RESEARCH ARTICLE

Government Operation Excellence (GOE): Case of Sultanate of Oman

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Abstract:
In the current century, e-government transformation is considered as one of the biggest challenges among and within the IT-related sector from the scale and complexity perspective. Having the main objective as of adapting an existing e-government system and methodology in order to obtain new computing requirements based on the concept of citizens’ new service. Thus, increase the features of service level, quality and maintaining a high policies and rules consistency. Moreover, mission criticality and time of services, information sharing and interoperability, efficiency and productivity along with the reduction of operation expenses are all considered as priorities in this transformation project (Raymond, 2007). Such a transformation is considered crucial for the service concept as it is changing rapidly; the roadmap coherence in e-government transformation is critical (Raymond, 2007). However, there is a big aspect regarding the e-Government progress by citizens due to many aspects and quality. Hence, there is a need to further study in order to be able to obtain better understanding of the complete picture and to have a balanced view and concepts all under one e-Government umbrella. This paper will review and analyze through a quantitative approach in Sultanate of Oman case study. This study targeted citizens in the country to check their intention to use e-Government in Oman (e-Oman) through checking GOE by SERQUAL. After reviewing and discussing questionnaire outputs using SPSS program, the writer will listed some recommendations and conclusion of the study and the nature of them they will be categorized upon to their point of view.

Key Words: Government, ICT, IT, G2C, G2G, G2B, G2E, e-Oman, SPSS, IEV, SERVQUAL.

1. Introduction
Moving towards e-Government would give many advantages to the country style of service along with budget usage and controlling. Indeed, it will give a great enhancement in the operation of the government in many aspects for the betterment of Government Operation Excellence (GOE). Some of these advantages are reducing the cost and increasing the interest due to the reduction of printed paper, acquire files and space for storage. Reducing work load on employees is another benefit to the work environment because employees will be on contact with minimum number of citizens and it will create better and calmer work environment. E-Government will benefit rural areas along with big cities because citizens can apply for services as long as they are part of the country and in some cases and services, citizens may apply and request for a service while they are abroad. Other benefits like environmental, knowledge, etc. could be counted for the betterment of the country (Huang and Bwoma, 2003). However, e-government is having some challenges and disadvantages as well which shouldn’t be forgotten or ignored. Some of these disadvantages are illustrated under hyper-surveillance, cost, inaccessibility sense of transparency and accountability. Hyper-surveillance, is affecting the security of data in terms of citizen’s personal information and government’s information while the capital cost required for the e-government project will be initially high for establishing the systems and structure but after that the operation cost will be low. On the other hand, usually face to face communication is better in terms of transparency and accountability than other methodologies like e-government. G2C implementation challenges towards GOE will play a key role in terms of technology and behavioral intentions. This challenge will reflect and affect directly the GOE and especially the government-citizen relationship. In Oman, there are many technological aspects that affect G2C like internet coverage, internet quality, citizen’s technology knowledge and technology availability. On the other hand, some behavioral aspects are also available like trust in government and trust in technology. Government of Sultanate of Oman has realized the importance of moving towards the information century. Therefore, e-Government initiatives were launched in Oman as a part of overall country information technology in 1998 (Abdulmohsen, Al-Badi and Mayhew, 2005). It was first
established under the name “Oman Digital” but each government sector is having its own website and its own
services and e-services without any interconnection between them but still not all of the government sectors initiate
electronic services or applications. The real situation in Sultanate of Oman is that some governments has its own
website and only has the ability to download form and few of them has the ability of submit online request.
However, the service integration and connection between different government agencies is not yet established.
Although that this initiation was established long back but the same system is still valid till date which create a big
question about the requirement of modification and improvement of such service. His Majesty Al Sultan Qaboos Bin
Said spoke about the importance of adopting and the usage of the new technology in the Omani daily life style on
11th Nov 2008 and he said, “Information technology and communications have now become the main elements that
move forward the development process in this third millennium ... We call upon all government institutions to
speedily enhance their performance, and to facilitate their services, by applying digital technology in order to usher
the Sultanate into the constantly evolving spheres for applying knowledge.” (ITA, 2010, p.5). As a response to His
Majesty’s speech, Oman Government decided to boost up the process of initiating the e-government. Therefore,
framework to move towards using Information and Communication Technology (ICT) as a platform for delivering
and offering services has established by Information Technology Authority (ITA) with the following desired
outcomes:
- Faster and better government services for both businesses and citizens
- More Effective and efficient government
- Better optimization of investments and resource (ITA, 2010)

2. Elements of SERVQUAL of Government Operation Excellence (GOE)
Emerging technologies worldwide continue to become more important and significant players in different aspects
and areas especially in developing systems for making their operation easier and faster (Ibrahim et al., 2015). Hence,
operating strategies would need to allow different system operators to mitigate adverse effects in maximizing system
benefit. Systems become advanced and more cost-effective. Traditional system operating strategies will need to be
revisited and reevaluated (Ibrahim et al., 2015). In order to realize such potential in systems, the operational aspects
need to improve management of different stakeholder relations, interdisciplinary synthesis, and the successful
operational excellence application (Lluís, Daniel & Andrew, 2013). Darnell et al. (2013) illustrated that in order to
get the optimum for enhancement of operation excellence of any agency, there should be a recognition of employees
and to provide opportunities for leaders for more professional development and flexible work environment.
However, this environment cannot be met unless the employee will have calm area to work away from public
and crowded citizens looking for their services. Darnell et al. (2013) further discussed that public services should be
promoted well in order to achieve the desired GOE faster with more efficient manner.
On the other hand, single governmental agency or departments cannot reach full governmental excellence alone
because delivering added value public e-services in e-government often requires cooperation between two or more
government agencies and departments (Badr and Bouchaib, 2010). Generally, such cooperation is ensured and
reachable by implementing interoperability between targeted automated business processes (Badr and Bouchaib,
2010).
Since the World Wide Web (WWW) establishment and development, considerable attention has been given to the
different adaptation of web-based technologies especially to the business environment like: business-to-business
(B2B) and business-to-consumer (B2C) sectors. After that, new other sectors have been gaining more attention,
including the involvement of government such as: government-to-business (G2B) and government-to-citizen (G2C).
Since governments are traditional and considerably more conservative entities, slower to change or adopt new
initiatives than other operators in the faster commercial field, it is reasonable and not surprising that governments in
general have been slower to clamber onto the bandwagon of the web-enabled (eg. Marche and McNiven, 2003).
Indeed, it is more reasonable to query about whether governments really require and want to make the service
transition from government to e-government. Nevertheless, a considerable e-government movement in different
countries and nations nowadays builds with a number of different national governments taking extensive measures
in order to engage thoroughly in their portfolios radical transformation. Generally, the intention of different service
approach and service styles provided or intended to be provided by governments will serve as a guide for better
understanding of their own motivation towards the concept of e-government in general and to avoid possible
potential problems and obstacles during this transition (Robert, Christian and Louis, 2005). Moreover, identifying
several unique cases of e-government will enhance the evaluation and the implementation adoption. Robert,
Christian and Louis (2005) involved that the government reinvention is to be better termed “new public
management” because it is totally improve and contribute to the enhancement of GOE. Government Operation
Excellence (GOE) is not tagged only to the transition from government to e-government but it is considering the different services and practices that government do for the betterment of the country. GOE is evaluated in the study using SERVQUAL approach and it is categorized into assurance, tangibles, reliability, responsiveness and empathy (Jinmei, 2011).

