

CITIZENS' ADOPTION OF ELECTRONIC GOVERNMENT IN PAKISTAN BY IMPROVING TECHNOLOGY ACCEPTANCE MODEL

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Abstract

The initiatives of e-Government are at an early stage in many developing countries and faced with various issues about execution the different technology acceptance models, frameworks and low response to citizens' adoption of e-Government services in their countries. However, existing relevant literature shows that e-Government research lacks a comprehensive conceptual framework for enlightening the more active citizens' adoption of e-Government services. This study fills the gap by extended technology acceptance model that based on the Unified Theory of the Acceptance and Use of Technology (UTAUT) model as its theoretical foundation by incorporating the trust factor, which was missing, not present in all previous corresponding technology acceptance models including, UTAUT model. The proposed significant factor has recognized and derived from the relevant published literature work, which is less conducted by the developing countries researchers like Pakistan. To achieve this different research aims, a triangulation approaches of data gathering was employed then tested using multiple

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research methods. Furthermore, this study used a variety of sophisticated processing and analysis techniques to determine the significant factors that affect the citizens' adoption of e-Government services, Pakistan context and confirm the credibility and stability. This new research is benefits for the public sector of emerging countries to accelerate the social, technological and economic progress, academicians, e-Government policy-makers, researchers. This research work accomplishes with a discussion of the contributions, limitations of this work and provides the guidelines for the future research direction.

Keywords: *Citizens, Adoption, Electronic Government, UTAUT Model, Pakistan*

Introduction

The most developments in Information Communication Technologies (ICT) have an unusual perspective to boost the better lives of people residing particularly in unindustrialized countries like Pakistan. It has different changed the way of many developed country governments such as USA, Canada, U.K., and Sweden likewise. Moreover, getting the most major gains from the adoption of e-Government services solutions, cooperating with their citizens' and commercial organizations(Shafi & Weerakkody, 2009), (Guha & Chakrabarti, 2014). Nearly, everywhere on the globe, the trending phenomenon of the online enforced to improve to upsurge the public community engagement and transforming society into electronic society (e-society).

By moving the affiliation association between the citizens' and government administration(Burke, 2012). (Fang, 2002). Since, the fast improving utilization of Information Technology to perform, execute the company operations, interchange information and communicate revolutionized. Further, government's authorities believe that IT digital, gadgets devices way-out to all critical issues like economic, social, trust and ICT improvement involved that concerned the creating developing states. As a result, 183 out of 200 countries use existing ICTs to deliver their best (Abdalla, 2012). Moreover, extremely recognized the position noticed of making their digital services more well-organized, easily accessible and reachable technological innovation (Bwalya & Mutula, 2014).

Nowadays, the citizens become smarter, Internet savvy and well-experience about

using valuable e-government services. It is appearing that citizens are attractive proficient with e-services, appreciating better admiring electronic facilities 24 hours of access form the private sector. According to (Chatfield and Alhujran, 2009), claim that e-Government has transformed to converted an opportunity to able rethink how the administration delivers better e-services solutions to their citizens. The several developing governments silent still face the problematic and challenging of a low level of adoption of e-Government services by citizens at different levels and trust on the system as well government web portals. The worldwide, in the less-developing countries more than (35%) of entirely e-Government assignments or projects had utterly failed. Almost half projects had either partially collapsed, and only (15%) percentage was positively satisfying and achieving to gratify primary e-projects goals (Heeks, 2006),(Estevez & Janowski, 2013).

In this regards, some studies have already accompanied research in the western world and only few focused on government viewpoints, but not on the prerequisite of demand side (the citizen's perception and trust aspects). For under developing countries, e-Government is now viewed consider as the way to making an additional sustainable and maintainable with new digital economy. Therefore, it is taken carefully into consideration to determine a dynamic role in managing, directing the operation process of change, reforms improvement that will be public enhancement assurance, confidence, and self-assurance. Though, more adoption of e-Government service by their citizens' conferring to their desire use and building trust in e-Government services is one of the most problematic issue in Pakistan. Though the e-Government has been connected with more effective communication, more efficient and cost effective provision of services knowledge. Some hitches allied with the low level of citizens' adoption utilization and trust in developing countries. There is a great necessity to the government firm understanding knowledge of citizen's needs and condition facilitation requirements (Abdullah, Rogerson, Fairweather, & Prior, 2006). Furthermore, no research performed to realize the linkage concerning e-Government services, citizens' adoption and trust factor in Pakistan comprehensively so far(Shafi & Weerakkody, 2009),. To increase the efficiency, effectiveness, worth of public trust on the system, quickness responds, accessibility of e-Government services.

However, no general model may be functional to government worldwide because every country has their barriers, limitations, ICT infrastructure, e-culture challenges to run e-Government projects. This piece of research has discussed the adoption of e- Government from different factors aspects as describe previously

above (Ndou, 2004). That will help government policy-makers, academician to recognize those factors that benefit to influence citizens' to adopt e-Government or state. According to (Venkatesh, Morriss, and Davis et al., 2003), the term brings up to the 'acceptance' mentions to the preliminary decision made by the individual to communicate interact with know how the technology innovations enhancement. Therefore, the current study has incorporated a definite thought of the Unified Theory of Acceptance and Use of Technology (UTAUT) model to explore and examine core-factor affecting the acceptance that is a trust. The practice the e-Government services in Pakistan, where the need to more empirical and theoretically grounded research that gets attention with more concentration on the precise targeted, focused factors. Moreover, to know the effect of citizens' adoption to adopt or using e-Government facilitated services in Pakistan.

Problem Statement

The several government authorities at world level, are expanding the Internet Technology (knowledge) to afford their citizens by additional suitable, convenient, practical digital access. To implement, enhance most reliable e-Government services without diminishing the time consumed waiting for long lines. The patiently at government offices accomplish and to facilitate socio-economic benefits to valued citizens (Wang & Shih, 2009). However, many public policymakers, academic educational researchers recognized the barrier such as low response level of citizens' adoption and trust of e-Government facilities features as a paramount of the developing countries like Pakistan. The extract from the published literary work, this involved debatable phenomenon, often overlooked by the several scientists, decision makers and ICT's specialists at present research field. The current studies considered regarded about the citizens' adoption and success of the e-Government services.

The consistently worldwide, most of the research work concentrated only on western countries, very less in developing countries same like Pakistan. Further, the researcher also found less qualitative research effort attempted in the literary works. That evaluates, analyze and expresses the absolute essential needs, approaches, techniques, barriers and challenges from the perspectives of citizens who use e-Government services in Pakistan. That totally affects the citizens' intention to adopt and use of e-Government services. (Checchi, Po-An Hsieh, & Straub, 2003). According to (Mofesh and Wanous et al., 2008), specified that high need to offer improved services for citizens and replied to their increasing more demand for online e-services for the accurate implementation of e-Government plans.

