CHALLENGES OF E-GOVERNANCE IN PAKISTAN

Amid the COVID-19 Pandemic

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Abstract

Electronic governance (E-Governance) has the capacity to deliver services electronically to the people. This paper measures the adoption rate of E-Governance among the citizens of Islamabad during the peak of the COVID-19 pandemic in Pakistan. The main objectives of this study are: (1) to measure the level of E-Governance adoption among citizens of Islamabad, and (2) to identify the technological barriers to its implementation in Pakistan. The paper emphasizes the following questions: Do citizens of Islamabad prefer E-Governance? Do they still rely on traditional methods of governance? What technological barriers do they face in adopting E-Governance? In this study, the researcher has applied a purposive sampling technique. Data were collected through a survey using a close-ended questionnaire distributed among employees of Zarai Taraqiati Bank Limited (ZTBL), Islamabad. The study adopts a quantitative approach, and the data were analyzed using SPSS. The findings reveal that most citizens prefer E-Governance over traditional methods, though they remain uncomfortable with online education. While they resist conventional governance, they still value traditional approaches. The study indicates technological barriers is essential for improved communication and quality of life. E-Governance has become a necessity for Pakistan's progress and prosperity, as its efficient implementation can enhance societal well-being. The study concludes that citizens view E-Governance as vital for modern governance.

Keywords: E-governance, Pandemic, Islamabad, Zarai Taraqiati Bank Limited (ZTBL)

1. Introduction

"E-Government to Citizens (G2C), Government to Business (G2B) and Government to employees G2E" (Bannister, 2012). In this technologically advanced cra, growing dependency on technology has led the world to shift to E-technology in order to implement more efficient and effective governance. During pandemic (COVID-19) the growing importance of working online and use of internet has got significant prominence. Nevertheless, when we see any new technology emerging and spreading across the globe, it seems difficult to adopt new technologies among the masses because it takes time and space to accept the change. The outbreak of COVID-19, pandemic has severely affected economics around the world, especially, in developing countries like Pakistan because everything was shifting online and Pakistan has rarely adopted online/E-mode of technology in their governance. E-governance is one of the tools for effective communication among different mediums. It is a tool to provide the capacity to different sectors to run an administrative work by using convenient and efficient technique of E-Governance. E-governance is the installed system, which maximizes the productivity at work but Pakistan faced dire challenges while shifting its work to online mode. The purpose of E-governance is to reach to the beneficiary through information and communication Technology (ICT). It is a well-known phenomenon that E-governance always administers efficiently through effective communication but problem with Pakistan is it lacks basic necessities like food and shelter, so for Pakistan it is difficult to develop E-mode of communication. Therefore, it had to go through the tough times during COVID-19. The ineffective way of communication has made the pandemic situation more difficult to handle, as there were very few offices, which were working online before the time of Pandemic and there had been such difficulties to have meetings at work place. Every department faced different kind of hurdles with certain degree of losses. E-governance is cost

2. Objective of Research Study

The main objectives of this study are:

- To measure the level of adoption for E-Governance among citizens of Islamabad.
- To identify the technological barriers regarding implementation of E-Governance in Pakistan.

3. Research Questions:

- Q1. Whether the citizens of Islamabad prefer to follow E-Governance?
- Q2. Do citizens of Islamabad prefer to follow traditional methods of governance?
- Q3. Whether there are technological barriers for the citizens of Islamabad in the wake of adopting E-governance during Pandemic (COVId-19)?

4. Literature Review

4.1 Information and Communications Technology (ICT)

"ICT (information and communications technology - or technologies) is an umbrella term that includes any communication device or application, encompassing: radio, television, cellular phones, computer and network hardware and software, satellite systems and so on, as well as the various services and applications associated with them, such as videoconferencing and distance learning. (Taher, 2015)" ²

4.2 Governance

"Governance" may be defined as a structures which illustrates to ensure accountability, responsiveness, rule of law, stability, equity and inclusiveness, empowerment, and broad-based participation "The amalgamation of these two terms gives birth to E-governance.