2.1 Assurance
Jinmei (2011, p.3) defined assurance as “the knowledge and courtesy of employees and their ability to convey trust and confidence”. Security and privacy factor represents the security and protection level of citizen’s personal information provided by e-Government services. Since the assurance dimension in SERVQUAL scale refers to the security sensation and security trust that employees provide to citizens (Parasuraman et al. 1988), the dimension of privacy and security probably replace the assurance dimension in online environment and e-services (Wolfinbarger and Gilly, 2003). One of the main considered obstacles to online environment development is the confidence lack which is stimulated basically by the deficiency of security and privacy assurance (Cristoal et al., 2007).

2.2 Tangibles
Jinmei (2011, p.3) defined tangibles as “the appearance of physical facilities, equipment, personnel, and communication materials”. Tangibles could be attributable to the fact that customers would be are aware of different financial constraints that are typical in different context. Hence they attach more other importance to service delivery aspects. Thus, most services are intangible (Bateson 1977, Berry 1980, Lovelock et al., 1981; Jinmei, 2011). Because they are counted as performances rather than tangible objects. Indeed, precise specifications concerning in manufacturing quality can rarely be set. Zeithaml (1981) illustrated that most of the services cannot be counted, measured, inventoried, tested or verified in advance of sale to assure quality (Jinmei, 2011). Since, the firm may find it difficult understanding consumers perceives in their services and evaluate service quality. Thus, in purchasing goods, the customers may employs many tangible cues for judging different quality aspects like: style, hardness, color, label, feel, package and fit. Whereas, in purchasing or dealing with services like e-Government there would be fewer tangible cues exist. Thus, Parasuraman et al. (1988) argued that in most cases, tangible evidence would be limited to the service provider’s physical facilities, equipment and personnel.

2.3 Reliability
Jinmei (2011, p.3) defined reliability as “the ability to perform the promised service dependably and accurately”. According to Parasuraman et al. (1988), reliability is considered as one of the most important dimensions in SERVQUAL instrument. This saying is having the same agreed concept by other scholars (Sukasame, 2010; Zeithaml, 2002; Alanezi et al., 2010).

2.4 Responsiveness
Jinmei (2011, p.3) defined responsiveness as “the willingness to help customers and to provide prompt service”. Online user and specifically in this case are citizens, expects the organization and governmental agencies to respond to their inquiries without delay (Yang and Jin, 2002; Alanezi et al., 2010). Hence, immediate and fast response will assist e-Government users in making decisions faster, answers their questions and resolves problems. Lee and Lin (2005) illustrated through a study that there is a correlation between responsiveness dimension and customers’ satisfactions.

2.5 Empathy
Jinmei (2011, p.3) defined empathy as “the provision of caring individualized attention to customers”. Its dimension in SEVQUAL scale concerns with presenting and providing caring and give individual attention to customers (Parasuraman et al. 1988). In online environment, empathy dimension could be named as personalization since there is no face to face interaction or direct human interaction between the customers and employees (Madu and Madu, 2002; Lee and Lin, 2005; Hongxiu and Reima, 2009; Alanezi et al., 2010). Thus, personalized service or empathy can play an enormous role improving customer’s satisfaction by providing some personalized services such as, e-payment, special delivery and service process (Hongxiu and Reima, 2009). In previous research works, empathy dimension has been given different names such as customization (Madu and Madu, 2002; Sohn and Tadisina, 2008; Surjadaja et al., 2003; Yang and Jin, 2002) and personalization (Lee and Lin, 2005; Nusair and Kandampully, 2008; Yang et al., 2003).

3. Elements of E-Government
3.1 Citizens-Centricity
Hassan and Fatimah (2014) in the absence of good government-citizens relationship and specifically citizens’ trust, citizens may become more suspicious about their service system presented by the government. Existing research on e-government services citizen-centric delivery especially in developing countries is still facing lack in explanatory
power for some reasons like understanding the relationship between the ICT implementation and social structures. Having citizen-centricity e-government approach would reduce the huge gap between applied strategies and government policies from one side and citizen’s perceptions on the other hand. Thus, the citizen-centric delivery e-government services determinants in developing countries would allow better understanding of citizens’ needs, desires, requirements and priorities that must be taken into consideration by governments for ensuring the success of services (Elsheikh and Azzeh 2014). Gilmore and D’Souza (2006) illustrated that it is an essential aspect to focus about citizen in governments prospective and customer in companies prospective as the main factor while presenting a service style or changing the service approach. Hence, e-government should be presented as citizen-centricity where it basically represent the difference between the delivered services against the desired one. Moreover, it would evaluate the current service delivery in terms of meeting citizen’s expectation and needs by the following attributes:

- Service design coverage against user requirements
- User interfaces languages of use against available most common local used languages
- New services style and approach against conventional services offered earlier
- The reduction of citizens visits to higher level offices for completing desired services
- Governmental employees knowledge and familiarity with the services packaged and delivery for different user groups or individuals

Lack of citizen-centricity in e-government implementation is one of the main e-government implementation challenges in developing countries. In light of this challenge, lack of citizen’s participation in e-government is expected. The e-government strategy should announce and state that a successful e-government implementation needs different stakeholder’s effective participation including citizens, Gunter (2006, p.365) argued that e-government “does not just depend on computer power, but also on the willingness of people to adopt it as a normal form of interface in respect of public services”. Therefore, Chan et al. (2010), Vencatchellum & Pudaruth (2010), Abdulwahab & Dahalin (2011), Keramati & Chelbi (2011), Lessa et al. (2011), Alzahrani & Goodwin (2012) adopted different empirical study in order to have a system facilitating e-government as more of citizen-centricity and to influence citizens and their intentions to use as the main goal. As per these recent empirical studies, it was shown that the facilitating conditions along with effort expectancy and performance expectancy has a significant impact as control factors that influences directly citizens’ intention to use and it will keep e-government upon to citizens’ desire and requirements. Citizens engagement is illustrated as a way of improving citizens’ trust in governments and from it the government-citizens relationship to be more citizen-centricity system (Bonsón et.al, 2012).