However, worldwide, more than 60% of altogether e-Government developments either partially or wholly is unable to achieve and to fulfill primary government goals that come from the needs of citizens for e-Government services (Madon, Sahay, & Sudan, 2007). According to the (Steffen and Iraqi et al., 2012), the initiatives in e-Government are quite silent in the initial stage regarding ICT development and citizens' adoption (participation) in e-Government services. Such services solution cannot accomplish without the complete assistance support of government, citizens' approval and utilization. The placement of e-Government has converted a dynamic characteristic of the attainment of citizens' adoption. To educated knowledgeable the question of how government can increase citizen's adoption level, to make better online public services (Madon et al., 2007).

Recently, the e-Government identified most-top primary concern for Pakistani administration with all its organizations. And due to the unavailability of electric supply round the clock, computer literacy levels, deficiency of ICT practical and functional expertise to support ICT arrangement at the extensive procedure in the Pakistan. Today, the greater part of Pakistani government services are demanding to make available citizens trust with comprehensive electronic sources etc. To response an answer to individuals' everyday life anxieties and free transactions on their website portals. Unfortunately, the mainstream of citizens' does not have more attention towards the public trust programs that are relevant of offering such e-services delivery. Therefore, the deficiency in citizens' trust and adoption in e-Government is a most top tangible challenge in the concrete implementation of e-Government structure that is direct effects causing a quiet acceptance of e-services in the Pakistan. According to (United Nation Survey,2014), the performance of e-Government services development and the e-participation index is feeble and unsatisfactory when compared with other South Asian countries presentation(Haider, Shuwen, & Hyder), depicted in below Figures. 1.1 and 1.2.

Fig. 1.1 e-Government Development Index Survey by United Nations, (2014)

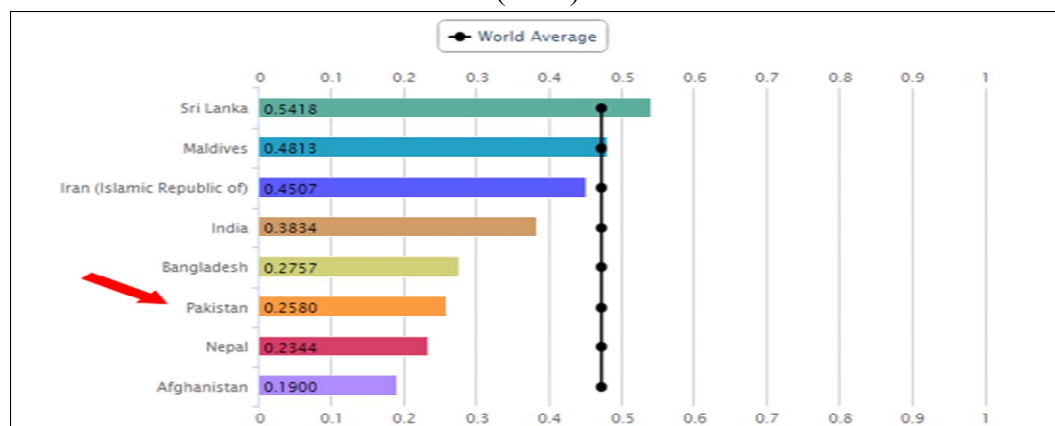
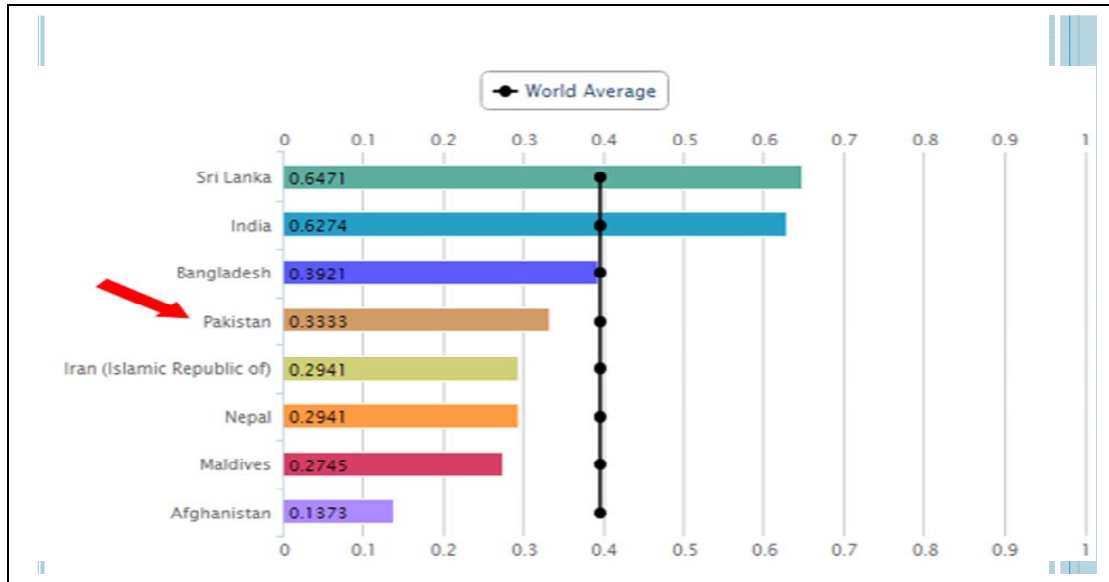


Fig. 1.2. E-Participation Index, Survey by United Nations, (2014)



It is mentioned in above figures (Fig.1.1, 1.2) that, e-Government development and e-participation activity most remains an emerging phenomenon in numerous countries, as compare others, the South Asian nations to Pakistan, it is developing in a gradual manner. However, the situation remains unsatisfactory performance both side perspectives. This judgment correlated to the suspension between government and citizen participation as labeled above figures. Especially regarding Pakistan, where the engagement index continuum reflects that up until 2014, the Pakistani' citizens' adoption is quite at lowest (Haider et al.). The Pakistani administration needs to catch up with the global average ranking for more betterment.