Governance +ICT =E-Governance

¹Bannister, F., & Connolly, R. (2012). Defining e-governance. E-Service Journal: A Journal of Electronic Services in the Public and Private Sectors, 8(2), 3-25

² ICT (information and communications technology - or technologies) definition. LinkedIn. https://www.linkedin.com/pulse/ict-information-communications-technology-definition-mohamed-taher

4.3 E-Governance

With this new paradigm, Information and Communication Technology (ICT) has established new public management system, it makes the policy making and other governmental system easy and operational. ICT play a key role in delivering the public services through E-governance. (Viscusi, 2015) ³ Hence both terms go hand in hand. It qualifies new invention and brings innovation in the administrative system. It is used in almost every sector such as health sector, education etc. E-Governance is the abbreviation of electronic governance. It is the amalgamation of information and Communication technology (ICT) and governance (Atta Ullah, 2020). According to World Bank "E-Government" refers to the use by government agencies of information technologies (such as Wide Area Networks, the Internet, and mobile computing) that have the capacity to transform relations with citizens, businesses, and other departments of government. These technologies can serve a variety of different ends: better delivery of government services to citizens, improved interactions with business and industry, citizen empowerment through access to information, or more efficient government management (Bank, 2015)." Through this application big data can be read accurately and efficiently. It's a time saving application through which huge data is saved and assessed. It increases accountability, efficacy. It provides efficient results through which curtails corruption, and promote merit and transparency in administrative work. (G2C) Government to Citizens. E-government has remarkably influenced the development of third world countries. Pakistan has experienced many challenges while dealing with pandemic because of less availability of online systems at administrative level. It's an effective system if it is provided with proper education and awareness among the masses. Through E-governance Public can easily access directly with government. Its saves time and increases the productivity of a government, which eventually helps in economic growth and contributes toward gross domestic product (GDP) (UN B., 2018). The main focus of the E-governance is to provide an equitable service to the citizens and minimize the risk poor governance system. The achievement of E-governance can be gauged by measuring the of use of E-Technology such as use of online banking system, use of websites in day to day life, use of E-mail and E-system and World Wide Web (WWW).

4.4 Types of E-Governance

There are four kinds of E-government which are as follows (1) Government to Government to Citizens (G2C), (3) Government to Business/Interest Groups (G2B), (4)Government to Employees (G2E)

4.4.1 Government to Government (G2G)

Government to Government (G2G) type of e-governance plays an important role in mobilization of files. It is the process through which government with the help of ICT makes a central e-governing system for the internal process of moving the files from one department to another departments. For instance E-signatures of officials, reporting forms and authentication of files which helps in referring the intra departmental activities (Biswas, 2020).

4.4.2 Government to Citizens (G2C)

In this type of governance the significance of this government to citizen is to facilitate the public services by using an effective mode of application through which the interaction between government and citizens can be made easy. For instance dissemination of information online system provision of online portals⁸, Disaster Planning and Disaster recovery Site Development, tax registration via digital mode, issuance of ID cards, driving licenses of citizens, payment and receiving of receipts of traffic challan and social grant during COVID-19 (Pandemic) via E-messages. Pakistan has started e registration of data for passport and National Identification Card (NIC) with the help of National Database & Registration Authority (NADRA, n.d.). 9

4.4.3 Government to Business (G2B)

This is the third type of E-governance "Government to Business" in which e-commerce takes place by which government buys or sells from their interest groups to run the flow of money and system of the country mainly it procures and provide auction according to the requirement of the government i.e. Paperless trade (Ahmad Odat, 2012).¹⁰

4.4.4 Government to Employees (G2E)

This is the forth and very important type of E-governance in which interaction of government with its employees take place in order to provide bureaucracy in daily routine without interaction making daily work done. Provide solution through E-learning, E-payment of salaries, Emails etc. (Directorate, 2014).¹¹

5. Role of E-Governance during (COVID-19) Pandemic

Before the outbreak of (COVID-19) pandemic Pakistan has already started working on adopting E-governance but Pakistan has not been able to maintain its system completely on E-Systems because there are variety of obstacles, which are being faced in first developing the digital sources for different sectors of government and second after developing the systems there is a huge gap in the implantation process. I will discuss the initiatives taken by government of Pakistan during COVID (pandemic) health crisis. People of Pakistan have gone through socio-economic and technological constraint during that time. The global pandemic has redefined the concept the governance, traditional way of communication has changed to online way of communication. For this purpose Pakistan has made different committees and launched information and complaint center with the help of National Health Services Plan (COVID-19, n.d.). ¹²Government of Pakistan launched the customer services complaint website to facilitate the citizens of Pakistan. But it is difficult to aware the masses and deal with health crisis at the same time especially, in Pakistan where literacy rate is very low more than 70% people lie below the poverty line and very few people have the facility of E-governance. Policy making is one important and implementation is the other (Saugata Bose, 2007-2008.). The key role of E-governance during pandemic was to penetrate to those factions of the society where government can't access directly and they don't have any window to register their issues and problems in short to ensure the interaction between government and citizens. Second important goal is building of an internal and an external system through which the government agencies can interact electronically. Third significance of e-governance is sharing of information, dissemination of information, collection of information and quick decision making with the help of having first-hand information from different medias like, electronic media, and online broadcast etc. Another important role played was coordination of internal governmental agencies, which helped in prompt decision making (UN R. D., 2019). ¹⁴ Digital media proved to have a crucial role in providing good governance in every walk of life. According to the UN report of E-governance (Survey, 2020) ¹⁵ developing countries had a hard time implementing these policies because of lack of infrastructure and other scarceness of resources. Pakistan has faced number of challenges in implementing E-governance. These barriers are as follows

