

Exploring the Challenges of E-Governance: A Case Study of Pakistan

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Abstract

This project has discussed the challenges of e-governance in Pakistan by using different scales and strategies like trust of public in e-system, capabilities of public of using e-system and government infrastructure. General public is facing challenges of using e-governance and this research aims to engage with the people which are directly involved with the current execution of e-government system in Pakistan to provide the overview of all the challenges which are faced by public. This thesis is constructed on primary data and this data is collected by the help of a questionnaire. After that data was analyzed through software called Statistical Package for Social Science (SPSS) and further analyzed by descriptive statistics and linear regression. Linear regression was carried out to calculate the significant values of variables. The findings of this research can inform policymakers and practioners seeking to address challenges of e-governance. The objective of this paper is to review the updated and available literature about e-government implementation stages and its challenges. Depending on literature, it reviews several relevant issues regarding e-government such as public capabilities for using e-government, public trust on system, government infrastructure and it focuses on the challenges of e-government implementation. Moreover, according to the linear regression results it shows that there is a relationship between challenges of e-governance and capabilities.

Keywords: E-Governance, Organization Citizenship Behavior, Effectiveness.

1. Introduction

E-governance, also known as electronic governance or digital governance, refers to the use of information and communication technologies (ICTs) to improve the efficiency, effectiveness, and transparency of government services and processes. While e-governance has the potential to transform the way governments operate, there are several challenges that must be addressed to fully realize its benefits. E-governance initiatives offer significant potential to improve the efficiency, effectiveness, and transparency of government services and processes. Governments must work to address these challenges to ensure that e-governance initiatives are effective and beneficial to all stakeholders. E-governance is the use of information and communication technology (ICT) to improve the efficiency, transparency, and accountability of government

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services. In Pakistan, e-governance has been recognized as a means to address the longstanding issues of corruption, inefficiency, and red tape in government operations. However, the implementation of e-governance in Pakistan has faced numerous challenges.

One of the major challenges of e-governance in Pakistan is the digital divide. A significant portion of the population, particularly those living in rural areas, lacks access to ICT infrastructure, including the internet and computers. This limits the reach of e-governance initiatives, as many citizens are unable to access online government services.

Technical Infrastructure: E-governance initiatives require a strong technical infrastructure, including hardware, software, and networking technologies. This infrastructure must be designed, developed, and maintained to ensure its reliability, security, and scalability. Building and maintaining such infrastructure can be expensive and requires significant technical expertise.

Data Privacy and Security: E-governance initiatives require the collection, storage, and processing of personal information, which can raise concerns about data privacy and security. Governments must ensure that appropriate measures are in place to protect personal information from unauthorized access, theft, or misuse.

Resistance to Change: E-governance initiatives often require changes in the way government services are delivered and consumed. These changes can be met with resistance from stakeholders who may be reluctant to adopt new technologies or processes. Overcoming resistance to change requires effective communication and stakeholder engagement.

Legal and Regulatory Framework: E-governance initiatives must comply with a range of legal and regulatory frameworks, including data protection laws, cybercrime laws, and intellectual property laws. These frameworks can be complex and may vary across different jurisdictions, which can create challenges for e-governance initiatives that operate across borders.

Capacity Building: E-governance initiatives require a skilled workforce with expertise in technology, policy, and governance. Governments must invest in capacity building to develop and maintain the necessary skills and knowledge required to implement and manage e-governance initiatives.

Another challenge is the lack of skilled human resources in the government. The effective implementation of e-governance requires a highly skilled workforce with expertise in ICT and management. However, the government of Pakistan faces challenges in recruiting and retaining qualified personnel, as the private sector offers more competitive salaries and benefits.

Moreover, cybersecurity is a major concern in e-governance initiatives. As e-governance systems rely heavily on the use of ICT, there is a risk of cyber-attacks that can compromise the integrity and confidentiality of government data. The government of Pakistan needs to prioritize cybersecurity measures to prevent data breaches and ensure the privacy of citizens.

Lastly, political instability, corruption, and bureaucratic hurdles have also hampered the progress of e-governance in Pakistan. These issues create a challenging environment for implementing e-governance initiatives, and the lack of political will and commitment can hinder the development of sustainable e-governance systems.

1.1. Research Problem

E-governance is the use of information and communication technologies (ICTs) to improve the delivery of government services, facilitate communication between the government and citizens, and enhance transparency and accountability in governance. In recent years, there has been a growing recognition of the potential of E-governance to improve the efficiency and effectiveness of public services in Pakistan. However, the country still faces numerous challenges in

implementing effective E-governance systems. Therefore, this research problem seeks to identify and examine the key challenges faced by Pakistan in implementing effective E-governance systems. Some of the potential challenges that could be explored include: Pakistan may lack the necessary infrastructure and resources to support the implementation of E-governance systems, including adequate internet connectivity, hardware and software, and trained personnel. Despite the potential benefits of E-governance for citizen participation, Pakistan may face challenges in encouraging citizens to use and engage with these systems, particularly among vulnerable or marginalized populations. Pakistan is a diverse country with multiple languages and cultures, which could pose challenges for the development of E-governance systems that are accessible and user-friendly across different regions and demographics. Pakistan has experienced political instability in recent years, which could hinder the implementation of E-governance systems by causing disruptions to government operations and reducing public trust in government. The implementation of E-governance systems may raise concerns about data privacy and security, particularly in a country with limited regulations and protections in this area.