3.2 Facilitating Conditions

Venkatesh et al. (2003) defines facilitating conditions as the degree that individuals believe that organizational and technical infrastructure exists to support the system and it represents the existence resource factors one’s perception like, money, time and technology factors that would facilitate or at least inhibit the latter from being utilized. AlZahrani (2011) insisted that facilitating conditions part of the e-government adoption have a significant effect on consumers’ intentions to use and it is considered as an important barrier and a significant control factor as well. There are two main dimensions included in facilitating conditions aspect which are:

- Resource factors, such as, time and money
- Technology factors, like: knowledge and country infrastructure.

Indeed, the absence of such facilities in both dimensions would affect the intention to use by citizens and lead to impede adoption of the approach. ALZahrani (2011) further illustrated that facilitating conditions contains two main elements which are:

- Technology support, the perception about defining the resources needed in order to use e-government services, such as, PCs and Internet services,
- Government support, the perceptions about defining the efforts from government that prompt and motivate various issues and aspects related to e-government services.

Government and technology support reflects the citizens’ beliefs about government role in facilitating Internet usage along with turning the project of e-government into reality. The study seeks mainly to investigate citizens’ viewpoints and feedback about this role. Al-Shafi (2009) argued that since e-government service is considered relatively new technology, citizens’ perceptions and viewpoints about their government’s role are considerably important for the project’s adoption process. The more the government is perceived in playing an effective and active role in supporting e-government project as of technology or normal governmental support, the more individual citizen will be willing to use the service which will increase the intention to use.
Researchers in the field of technology studies (e.g. Moore and Benbasat, 1991; Taylor and Todd, 1995; Venkatesh et al., 2003) found that facilitating conditions construct has a valid positive effect on e-government project and especially the innovation use and it is found that it can be considered as a significant technology use predictor. Al-Azri, Al-Salti and Al-Karahouli (2010) conducted a qualitative research by conducting many interviews in Sultanate of Oman. Most of the interviewees believed that senior top governmental management support and commitment are imperative to provide and allocate sufficient resources and funds as well as discourage resistance and increase efficiency. In this study, facilitating conditions was measured by taking the perception of being able to assess required resources and to obtain some knowledge and the necessary support required to use services of e-government.

3.3 Effort Expectancy
Venkatesh et al. (2003) defines effort expectancy as the ease degree associated with the system use. Citizens usually expect some amount of effort from government in modifications and implementation of infrastructure and systems. Whereas, these visible efforts would significantly enhance the intention to use and improve their acceptance of the new approach. Indeed, this acceptance will be correlated to the trust and positive relation with the government. Barua (2012) argued that it has a positive impact on the intention to use by different users from citizens or governmental employees towards the e-governance application system use. Barua (2012) argued that this construct would have a significant effect especially in determining information technology user acceptance.

3.4 Performance Expectancy
Venkatesh et al. (2003) defines performance expectancy as “the degree to which individuals believe that using a system will help them improve their job performance” and upon to Al-Shafi (2009) it basically contains five different variables which are:

- Performance expectancy: citizens expectation of the system’s performance against the required and the desired service applied
- Extrinsic motivation: citizens may influenced by external factors like government-citizens relationship
- Job-fit: attach the specific task and service to the most suitable system
- Relative advantage: citizens usually compare the new proposed service style against the traditional one. Upon to the correlated answer, citizen’s intention will be effected
- Outcome expectations: the expectation from citizens regarding any new service approach and style is have easier, better, faster and smoother flow without putting more effort.

In this study, performance expectancy is measured by taking the perceptions of using e-government services in benefits prospective such as saving of money, time and effort along with facilitating communication between citizens and government, improving the government services quality (AlAwadhi and Morris, 2009; Al-Shafi et al., 2009). Al-Shafi et al. (2009) argued that performance expectancy was found to be a very strong intention to use predictor of IT.

4. Behavioral Usage
Essentially, learning social behavior involves learning the required and necessary skills in order to progress the ability that helps to resolve arguments without violence or misuse, to empathize with classmates, colleague, friend, family and others to develop self-respect and mutual respect. It includes behavior responsibility and ownership, to understand that actions have consequences either for themselves or others and to learn techniques for solving day-to-day issues and obstacles, particularly with provocative situations. That different emotional intelligence are creating and completing the relationship in each individual person’s emotion that may influence and often has an effect in the decisions and targeted goals (Graham, 2007). These different emotions and behavioral initiatives by citizens could be controlled or at least diverted and switched towards the country’s goal and target. Behavioral initiatives may be changed due to social aspects from social people like: classmates, colleague, friend, family and others or may be influenced by the other aspects from government and service provider like: trust, availability, transparency and others. Any source of influence either from social people or service provider, it will have a great affect in the person who may lead to the initiative to use and give a try to the new service or new service style.

Citizens in the country should be treated as customers because the government services delivery should be redesigned to be with a customer focus. However, this view is challenged by Mintzberg (1996), who decided to distinguish customers from clients, citizens and subjects in general. The point is that governments don’t have to call or address someone a customer for treating them well or to ensure that services are designed with and for them. “Customers buy products, clients buy services, but citizens have rights” (Robert, Christian and Louis, 2005, p.1) “That go far beyond those of customers or even clients” (Mintzberg, 1996, p. 77). Robert, Christian and Louis,
(2005) argued that this does not mean that there is no need to improve, enhance and reinvent government, but it does give limit to the B2C relationships nomenclature extent and G2C relationships (Robert, Christian and Louis, 2005).