³ Shaping public sector innovation theory: An interpretative framework for ICT-enabled governance innovation. Electronic Commerce Research. https://link.springer.com/article/10.1007/s10660-015-9184-5

⁴ (Ullah et al., 2021)

⁵ E-government. World Bank. https://www.worldbank.org/en/topic/digitaldevelopment/brief/e-government

⁶ United Nations. The role of E-governance in bridging the digital divide. https://www.un.org/en/chronicle/article/role-e-governance-bridging-digital-divide

Biswas, A. (2020, October 2). E-governance: Meaning, objectives, features, and 4 types. SCHOOL OF POLITICAL SCIENCE. https://schoolofpoliticalscience.com/what-is-e-governance/ ⁸Prime Minister's Office, Islamabad, Pakistan. https://www.pmo.gov.pk

⁹ E-Governance. NADRA Pakistan – National Database & Registration Authority Official Website. https://www.nadra.gov.pk/solutions/e-governance/

¹⁰ CORE – Aggregating the world's open access research papers. https://core.ac.uk/download/pdf/25899724.pdf

¹¹ http://www.oecd.org/gov/digital-government/Recommendation-digital-government-strategies.pdf 12 https://covid.gov.pk/

¹³ https://www.researchgate.net/publication/4357352_Implementing_e-governance_using_oecd_model_modified_and_gartner_model_modified_upon_agriculture_of_Bangladesh

¹⁴ Digital Cooperation - Digital Cooperation. https://digitalcooperation.org/wp-content/uploads/2019/06/DigitalCooperation-report-web-FINAL-1.pdf

¹⁵ Home. https://publicadministration.un.org/egovkb/Portals/egovkb/Documents/un/2020-Survey/2020%20UN%20E-Government%20Survey%20(Full%20Report).pdf

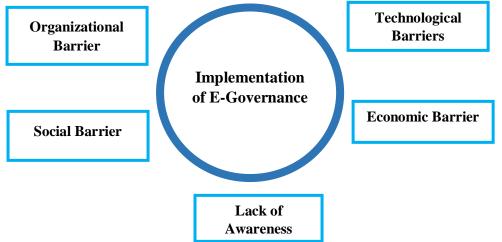
6. Challenges in Implementing E- Governance

The aspiration of this research study is to investigate the technological barriers faced in implementing E-governance during pandemic.

6.1 Organizational Barrier

In the wake of Pandemic, the role of administrative body play a crucial role in implementing E-governance. Political support, and other stakeholder endorsement is very important. Unfortunately Pakistan faced dire challenges because it is a developing state where there is a lack of resources for employing full-scale electronic system of governance.





6.2 Technological Barrier

Pakistan is one of the countries where there are Multi-National Companies (MNC's) and other technological organizations exists but state dearth the ICT infrastructure which is a hurdle in employment of complete digital governance. Inter departmental communication is in embryonic stage, concerns about cyber security is also a question which should be addressed. The outbreak of COVID-19 awaken the government that if we would not modify the traditional methods into electronic mode the state would lag behind.

6.3 Social Barrier

The people of Pakistan resist change and social environment for accepting online technology is time taking and non-serious because people don't trust electronic mode. There is E-banking facility in Pakistan but the most of them still stick to old traditional methods of banking. Similarly in case of having online education People of Pakistan hesitated for online education and they want to follow traditional way of education because of the technological barriers and they are stick to societal taboos.

6.4 Economic Barrier

The key hurdle in adopting e-governance is economic support. Top management backing and fund to develop software's for establishing electronic governance, they don't have basic necessities to meet the requirement of having an online system. Government should release the fund for this purpose.

6.5 Lack of awareness

Another important and most commonly existing factor which is majorly effecting the society in acceptance and adoption of E-governance is lack of awareness among the masses. There is lack of education and lack of awareness about ICT knowledge prevails in the society. It is necessary for government to educate citizens first and then implement the technology for online system

7. Research Methodology

7.1 Population

Zarai Taraqiati Bank Limited has been selected as an area of population for this study.

7.2 Sampling Technique

In this study purposive sampling technique is used. The research study consists of quantitative analysis approach. In this paper, survey was conducted through questionnaire having close ended questions, which were distributed among the citizen of Islamabad in Zarai Taraqiati Bank Ltd (ZTBL). Purposive sampling technique used in order to take information and gather primary data to have empirical based study. A questionnaire with the rule of five points Likert scale was floated among the respondents. There are three main constructs which were deduced from the research study.

