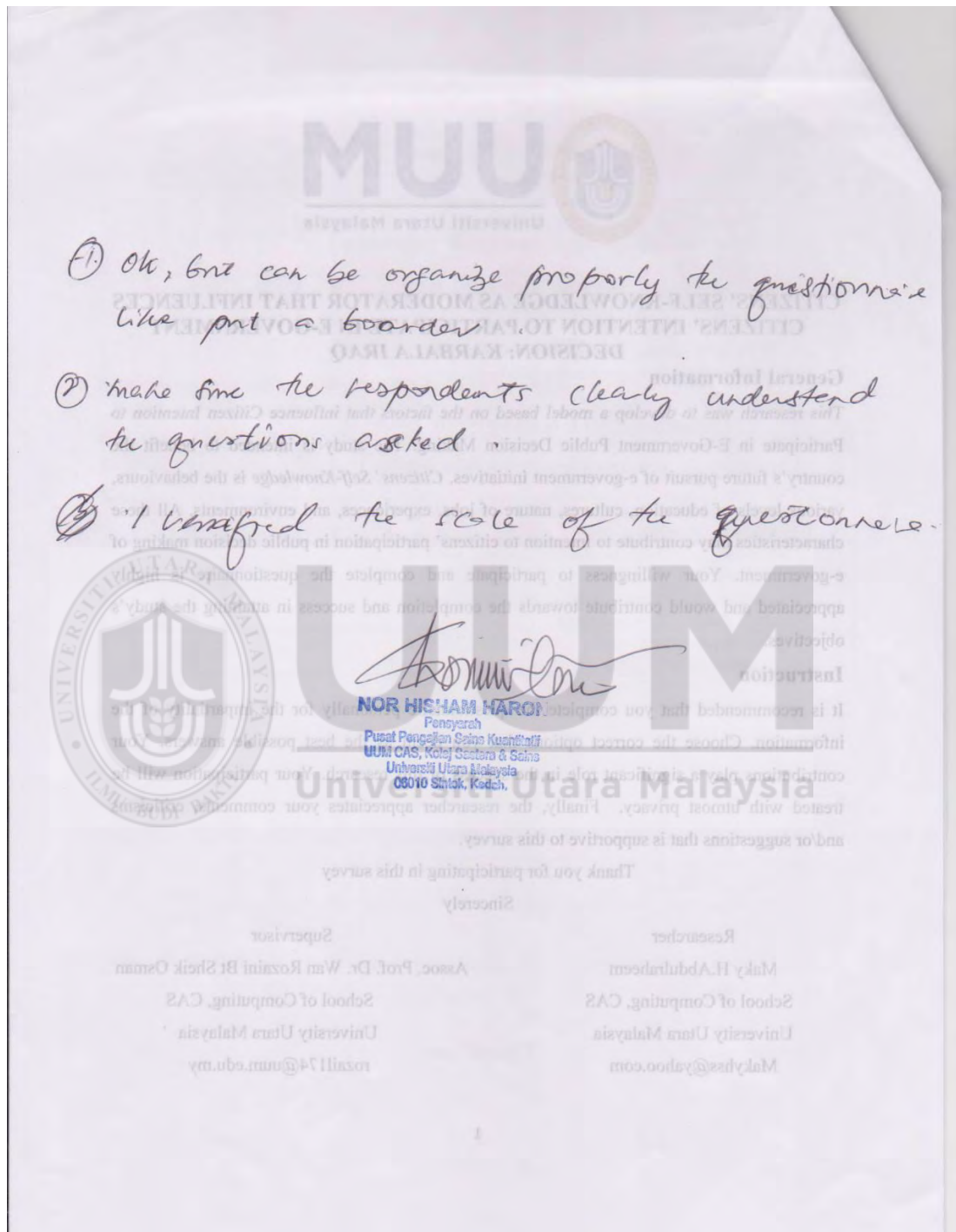Thank you for participating in this survey.