4.1 Image
Moore & Benbasat (1991) defined image as “the extent to which the use of an innovation is perceived as enhancement of one’s image or status in one’s social system” (Al-Zahrani, 2011, p.114). Perceived image refers to the level that one can increase own image and social status among others (Moore and Benbasat, 1991). Conversely, appearance image is positively associated with controlled and targeted motivation (Damian et al., 2012). Damian et al. (2012) further illustrated that there is a direct relationships evidenced between energy image and self-reported exercise behavior along with the relation between appearance image and intention to exercise. Nor and Pearson (2008) indicated that there are a positive relationship between image and attitude using a study was on the internet banking in Malaysia key antecedents. It revealed that image has a significant influence and effect on attitude. Karahanna et al. (1999) agrees with Nor and Pearson (2008) and indicated a positive link support between image and attitude (Al-Zahrani, 2011). Image as a personal aspect with sport people, exercisers and athletics, has long been considered to be an extremely effective performance enhancement tool. Moreover, It has been recognized as a potential self-regulatory strategy for them in order to enhance motivation and self-efficacy (e.g., Giacobbi, Hausenblas, & Penfield, 2005; Hall, 1995).

4.2 Social Influence
The second component of the model is social influence which is defined as “individuals’ perceived pressures from social networks on adoption or otherwise of the innovation” (Yang et al., 2012, p.132). Social influence has long been considered as an important critical element in explaining adoption behavior (Cooper & Zmud, 1990; Karahanna et al., 1999). Family, friends/colleagues and media influence all are parts of this social influence component (Al–Zahrani, 2011). Al-Zahrani, (2011) indicated that the relationship between social influence and behavior intention has been theoretically and empirically investigated by many previous studies (Gefen, Karahanna & Straub, 2003; Lewis, Agarwal, & Sambamurthy, 2003; Taylor & Todd, 1995; Venkatesh et al., 2003; Lu et al., 2011). Recently, many studies especially in mobile and electronic service fields incorporated social influence into their research models (Gu, Lee, & Suh, 2009; Hong & Tam, 2006; Lu, Liu, Yu, & Wang, 2008; Lu et al., 2011). For instance, In a research on mobile internet services adoption, Lu et al. (2005) found that social influence is positively influence perceived usefulness and intention to use. On the other hand, Karahanna et al. (1999) argued that social influence tend to reduce adoption perceived risk because they provide strong evidence indicating the adoption decision appropriateness and legitimacy (Karahanna et al., 1999).

4.3 Perceived Behavioral Control
Goal-directed behavior or as known as behavioral control (BC) could be controlled by consequences knowledge. Whereas, reduced goal-directed control could be associated with some propensity for action without thought. These information support the claim that human impulsivity is marked by causal knowledge impaired use that make adaptive decisions (Lee et al., 2012). Taylor and Todd (1995a) concluded that the perceived behavioral control antecedents are self-efficacy and facilitating conditions. Lee and Kozar (2005) further discussed that researchers should identify different factors that suit the situation of a BC context in order to increase the percentage of variance of the aspect (Al-Zahrani, 2011).

5. Technological Usage
In this new large-scale computing age with dynamic development and high complexity, there is a common weakness in the interoperability among IT and business. Hence, it is leaving IT far behind while business is in line. Poor business responsiveness along with current IT governance, make the situation even more difficult for e-government to achieve the desired enterprise goal (Raymond, 2007).

In the current century, e-government transformation is considered as one of the biggest challenges among and within the IT-related sector from the scale and complexity perspective. Having the main objective as of adapting an existing e-government system and methodology in order to obtain new computing requirements based on the concept of citizens’ new service. Thus, increase the features of service level, quality and maintaining a high policies and rules consistency. Moreover, mission criticality and time of services, information sharing and interoperability, efficiency and productivity along with the reduction of operation expenses are all considered as priorities in this transformation project (Raymond, 2007).

Such a transformation is considered crucial for the service concept as it is changing rapidly; the roadmap coherence in e-government transformation is critical (Raymond, 2007). Although with mobile communication technology development, the services of wireless mobile data have experienced a rapid growth in the world but still the acceptance of those services generally is not considered well
enough. Considering technological behavior by citizens towards wireless mobile data services and other technologies available in the country as an integrated service and addressing the acceptance influencers and issues is achievable by combining the technology acceptance different models along with social behavior different models. (Jing and Jiayin, 2009). Jing and Jiayin (2009) illustrated that the factors including in the services technology, innovativeness of personal to information technology (IT), facilitation conditions social influences and service and product trust affected user’s intention to accept and use. Emphasizing on how society, citizens and users’ psychology motivation influence citizens and users’ behavior and extending it to the acceptance behavior to a change in mentality process including attitude, intention to use and actual use (Jing and Jiayin, 2009). All combined with IT behavior to have the complete picture and overview of the intention to use from both prospective.

5.1 Perceived Ease of Use
Perceived usefulness was defined by the scholar as “the degree to which a person believes that using a particular system would enhance his/her job performance” (Davis, 1989). Davis (1989) describes that a system high quality in perceived usefulness as one for which a user trust and believes in the existence of a positive user-performance relationship. The user usually perceives the system to be an effective way of performing tasks.

5.2 Perceived Usefulness
Perceived ease of use refers to the extent to which that a person believes that using a particular system would enable and help in accomplishing the desired task free of effort. In view of this effort is a finite resource, is considered better and easier to use than other applications more easily accepted by public users despite of their knowledge and qualifications. Perceived usefulness and perceived ease of use in e-commerce field through significant determinants. These results confirm even by the most influential e-business factors as senior managers of SMEs that perceived usefulness and perceived ease of use of the TAM model. The results also confirmed Igbaria et al (1995) study and used on PCs and other factors through the website, whether in the small and medium enterprises context.

5.3 Perceived Risk
The general concept of risk is society’s great concern outgrowth about coping with the modern life dangers. Perceived risk (PR) is commonly thought of as felt uncertainty regarding possible using a product or service negative consequences. Bauer (1967) illustrated that PR is formally defined as “a combination of uncertainty plus seriousness of outcome involved” and Peter and Ryan (1976) defined it as “the expectation of losses associated with purchase and acts as an inhibitor to purchase behavior” (Mauricio and Paul, 2003, p454). Whereas, Mauricio and Paul (2003, p454) gave it an e-service definition of “the potential for loss in the pursuit of a desired outcome of using an e-service”. PR could enter information systems adoption decision when several circumstances of the decision create the following different aspects defined by Mauricio and Paul (2003)

- feelings of uncertainty
- Discomfort and/or anxiety
- Conflict aroused in the consumer
- Concern
- Psychological discomfort
- Making the consumer feel uncertain
- Pain due to anxiety
- Cognitive dissonance

The dissonance usually arises from the product evaluation as having variations and combinations of costs and benefits, risks and utility. For this research context, the potential increased task performance efficiencies, while risks include possible different task performance related problems and the uncertainty of internet as perceived as an unsecured communications medium.