By identifying and examining these challenges, this research could help to inform the development of more effective E-governance policies and strategies in Pakistan, with the aim of improving the delivery of public services and promoting greater transparency and accountability in governance.

1.2. Research Question

The main research question is:

What are challenges of E-governance in Pakistan?

To direct the whole process of research, the following research question helped a lot to understand the research.

- What are the primary concerns of the public regarding the privacy and security of their personal data in e-governance systems?
- What are the key challenges faced by the public in adopting e-governance initiatives?
- How can e-governance be used to improve the efficiency and effectiveness of public services in Pakistan?

1.3. Research Objective

The objective of this research is to identify and analyze the challenges faced by the implementation of E-governance in Pakistan. This study aims to investigate the factors that hinder the successful implementation of E-governance initiatives and provide recommendations for improving the effectiveness of E-governance in Pakistan. The specific objectives are as follows:

- To identify the current status of E-governance initiatives in Pakistan, including the scope, nature, and level of implementation.
- To identify the challenges faced by the implementation of E-governance in Pakistan, such as technical, organizational, cultural, and legal barriers.
- To analyze the impact of these challenges on the effectiveness and efficiency of E-governance initiatives in Pakistan.
- To examine the strategies and best practices adopted by other countries to overcome these challenges and improve the implementation of E-governance.

1.4. Research Significance

- To make sure data security and privacy: involves examining the legal and ethical aspects of data collection, processing, and storage, and proposing strategies to ensure data security and privacy.
- To identify strategies to enhance the implementation of e-governance. This involves examining successful case studies of e-governance implementation, identifying best practices, and proposing strategies to overcome the challenges faced.
- To identify and understand the challenges that hinder the implementation of e-governance. Involves examining the factors that influence the adoption of e-governance, such as technical, organizational, social, and cultural factors.

1.5. Research Scope

- The scope of research on challenges of e-governance in Pakistan can be broad and comprehensive, covering a range of topics related to the adoption, implementation, and sustainability of e-governance initiatives in the country.
- An assessment of the existing policy and legal framework for e-governance in Pakistan, including an analysis of its strengths and weaknesses, and recommendations for improvements.
- An analysis of the existing Challenges of e-governance infrastructure and technology capabilities in Pakistan, including an assessment of their readiness to support e-governance initiatives, and recommendations for strengthening and expanding the ICT infrastructure.
- An analysis of the role of political will and leadership in promoting e-governance initiatives in Pakistan, including an assessment of the incentives and disincentives for political leaders to support e-governance, and recommendations for improving political will and leadership.
- The study on the given statements up there can help to face Challenges of E-governance in Pakistan

2. LITERATURE REVIEW

This section stretches all-encompassing literature and speculative material about each and every variable debated in this research and their relationship with others variables. Each and every variable is chatted individualistically with its impact on others. E-governance initiatives may exacerbate existing inequalities and exclusion in society. For example, e-governance initiatives may exclude those who do not have access to the necessary ICTs or digital skills, or those who are not proficient in the official language of the government. According to a report by the United Nations Development Programme (UNDP), e-governance initiatives must be designed with inclusivity and equity in mind to avoid exacerbating existing inequalities. (UNDP, 2018).

E-governance refers to the use of information and communication technologies (ICTs) to improve the efficiency, transparency, and accountability of government services and processes. E-governance initiatives aim to transform traditional government practices and enhance citizen participation in decision-making, service delivery, and policy implementation. E-governance can take different forms, including online service delivery, citizen engagement platforms, digital

identity systems, e-procurement systems, and data-driven decision-making tools. Some of the benefits of e-governance include improved Service Delivery. E-governance can enhance the speed, accuracy, and quality of government services by enabling citizens to access and interact with government services online. This can reduce bureaucratic delays, corruption, and inefficiencies in service delivery. Increased Transparency and Accountability: E-governance can promote transparency and accountability in government processes by providing citizens with access to information on government decisions, expenditures, and performance. This can enhance citizens' trust in government and reduce opportunities for corruption and malpractice.

Enhanced Citizen Participation: E-governance can facilitate citizen participation in decision-making, policy formulation, and service delivery through online consultations, feedback mechanisms, and citizen engagement platforms. This can enable citizens to voice their opinions and concerns and hold government officials accountable.

Improved Efficiency and Cost Savings: E-governance can reduce administrative costs and improve efficiency in government processes by automating routine tasks, reducing paperwork, and streamlining procedures. This can save time and resources for both citizens and government officials.

E-governance infrastructure has become an essential part of the public administration systems in developed countries. The key aspects of e-governance infrastructure in developed countries are

- **Broadband connectivity:** Developed countries have high-speed broadband infrastructure that is accessible to a large portion of the population. This allows citizens to access e-governance services, regardless of their location.
- **Digital identity:** Developed countries have established robust digital identity frameworks that allow citizens to securely and reliably access government services online. These frameworks also enable cross-border e-governance services, making it easier for citizens to interact with governments in other countries.
- **Mobile accessibility:** Many developed countries have mobile-friendly e-governance services that enable citizens to access government services using their smartphones and tablets.
- **Open data:** Developed countries have implemented policies and regulations to promote open data, which enables citizens to access government data and use it to develop innovative applications and services. Open data also promotes transparency and accountability in public administration.
- **Cybersecurity:** Developed countries have implemented robust cybersecurity measures to protect their e-governance systems and data. These measures include encryption, multi-factor authentication, and network security protocols.