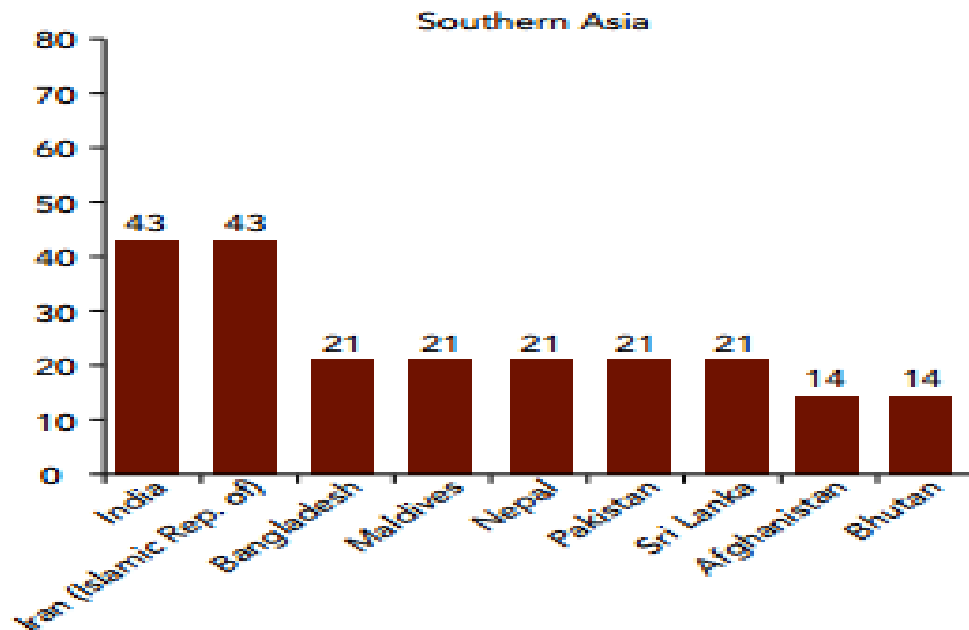


Fig. 1.3. Use of e-Government Services Ranking, Survey by UN, (2014)

The maximum common reason highlighted by (Haider and Shuwen et al., 2015), that ICT adaptability and flexibility of e-Government services in advanced developed countries is, that the expectation of the citizens does not come across those e-services. According to (United Nations e-Government Survey, 2014), the widely held of the government websites and e-portals that deliver e-Government services are disguised concealed from the citizens in the South Asian regions. According to the United Nation performed survey ranked Pakistan on 156th in 2012 on a world-level and 97th in 2014, on Asia Level (Haider et al.). The rating can see in Figure 1.3 above that the fundamental issue that gives more weight towards the deficiency of e-Government services utilization in these South Asian countries. The draw out from the above finding results clearly indicates a problem of lack of formal adoption of the citizens'' in Pakistani society or trust.

Therefore, this research also intentions to fill this gap in the literary work by sound transmission and empirical research analysis that could influence on citizens attitudes and opinions. When adopting this advancement innovation, based on existing validated model given by (Venkatesh, 2003), are mainly technology adoption theories (Ovais Ahmad, Markkula, & Oivo, 2013; Shafi & Weerakkody, 2009). The discovery of this piece of this work will benefit to

recognize the theoretical newly improved constructs (trust) of the background in the study topic context. In practice exercise, these research outcome will assist the government of Pakistan, the decision makers to better understand the most-serious important factors that impact the e-Government adoption by Pakistani citizens’.

Research Aims and Objectives

The most genuine intention of this research is to determine and investigate the important factor as a key challenge. Also, inspect the influential factor to adopt the e-Government by Pakistani citizens contextual. The supreme and ultimate goals are to improve a better fundamental knowing about the break research issues. That prevails between the e-Government services and response to citizens’ adoption in Pakistan public sector. For this motive, the present’s research has improved a UTAUT model by cooperating trust factor. Moreover, chosen it as the platform theoretical model foundation to address. Also, to deal this research gap in the literature contextual empirically, by utilizing and developing the validated UTAUT model. In this study, research has recognized the crucial element that affect the citizens’ adoption of e-Government perspective by investigating UTAUT model. Following research analysis having these objectives that will be pursued as under:

- To continuously review comprehensive literature in the area of e-Government Pakistan in general that concentrate on the citizens’ adoption aspects for deeper practical understanding in real world setting.
- To identify widely existing study challenges that affect citizens’ adoption, e-Government services availability in Pakistan and overall progress made so far.
- To develop (improve) a unique theoretical model (based on UTAUT), aim to look at the conceptual model that depicts the main noticeable salient factor such as trust by addressing the research gap and evaluate the viability of the model.
- To generate e-Government phenomenon by providing some explanations from study outcomes which, will be useful for the decision-makers, academicians, e-Government project offices and all concerned researchers. Also, indicate the direction to future research.

Research Question(s)

According to (Al-shawi, Al-alwany, and Iran et al., 2009, p.77), discoursed a critical issue to address the low response of efficient employment of e-Government services by citizens' in most of the developing countries like Pakistan. It is an argument that the adoption response of e-Government services in the emerging countries in Pakistan public sector is a very bottom level stage. Also, no existing research, examinations have done and led before in this particular study area context. Therefore, the researcher is annoying to figure-out the important, influential factor(s) and to determine how this knowledge can create a more efficient dissemination on the prompting citizens' adoption of e-Government services in Pakistan. The resulting research questions acknowledged fulfilling the research aims, which constructed on the pivotal study research question and sub-research question as under:

RQ-1 "How can enrich the significant factor that influences the citizens' adoption of e-Government in the Pakistan most captured by incorporating the proposed UTAUT model?"

As recognized on the above main central research question, next to research issues that has formulated carefully to attempt the initial determination of this research. That further, distributed into the sub-research question, which is:

SRQ-2. What is the importance of "Trust" construct and relative impact on the citizens' adoption of e-Government for future deployment in Pakistan?

However, different technology acceptance models were established and used to recognize the getting of citizens 'acceptance technologies studies. The UTAUT model is the latest model among the technology acceptance models till to date (Wang & Shih, 2009). In this study, trust factor has been incorporated (improved) as newly added independent variable to the UTAUT model. Therefore, trust construct variable is affecting in behavioral intention directly, and no relationship was assumed between them. For more comprehensive detail, follow research model.

Research Significance and Motivation

This research deals with effective and significant research efforts to the potential of citizens' adoption of e-Government services Pakistan background and wants much attention for emerging nations like Pakistan. The scholar (Muhammad (Ovais and Jouni Markkula et al., 2013, p.55), stated that Pakistan usually spends the same or more money on e-Government projects than the other developing countries. However, received less response from the citizens' participation and

lower ranking towards e-Government compare with other South Asian states position is a significant challenge. According to the (Heeks et al., 2003), the researcher identified that utmost of e-Government projects in emerging countries fails, with (35%) percentage classified as total failures and (50%) of partial failures in such projects.

Though, the author(s) performed exhaustive literature reviews with critical analyses that found much-published literature reveals and inadequate. The focused enriching the impact in this area of research needs to examine influencing factor (trust) and formulating a larger conceptual model which might enlighten fits the e-Government acceptance and use in Pakistan setting. The primary research motivations are summarized as under:

The literature reported that there are several studies on the citizens' adoption of e-Government conducted in the developed countries but, there is a lack of empirical research that considers in developing countries researchers like Pakistan.

Filling the gap in the literature is one of the motivations for conducting this study in a country such as Pakistan with different cultures and values.

The current published literature work indicated that there is the low response trust of citizens' adoption of e-Government particularly noticeable in Pakistan.

This research helps to re-engineer, re-building strengthening relationships between citizens and e-Governments adoption in Pakistan public sector.