- Adoption of online method
- Preference towards traditional methods
- Technological barriers

8. Theoretical Framework

There are two theories which, we have applied in our research study one is Davis technology acceptance model and the other is diffusion of innovation theory. Which are as follows.

8.1 Davis Technology Acceptance Model

Technology Acceptance Model is one of the most influential models of technology acceptance, having two primary factors i.e. influencing an individual's intention to use new technology and perceived ease of use and perceived usefulness. It is difficult for an older adult to adopt the technology who considers playing digital games as wastage of time or difficult phenomena, while one other side the older adult who consider playing digital games as mental stimulation will easily adopt the technology. Whereas, (TAM) faced criticism on a number of grounds, however it consider as a useful general framework and has consistency about number of investigations into the factors that influence older adults' intention to adopt latest technology (Boot, 2016)

The Technology Acceptance Model (TAM) was transformed from the Theory of Reasoned Action has been used as the theoretical basis for many empirical studies of user technology acceptance. Apparently it is the most promising way to overcome the problem of poorly utilized systems. However, e-learning is comparably new and e-learners are particular user group. Thus, original variables i.e. Use, Intention of use, Usefulness and ease of use cannot fully reflect e-learners' motives, for additional intrinsic motivational factors a search is required.

TAM was originated in the psychological theory of reasoned action and theory of planned behavior, TAM has become a key model to predict the human behavior toward potential acceptance or rejection of the technology (Granić, 2014).¹⁶

8.2 Diffusion of Innovation Theory

Diffusion of Innovation (DOI) Theory, proposed by E.M. Rogers in 1962, considered as one of the oldest social science theories. It has originated in communication to explain how, over time, an idea or product gains proper momentum and diffuses (or spreads) through a particular population or social system. The end result of this diffusion is that people, as part of a social system, adopt a new idea, behavior, or product. Adoption means that a person does something have different than what they had previously for example, purchase or use a new product, acquire and perform a new behavior, etc. The key to adoption is that the person must perceive the idea, behavior, or product as new. Like that diffusion is possible (Everett Roger, 2019).¹⁷

In short, the diffusion of innovation promotes the process that occurs as i.e. people adopt a new idea, product, practice, philosophy, and so on. Rogers introduced 5 categories of adopters of an innovation i.e. innovators, early adopters, early majority, late majority, and laggards. At some extent, a sixth group as non-adopters (June Kaminski, 2020). At theoretical approach to understand "how change may be achieved is Rogers' diffusion model". He states that, certain characteristics of the innovation itself may facilitate its adoption.

Factors like poor infrastructures, high costs, language barriers, social and political factors, may create barriers to adoption. Rogers detected that members of all social systems do not accept an innovation in the same manner and at the same rate.

Rogers' theory functions as asks why some technologies are quickly adopted and used while others not.²⁰

There are four major factors that influences the diffusion process are innovation itself, how information about the innovation is communicated, time, and the nature of the social system into which the innovation is being introduced. The Diffusion of Innovation Theory (DOI) is used in this study to investigate the factors which make influence on adoption of social networking sites innovation. Rogers' diffusion of innovation theory conducted study on primary attribute of an innovation instead of the perceived characteristics of the innovation by the potential adopters (Yew-Siang PoongJ. W. Ong, 2008).²¹

9. Significance of the Study

The basic purpose of this research was to investigate the technological barriers prevails among the citizens of Pakistan. A careful study will illustrate the dire challenges in adopting E-governance, people have tilt towards adopting online mode except online method of education. This study will help to provide identification about those technological barriers which are halting the progress and productivity of the citizens. If we eliminate these aforementioned socio-economic, technological and economic barriers people will act positively in adopting E-mode of governance.

10. Research Gap

The research study would make addition to the literature about the societal taboos for the implementation of E-governance in Pakistan

11. Research Study Results

• Test of Reliability

The test of reliability shows reliability of the questionnaire items.

According to the rules of thumb provided by George and Maller

| _> .9 consider excellent | _> .6 consider Questionable |
|---------------------------|-----------------------------|
| _> .8 consider good | _< .5 Unacceptable |
| _> .7 consider acceptable | |

For the variable of adoption for E-Governance the value of Cronbach's alpha is .865, for traditional method the value is .845 and for technological barriers the value is .735. The values shows the reliability of questionnaire.