These are just a few examples of the e-governance infrastructure that has been implemented around the world. Many other countries have also implemented digital tools and platforms to improve their governance systems, and e-governance is likely to continue to play an important role in the delivery of public services in the future. Overall, the developed countries have made significant progress in developing an advanced e-governance infrastructure, which is essential for promoting transparency, accountability, and citizen participation in the democratic process.

The survey which is conducted for the data carried out from people it came to know that capabilities of people is the issue in not adopting the e-governance effectively because they are not literate enough to understand the electronic system. Moreover, language is also a huge barrier in understanding and adopting the e-governance by citizens because majority of the population is

not educated and the official language in Pakistan is English and because of that people hesitate to use e-governance which is the major issue for e-governance in Pakistan (mehmood, 2021).

With the advent of time, many developing countries are moving towards e-governance, with a number of them being in their initial stages. How well do they fare in their efforts depends largely on how do their citizens respond to these reform activities that are likely to change the landscape of governance and are considered to be a big step in the field of public service delivery. However, the success of these initiatives will depend on several factors which include the ease of use, its utility, credibility, safety, and its relative advantage. Deakin and Dillon argue that the success of these initiatives depend heavily on the trust factor and how much do citizens trust such initiatives concerning their security and privacy issues (Siddique, 2021)

2.1. Challenges of e-governance

Despite these significant achievements, several challenges remain in the implementation of e-governance in South Asia. These challenges include:

- Limited access to digital infrastructure, especially in rural areas.
- Lack of digital literacy and awareness among citizens.
- Limited resources and funding for e-governance projects.
- Limited coordination and collaboration among government agencies and departments.
- Security concerns, including cyber threats and data privacy.

2.2. Challenges of e-governance in Pakistan

Pakistan has a low level of E-governance infrastructure and internet penetration, which limits the reach of e-governance initiatives. According to the Pakistan Telecommunication Authority (PTA), as of December 2020, the country's internet penetration rate was 35%. (PTA, 2020). This low level of internet access hampers the ability of citizens to access online government services, such as e-tax filing, online passport renewal, and land record management systems. A significant proportion of the population in Pakistan lacks the necessary digital literacy skills to use E-governance, including computers, smartphones, and the internet. This is particularly true for citizens in rural areas. According to a study by the International Telecommunication Union (ITU), only 9% of the rural population in Pakistan had used the internet in the past year. (ITU, 2018) This lack of digital literacy limits citizen participation in e-governance initiatives.

Cybersecurity is a major issue in Pakistan, with reports of frequent cyber-attacks on government systems. In 2019, the Federal Investigation Agency (FIA) reported over 1,000 cyber-attacks on government websites in a single year. (FIA, 2019) These attacks raise concerns about the vulnerability of e-governance systems and the risk of data breaches. There are concerns about the institutional capacity and political will to implement e-governance initiatives in Pakistan. Many e-governance projects have failed to achieve their intended goals due to poor planning, inadequate resources, and a lack of political will. According to a report by the World Bank, there is a need for effective coordination and collaboration between different government departments and agencies to ensure the success of e-governance initiatives. (World Bank, 2016). The lack of a robust legal and regulatory framework is another challenge to e-governance in Pakistan. A study by the Pakistan Institute of Legislative Development and Transparency (PILDAT) identified the absence of clear legal and regulatory frameworks as a major obstacle to e-governance in Pakistan.

Citizen awareness and participation is another challenge to e-governance in Pakistan. A study by the Centre for International Private Enterprise (CIPE) found that there is a lack of awareness and

understanding of e-governance among citizens in Pakistan.

The study recommended the development of public awareness campaigns to educate citizens about e-governance (CIPE, 2016). Another study identified the lack of citizen participation in e-governance initiatives as a barrier to their effectiveness. The study recommended the involvement of citizens in the design and implementation of e-governance initiatives to ensure their relevance and impact (Shahzad et al., 2018).

The lack of political will is also a significant challenge to e-governance in Pakistan. A study by the United Nations Development Programme (UNDP) identified the lack of political will as a key obstacle to e-governance in Pakistan. The study found that government officials are often resistant to change and are reluctant to invest in e-governance initiatives (UNDP, 2017).

Another study identified corruption and vested interests as barriers to e-governance in Pakistan. The study recommended the involvement of civil society organizations and the media in monitoring e-governance initiatives to ensure transparency and accountability (Siddiqui & Ahmad, 2017).

Cybersecurity is another significant challenge to e-governance in Pakistan. A report by the Pakistan Telecommunication Authority (PTA) identified several cyber threats to e-governance, including phishing attacks, malware, and ransomware. The report also noted that there is a lack of awareness and capacity among government officials and citizens to protect themselves from cyber threats (PTA, 2020). The study recommended the development of a national cybersecurity policy and the establishment of a dedicated agency to oversee cybersecurity (Ali et al., 2019).