Further, this work is evidencing that is unique and validated, by its significance to the research. By increasing human knowledge that contributes generating novel insights and philosophies for the complex analysis factor i.e. trust with UTATU model construct. Therefore, all research context concentrates on the original creativity of research work. Examines innovative contribution towards a body of knowledge, treated practice and found participation concerning.

Research Design and Methodology

This research explains the comprehensive research methodology of the present work and as e-Government remains, a novel phenomenon in many theories and models frameworks assist the government to lead, to implement in under developing countries like Pakistan; where citizens adoption of e-Government at the beginning stage and experiencing many difficulties . An investigation research method describes the research activities, data analysis measurements, methods purpose, and analysis applications procedures (Colesca, 2009). According to

(Louis, Lawrence and Keith et al., 2007), the research methodology background is referred to the research philosophy conceived in which the research strategy is formulated; research is performed with different types of methods. (Williman et al., 2005, p. 275).

The investigator used both research methods techniques as qualitative and quantitative (Mixed methods) for collecting the information (data) and for its procedure. For this purpose reason, the researcher took 300 set of questionnaire data information were gathered as a first hand data at this point. In this process, the researcher used different kind of mathematical, statistical techniques were implemented. Such as Exploratory Factor Analysis (EFA), and Confirmatory Factors Analysis (CFA), modeling adopted to use. For second phase this study relies upon on the employed the qualitative chosen concentrate (focus group) method to help and confirm the set of validating of the questionnaire results and its final findings. The initially, a good reviewing literary work, analysis techniques, discussion explains the justification, and survey research strategy will be determined based on the systematic research plans. Also the procedures that have an ability to give the answer the research question of their relationship.

E-Government Fundamentals: Literature Review

This research mentioned the core determinations a critical view of all international published research work of e-Government background on the subject. For the wider context in developed and emerging developing countries, particularly setting-up Pakistan's circumstantial. The author also has already mentioned for more comprehensive, relevant literature review and general theoretical foundation. According to (Dibbern, Goles, and Jayatilaka, 2004), e-Government (Electronic Government) is every so often associated with more effective communication, more efficient, cost effective services, the body of knowledge and information (Dibbern, Goles, Hirschheim, & Jayatilaka, 2004). It is defined involving government digitally to serve and enable people with competence effectiveness, and well transparency in the supremacy government processes. The improvement of office management e-services by providing the various online government services using ICT platform (Fang, 2002).

The advancement in ICT has expanded the preparation of Internet into innovative e-Government services. That has enabled ICT to offer diverged services to entrance citizens at all level implementation (Sharma & Panigrahi, 2015). As the technology is moving towards innovation, (Ahmad et al., 2006), (Okot-Uma & London, 2000) stated that the governments entirely world transforming their

public administrations from conventional methods to new innovative methods. Many researchers have discussed critically of e-Government impact. This is a potential relationship between the citizens' and governments, to create government services, information more transparent, readily available, convenient for residents and arrange for additional government accountability (Singh, Pathak, & Naz, 2011) (Tolbert & Mossberger, 2006, p.n.d.34).

According to (Mete Yildiz, 2007)(Yildiz, 2007), claimed that nearby no any universal general definition of the e-Government. Almost all scholars are agreed that e-Government at a young stage especially in under developing countries; everybody has owned several explanations and interpretations. According to the a web definition (www.innovazion.gov.it), e-Government (electronic government) represents a new concept of government organization, an operation that accessed easily, quickly and transparently by digital technologies. According to (Kagaari et al., 2010), the electronic term government (e-Government) was implemented in the US political during the year 1997 to 1998 and commonly it meant re-engineering with the technology. The government structure through Internet Technology(Kagaari, Munene, & Mpeera Ntayi, 2010). Early 1999, the United States implemented e-Government project support the National Organization of Science and IT research community in special projects (Conradie & Choenni, 2014; Layne & Lee, 2001).

The IT experts in a short time of the period (Kasson and Bo Edvardsson, 2008). The e-Government is contingent on the ICT that noted The Internet rapidly become a primary method by which citizens interact with civil governments. The last over two decades, at all levels of government, have implemented ICT projects to provide electronically information services all users (Shan et al., 2011, pp. 15) (Shan, Wang, Wang, Hao, & Hua, 2011). The consequently, the usage and Internet as the channel of communication to offer services to entire users known as e-Government. This is identified by the (Reddick et al., 2009), that e-Government as the exercise of IT assets, systems to deliver information. This public service and citizens with the Internet or additional virtual technologies. The e-Government functions can be a choice for simple applications, such as links to information, events associated with the local communities, to more complicated applications that authority citizens to expansion more access to and manipulate personal information (Cairncross, 1997, p.n.d.). In a three ringed model technologically advanced by (Koh and Prybutok, 2003) the functions of e-Government. They also, identify three leading sets of e-Government Internet services, i.e. Informational, Transactional, and Operational use purpose services (Casalino, 2014; Sanchez, Koh, Kappelman, & Prybutok, 2003).

Furthermore; government transaction with the G2C applications, the organization's public information, and contact details. Moreover, they offer regular services online provided by digital technologies. The e-Government uses the advances in technology to serve better citizens and companies, and the types of government provided online. In some circumstances, carry on to increase as Internet usage increases. The other researchers declared that e-Government is inflexible to define, indistinct, and constantly evolving (Bertot, Jaeger, & Grimes, 2010).

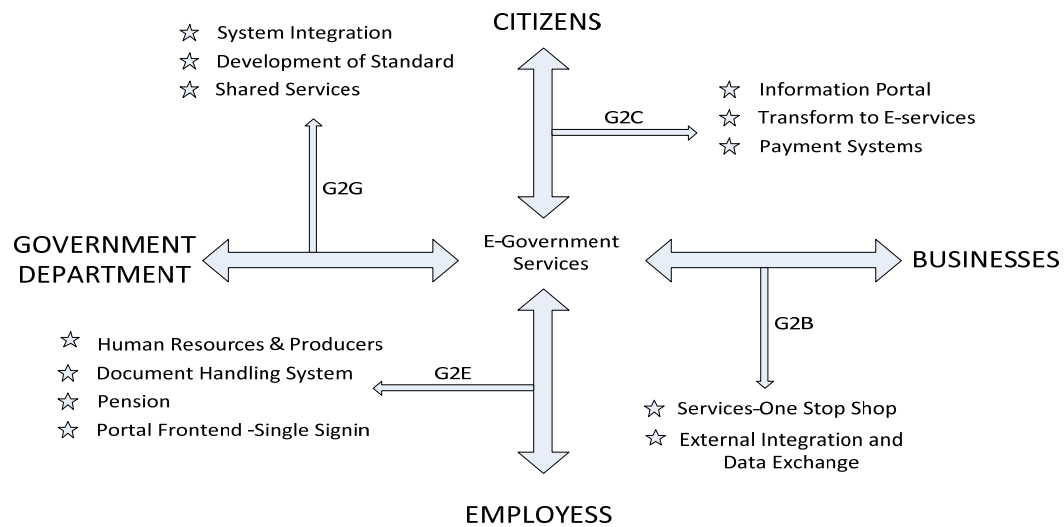


Fig. 2.1 Broad Graphic System drivers for of e-Government service

The above Figure 2.1 appearances the several e-Government models services that described below in more detail to use of information technologies allowing greater interactivity with citizens and progress the internal management of the organs is evidenced by the different relationship ranks of government. The relationship suggest the interaction between governments and citizens (Carter & Bélanger, 2005).