5.4 Trust in Technology
Trust in technology, should often be included into the model in order to augment the present descriptors in explaining consumer adoption decisions in the electronic or mobile services context (Dahlberg et al., 2008). Moreover, trust in technology is considered to be an important factor that have the influence power on user’s online behavior, especially in the e-services context. Kewan et al. (2011) defined trust as “the willingness of a party to be vulnerable to the actions of another party based on the expectation that the latter one will perform particular actions, which are important to the former one”. Unlike traditional offline trust, this type of new trust which is called online trust is generated through individual’s interactions with different online information systems (Bart, Shankar, Sultan, & Urban, 2005; Kewan et al., 2011). In recent years trust has attracted more attention and been used and integrated into TAM under various circumstances.
6. Research Methodology

The probability sampling is the sampling applied in this research; mainly the data collection procedure will be by sending SMSs to a random sample of local citizens aged from 18 to 60 years which makes the filter only a demographic filter without any limitations. The researcher requires 500 respondents in order to generalize the outcome result in Oman. Therefore, the agreement with the mediator organization was to send 10,000 random SMSs upon to the attached demographic filter and the target is to get a minimum of 500 answers for the questionnaire.

6.1 Population of Study

The target population for this study is citizens in Sultanate of Oman. The unit of this study consists of citizens in business sectors, employees in government sectors, citizens without work. In Sultanate of Oman there are a sum of 42 governments and governmental agencies, a population of 3,992 million citizens upon to the last conducted national count in 2014. Where 56.6% are Local citizens and 43.3% expats (NCSI, 2014). Roscoe (1975) took 10% as rule of thumb while choosing a sample of big group. Weiberg and Brown (1977) argued that Roscoe’s decision will give an error of 3% to 4% and it is not worthy to compromise in power, time and money in order to reduce the error to 1% or 2% (Hill, 1998)

6.2 Data Collection

The main telecommunication services provider in Oman are Omantel and Ooredoo. The researcher agreed with them through a mediator organization that have the approval and capability to send bulk categorized massages (SMS) through mobiles. The data collection procedure will be by sending SMSs to a random sample of local citizens aged from 18 to 60 years which makes the filter only a demographic filter. The researcher requires 500 respondents in order to generalize the outcome result in Oman. Therefore, the agreement with the mediator organization was to send 10,000 random SMSs upon to the attached demographic filter and the target is to get a minimum of 500 answers for the questionnaire. This method of data collection is called Push SMS application system where Naqvi, AlShihi and Ali (2011) stated that a Push SMS application system is basically whereby a message is been sent from any prospective like application, person, company or governmental agency to the users, customers or citizens. However, it is considered as a one way communication method where the receiver is not forced to reply or answer the SMS because mostly it is used for marketing and broadcast information. In other words, it is a mobile application that would initiate a message. For instance, some public organizations have started to send bulk messages to public citizens or it may be also categorized and squeezed to be targeted to specific segments of citizens in terms of demographic, geographic… etc. this message is for informing them about certain activities, products and events. Along with the demographical regular questions that are based on gender, age, region, working place and the knowledge about e-Oman, focused questions were asked

7. Discussion

As per the quantitative approach of survey, from 5000 distributed questionnaires, 1257 questionnaires were returned. Thus, the study’s response rate is 25.14%. However, after checking the obtained responses Out of these returned questionnaires, only 585 questionnaires were usable and applicable for analysis because the rest didn’t answer all questions and they skipped some of them. So, the usable response rate is 12%. As stated earlier, the survey is not covering all citizens in Sultanate of Oman but it will cover only citizens in the ages between 18 to 60 years old. The reason behind this is that citizens younger than 18 years old don’t require government services in general and as per the low in Oman they will not starting work before that. The same situation for citizens older than 60 years old because this is the retirement age in the Sultanate.

7.1 Missing Data Test

Missing data test after removing the incomplete responses and it shows no missing data which are usable to the next steps. In order to indicate outliers, The Mahalanobis factor is used as it is considered a simple linear regression output (Hair et al. 2010). Since there are 60 questions in the used questionnaire with 5 questions from demographic and general, Chi2 is found to be 94.47 for 56 degree of freedom and for Chi2 P=0.001. Therefore, all values found to be above this value will be emitted and exempted from the received responses. Hence, the number of exempted responses found to be 52 responses and the remaining cleaned data are 500 responses.

7.2 Normality Test

It is assumed that for any research, the variables should be normally distributed in any research in order to avoid skewed and distorting of different variables relationship in terms of interest and significance of the test results (Hassan, 2015). Hence, Histogram would provide score distribution information on the continuous variables. Histogram showing, all bars are close to the normal. Thus no violation in normality assumption (Pallant, 2011). As per the Standard Deviation, it is showing the spreading way of the data and it is known as the data distribution average distance from the mean. If the SD closed to the mean it will be low and it will be high if it will be high
otherwise. Skewness and kurtosis is recommended and acceptable when it is located within ±3. (Cao and Dowlatshahi, 2005)

7.3 Linearity Test
Linearity was evaluated using residue and partial regression plot. It can be observed from both figures that non-linearity data is not a valid issue in the study data. As per the homoscedasticity, it is known as the residual variance should be homogeneous across predicted values level. If the significant value is more than 0.05, the homogeneity is assumed to be non-violated and it is accepted. ANOVA test indicate that all values are within the acceptable range (greater than 0.05).

7.4 Descriptive Test
As stated earlier, the survey is not covering all citizens in Sultanate of Oman but it will cover only citizens in the ages between 18 to 60 years old. The reason behind this is that citizens younger than 18 years old don’t require government services in general and as per the low in Oman they will not starting work before that. The same situation for citizens older than 60 years old because this is the retirement age in the Sultanate. As summarized, the respondent’s demographical data are based on gender, age, region, working place and the knowledge about e-Oman. Although the survey was distributed randomly in all four regions of Sultanate of Oman but most of the respondents were from the capital (Muscat) which score alone about 50%. Indeed, this show their vision and interest in knowledge and the new system of e-government approach. The majority of respondents were males (75%) while female has less percentage 25%. This is considered normal and rational in Lebanon because Oman is more as traditional country where female does not like to involve herself in unknown areas nor replying to unknown person’s massage. Moreover, usually men are associated to finish governmental issues and works within each family which lower the knowledge of such facilities among female. Thus, their reaction to the survey is low.