Infrastructure and Connectivity: Limited access to reliable electricity and internet connectivity in many parts of the country can impede the deployment and effectiveness of e-governance initiatives. **Political Will and Institutional Capacity:** E-governance initiatives require strong political will and institutional capacity to ensure their sustainability and effectiveness. However, these factors are often lacking in the Pakistani context.

2.3. Technological challenges of e-governance

The two major technological challenges of e-governance are interoperability and technical expertise. E-governance initiatives often involve multiple agencies and systems that need to communicate and exchange data seamlessly. However, achieving interoperability between different systems and platforms can be challenging due to differences in data formats, standards, and protocols. Developing and implementing e-governance initiatives requires specialized technical expertise in areas such as software development, data analytics, and system integration. However, there is a shortage of skilled IT professionals in many countries, including Pakistan, which can impede the deployment and effectiveness of e-governance initiatives.

2.4. Institutional challenges of e-governance

Institutional challenges of e-governance in Pakistan include:

Lack of Political Will: E-governance requires strong political will and leadership to be successful. In some cases, political leaders may be reluctant to implement e-governance programs due to fear of losing control or political opposition. This can result in inadequate resources being allocated to e-governance initiatives (Defitri, 2022).

Institutional Capacity: E-governance initiatives require adequate institutional capacity to manage and operate complex technological systems and processes. However, many government institutions in Pakistan lack the necessary human, financial, and technological resources to implement e-governance initiatives effectively (Vukanovic, 2013).

Fragmentation and Coordination: E-governance initiatives often involve multiple government agencies and departments that need to coordinate and collaborate effectively to ensure their success. However, fragmentation and lack of coordination among government agencies can hinder the implementation and effectiveness of e-governance initiatives.

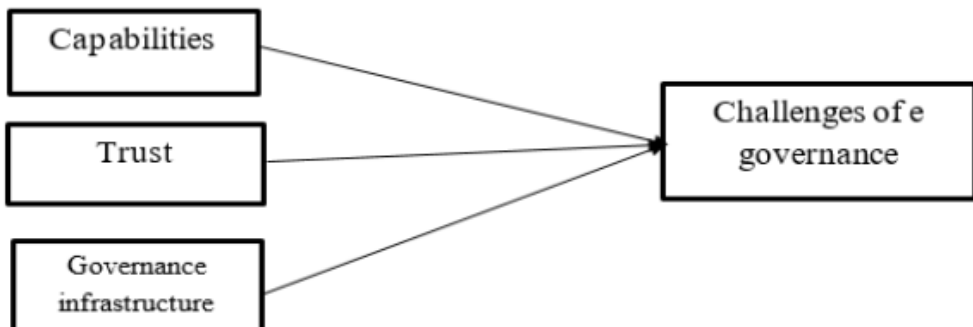
Legal Framework: E-governance initiatives require a robust legal framework to ensure their legality, transparency, and accountability. However, the legal framework for e-governance in Pakistan is still evolving, and there are concerns about the adequacy of data protection and privacy laws.

Bureaucratic Resistance: The hierarchical and bureaucratic nature of government institutions in Pakistan can create resistance to change and innovation, particularly among senior officials who may perceive e-governance initiatives as a threat to their power and authority.

Resistance to change: Resistance to change is a common institutional challenge in any organizational change. In the case of e-governance, government officials may be resistant to adopting new technologies and processes, which can impede the successful implementation of e-governance initiatives.

The survey which is conducted for the data carried out from people it came to know that capabilities of people is the issue in not adopting the e-governance effectively because they are not literate enough to understand the electronic system. Moreover, language is also a huge barrier in understanding and adopting the e-governance by citizens because majority of the population is not educated and the official language in Pakistan is English and because of that people hesitate to use e-governance which is the major issue for e-governance in Pakistan.

1. 2.6 Theoretical framework



H1 There is significance relationship between challenges of e-governance and trust.	Accepted
H0 There is no significance relationship between challenges of e-governance and trust.	
H2 There is significance relationship between challenges of e-governance and capabilities.	Accepted
H0 There is no significance relationship between challenges of e-governance and capabilities	
H3 There is significance relationship between challenges of e-governance and government infrastructure.	Accepted

H0 There is no significance relationship between challenges of e-governance and government infrastructure.	
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3. RESEARCH METHODOLOGY

This chapter provides the material concerning the data collection method as it encompasses each and every aspect of the investigation strategy, measure questions that are questioned, model collection techniques and size, the plan of research. It contains information and name of organizations from where data is together, and the name of author of questionnaire and comprehensive information of how data is administered for result.

3.1. Research Design:

The research design describes the overall plan for conducting the study. This includes the research questions, hypotheses, or objectives of the study, as well as the type of study (e.g., experimental, survey, case study, ethnographic, etc.) and the rationale for selecting that type of study. The research design should also include information about the variables being measured and how they will be manipulated or controlled.

3.2. Participants and procedure

This study is quantitative, which shows that we got numerical data from the sources and did analysis on it. The data was collected from 173 students of UMT university.

The collection of sample is created on the basis of usage of e-governance facility. The participants use e-governance for the purpose of paying income tax and corporate tax, application of personal documents such as passport and driver's license, and employment search services. So total 173 questionnaires were circulated. Responses only were measured for further data analysis. Different types of result have occurred which explained in different parameters like standard deviation, mean, median and mode etc. Along with the questionnaires participants are also received a letter in which the purpose of the study and different scopes were discussed.