ICT Sector in Pakistan

The advancement in ICT has expanded the exercise of Internet into innovative e-Government services. That has enabled IT to offer diverged services and effortlessness of entrance to the citizens. As the technology is moving towards innovation, (Ahmad et .al., 2009), stated that the governments are transforming their public administrations from conventional methods to new-innovative approaches. The ultimate factor that makes a barrier to the placement of e-services (electronic services) in all the government sector of Pakistan is a critic-issue. It

took the early initiative to incorporate e-Government in Pakistan in the year 2002. The analysis of e-Govt. in Pakistan should be conducted from the perspective of both parties (Kaleem & Ahmad, 2008).

A suitable core employment of e-Government services is a challenging assignment for all states, especially in developing countries. However, it is not incredible to implement e-Government services. According to Pakistan Electronic Government, Directorate (EGD, 2011) discussed inventive ICT apparatus's, resources and advanced technology adoption in developed countries rather than developing nations. The Pakistan is a less developing state; it is in the initial phase of e-Government acceptance level (Shah, Khan, & Khalil, 2011), (Khan, Khan, & Zhang, 2010). It is also observed that e-Government implementation has definite organizational improvements for better service condition to lift corporate performance (Schuppan, 2009). Furthermore, it is noted that e-Government can help nations to look forward rapidly and to get more attention through advanced smart technologies.

Theoretical Framework Foundation

This research draws the most extraordinary attention to consider theoretical background concerning to the citizens' adoption of technology and also derive the review; highlight the concepts of incorporating construct factor like trust. The influence of the previous research paradigm significant association with the citizens' adoption of e-Government. This work has ensured the best intended conceptual proposed research model, that utilized globally to identify secure foundation; including influential factor. However, currently, the theoretical foundation remains a short and relatively novel field of this study (e-Government adoption citizens perspective). A proposed conceptual research model much emphasis on significant potential factor(s). It is founded on the newly added improved factor such as a trust, this novel factor lead the justification of the study, support research argument in the following section and subsection of this research work in more comprehensively. That construct model is drawn attention with the incorporation (improved version) of UTAUT model. To indicate the factor specifying consideration to achieving the core research objectives of this empirical study with the support of a study proposed conceptual model development.

Proposed Research Model

This study proposed a research model development that based on the Unified Theory of Acceptance and Use of Technology (UTAUT) research model presented by (Venkatesh et al., in the year 2003). The researcher used the most

renowned UTAUT model as the theoretical foundation for this research purpose, adopted from the above original model named. According to the researcher, this model is a hypothetical driver of the motivation for this study. In this regards, various measurement analyzes the research issues very carefully as possible in term of suitability modified, reliability, validity, correlations relationship, an important factor and proposed hypothesis analysis for the complete picture of acceptance process or to adopt e-Government by citizens' perspectives. For above purpose researcher also have reviewed the relevant published literature such as SSCI or SCI indexing research papers about the citizens' adoption of e-Government and incorporate the one novel constructs variable was introduced variable such as trust, which has been added and improved by integrating. The proposed model have discussed in more detail to investigate the catalyst variables that have an impact on citizens' adoption of e-Government.

Trust (TR)

According to (Rotter et al., in 1967), define trust as an expectancy detained by anyone that the promise of an individual or group could be relied upon. The trust phenomenon is widely discussed and its has justification for this study (Carter & Bélanger, 2005). As trust plays an important role to build a human relationship to engage with each other. The particularly emphasized that confidence can help in the adoption online trust or relationship between UTAUT model components (Solehria & Jadoon). Moreover, trust in the enabling technology means to trust in the Internet Services, (Carter and Belangerr, 2005); (Pavlou, 2003); and (McKnight, Choudhoury, et al., 2002), p.n.d 87.

The Importance of Trust in the Proposed Research Model

Initially, a citizen is encouraged or enticed to engage in a relationship with the e-Government or professional environment through the providing access to their services with more-efficient and more-productive manners. Based on this positive trend of e-Government towards the businesses and citizens development for the citizens' trust. Its shows that trust has recognized one of the bases for human interaction for ensuring more participation and trust building in e-Government services and its system (Abu-Shanab, 2014). Also, it is essential to many fields of these studies such as communication, leadership, management and trust in institutions. That based on the trust, (Mc-Knight, and Chervany, 1996), the initial trust beliefs. The client has a collective personality and cultural factors (disposition trust) under the conditions of Ganzhi ceremony (institutional-based trust), which involves the legal aspects related to electronic commerce. The concepts of security enhancements, resulting in a propensity to the trust and provides privacy services. According to the (Reichheld et al., 2005); (Schefter et al., 2000, p.n.d

33), trust is critical in the several socio-economic interaction, particularly in the online world.

The relevant published literature review and mentioned that online transaction had great significant in past research. Including (Gefen, Karahanna, and Straub et al., 2003); (Holsapple et al., 2007); (Sasidharan et al., 2005); (Pavlou et al., 2003); and (Pavlou et al., Fygenson, 2006). A strongly emphasized that the significance of the trust in different acceptance. Moreover, the usemodels for improvement a more wideranging understanding of citizens' acceptance of e-services. Therefore, (Armida et al., 2008), used UTAUT model in the USA as a theoretical framework to study. The research model was modified by relating Trust to the performance expectancy the effort expectancy, facilitation condition and behavioral intention. The principal objective was to test the original UTAUT model and adding trustvariable. Further, to verify and examine to measure what factors have the greater influence on the citizens' intention to adopt e-Government technology and understanding of user acceptance of e-services (Gefen et al., 2003); (Gefen et al., 2005); (Holsappe and Fygenson et al., 2006). Furthermore, (Jaeger 2003); (Lieth and Morison, 2004); (Cody-Allen et al., and Kishore et al., 2006),extended UTAUT model y adding improving constructs. Including trust in it, argue that equality and satisfaction can develop a real e-Business system in the world. In the addition, to relative advantage, trust is likewise involved in our e-Government, make a new- association between confidence and performanceexpectancy was established to study as individual's intention to use e-Government system. According to literature, states that there are two principal objects of the trust.