¹⁶ Technology acceptance model: A literature review from 1986 to 2013. Universal Access in the Information Society. https://link.springer.com/article/10.1007/s10209-014-0348-1

¹⁷ Diffusion of innovation theory. https://sphweb.bumc.bu.edu/otlt/mph-modules/sb/behavioralchangetheories/behavioralchangetheories4.html

 ¹⁸ Diffusion of innovation theory. Canadian Journal of Nursing Informatics. https://cjni.net/journal/?p=1444
 ¹⁹ The Medical Journal of Australia.https://www.mja.com.au/system/files/issues/180_06_150304/san10748_fm.pd

²⁰ Applying Rogers' diffusion of innovation theory to the acceptance of online databases at University zone of Iran. Authentication error ProQuest. https://search.proquest.com/openview/1ea326dccd7c6627e8f4c27875878cb0/1?pq-origsite=gscholar&cbl=2035310 https://ibimapublishing.com/articles/CIBIMA/2008/296737/296737.pdf

| Adopt | Adoption for Governance | | | | | | |
|------------------|-------------------------|---|--|--|--|--|--|
| Relial | Reliability Statistics | | | | | | |
| Cronb | Cronbach's | | | | | | |
| Alpha N of Items | | | | | | | |
| .865 | | 9 | | | | | |

| Technological Barriers | | | | | | |
|------------------------|------------|--|--|--|--|--|
| Reliability Statistics | | | | | | |
| Cronbach's | | | | | | |
| Alpha | N of Items | | | | | |
| .735 | 9 | | | | | |
| | | | | | | |

| Adoption for | Traditional |
|-----------------|-------------|
| Method | |
| Reliability Sta | atistics |
| Cronbach's | |
| Alpha | N of Items |
| .845 | 9 |
| | |

12. Data Analysis:

• Table-1

Determination of Sample Size

| Departr | Departments/Population | | | | | | | | |
|---------|------------------------|-----------|---------|---------------|--------------------|--|--|--|--|
| | | Frequency | Percent | Valid Percent | Cumulative Percent | | | | |
| Valid | Law | 15 | 34.1 | 34.1 | 34.1 | | | | |
| | HR | 15 | 34.1 | 34.1 | 68.2 | | | | |
| | Performance Management | 1 | 2.3 | 2.3 | 70.5 | | | | |
| | Credit Policy | 2 | 4.5 | 4.5 | 75.0 | | | | |
| | Recovery Litigation | 4 | 9.1 | 9.1 | 84.1 | | | | |
| | SRNWD | 4 | 9.1 | 9.1 | 93.2 | | | | |
| | MSD | 3 | 6.8 | 6.8 | 100.0 | | | | |
| | Total | 44 | 100.0 | 100.0 | | | | | |

The questionnaire were distributed among the employees of Zarai Taraqiati Bank (ZTBL), Islamabad. The questionnaire were distributed by hand.

Survey Results

• Construct-I

Q.1) Whether the citizens of Islamabad prefer to follow E-Governance?

Table 1. Qualitative Interpretation of 5 point Likert scale measurement's

| Likert Scale Description | Likert scale Interpretation | Likert Scale Interval |
|--------------------------|-----------------------------|-----------------------|
| Strongly Disagree | 1 | 1.0 - 1.80 |
| Disagree | 2 | 1.81 - 2.60 |
| Neutral | 3 | 2.61 - 3.40 |
| Agree | 4 | 3.41 - 4.20 |
| Stongly Agree | 5 | 4.21 - 5.00 |

The above table shows that mean range from (1.0-1.80) means as strongly disgaree, from (1.81-2.60) means as disagree, from (2.61-3.40) means neutral, from (3.41-4.20) means agree and from (4.21-5.00) as strongly agree

Table Source: (Eva Nyutu, 2020)

Table:2

| Descriptive Statistics of Adoption level for E-Governance among citizens | | | | | | | | |
|--|-----------------|---------|---------|---------------------|-----------|--|--|--|
| | | | | | Std. | | | |
| Statements | N | Minimum | Maximum | Mean | Deviation | | | |
| I preferred the online submission | 44 | 1.00 | 5.00 | 4.1591 | .86113 | | | |
| E-banking is a comfortable phenomena | 44 | 2.00 | 5.00 | 4.1591 | .77589 | | | |
| Electronic Payment is quite easy | 44 | 2.00 | 5.00 | 4.2045 | .79474 | | | |
| E-complaint system is an easy phenomenon | 44 | 2.00 | 5.00 | 4.0227 | .87574 | | | |
| I am comfortable with online registration i.e. ID card etc. | 44 | 1.00 | 5.00 | 3.8864 | 1.16571 | | | |
| Online education system is reliable | <mark>44</mark> | 1.00 | 5.00 | <mark>2.6136</mark> | 1.29787 | | | |
| Online training/ Sessions were effective | 44 | 1.00 | 5.00 | 3.0000 | 1.14119 | | | |
| Online availability of doctor is an effective method | 44 | 1.00 | 5.00 | 2.8182 | 1.29889 | | | |

| I have trust on online system | 44 | 1.00 | 5.00 | 3.2727 | 1.04244 |
|-------------------------------|----|------|------|--------|---------|
| Valid N (list wise) | 44 | | | | |