3.3. Sample Design

The besieged populace of my thesis is general public of Pakistan. The basic intention of this study is to explore the challenges which are faced by public in practicing e-governance. Because our targeted population use facility of e-governance for different purposes that's why the result was honest and good. So our targeted population is well apposite for this research because they are the frequent user of facility of e-governance.

3.3.1. Sample Technique

In this thesis convenience sampling method is used. Convenience sampling is a non-probability sampling method where subject is nominated because of their opportune convenience. This technique is used in this thesis because subject is easily available for participation. A questionnaire was given to the general public and analysis have done on that.

3.3.2. Sample Size

The statistics was composed from 173 respondents, which are the general public and students of University of Management and Technology.

3.3.3. Measures and Instruments used in research

The Quantitative research approach is used to analyzed the data which is collected. It is often used to test hypotheses, generalize findings, and identify relationships between variables. The primary data collection methods used in quantitative research include surveys, experiments, and secondary data analysis. The data collected in quantitative research is analyzed using statistical methods such as regression analysis, correlation analysis, and analysis of variance (ANOVA). In this thesis, Briet, Naring, Brouwers, & Droffelaar (2005) scale was used to observe the challenges which is faced by public. All the items on this scale were rated from 1 (strongly agree) to 5 (strongly disagree).

4. FINDINGS

This section of thesis deals with the investigation part. Sample size is 174 and both male and female participants participated in this sample. SPSS software is used to analyze the result and get findings.

4.1 Data Analysis: Following is the descriptive statistics table.

Statistics					
		Age	Education	Gender	Income in Thousands
N	Valid	173	173	173	172
	Missing	41	32	21	29
Mean		1.01	1.28	1.55	1.75
Median		1.00	1.00	2.00	1.00
Mode		1	1	2	1
Std. Deviation		.076	.625	.498	1.369
Variance		.006	.390	.248	1.873
Range		1	2	1	4
Minimum		1	1	1	1
Maximum		5	5	5	5

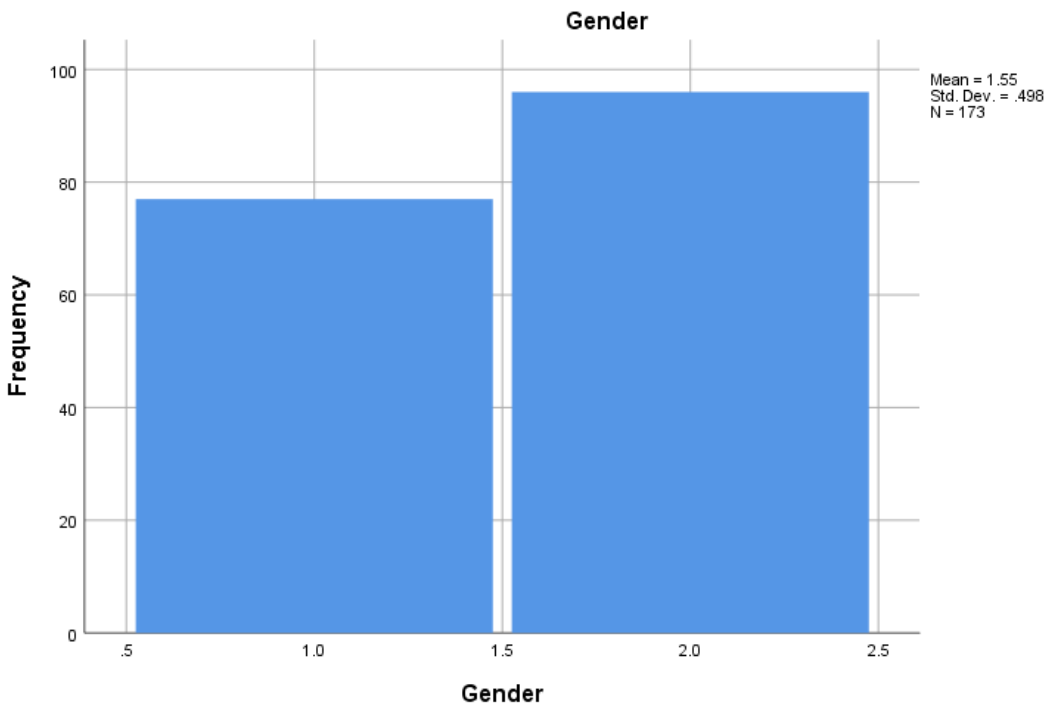
This table is showing the values of Mean of different variable like the mean value of education is 1.28 and in the same way the mean value of age is 1.01 and the values of the other variables like income and gender are 1.75 and 1.55 respectively. In the same way the values of median for these variables 1.0, 1.0, 2.0 and 1.0 respectively and the values of mode are 1, 1, 2 and 1 respectively.

4.1. Gender

There are 173 Respondents to those data are collected, 77 are male, and 96 are female respondents. The percentage of male 44.5 and the valid percentage of female is 55.5. Graphical representation is given below.