The results also show that most of the respondents were in the two ranges combined to be from 18 to 40 years old, which reflects the knowledge, interest and reaction towards the new system by the younger generation compared to the elders.

As per the working place, it was almost normally distributed between government sector and private sector while the number of participants with private business or not working became much less. The reason behind that I that most of the Omani’s prefer to have regular work duty and to have their private business aside of it. Hence, the results are rational and expected.

Regarding the knowledge about e-Oman and associated services and uses, the received results were higher that the expectation because only about 30% indicated their absence of knowledge about it. The reason behind that maybe due to the mix and overlap between e-government and e-services or maybe because some people feel bad if they show their absence of new knowledge or systems. This question was discussed in the qualitative research with high profile educated positions in Oman and they show the same feedback. For instance, Dr. Qasim Al Salmi General Director in Royal Hospital (Biggest governmental hospital in Oman) illustrated that his expectation about this question was that “more than 70% don’t know about the e-government. The reason there are not many applications for public use to become familiar with e-government”. He further elaborated that: “Public will know about e-services when they start to use them. Therefore the public don't know much about e-services because they have not been made available for public use as yet. It appears they are not more than future projects for the public”. Whereas, Mr. Anwar Al Salmi Admin & Finance Consultant in Awqaf and Religious Affairs Ministry illustrated that: “It seems that till date the real meaning of e-government is not yet known by many citizens and governmental employees which illustrate a mix and overlap understanding with available scattered e-services". Haitham Al Salmi Deputy General Director in Muscat Clearing and Depository Company further discussed that: “Most of e-government services are partially implemented and concentrate more in e-forms rather than full fledge of e-services”. On the other hand, Hilal Al Barwani Vice President of Central Bank of Oman (CBO), Mr. Khalil Al Salmi Deputy CEO in Dry Dock CompanyFirst governmental company for dry dock services in Oman, Mr. Saud Al Salmi CEO of Gulf Salt (The biggest salt factory in Oman and 2nd in gulf), Sadiq Al Lawati CEO of Elite Shine Trading-SMEand Mr. Dawood Al Salmi CEO of Al EMAD for Designing and Engineering Consultancy-SME- furnished some reasons regarding this aspect that is lack of awareness, knowledge of ITA, promotions, marketing, transparency and educating citizens about e-government.

7.5 Evaluation of the Model Quality
SmartPLS, Version 2.0 M3 was used in this research in order to perform data analysis. This software is commonly used in management and marketing science (Henseler et al., 2009) where it is usually analyzed and interpreted in two stages (Hair et al., 2011) First the measurement model, which is also known as outer model would be tested in order to ensure validity and reliability. Precisely, multi-item constructs measurement properties including convergent validity, discriminant validity and reliability, would be examined by conducting Confirmatory Factor Analysis
Multi-co-linearity testing would also be a measurement model part for formative measurement adapted in the second order construct. Second, proposed structural model would be analyzed by R², effect size (f²) and the model predictive relevance (Q²). Bootstrapping of 5,000 subsamples would be used for testing the study hypothesis. Figure 1 below show the original research framework using SmartPLS.

Figure 1: Research Framework

7.6 Measurement Model
In order to validate the measurement model used in this study, the indicators load would be determined to know how well on the theoretically defined constructs. Examining the outer model would ensure the constructs that are designed to measure, thus ensuring that the used survey instrument is reliable. This study determine each individual item reliabilities loadings to the respective variables. For this part, confirmatory factor analysis (CFA) was conducted for assessing the measurement model validity. For the purpose of measure goodness testing, two main criteria used that are validity and reliability.

7.7.1 Validity Test
The other name of Validity is the evaluation’s correctness, whether in terms of theoretical or practical (Pendergrass et al., 2003). There are three validity analysis types that are: content validity, construct validity (include convergent validity also) and criterion validity (include reliability analysis also).

7.7.2 Content Validity
Content validity was applied and used to represent the accuracy degree between measures set and the interest concepts (Hair et al., 2010). Prior to distribution of the study survey, the questionnaire was pretested for validation of its content and language. The method for this presentation test was described in Chapter 4 where the representatives were two lecturers with doctoral degree from the university and nine personnel from top management level in the country who were engaged in e-services and e-government system for long period. This step was conducted in order to ensure the questions appropriateness and clarity.

7.7.3 Construct Validity
Sekaran and Bougie (2010) illustrated that Construct validity testifies the wellness of the obtained results. According to Ramayah et al. (2011), the instrument should be theorized. This aspect can be achieved by assessing both convergent and discriminant validity and specifically by looking at the respective loadings and cross loadings of the output data. According to Hair et al. (2014a), gained indicator loadings should be greater than 0.60. Based on the above recommendations, this study used a cut-off value of 0.6 is being used as significant.

7.7.4 Discriminant Validity
The degree of differentiation among constructs or measure distinct concepts is known as the Discriminant validity. Hair et al. (2014a) stated that AVE value should be the highest among the other latent construct squared correlation as recommended by Fornell–Larcker’s (1981) with criterion and the item’s loadings must be greater than all its cross
loadings. In this study, first round analysis of discriminant validity had not detected any item that was not meeting this recommendation. Accordingly, both correlation matrix and AVE for each and every variable had complied with Fornell and Larcker’s (1981)

7.7.5 Convergent Validity
Ramayah et al. (2011) described Convergent validity as the amount of items measuring the same concept are in match and agreement. Sarstedt et al. (2014) suggested that researchers to utilize the following tests: factor loadings, composite reliability (CR) and average variance extracted (AVE) for assessing convergence validity. In this study, all the CR values ranged from 0.78 to 0.96, which indicate good internal CR. Average Variance Extracted (AVE) is measuring the variance encapsulated by indicators relative to measurement error and it should be at least 0.50 in order to justify the construct use (Sarstedt et al., 2014). In this study, the AVEs ranged from 0.55 to 0.88, which were all within the suggested range. Therefore, all the latent variables satisfied the threshold value and considered to meet the standard recommended for the validity of convergent.