Sincerely,

Researcher,	Supervisor,
Maky H.Abdulraheem	Assoc. Prof. Dr. Wan Rozaini Bt Sheik Osman
Ph. D Student	School of Computing, CAS
School of Computing, CAS	Universiti Utara Malaysia
Universiti Utara Malaysia	+60- 49- 285209
makyhss@yahoo.com	rozail174@uum.edu.my

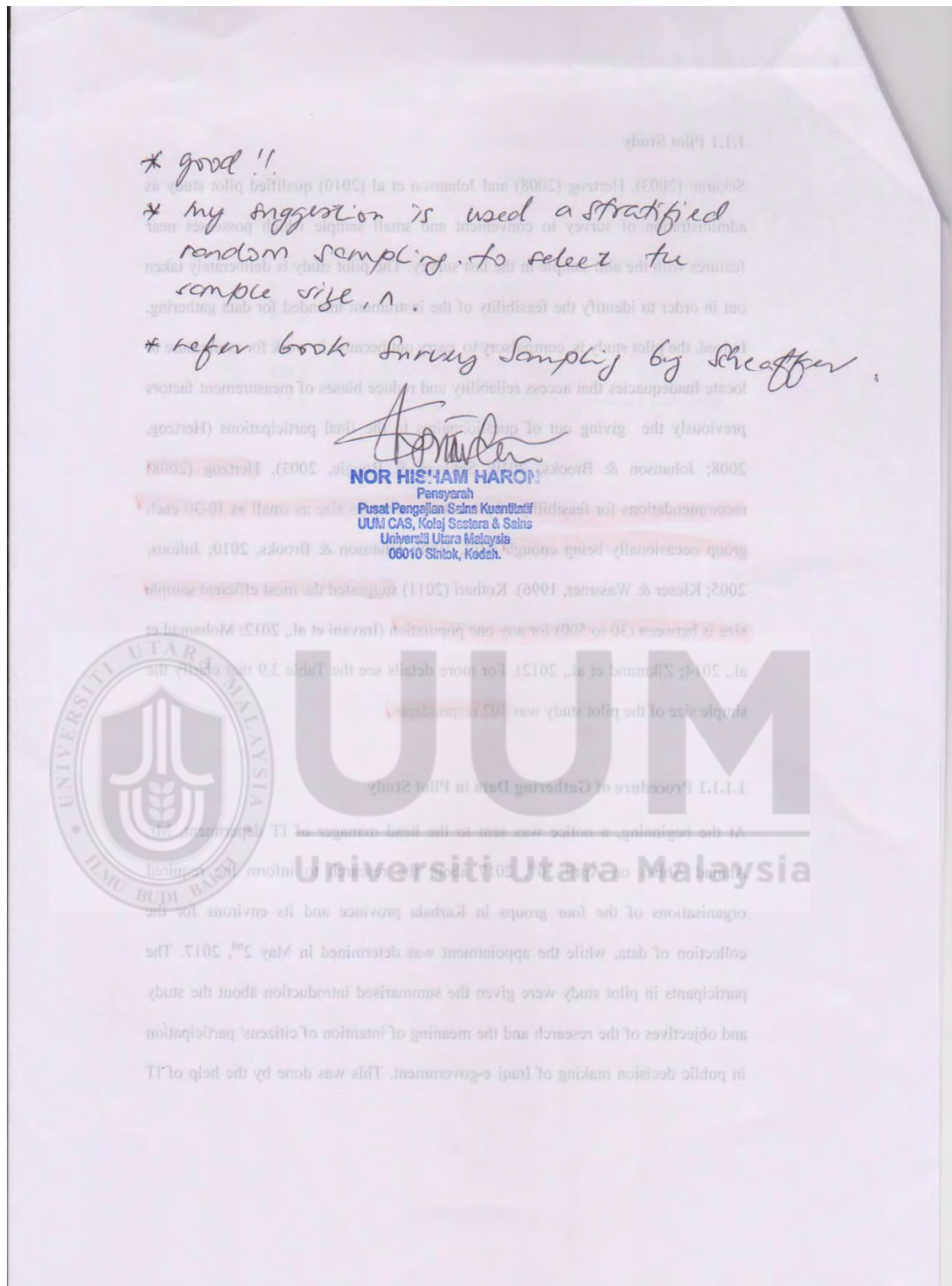*I verify the measurement of the scales are appropriate.*

DR. SUZILAH ISMAIL   13/7/17
Associate Professor
School of Quantitative Sciences
UUM College of Arts and Sciences
Universiti Utara Malaysia

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Verification of (Dr. Nor Hisham Haron) on questionnaire: (School of Quantitative Sciences, UUM, Malaysia). He advised me to make a focus groups from each group one person to get the feedback and improve the questionnaire and he explained to the researcher many things.