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	77	32.2	44.5	44.5
	2	96	40.2	55.5	100.0
	Total	173	72.4	100.0	



4.2. Age

The given bar chart is mentioning the age group of the people who participate in this survey. Hence this survey was conducted among youngsters so the highest percentage of the age is between 20-30.

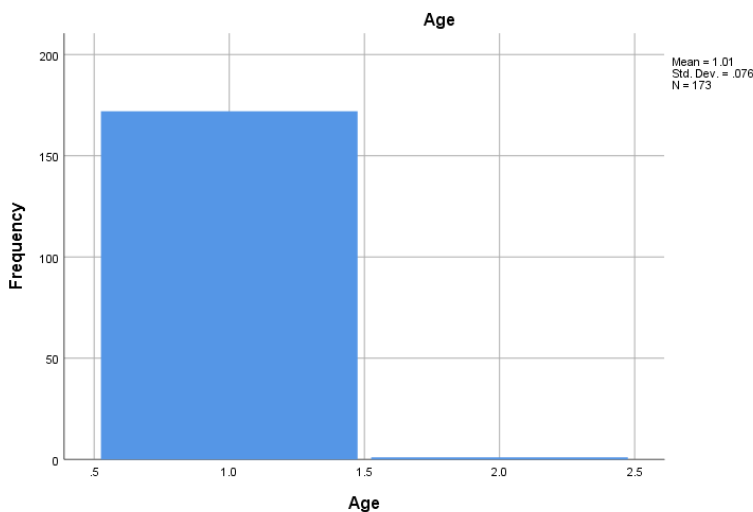
1 representing 20 to 30 age group members

2 representing 31-40 age group members.

The percentage of 20 to 30 age group member 99.4% and 31 to 40 age group member percentage is 0.6.

The graphical representation is given below

Age					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	172	72.0	99.4	99.4
	2	1	.4	.6	100.0
	Total	173	72.4	100.0	

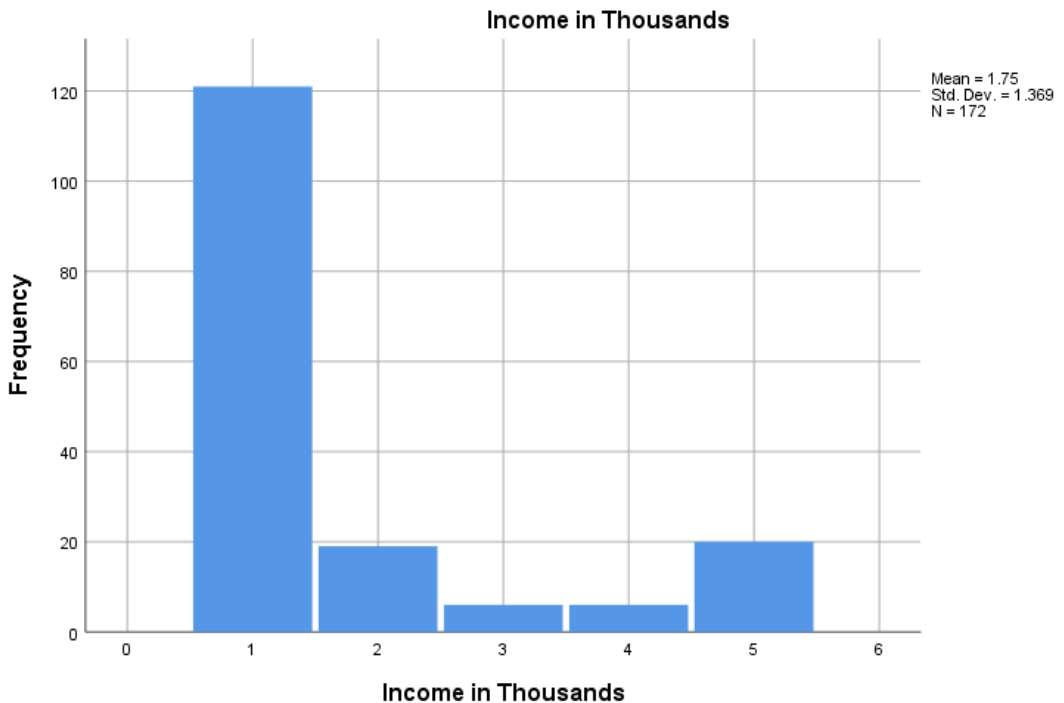


4.3. Income

The given bar chart shows the income of the participants which is showing according to the chart that the highest percentage of the 121 participants income lies between 20 to 30 thousands in pkr. The 19% participant's income lies between 31 to 40 thousand. The 6% participants income lies between 41to 50 thousand. The other 6% participant income lies between 51-60 thousand and 20% participants income is 60 above.