Note: 1 Strongly Disagree, 2 Disagree, 3 Neutral, 4 Agree, 5 Strongly Agree

The above values of statements shows that citizens have aptitude towards the E-Governance as most the mean values of statements regarding adoption for E-Governance are above 4 and 3 except one statement which related to online education system is less than 3.

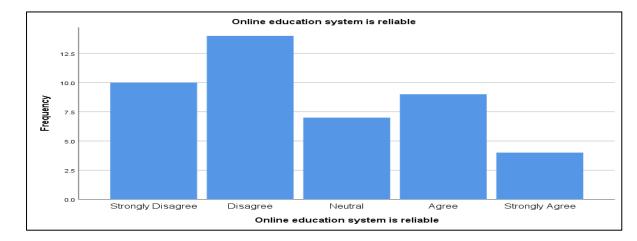
Table 3

Mean Value of Adoption

| Descriptive Statistics | | | | | | | | | |
|-------------------------------|----|--------|--------|--------|-----------|--|--|--|--|
| | | Minimu | Maximu | | Std. | | | | |
| | N | m | m | Mean | Deviation | | | | |
| Adoption | 44 | 2.00 | 5.00 | 3.5707 | .72588 | | | | |
| Valid N (list wise) | 44 | | | | | | | | |

The mean value about the adoption rate of E-Governance shows that most of the citizens prefer to follow E-mode, but they did not agree with some of its features.

Fig.1: Frequencies of a statement from the construct of Adoption



As the frequencies of above Fig.1 shows that most of the people were uncomfortable with one of the statement of construct of adoption which is about online education system. This shows there is a lack of trust on technology but most of them were agreeing the other statements construct regarding adoption of E-Governance. Following are the observations about a question from the construct of adoption level for E-Governance. The figure shows that most of citizens disagree/strongly disagree with the term that "online education system is reliable" we will relate this question further with the third construct which is about the technology barriers.

• Construct-II

Q.2. Whether the citizens of Islamabad prefer to follow traditional methods?

 $\textbf{Table.1. Descriptive Statistics of preference about traditional methods \ rather \ than \ E-Governance \ among \ citizens$

| Statements | N | Minimum | Maximum | Mean | Std. Deviation |
|--|-----------------|---------|-------------------|---------------------|----------------------|
| I preferred manual submission form system | 44 | 1.00 | 5.00 | 2.4318 | 1.20845 |
| I preferred traditional ways of banking | 44 | 1.00 | 4.00 | 2.2727 | .99682 |
| I don't have trust on E-payment | 44 | 1.00 | 4.00 | 2.3636 | 1.03634 |
| To file a manual complain is better than E-Complain | 44 | 1.00 | 5.00 | 2.5455 | 1.13002 |
| I preferred traditional ways of registration of ID card etc. | 44 | 1.00 | 5.00 | 2.3864 | 1.06128 |
| Traditional way of education is more reliable | <mark>44</mark> | 1.00 | <mark>5.00</mark> | <mark>3.4773</mark> | <mark>1.30275</mark> |
| Physical training sessions are more reliable than online | 44 | 1.00 | 5.00 | 3.6364 | 1.20253 |
| Online availability of doctor is not a useful phenomena | 44 | 1.00 | 5.00 | 3.1364 | 1.24995 |
| I have trust on traditional ways rather than online | 44 | 1.00 | 5.00 | 3.0682 | 1.06526 |
| Valid N (list wise) | 44 | | | | |

Note: 1 Strongly Disagree, 2 Disagree, 3 Neutral, 4 Agree, 5 Strongly Agree

According the above statements we can observe that most of the people have mixed approach but most of them agree with the phenomena that traditional mode of education/training sessions etc. are more reliable.

Table-2

Mean Value of preference for traditional methods

| Descriptive Statistics | | | | | | | | | |
|------------------------|----|---------|---------|--------|----------------|--|--|--|--|
| | N | Minimum | Maximum | Mean | Std. Deviation | | | | |
| Traditional | 44 | 1.40 | 4.40 | 2.8591 | .64351 | | | | |
| Valid N (list wise) | 44 | | | | | | | | |

The mean value about the adoption rate for traditional methods shows that citizens of Islamabad have mixed approach for the traditional methods of governance.