Verification of (Dr. Nor Hisham Haron) on pilot study with his recommendations

* good !!
* my suggestion is used a stratified random sampling to select the sample size.
* refer book survey sampling by Scheaffer.

NOR HISHAM HARON
Pensyarah
Pusat Pengajian Sains Kuantitatif
UUM CAS, Kolej Sastera & Sains
Universiti Utara Malaysia
06010 Sintok, Kedah.

Appendix F **Government Letters**

Government Letters: Embassy of Republic of Iraqi Cultural Attache letter for the distribution of the questionnaires

Embassy of the Republic of Iraq
Cultural Attaché - Kuala Lumpur

سفــارة جمهـورية العـــراق
الدائرة الثقافية ـ كوالالمبور

ممثلية وزارة التعليم العالي والبحث العلمي العراقية في ماليزيا
Representative of the Iraqi Ministry of Higher Education and Scientific Research (MOHESR) in Malaysia

No. :   AUT098/UUM/1/2017
Date: 27.Sep.2017

UNIVERSITI UTARA MALAYSIA (UUM),

SINTOK 60010 KEDAH DARUL AMAN,

MALAYSIA.

Re: Data Collection Approval.

The Cultural Attaché of the Embassy of the Republic of Iraq presents its warmest greetings to you. Referring to the matter above, we would like to certify that **Mr. Maky H. Abdulraheem** (matric number: 95795) has distributed his questionnaire, that are required for his research, as requested by (The Province of Holy Karbala Governors Office), Mr. Maky collected the data generated from the questionnaire as state it in the attached letters.

Kindly, if you need further information, do not hesitate to contact us

Enclosed:
-   The Province of Holy Karbala Governors Office Letter No: 2045/22 Dated: 6/6/2017.
-   The Province of Holy Karbala Governors Office Letter No: 2546/4 Dated: 25/7/2017.
-

Best Regards,

Prof. Dr. Sami Dheyab Mahal

Cultural Advisor

CC To:

- Mr. Mohd Khatry Mukhtruddin (Senior Assistant Registrar for Dean).

- Prof. Dr. Wan Rozain Bt Sheik Osman (College of Arts and Sciences, Universiti Utara Malaysia).

- Dr. Maslinda Binti Mohd Nadzir (College of Arts and Sciences, Universiti Utara Malaysia).

2017

Address: Unit 5.07 Level 5 North Block Ampwalk 218 Jalan Ampang Kuala Lumpur 50450 Malaysia
Tel: 0060 3216 30741 Email: culturalofficemalaysia@yahoo.com, kualalumpur@scrdiraq.gov.iq

Fax: 0060 3216 30742
Website: Iraqculturalattache-my.org

Karbala government letter for the distribution of the questionnaires

THE REPUBLIC OF IRAQ
THE PROVINCE OF HOLY KARBALA
GOVERNOR'S OFFICE
العـــدد : 2045/22
التاريخ: ٢٠١7 6/6

To / Presidency of Courthouse of Appeal of Holy Karbala
Sub/ Doctorate Degree thesis questionnaire

Peace, mercy and blessings of God are upon you…
Enclosed the questionnaire of the final thesis about the electronic government of higher studies (Doctorate) student (Mr. MAKY H. ABDULRAHEEM) the employee in IT department in our governorate in order to fill it with the required information by persons of concern and then returning it to us with a formal letter.

Kindly inform us … with Appreciation

Signed by
Aqeel Omran Al-Turaihi
Governor of Holy karbala
5/6/2017

Enclosed
- Questionnaire (12) copies

Cc to/
- Ministry of Foreign Affairs/ Consular Directorate/ we'd like to clarify to you that higher studies (Doctorate) student (Mr. MAKY H. ABDULRAHEEM) the employee in IT department in our governorate, he is studying at (University Utara Malaysia), he has made the questionnaire at the directorates mentioned via our letter, kindly be advised and inform the cultural attaché in the embassy of Republic of Iraq in Kuala Lumpur in order to certify that to the foresaid university and advise us.. with appreciation.
- Ministry of Higher Education and Scientific Research/ department of missions and cultural relations/ kindly be informed and take the proper procedure with appreciation.
- Chamber of Commerce of Holy Karbala/ Enclosed (151) copies of the above mentioned questionnaire in order to take the proper procedure and advise us.
- Workers Union of holy Karbala/ enclosed (258) copies of the above mentioned questionnaire in order to take the proper procedure and advise us.
- Dept. of Information Technology of the governorate/ enclosed (80) copies of the above mentioned questionnaire in order to take the proper procedure and advise us.

office@holykerbala.gov.iq

محافظة كربلاء المقدسة - البدالة ٢٢٢٥٠٩

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Karbala government letter about receiving all the questionnaires and the survey was done.