First, is must trust the entity providing the services and second is the systemmechanism through, which services are provided. It is still in developing stage; in another same context, trust has two elements: trust in a particular entity, which is the government public sector or any agency. The second is trust in the providing technology that the Internet as the vehicle by which the services get to the citizens. Moreover, ease of use trustworthiness is a significant provider of citizens intention to use e-Government services (Carter and Belanger, 2005; Pavlou et al., 2003). The Trust of the Internet is the furthestmost significant predictor of e-services acceptance, adoption, reliable and safe technology. The Trust has established to be an essential part of e-Government services studies, and this belief also dependent upon the citizens understanding. The citizen must believe the agency providing the services to their citizens with reliable. The some scholar like (Wang and Emurian et al., 2005), emphasized that absence of the trust be one of the mostformidable barriers to using e-services acceptance. When financial or personal information is required to the onlinesystem is involved.

According to (Zucker, Pavlou, et al., 2003)p.n.7, suggest that factors influencing trust in Internet shopping in Ireland. Moreover, emphasized that trust is an important factor for a consumer to make a purchase from the Internet environment.

Two Broader Types of Trust (study context)

An e-Government assessment depends on the citizens' perception, the adequate capability to provided services by the government and according to the citizens' expectations. Two main broader types of Trusts in this research context.

Trust in the Government

According to (Tolbert et al., 2007); (Mossberger et al., 2006); (Belanger & Carter, 2008); (Levi and Stoker et al., 2002), that trust has an important to build persons' perception, the stability of the government. That keenly depends on the government laws and regulations, integrity, digital signature, digital identity, and ability of the services provider (Belanger and Carter, 2008). The government strategies can help to build the citizens trust in the government that has a significant role in the digital government to provide online services imperative and widespread adoption of e-Government (Jaeger & Fleischmann, 2013). The many developing countries governments have fails to create a positive perception, which is a government responsibility, but the government is inefficient in this regards. Therefore, this research explores the profoundly influence of citizen's trust in the government of Pakistan over their intention to use e-Government services.

Trust in the system (Internet)

The second broader type is Trust in the system (Internet), or the Information Communication Technology provides the mechanism through which services to their citizens. This is recognized as a key predictor of the adoption of e-services (Ma-Knigh et al., 2002); (Garter and Belanger, 2005, p.n.d.23). The key perception of the institution structures, regulation, can make security measures, safety and this can influence on citizens adoption to using e-Government services.

Literature Review: Trust

According to the (Lewicki et al., 1999); (Bunker et al., 1996), described as a trust, over time the development of one of the intentions, capabilities. Moreover, other past behavior to learn the knowledge-based trust activities (Kramer, 1999). The exchange collaborates performance standards, technical, organizational capacity. It is stated that (Grazioli and Harvenpaa, 2002); (Al-Diri et al., Sait et al., 2004),

need more attention on the attributes of the public trust in the government. Moreover, other features can much support to build a sound effect on government citizens' relationship that previously citizens' didn't have to offer access information in early stage of time (Mishra & Mishra, 2012). According to (Carter and Belanger, 2005); (Al-Sobhiet al., Heidemann et al., 2013), the word trust has different means, different things to different people. Authorizing to (Bannister and Connolly et al., 2011), state the terms as trust says citizens' centric, transformational government, into the new government and further reconnaissance. Some other commonly challenges are described as under:

Tab 3 Summary of the Trust Studies (Alzahrani, 2011)

No	Authors	Study	Key Construct of Trust
1	Belanger and Carter 2008	Trust and risk in e-Government adoption	Trust in Internet and Government Perceived risk Disposition to trust
2	Belanger et al., 2002	Belanger mentioned that trustworthiness in electronic commerce: the role of privacy, security, and website	Four Common Trust indices: Third privacy seals Privacy statements Third party security seals
3	Carter and Belanger et al., 2005	This is also important factor for the utilization of e-Government services: citizen trust, innovation, factors	Trust in the Government Trust in the Internet
4	Gefen et al., 2003	Trust and online shopping an integrated model	Knowledge-based trust Calculative based trust Institution based trust
5	Ha and Stoel, 2009	Most of the consumer acceptance: antecedents in a technology acceptance model	Trust Enjoyments UTAUT attitude
6	Hoffman et al. 1999	Building consumer trust online	Perceived security Perceived privacy
7	Kim & Prabhakar, 2004	Initial Trust and the adoption of B2C	Structural assurances Word of mouth referrals Trust
8	Kim et al. 2009	Exploring online transaction self-efficacy in trust	Online transaction Consumer Trust

9	Lee and Turban, 2001	A Trust model for consumer	Trust of the web merchant Trust of the Internet Trust in the Government
10	McKnight et al., 2002	Developing and validating trust measures for e-Government	Trusting beliefs Trusting intentions
11	Pavlou, 2003	Consumer Acceptance of electronic commerce integrating trust with technology model	Perceived Risk Trust in the web retailer and The Internet
12	Warkentin et al. 2002	Encouraging citizen adoption of e-Government building trust	Institution based trust
13	Horst et al., 2007	Trust was the primary determinant of the PU of e-Government services	Tested hypothesized that trust positively influence on e-Government adoption services
14	Kamal, 2010, Alhujran, 2009	Trust in the Internet has a significant positive impact on intention to use e-transaction and e-Government	Investigated for the e-Transactions research study

Citizens Trust

Many developed countries are the world's leader in the e-Government development perspectives such as Norway, Canada, Sweden and United States of America last couple of years. According to the (Moon et al., 2003), describe that public trust has become a catalyst of the e-Government context. Moreover, playing a paramount role in developing the citizens' sharing personal data, online transaction and communication for the individuals' and businesses (Yang, 2006). However, this is noticeable that successful adoption, usage of e-Government services by the citizens remains an indefinable phenomenon. The citizen's trust, satisfaction going to decline due to the administrative, political, unprofessional implementation of e-Government programs, e-services quality, and economic reasons. The brief view of this literature specified that trust of the citizens could increase the citizens' adoption and usage in e-Government services easily such as online tax services, needed information that citizens' are required and e-Government (Carter & Bélanger, 2005).

The citizens' trust supports bring the positive change in their beliefs, satisfaction, experience about government efficiency, effectiveness. Moreover, contribution towards enabling technologies using as the e-Government in Pakistan public

sector. All these depend on the citizens' willingness to adopt such services that are provided by their government for smooth functioning to make enabling citizens' towards e-Government adoption. This research contributes by proposing a Trust construct in this chapter for more detail find about sections.