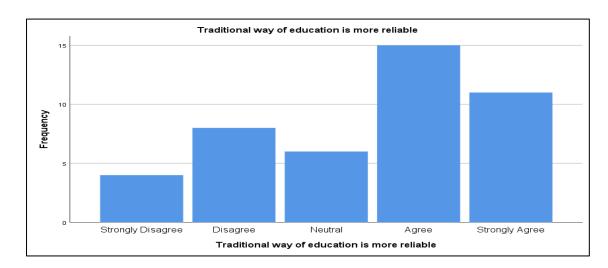


Fig.2: Frequencies of one of the statement of constructs about preference for traditional methods However, same as other construct the most of the people were disagree with majority of question but they were agree and

Strongly agree with the following question. Here in above Fig.2 most of the citizens agreed/strongly agree with the phenomena that traditional method of education is reliable however on other hand most of them were not in favor of traditional methods.

• Construct-III

Q.3. Did there are the technological barriers for the citizens regarding E-Governance?

Table-1. Descriptive statistics about the level of agreement of citizens about technological barriers for E-Governance

| Statements | N | Minimum | Maximum | Mean | Std. Deviation |
|--|-----------------|---------|-------------------|---------------------|---------------------|
| There is a lack in technology regarding online system | 44 | 2.00 | 5.00 | 4.0455 | .74567 |
| I think without proper knowledge of technology online system is a complicated phenomena | 44 | 2.00 | 5.00 | 4.2045 | .59375 |
| I never thought that knowledge about technology is necessary before to implement online system | 44 | 1.00 | 5.00 | 3.2273 | 1.30942 |
| Without knowledge about technology the online system can be dangerous for the citizens | 44 | 1.00 | 5.00 | 4.0227 | .97620 |
| It is necessary for government to educate citizens first then implement online technology | 44 | 1.00 | 5.00 | 4.3182 | .77077 |
| lack of knowledge acts a big barrier for online system | 44 | 1.00 | 5.00 | 4.1818 | .81477 |
| Social environment for accepting online technology is time taking and non-serious | 44 | 2.00 | 5.00 | 3.8409 | .98697 |
| It is necessary to educate citizens about online technology for future pandemics | <mark>44</mark> | 3.00 | <mark>5.00</mark> | <mark>4.4091</mark> | <mark>.58342</mark> |
| Nobody educated me properly for online technology in the wake of pandemic | 44 | 2.00 | 5.00 | 3.7045 | 1.06922 |
| Valid N (list wise) | 44 | | | | |

Note: 1 Strongly Disagree, 2 Disagree, 3 Neutral, 4 Agree, 5 Strongly Agree

The mean values of separate statements of the above table shows that most of people are agree that there are various technological barriers for the implementation of E-Governance

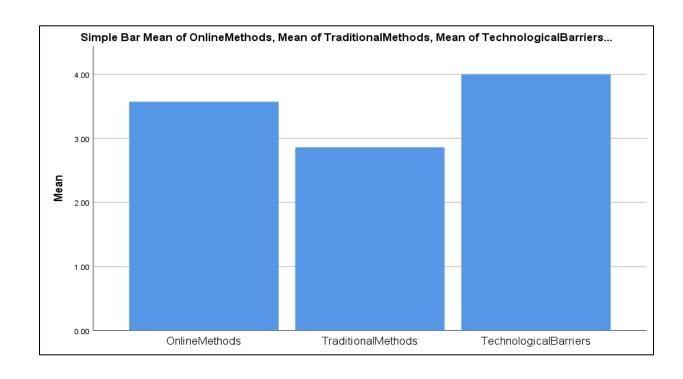
Table-2. Mean value for whole construct (Technological Barriers)

| Descriptive Statistics | | | | | |
|------------------------|----|---------|---------|--------|----------------|
| | N | Minimum | Maximum | Mean | Std. Deviation |
| Technology | 44 | 2.56 | 5.00 | 3.9949 | .50943 |
| Valid N (list wise) | 44 | | | | |

Fig.3: Frequencies of one of the statement of constructs about

The mean value shows that citizens agree with the fact that there are technological barriers.

Graph shows that Overall Mean of all the constructs, adoption of online, adoption for traditional method, and identification of technological concerns.



The mean value of this question shows in figure that most of people were agree with the phenomena that there are certain social, environmental, governance and technical challenges are act as barrier for the implementation exemplary E-Governance. Hence the above two questions of the other constructs people that people want E-Technology but due to certain hurdles they force to adopt some traditional ways. The mean value of this question shows in figure that most of people were agree with the Phenomena that there are certain social, environmental, governance and technical challenges are act as barrier for the implementation exemplary E-Governance. Hence the above two questions of the other constructs people that people want E-Technology but due to certain hurdles they force to adopt some traditional ways.