Income in Thousands					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	121	50.6	70.3	70.3

	2	19	7.9	11.0	81.4
	3	6	2.5	3.5	84.9
	4	6	2.5	3.5	88.4
	5	20	8.4	11.6	100.0
	Total	172	72.0	100.0	



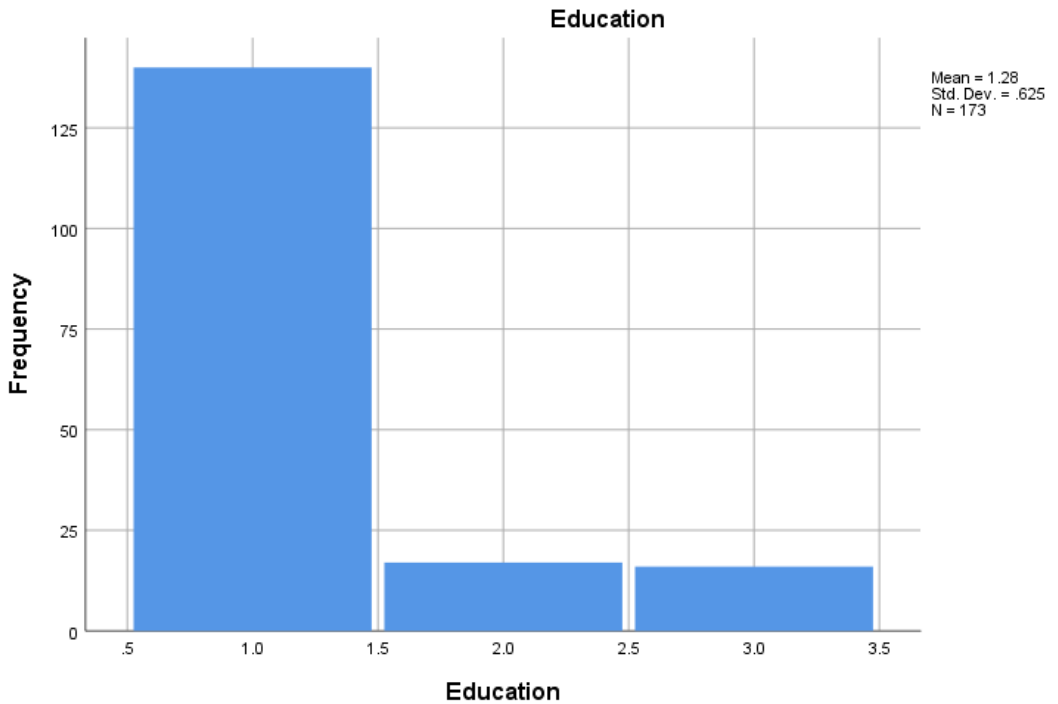
4.4. Education

This bar chart shows the data of education that 140 participants are done bachelors and 17 participants have done masters and other 16 participants have done intermediate.

The percentage of bachelors students are 80.9% and master students' percentage is 9.8% and last but not least the percentage of intermediate students are 9.2%

Education					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	140	58.6	80.9	80.9

	2	17	7.1	9.8	90.8
	3	16	6.7	9.2	100.0
	Total	173	72.4	100.0	



4.5. Data Analysis

Descriptive Statistics						
Variables	N	Minimum	Maximum	Mean	Std. Deviation	Variance
CE	173	1	5	3.8169	.58	.340
C	173	1	5	3.7001	.633	.401
GI	173	1	5	3.6647	.65323	.427
T	173	1	5	3.7508	.63229	.400
Valid N (list wise)	173					

The variables which included in this survey are Challenges of E-governance (CE) , Capabilities

(C), Government infrastructure (GI) and Trust (T).

The given table is showing the values of Mean of different variable like the mean value of Challenges of E-Governance is 3.8169 and in the same way the mean value of Capabilities is 3.7001 and the values of the other variables like Government infrastructure and Trust are 3.6647 and 3.7508 respectively. In the same way the values of std. deviation for these variables 0.58, 0.633, 0.65323 and 0.63229 respectively and the values of variance are 0.340, 0.401, 0.427 and 0.400 respectively.

		Age	Edu	Incom e	CE	C	T	GI
Pearson Correlation	<i>Age</i>	1.000	-0.035	0.126	-	-0.185	-0.212	-0.136
	<i>Edu</i>	-.035	1.000	0.056	0.304	0.108	0.111	0.111
	<i>Income</i>	0.126	0.056	1.000	0.058	-0.018	0.242	0.115
	<i>CE</i>	-	0.058	0.078	0.078	0.408	0.491	0.349
	<i>C</i>	0.304	0.108	-0.018	1.11	1.000	0.409	0.348
	<i>T</i>	-.185	0.111	0.024	0.408	0.409	1.000	0.327
	<i>G1</i>	-	0.111	0.115	0.491	0.348	0.327	1.000
		0.212			0.349			
Sig. (1-tailed)	<i>Age</i>	.	0.325	0.050	0.00	0.007	0.003	0.037
	<i>Edu</i>	0.325	.	0.232	0.224	0.078	0.073	0.074
	<i>Income</i>	0.050	0.232	.	0.078	0.407	0.378	0.066
	<i>CE</i>	0.00	0.224	0.156	.	0.00	0.001	0.00
	<i>C</i>	0.007	0.078	0.407	0.251	.	0.005	0.018
	<i>T</i>	0.003	0.073	0.378	0.001	0.018	.	0.011
	<i>G1</i>	0.037	0.074	0.066	0.01	0.430	0.018	.
N	<i>Age</i>	173	173	173	173	173	173	173
	<i>Edu</i>	173	173	173	173	173	173	173
	<i>Income</i>	173	173	173	173	173	173	173
	<i>CE</i>	173	173	173	173	173	173	173
	<i>C</i>	173	173	173	173	173	173	173
	<i>T</i>	173	173	173	173	173	173	173
	<i>GI</i>	173	173	173	173	173	173	173

4.6. Reliability Statistics

The cronbachs alpha value is 0.445. The more detail is given below in the table.