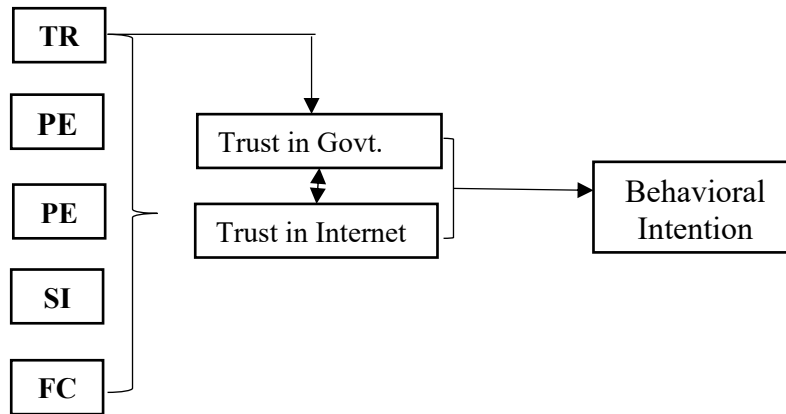


Fig. 3.1 Incorporate Trust Construct

From the research questions, related literature, amended UTAUT conceptual model and theoretical foundation, following hypothesis formulated and developed for this study as under:

NO	HYPOTHESIS FORMULATION
H1	Trust (TR) will have a positive influence on behavioural intention (BI) to use of e-Government services, and this relationship is moderated by Gender.
H2	Performance expectancy (PE) will have a positive influence on behavioural intention (BI) to use of e-Government service adoption, and this relationship is moderated by Gender, Age, Education level and ICT experience.
H3	Effort expectancy (EE) will have a positive influence on behavioral intention (BI) to use of e-Government service adoption, and this relationship is moderated by Gender, Age, Education level and ICT experience.
H4	Social influence (SI) will have a positive influence on behavioral intention (BI) to use of e-Government service adoption, and this relationship is moderated by Gender and Age.
H5	Facilitation conditions (FC) will have a positive influence on behavioural intention (BI) to use e-Government services adoption, and this relationship is moderated by Age, Education level and ICT experience.

The Proposed Research Model (Improved)

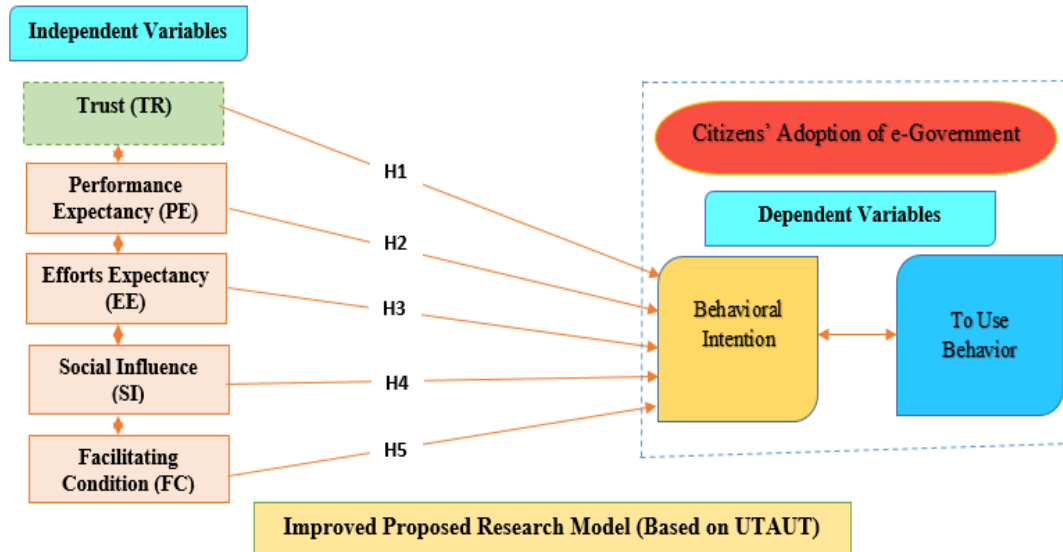


Fig 3.2 The Proposed Research Model (Improved)

Data Analysis and Presentation (DAP)

This research work describes data analysis presentation and outcomes of results, the determination of a researcher used quantitative data collection measurement scale analysis from the survey set of questionnaires. Moreover, for the descriptive data analysis set out pertinent analyzed illustrative questionnaire facts. That will offer the assessment using the charts, figures and tables. The reliability and validity of the data considered and understood in more accurately to influence the citizens' adopting of e-Government in Pakistan context. The advanced statistics, coding the responses, and frequency of the gather data present the descriptive statistics. Further, that will develop the preliminary research analysis findings to ensure the accuracy of analysis information and missing data from the research context. Moreover, the cause and effect relationships between different aspects variables also assess to evaluate by using the inferential analysis and use factor analysis to load entirely correlated factors within one group.

All these based on the improved UTAUT model design declaration as already explain in detail above sections and suggested into the proposed UTAUT model constructs adopt to measure by the five scales on the Likert Type Scale (LTS) by ensuring the strongly agree, agree, neutral, disagree, and strongly disagree facts. Also point out the most common eleven barriers identified by the respondents

during the study the measuring scale like this not a barrier (0), significant-barrier (1), or paramount barrier (2). These techniques were used to obtain better consideration and views about the e-Government challenges and obstacles that might influence to adopt such services in Pakistan. The last (fifth) part is included ‘YES/NO’ trick questions. To explore in the easiest way about to know the citizens’ intention to adopt the e-Government services in Pakistan.

Data Screening and Management

It is before, analyzing the pre analysis procedure used for the raw data information screening. It is one the important process or step before starting data analysis more useful way to prevent different incorrect result findings in the research (Jones, K., Field et al., 2005). According to another scholar (Seki et al., 2009), said that data are screening these original, unique producers; investigate the data accuracy, study extreme cases, treatment of the missing data.

Descriptive Statistics Management

The survey was completed and returned 160 respondent’s feedback reviews in which various Pakistani IT employees of the public sector industry were 30 respondent. Moreover, 110 respondents were Pakistani citizens’ from the different walk of life. It refer to each group and provide the analysis of the findings of this study.

Table.4.1

Skewness & Kurtosis Statistics Study’s Variables (N=300)		
Scale	Skewness	Kurtosis
Performance Expectancy (PE)	-0.87	0.21
Effort Expectancy (EE)	0.29	-0.50
Social Influence (SI)	-0.45	0.21
Facilitating Conditions (FC)	-1.01	1.44
Trust (TR)	-0.19	0.54
Behavioural Intention (BI)	0.23	-0.71

Noted: SE for the Skewness statistic = 0.0.6. SE for kurtosis statistic = 0.15.

By adopting the set of the questionnaire to test the construct proposed in the conceptual model and examine the legitimacy of construct(s). The proposed

conceptual design model as already presented as above in more detail (Figure 4.1). The researcher determines the overall reliability of all these statistic measurement scales. The authors' uses this resolve measurement methods as Factor Scale Analysis (FSA) techniques were implemented on each scale more extensively and confirm the validity of the factors structures that represent each individual model construct. In this study, the researcher also used for further confirmation the validity of the factor structures that represent each model construct components build in such way. These both measurement scales widerange used to confirm, improve the recognized research framework and refine the identified structure of each model construct with the validity credibility and unidimensionality.