THE REPUBLIC OF IRAQ
THE PROVINCE OF HOLY KARBALA
GOVERNOR'S OFFICE
العـدد : 2546/4
التاريخ: 25 / 7 /2017

To / Ministry of Foreign Affairs/ Consulate directorate
Sub/ Doctorate Degree thesis questionnaire

Peace, mercy and blessings of God are upon you…
Reference to our letter No. 22/2045 on 6/6/2017
1- Enclosed the letter of Presidency of Courthouse of Appeal of Karbala No. 23/1/3065 on 16/7/2017 including making of the pilot and main studies of survey questionnaire of higher studies (Doctorate) student (Mr. MAKY H. ABDULRAHEEM).
2- Enclosed the letter by Chamber of Commerce of Holy Karbala No. 1252 on 7/6/2017 including making of the pilot and main studies of survey questionnaire of higher studies (Doctorate) student (Mr. MAKY H. ABDULRAHEEM).
3- Enclosed the letter by Workers Union of Holy Karbala No. 306 on 2/7/2017 including the same topic referred at the item No. (1) mentioned above.
4- Enclosed the letter by Local directorate/ Dept. of Information Technology No. 60 on 7/6/2017 including making of the pilot and main studies of survey questionnaire.

To be advised and inform the cultural attaché in the embassy of Republic of Iraq in Malaysia including informing of (University Utara Malaysia) and inform us thanking your well intention toward the service of the city Imam Hussein (Pbuh)… with Appreciation.

Signed by
Aqeel Omran Al-Turaihi
Governor of Holy karbala
25/7/2017

Enclosed
- Four letters.
Cc to/
- Ministry of Higher Education and Scientific Research/ department of missions and cultural relations/ referred to the above mentioned letter, kindly be informed with appreciation.
- Presidency of Courthouse of Appeal of Karbala/ the office of head manager of the Courthouse of Holy Karbala, referred to the above mentioned letter, kindly be informed with appreciation.
- Local directorate/ Dept. of Information Technology referred to the above mentioned letter, kindly be informed.
- Chamber of Commerce of Holy Karbala referred to the above mentioned letter, kindly be informed.
- Workers Union of holy Karbala referred to the above mentioned letter, kindly be informed.

office@holykerbala.gov.iq

محافظة كربلاء المقدسة - البدالة 222509

Appendix G **Verifications for Recommendations and Revised Model of Study**

Expert's experiences

| Name	Area of Experience	Year of Experience	Address of the expert
Assoc. Prof. Dr. Azham Hussain	Assoc. Prof. Azham Hussain is a member of the US-based Institute of Electrical and Electronic Engineers (IEEE), and actively involved in both IEEE Communications and IEEE Computer societies. Azham is published in the areas of software evaluation and testing, user behaviours, group collaboration, ubiquitous, and mobile technology design.	More than 15 years	Dr. Azham Hussain is the Associate Professor of Software Engineering at UUM School of Computing. He is the founder and head of Human-Centered Computing Research Group which is affiliated with the Software Technology Research Platform Center at School of Computing, Universiti Utara Malaysia. https://sites.google.com/site/drazhamhussain/
Assoc. Prof. Dr. Najeeb Abbas AlSammarraie	He joint MEDIU in SEPT.2012 as a lecturer in Faculty of computer and Information Technology. I completed my M.Sc. from North Staffordshire University in UK,	More than 20 years	Assoc. Prof. Dr. Najeeb Abbas Al-Sammarraie of School of Computing and Information of Technology Research in Faculty of Computer and Information Technology of Al Madinah International University, Position: Lecturer

worked in computer center in Iraq for more than 15 years as a Software manager. After completed my Ph.D. Start working in private University in Iraq. I have over 15 years' experience as senior lecturer, then he worked as a Dean of Private University College, Head of Computer Department for more than 5 Years.