7.7.6 Reliability Test
In order to check the selected scales status in terms of relatively reliable in this research, calculating the variable factor Cronbach’s Alpha is essential in order to obtain the individual internal consistency. The instrument reliability implies that the checking measure will produce the same results if used repetitively. Cronbach's Alpha is illustrating reliable data and it is greater than 0.5

7.7.7 Assessment of Higher Order Measurement Model
This study has mainly three constructs to be conceptualized as second-order construct namely e-Government (EGOV), Technology Intention to Use (M1TIU) and Behavioral Intention to Use (M2BIU) all are reaching Government Operation Excellence (GOE). While modelling such higher-order constructs with PLS-SEM for all the mentioned measurement models, they will be estimated separately using an approach called repeated indicators approach or the hierarchical components model suggested by Wold (Hair et al., 2014). The second-order factor in this approach is measured by all the first-order factors and indicators repeated measures in the analysis (Sarstedt et al., 2014). Figure 2 is showing the hierarchical components model. Second order constructs were inspected significantly via 5,000 bootstrapped iterations. After that PLS-SEM was used to obtain path weighting scheme algorithm. This would give estimates of the structural model relationship through obtaining path coefficients which represented the hypothesized relationship among different constructs. The different obtained results of structural model R² are obtained and presented below.

7.7.8 Analysis of R Square (R²)
R² measures is considered the primary criteria to be evaluated in the structural model by PLS-SEM for determining the path coefficients significant level (Hair et al., 2014a). Hence, it aims to explain the endogenous latent variables’ variance and usually their R² should be reasonable high. Hair et al., (2014a) illustrated that R² values of 0.75, 0.50, or 0.25 for can be counted as substantial, moderate or weak, respectively. Accordingly and based on the results reported in figure 3, it can be observed that R² of GOE was 0.772 where 77.2% which considerable as substantial.
7.7.9 **Blindfolding and Predictive Relevance (Q2) Analysis**

Blindfolding procedure is to generate the cross-validated redundancy and cross-validated communality and it is highly recommended as it is basically to evaluate the wellness of the model prediction of the data of omitted cases which (Hair et al., 2014a). According to van der Marel (2012), Stone-Geisser’s test should be calculated by the following formula: \( Q^2 = 1 - SSE/SSO \). Hair et al. (2014a) suggested that the number of cases should not be a multiple omission distance (D) integer number otherwise the blindfolding procedure yields in erroneous results and they suggested to choose and select a value of D between 5 and 10. Thus, in this study 9 is taken as a value for D in order to obtain cross-validated redundancy measures for each dependent variable. Cross-redundancy value should be greater than zero; otherwise the model predictive relevance of cannot be concluded. The obtained cross validated redundancy values for GOE, M1TU, M2BIU and EGOV. These results support the researcher claim that the model has constructs adequate prediction relevance.

### Testing of Hypotheses

Hair et al. (2011) confirmed that when paths are non-significant or reveal signs that are against the hypothesized direction, the prior hypothesis should be rejected. On the other hand, significant paths showing the hypothesized direction support the proposed causal relationship empirically. The critical t-values for a two-tailed test is considered to be 1.96 for 5% significance level and 2.58 for 1% significance level. Along this vein, this study used 5,000 re-sampling with a replacement number and number of sample (500) for producing standard errors and obtain t-statistics. Analysis of each hypotheses are represented in the following subheading.

Findings of this study was reported in this chapter along with the presentation of the findings on the response rate and characteristics, techniques employed and examined in measurement refinements and analyses run in order to examine the instrument validity and reliability tests among different variables. Descriptive statistics showed that generally the respondent’s perception indicated moderate levels different specified variables indicated in the study. More importantly, this chapter used SPSS and results of PLS analysis in order to analyze obtained results. As mentioned in the various analyses above, 3 hypotheses were checked and two of them accepted while one of them found different. The summary of all mentioned hypotheses results were shown in table 1.

<table>
<thead>
<tr>
<th>Hypothesis code</th>
<th>Hypothesis</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>There is a significant relationship between e-Government system and Government Operation Excellence.</td>
<td>Accepted</td>
</tr>
<tr>
<td>H2</td>
<td>Technological Intention to Use moderates the relationship between e-Government system and Government Operation Excellence.</td>
<td>Rejected</td>
</tr>
<tr>
<td>H3</td>
<td>Behavioral Intention to Use moderates the relationship between e-Government system and Government Operation Excellence.</td>
<td>Accepted</td>
</tr>
</tbody>
</table>

**Table 1: Hypothesis Summary**

8. **Recommendations and Conclusions**

The main purpose of this study was to develop an integrated model investigating e-government services citizens’ acceptance in Sultanate of Oman that would affect the government operation excellence. The first step in the study was by conducting an extensive literature review for deriving the adoption relevant factors. The research aimed to understand the current e-Government services practices, concept, categories and stages. Since the study is conducted for the empirical work in Sultanate of Oman, it was considered essential and important to gain and obtain enough knowledge about the context of the field study especially in the country for distinct cultural characteristics. Then, the study derive the key factors of adoption through reviewing well-known scholarly accepted theoretical models in the literature of IT acceptance, Technological and Behavioral intention to use, related empirical studies.

As a result, the decomposed theory of TAM, TTF and SCT were selected by integrating them together to examine e-Government citizens’ acceptances and intention to use to effect GOE. For answering the research questions, the study attempted to use and outline an appropriate research methodology by elaborating and conducting research paradigms, strategies and methods. Indeed, with presenting a valid approach selection justification. Thus, the study generated hypotheses and research instrument design. A representative sample of five hundred citizens in selected regions in Sultanate of Oman was collected to validate the structured model along with set hypotheses. The proposed model includes four independent variables: Citizens Centricity, Facilitating Conditions, Effort Expectancy and Performance Expectancy with seven moderation variables divided into two main categories, Technological
Intention to Use: Perceived Easy to Use, Perceived Usefulness, Perceived Risk and Trust in Technology. Whereas, the other category is the Behavioral Intention to Use: Image, Social Influence and Perceived Behavioral Control. The model was analyzed and validated using the structural equation modeling (SEM) technique with two main software SPSS and SmartPLS. The findings showed that both gained measurement and structural models exhibit good model fitting the data. The analysis showed that all obtained constructs satisfied the criteria of constructs reliability, convergent and discriminant validity. The paths estimations showed that Technological Intention to Use is more as a mediating construct that a moderating one. Whereas, Behavioral Intention to Use found to be partially mediating construct

8.1 Research Contributions
The outcomes of the research contribute is to understand the e-Government adoption drivers from the citizens’ prospective and viewpoints. The study conducted a literature review in order to address the gap in the knowledge in the citizen acceptance field of e-Government and also to outline the adoption key elements in the country. Consequently, the study succeeded in terms of developing and validating an integrated combined model based on well-known theories and scholarly accepted in acceptance and intention to use in terms of technology and behavior affecting citizens which generated the following contributions:

- The core element of the research’s contribution, it provides a better e-government services citizen acceptance and intention to use understanding in Sultanate of Oman. The research portrays a roadmap for acceptance and intention to use aspects by developing an e-government adoption integrated model from citizens’ prospective. The model is analyzed and validated based on empirical work with large size data collected. The model involved Technology Acceptance Model, Technology Task Fit and Social Cognitive Theory. Lastly, it succeeds in figuring and revealing the key factors that affect e-Government services citizen acceptance in Sultanate of Oman.
- This study differs from other earlier studies (Schaupp et al., 2010; Al Zahrani, 2011; Al Zu’bi, 2012; Hassan, 2015) in literature by investigating a broader e-government services set from the citizen’s prospective and viewpoint and not focusing on a specific application. Thus, the research integrated technological and behavioral intention to use aspects in the acceptance model.
- The study shows that technological acceptance is becoming an essential aspect to achieve government operational excellence with a mediating effect which means that it plays an important role in e-Government services citizens’ acceptances.
- The study shows that behavioral acceptance is becoming an essential aspect to achieve government operational excellence with partial mediating effect and it plays an important role in e-Government services citizens’ acceptances.
- The achieved validated instrument is reliable to conduct future studies in technology and behavior intention to use aspects and citizen’s acceptance. Since it is based on rigorous validation along with previous validated instruments in IT literature.

8.2 Implications for Theory
The study modifies, integrate and validates a framework based on the TAM, TTF and SCT models for the e-government adoption application from citizens’ prospective and viewpoints. The study integrates technological intention to use with behavioral intention to use into the theoretical framework which is the key contribution to the theory’s development. The findings demonstrate the adapted theory robustness and appropriateness to help understanding online user of e-Government applications behavior in the Sultanate of Oman context. The developed model could provide a foundation for further future studies in the region. Moreover, the validated research’s instrument could serve as a base for further future studies in IT research particularly in the Middle East countries.

8.3 Implications for Practice
The e-government success is contingent upon citizen willingness and intention to use e-government services. Government of the country should give important consideration to develop IT projects without forgetting to focus on citizen’s viewpoints in order to transfer traditional services to online form successfully. An understanding of the citizen acceptance relevant factors in e-government can provide policy and decision makers with a set of strategic management plans in order to build and prompt greater acceptance towards these services. The research’s results hold important and essential strategic suggestions for various government departments and agencies that provide e-government services in increasing the citizens’ adoption rate.

In terms of e-Government, the results score the importance of citizen’s trust in government for adoption. Government should give more effort on building positive government-citizen relationships as they are considered the main customers and accordingly the main factor that will affect the success or failure of the e-Government project. Hence, it is considered important and essential to have the necessary skills and expertise while conducting
the project for smooth achievement of the goal. Furthermore, co-operating with competent well-known businesses in e-services and e-government area in order to enhance government-citizens relationship and to make the project more citizen-centricity should enhance citizen trust towards government. On the other hand, citizen’s effort expectancy and performance expectancy from government is effecting e-Government project in general and will decrease trust in government which would effect GOE. Government should facilitate better environment and platform for the project in order to enhance citizen’s acceptance toward the project as well as achieving GOE significantly and successfully. For instance, the Internet is insignificant for developers to implement the latest advance tools, equipment and foundations with significant security standards. Government could focus to promote and educate citizens about the provided e-services by e-government technology that would provide the confidence and overcome the available barriers between individuals and the technology. Clear visions, missions and strategies for developing e-Government in the country could help in facilitating the e-Government adoption. Such initiatives could encourage citizens’ intention to use e-Government as a national successful project.

In terms of technology intention to use, it is essential and important for government of the country to work on stimulating positive feelings while using e-Government initiatives in order to ensure successfully accepted projects. Operating on the significant attitude antecedents of (e.g. perceived usefulness, perceived easy to use, perceived risk and trust in technology) among citizens, which could facilitate the e-services adoption. This eventually might lead to the personal perceptions development of positive attitudes towards e-services in e-Government against the traditional governmental services. Decision makers in governments may launch a marketing campaign focusing on the project benefits wide variety to its citizens through various media channels. It is crucial to promote the e-Government services utilization benefits over the traditional ways in order to show its usefulness and easy to use and accordingly to increase citizen’s trust in technology. Failures in protecting the system and personal citizen’s data could cause loss of trust and confidence in the system and government’s ability to carry out such projects which would discourage citizens from using the system and effect their perceived risk category.

In terms of behavioral intention to use, the significant impact of behavioral intention to use like perceived behavioral control (PCB) stresses the internal and external impediments essential role that can hinder or facilitate the e-government technology use. The findings of the study show that Image, Social Influence and Perceived Behavioral Control have significant impacts on intention. It is fundamental that decision makers aim to overcome any potential barriers towards utilizing the provided services successfully and effectively. For instance, if the government want to boost confidence and familiarity in e-government services usage among citizens, it should advertise demonstrations of how to use these services and this will effect both citizen’s and government’s efficiency through various media channels.

8.4 Research Limitations

This research is developed a framework from well-known and scholarly accepted theories in adoption and then validated by covering a large size sample of 500 participants pooled from the citizens of Sultanate of Oman. However, like any other research, this research has some limitations. The first considered limitation comes from the sample population collection. Although the research has followed the common sampling in data collection practice but the data collection collected from Muscat, Al Batinah, al Dakhliya and Al Sharqiya. This procedure is good especially with very high sample size in order to generalize the result to the complete country but it would be more efficient if it is collected from all regions of the Sultanate.

Another important limitation reflected from the high number of male compared to female participants. Although, data distribution procedure did not have a demographic filter of gender but it was noticed that the number of participants from male is very big compared to the female participants

Another limitation is the data distribution procedure. Although the research is talking about IT and technology aspects and used on of the most famous procedure in data distribution which is online procedure through link in phones but this procedure have a limitation because participants will need to obtain smart phones, smart devices or at least personal computers or laptops in order to participate in the data collection. Citizens who do not have knowledge in computers and modern smart devices or they do not have required tools and equipment for participating in the collection are not included.

Finally, although the study follows the common languages in the country (Arabic and English) but it is important to note that there could be a possibility of a slight skew of the original required and aimed meaning during the translation process.

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