Table 4.2

Cronbach's Alpha Reliability Test Results

Constructs	No. of Items	Cronbach' Alpha (α)	Remarks
Performance Expectancy (PE)	4	0.72	High Reliability
Effort Expectancy (EE)	4	0.74	High Reliability
Social Influence (SI)	4	0.85	High Reliability
Facilitating Conditions (FC)	3	0.90	Excellent Reliability
Trust (TR)	4	0.79	High Reliability

Analysis of Trust (TR) scale

The researcher analysis trusts with same scale procedure and presents the set of the questionnaire statements in below Table 4.3, which show the effect of Trust on the citizens' acceptance and to adopt the e-Government services in Pakistan by their citizens'. The four scale correlation matrix items of Trust (TR1 to TR4) indicated that correlation coefficients greater > than (0.3). Also, both the KMO analysis that is 0.748 highly significant finding results in this study. Finally, it is concluded the four items scale measure is the trust validity test are unidimensional.

Table 4.3
Coding of TR Variables (item)

Construct	Variable Code	Questionnaire Statement
Trust (TR)	TR1	Internet is Trustworthy
	TR2	I have confidence in IT used by government agencies to operate e-government in Pakistan.
	TR3	Government agencies can be trusted to taken out online transactions faithfully
	TR4	I believe that e-Government services are trustworthy

Table:4.4
Correlation Matrix for TR Scale (item)

Construct	Variable Code	TR1	TR2	TR3	TR4
Correlation	TR1	1.000	0.719	0.477	0.477
	TR2	0.719	1.000	0.569	0.691
	TR3	0.477	0.569	1.000	0.606
	TR4	0.577	0.619	1.606	1.000

Determinant = (0.245)

Table 4.5
Factor Loading for Trust (item)

Component Matrix ^a	(Trust)
	Component
	1
TR1	0.964
TR2	0.957
TR3	0.907
TR4	0.850

Extraction Method: Principal Component Analysis

a. 1 Component extracted.

Table 4.6
KMO and Bartlett's Test for TR (item)

<i>KMO and Bartlett's Test (Trust)</i>	
<i>(Kaiser-Meyer-Olkin, Ali Measure of the Sampling Adequacy)</i>	
	0.748
	Approx. Chi-Square
	563.501
Bartlett's Test of Sphericity	df.
	21
	Sig.
	0.000

Table. 4.7 **Hurdle to e-Government Services Citizens' Adoption in Pakistan**

No.	Hurdle / Challenges
1	ICT infrastructure weakness of the government in public sector Pakistan
2	Lack of awareness & ability to use computer accessories technology efficiently
3	Lack of awareness about e-Government services among the Pakistani citizens
4	Lack of security & privacy of data and information on public government websites
5	Poor citizens' trust on the government and e-Government system services
6	Poor policy and rule and regulation for e-usage in the Pakistan
7	Lack of partnership and collaboration between government sectors
8	Lack of technical support from government websites support teams
9	Government employees resistance to changing to electronic ways and uses
10	Shortage of financial and energy resources in government sectors in Pakistan
11	Availability and reliability of Internet connection cost in Pakistan.

Citizens' Perception towards e-Government Services Obstacles

Below Table 4.8, provides all hurdle limitations relevant to the citizens' perception adoption towards the e-Government services obstacles in Pakistan, which are detail described and explained as "important hurdle" and "very important hurdle." This technique assisted in identifying the veracity of the limitations hurdles in following questions.

Table 4.8

Analysis Citizen's Perspectives of e-Government Services Hurdle

No. Barriers / Challenges - Important barrier - Very important barrier					
		<i>Freq.</i>	%	<i>Freq.</i>	%
1	ICT infrastructure weakness of the Government in public sector Pakistan	338	53.5	182	46.8
2	Lack of ICT ability to use computer accessories and technology efficiently	319	52.2	299	49.2
3	Lack of trust about e-Government services among the citizens	174	33.5	444	66.5
4	Lack of security, privacy of data & information on govt. public websites	337	53.4	282	46.6
5	Poor citizens trust on the Government & e-Government public services	301	49.1	317	50.9
6	Poor policy and rule and regulation for e-usage in the Pakistan	305	49.5	313	50.5
7	Lack of partnership and collaboration between Government sectors	238	41.3	380	58.7
8	Lack of technical support from Government websites support teams	164	32.3	454	67.7
9	Government employees resistance to changing to e-ways	246	42.3	372	57.7
10	Shortage of financial & energy resources in Government sectors in Pakistan	303	49.3	315	50.7
11	Availability and reliability of Internet connection cost	168	32.8	450	67.2

Future Research Work Directions

The research expresses the summarizes the research findings of the empirical study and the outstanding contributions towards academically, theoretically, practical knowledge and its implications by addressing the key research objectives which, already has identified in this research work. The detail discussion in this study work at present delivered in the preceding paragraphs and all its sections. The

conclusion about the research outcomes of the practical empirical study in the study is provided. Finally, this study also assisted in concluding the logical and sensible development of theoretical analysis framework. Moreover, the crucial experimental results to understand the citizens' aspects factors only that affected the influenced the adoption of e-Government services by Pakistani citizens' including trust aspect, specifying the country Pakistan context. However, in this research, there is a room available for further development and re-examination, according to a country to country situation. Hence, this further study offers the guideline, for approaching the future research work efforts. Further, that implication for theory and practice, investigate the affecting adoption factors and operation of e-Government services in Pakistan citizens' perceptions that provide important study concerns considerations and development room.

This study will improve and enhance the adoption equal of e-government services by encouraging citizens' trust to accept these services in Pakistan. Moreover, transform their traditional system into electronic transactions. This employed study provides an entirely vibrant picture of the research subjects and its aims. The UTAUT model highlights and demonstrates the conclusion of the study. That strength and refine the newly construct i.e trust that will be helpful to improve and increase the adoption level of new-technology in developing countries like Pakistan. This study also may analysis by adding the culture values factors, which would be crucial in Pakistan background. The Further the pathway could be investigated, to discover and explore comparative studies that would be more useful to the developed and developing countries context and will benefit to acquire more comprehensively knowledge in this area.

Concluding Remarks and Limitations

The finding of this research analysis very beneficial permitting to the subject study context, even with the restriction of this research work. This well research theoretical, methodology, practical contributions made very significant. Also extended the knowledge regarding the e-Government adoption citizens' perspectives like Pakistan context. The author has presented the restrictions of this study Pakistan context. Also, relatively this is a new phenomenon particular new-technology domain. The authors also faced some limitation while collecting empirical survey data at the national population level where respondent addresses were not updated available on given information. This proposed UTATU-model is only applicable fit from the citizens context. It could develop better and relevantly useful in other countries. Finally, the outcomes of this particular study that support and accept the citizen's adoption of e-Government services importance and proposed influential factor like trust in Pakistan background.

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