Email: dr.najeeb@mediu.edu.my Phone: +60355113939 / Ext: 765
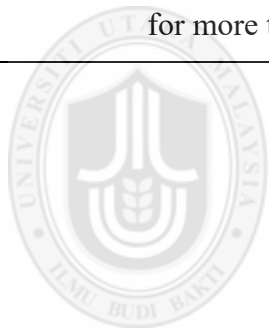
Verification of (Assoc. Prof. Dr. Azham Hussain) on recommendations and revised model of study: (School of Computer Sciences, College of Art and Sciences CAS, UUM, Malaysia).

Final Validation of Output

Because you have information about "**Citizens' self-knowledge as moderator that influences citizens' intention to participate in e-government public decision**" study, as you provided this study many advices before to improve the study model and the questionnaire of this study. The researcher requires from you to verify the recommendations and revised model of this study. From the study, the results shows that the recommendations are necessary to improve the citizens' participation in public decision making of e-government based on the findings, the following recommendations are listed below:

Please state your opinion and whether you agree the list, Please tick (√) in the box.

1	2	3	4	5	6	7	8	9	10	11
√	√	√	√	√	√	√	√	√	√	√

Suggestions and Comments
....
Appropriate and make sense.
....
....
....

Name Azham Hasan Signature

SOC UUM.

DR. AZHAM BIN HUSSAIN
Assoc. Professor
School of Computing
UUM College of Arts and Sciences
Universiti Utara Malaysia

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1.1 Practical recommendations

This research has identified the points that need to be followed in order to increase the intentions of the citizens to participate in the public decision-making of the e-government and give the recommendations to the decision makers. The practical recommendations have been drawn from the outcomes of the analysis of the data and the review of past works. This study has six recommendations about the main factors and six recommendations about the moderators' variables.

1.1.1 Recommendations about the Main Factors

1. Attitude towards Act or Behaviour: This study reveals that if the governments have good attitudes towards their citizens and support the citizens in participating in the e-government, the results will be better attitudes of the citizens about the e-government and participation in the e-government.

2. Subjective Norms: This study reveals that if the citizens participate in the e-government, their communities will be linked to the world and there will, finally, be a positive influence on the intentions of the citizens to participate in the public decision-making of the e-government.

3. Social Influence: This study has shown that social influence takes place when a person's opinions, emotions, or behaviours are influenced by others. This factor was under the influence of all of the moderator variables. The study of communities and their influences on the intentions of citizens to participate in the public decision-making of the e-government improves the e-government and technologies in these areas.

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4. Facilitating Conditions: This study has shown that the facilitating conditions must ensure that the priority is given to the gender, age, level of education, social group, working sector, and Internet experiences in terms of their opinions. They should ensure engaging all of the citizens' groups and increase their participation in different aspects of the e-government.

5. Compatibility: This study has shown that the compatibility amongst all of the social groups of citizens in their opinions will do a good services in the e-government since most of the social communities have problems related to gender, age, and level of education, and the government needs to get for compatibility amongst these social groups.

6. Culture: This study reveals that culture gives a supportive environment in terms of the study of the social behaviour and norms found in citizens by the participation of the citizens in the public decision-making of the e-government, and this gives the decision makers the chance to improve the e-government.

1.1.2 Recommendations about the Moderator Factors

7. Disseminate the idea of the citizens' participation in the public decision-making of the e-government between the males and females. Females have the highest level of agreement for the most variables of the study model. This research reveals that if the female group is good with the citizen's participation in the public decision-making model, their communities would be making and, eventually, it would have a positive impact on the citizens' participation in the public decision-making of the e-government.
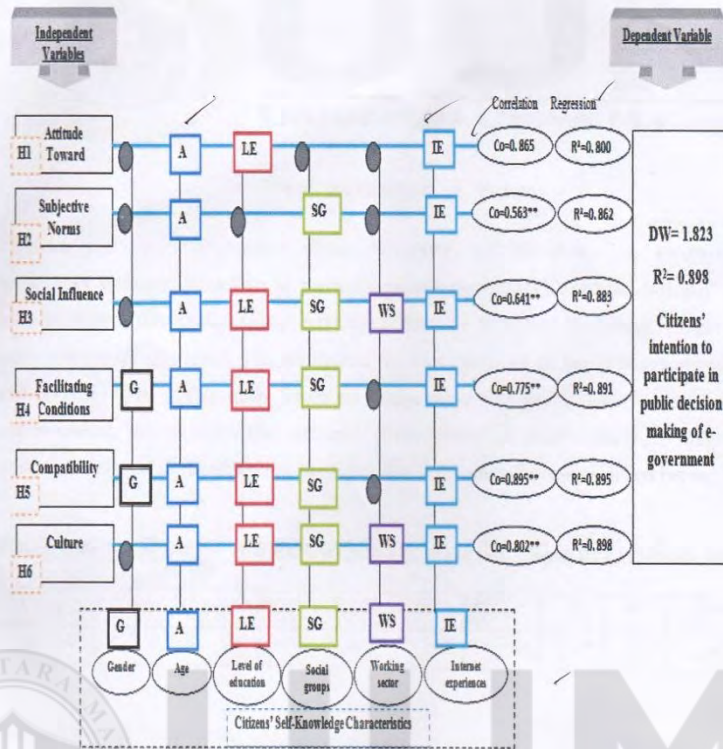
8. The study presents that a large proportion of the youth had a higher level of agreement about the factors of the study model. This leads to the fact that the youth have a great effect on the communities and, commonly, they are the most effective