13. Interesting Findings:

As we can observe form the above findings the majority of citizens prefer to follow the E-Governance but they do not agree or we can say they were not comfortable with the online education system, as on the other side they don't want to prefer traditional ways of technology but they prefer traditional methods of education. The final research question hence proved that there is lack in technology regarding proper implementation of E-Governance but people still want to prefer E-Governance rather than traditional governance and their intention elaborates that they would definitely follow the methods of E-Governance in case of smooth working.

14. Conclusion

The research study concludes that the traditional method still prevails in the society. If we want to have a better quality of life, we have to eliminate technological barriers to provide efficient communication in every walk of life. E-governance has become necessity for the prosperity and progress of the Pakistan now. The efficient and effective E-Governance has the capacity to produce quality of life for the society. Hence this study prove that E-Governance has become need of most of the individuals, people want elimination of technological barriers here in the society for the quality use of E-Governance.

Bibliography

A., A. B. (2020, October 2). E-governance: Meaning, objectives, features, and 4 types. SCHOOL OF POLITICAL SCIENCE, pp. https://schoolofpoliticalscience.com/what-is-e-governance/.

Ahmad Odat, M. K. (2012). E-Government Challenges and Opportunities:. IJCSI International Journal of Computer Science Issues, Vol. 9, Issue 5, No 2, September 2012, https://core.ac.uk/download/pdf/25899724.pdf,.

Atta Ullah, C. P. (2020). The Role of E-Governance in Combating COVID-19 and Promoting Sustainable Development: A Comparative Study of China and Pakistan. Chinese Political Science Review.

Bank, W. (2015, May 19). Retrieved from https://www.worldbank.org/en/topic/digitaldevelopment/brief/e-government.

Bannister, F. &.-g.-S.-2. (2012). E-Service Journal: A Journal of Electronic Services in the Public and Private Sectors,. *Defining e-governance*.

Biswas, A. (2020, october 2). E-Governance: Meaning, Objectives, Features, And 4 Types.

Boot, N. C. (2016). Technology, Gaming, and Social Networking. *Computers in Human Behaviour*, 389-407.

COVID-19, P. (n.d.). COVID web page. Retrieved from https://covid.gov.pk/.

Directorate, P. G. (2014). Recommendation of the Council on Digital. Organisation for Economic Co-operation OECD.

Eva Nyutu, W. W.-S. (2020). Correlational Study of Student Perceptions of their Undergraduate Laboratory Environment with respect to Gender and Major. 83-102.

Everett Roger. (2019). Diffusion of Innovation Theory. Retrieved from https://sphweb.bumc.bu.edu/otlt/mph-modules/sb/behavioralchangetheories/behavioralchangetheories4.html.

F. Nazari, F. K. (2013). Applying Rogers' Diffusion of Innovation theory to the acceptance of online databases. *Malaysian Journal of Library & Information Science*.

Granić, N. M. (2014). Technology acceptance model: a literature review from 1986 to 2013. *Universal Access in the Information Society*.

June Kaminski. (2020). Diffusion of Innovation Theory. Canadian journal of Nursing Informatics. Retrieved from https://cjni.net/journal/?p=1444.

NADRA. (n.d.). National Database & Registration Authority Official Website. Retrieved from https://www.nadra.gov.pk/solutions/e-governance.

Saugata Bose, M. R. (2007-2008.). Implementing E-Governance Using OECD Model (Modified) and Gartner Model (Modified) Upon Agriculture of Bangladesh. Computer and information technology. 10th international conference.

Survey, E. (2020). *E-Government Survey 2020.* UN Organization.

Taher, M. (2015, December). ICT (information and communications technology - or technologies) definition. Retrieved from https://www.linkedin.com/pulse/ict-information-communications-technology-definition.

The Medical Journal of Aurstralia. (n.d.). Retrieved from https://www.mja.com.au/system/files/issues/180_06_150304/san10748_fm.pd.

UN, B. (2018). United Nations. The role of E-governance in bridging the digital divide. Retrieved from https://www.un.org/en/chronicle/article/role-e-governance-bridging-digital-divide.

UN, R. D. (2019). the age of interdependency. UN Foundation.

Viscusi, G. M. (2015). Shaping public sector innovation theory: An interpretative framework . *Electronic Commerce Research.*, https://link.springer.com/article/10.1007/s10660-015-9184-5, for ICT-enabled governance innovation.

Yew-Siang PoongJ. W. Ong, T. H. (2008). 3G Services Adoption among University Students:. Journal of Communications of the IBIMA.