part of the different aspects of the society. For that reason, the decision makers must give the youth greater importance and encourage them to participate in the e-government. Eventually, the youth will have a positive impact on the citizens' participation in the public decision-making of the e-government.

9. Disseminate and educate the citizens about the need to participate in the e-government. The study presents that a proportion of the higher level of educated citizens had a higher level of agreement about the factors of the study model. Eventually, the higher levels of educated citizens will have a positive effect on the citizens' participation in the public decision-making of the e-government. For that reason, the decision makers must give the higher levels of educated citizens' greater importance and encourage them to participate in the e-government.

10. The administrative must give the IT professionals greater value and support them in participating in the e-government because they had a higher level of agreement and they will have a positive effect on the citizens' participation in the public decision-making of the e-government. IT professionals are specialised in the e-government infrastructure.

11. The administrative should give the higher level of Internet experts' greater value and give them in participating in the e-government because they had a higher level of agreement and they will have a positive effect on the citizens' participation in the public decision-making of the e-government.

Revised Model of the Study: *the citizens' intentions to participate in the public decision-making of the e-government.*

Thank you for participating in this verification.

Sincerely,

Researcher,

Maky H.Abdulraheem

Ph. D Student

School of Computing, CAS

Universiti Utara Malaysia

makyhss@yahoo.com

Supervisor,

Assoc. Prof. Dr. Wan Rozaini Bt Sheik Osman

School of Computing, CAS

Universiti Utara Malaysia

+60- 49- 285209

rozail174@uum.edu.my

Verification of (Assoc. Prof. Dr. Najeeb Abbas Al-Sammarraie) on recommendations and revised model of study: (Faculty of Computer and Information Technology Al-Madinah International University, Malaysia).

c

UUM
Universiti Utara Malaysia

Final Validation of Output

Because you have information about "**Citizens' self-knowledge as moderator that influences citizens' intention to participate in e-government public decision**" study, as you provided this study many advices before to improve the study model and the questionnaire of this study. The researcher requires from you to verify the recommendations and revised model of this study. From the study, the results shows that the recommendations are necessary to improve the citizens' participation in public decision making of e-government based on the findings, the following recommendations are listed below:

Please state your opinion and whether you agree the list, Please tick (√) in the box.

1	2	3	4	5	6	7	8	9	10	11
√	√	√	√	x	√	x	√	√	x	x

Suggestions and Comments

1- it's very interesting research

2- Supposed to be all e-government decisions with transparency, this will reflect the social influence of the citizens

3- For point 10 &11, Internet experts is part of IT professionals and all of them are Citizen

4- What about the influence of uneducated citizens on the E-G decisions, what is the strategies to handle this cases.

Assoc. Prof. Dr. Najeeb Abbas Al-Sammarraie
Faculty of Computer and Information Technology
Al-Madinah International University

1

446

1.1 Practical recommendations

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4. Facilitating Conditions: This study has shown that the facilitating conditions must ensure that the priority is given to the gender, age, level of education, social group, working sector, and Internet experiences in terms of their opinions. They should ensure engaging all of the citizens' groups and increase their participation in different aspects of the e-government.

5. Compatibility: This study has shown that the compatibility amongst all of the social groups of citizens in their opinions will do a good services in the e-government since most of the social communities have problems related to gender, age, and level of education, and the government needs to get for compatibility amongst these social groups.

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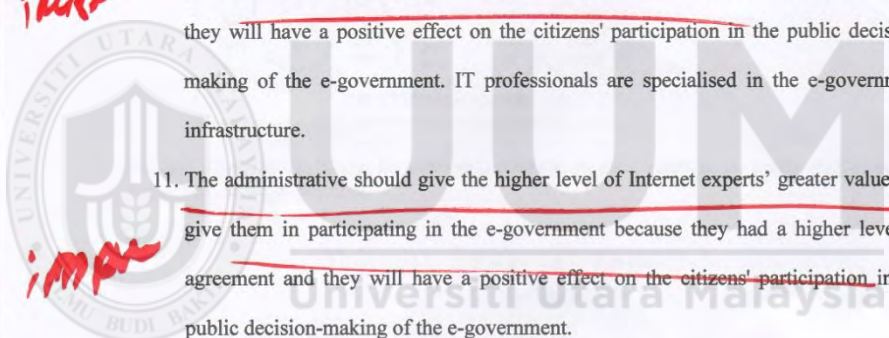
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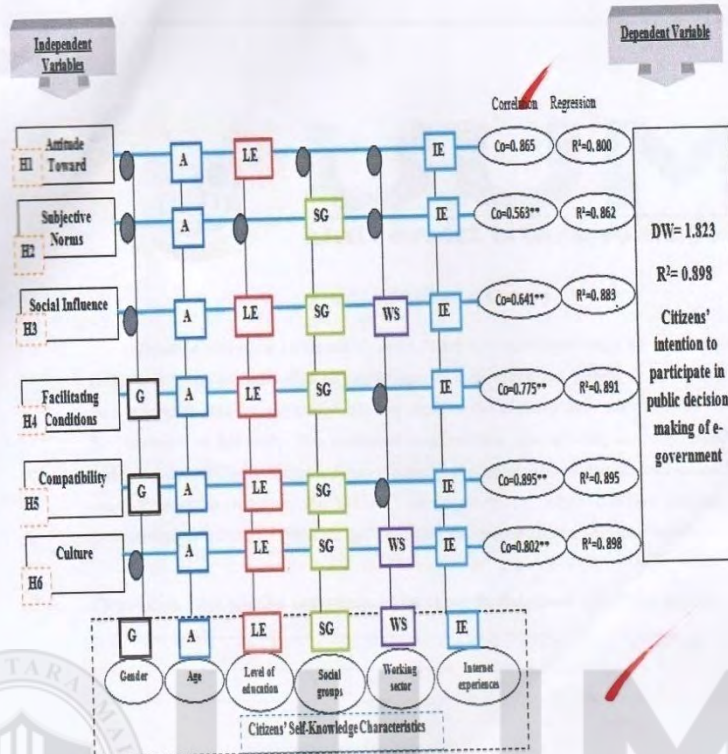
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Thank you for participating in this verification.

Sincerely,

Researcher,

Maky H.Abdulraheem

Ph. D Student

School of Computing, CAS

Universiti Utara Malaysia

makyhss@yahoo.com

Supervisor,

Assoc. Prof. Dr. Wan Rozaini Bt Sheik Osman

School of Computing, CAS

Universiti Utara Malaysia

+60- 49- 285209

rozail174@uum.edu.my

Consultation letter of (Mr. Nor Hisham Haron) on data analysis and revised model of study: (Lecturer in Department of Math and Stats SQS, UUM, CAS).

Nor Hisham bin Haron Lecturer

Department of Mathematics and Statistics School of Quantitative Sciences

College of Arts and Sciences Universiti Utara Malaysia 06010 Sintok
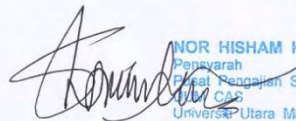
Kedah

October 10, 2017

To Whom It May Concern

CONFIRMING ON THE ATTENDANCE TO CONSULTATION

I am delighted to confirm that Mr Maky H. AbdulRaheem has come and discussed with me his study on sampling techniques. Here I attach the copies of the consultation form that he attended.

I hope, the consultation will give some input to him during his study.

Sinceely,

NOR HISHAM HARON
Penyarah
Pusat Pengajian Sains Kuantitatif
UUM CAS
Universiti Utara Malaysia

NOR HISHAM HARON
Lecturer
Department of Math & Stats SQS UUM CAS

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