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.445	.429	8

4.7. model summary

The R square value is 0.314 this shows that 23.41 % variation in the dependent variable (Deep Acting) is described by the independent variable and control variable.

Model summary					
Model	R	R square	Adjusted R square	Std. Error of the Estimate	Sig.
1	0.560 ^a	0.314	0.302	0.4869945	.000

a. Predictors: (Constant), T, GI, C

4.8. Anova

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	18.345	3	6.115	25.784	.000 ^b
	Residual	40.081	169	.237		
	Total	58.426	172			

a. Dependent Variable: CE

b. Predictors: (Constant), T, GI, C

P value .000 is less than 0.5 so model is significant

4.9. Coefficient

MODEL	B	STD.ERROR	Standardized Coefficients Beta	T	Sig.
1. (Constant)	1.364	.286	0.000	4.761	.000
C (Capabilities)	.191	.066	.207	2.878	.005
GI (Government infrastructure)	.143	.062	.161	2.310	.000

T (Trust)	.326	.066	.353	4.941	.000
Age	-1.465	.500	-.191	-2.929	0.004
education	-.025	.059	-.026	-.414	0.680
Income	.035	.027	.083	1.293	0.198

The results show that there is a relationship between challenges of e-governance and capabilities. Results indicate that 1-unit increase in Capabilities leads to .191 increased.

Other variables like demographic characteristics, education, age and income has not significant values.

4.10. RELIABILITY COEFFICIENT

Challenges of e-governance

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.618	.694	7

Capabilities

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.570	.732	7

Trust

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.675	.732	7

Government infrastructure

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.584	.663	7

5. DISCUSSION

Discussion section is all about the entire crux as it covers the result and relief them understand it with reference to given literature. In this part we will discuss the discoveries of research and recommendations.

The last recommendation for improving the challenges of e-governance is to ensure effective governance and regulation of e-governance initiatives. This involves establishing mechanisms to ensure that e-governance initiatives are transparent, accountable, and responsive to citizens' needs. One of the challenges of e-governance is the potential for corruption and misuse of public funds. Without effective governance and regulation, e-governance initiatives may be vulnerable to abuse and mismanagement. Therefore, it is important to establish oversight bodies that can monitor e-governance initiatives and ensure that they are being implemented in accordance with established standards and procedures.

Another challenge is ensuring that e-governance initiatives are responsive to citizens' needs. This requires mechanisms for citizen participation and feedback, such as public consultations, citizen feedback mechanisms, and participatory budgeting. By involving citizens in the decision-making process, governments can ensure that e-governance initiatives are designed to meet their needs and priorities.

can create inequalities in the delivery of e-governance services, as some citizens may not have the necessary technology or skills to access them. For example, a study by the United Nations Development Programme (UNDP) found that the digital divide is a significant challenge for e-governance in developing countries (UNDP, 2016).

It is important to ensure that e-governance initiatives are transparent and accountable. This involves establishing clear rules and procedures for the collection and use of data, as well as mechanisms for public access to information. Additionally, it may be necessary to establish legal frameworks to ensure that e-governance initiatives are subject to review and oversight by independent institutions, such as courts and audit agencies.

In conclusion, e-governance faces several challenges that must be addressed to fully realize its potential. These challenges include the digital divide, cybersecurity, resistance to change, capacity building, and interoperability. Governments and other stakeholders must work together to overcome these challenges and create e-governance systems that are efficient, effective, and equitable. Moreover, effective governance and regulation is essential for addressing the challenges of e-governance. By establishing oversight bodies, promoting citizen participation, and ensuring transparency and accountability, governments can help to ensure that e-governance initiatives are designed and implemented in a way that benefits all citizens.

6. CONCLUSION AND RECOMMENDATIONS

This section stretches the wind up of all the thesis and literature. It covers or measures all the exploration that is being accompanied and examined and the way through which it can be helpful for others. This chapter also covers limitations, future directions and research implication.

6.1. Conclusion

This thesis examines the challenges of E-governance in Pakistan among general public. E-governance has the potential to transform the way governments interact with citizens and deliver services efficiently. However, in Pakistan, there are several challenges that hinder the effective implementation of e-governance initiatives. One of the major challenges is the lack of infrastructure and technological capabilities, particularly in rural areas. This leads to a significant digital divide, where only a small segment of the population can access and benefit from e-governance services. Another challenge is the lack of political will and commitment to e-governance. The government needs to prioritize and allocate adequate resources towards building the necessary infrastructure and creating a conducive environment for e-governance to flourish. Additionally, issues such as corruption, bureaucratic red tape, and a lack of transparency and accountability also pose significant challenges to the successful implementation of e-governance in Pakistan.

In terms of infrastructure, Pakistan lags behind other countries in terms of technological development, with many areas lacking basic facilities such as electricity and internet connectivity. This limits the ability of e-governance initiatives to reach all citizens, particularly those in rural areas. Similarly, the digital divide between urban and rural areas means that many people lack access to the technology necessary to participate in e-governance initiatives.

A questionnaire is used to conduct this research paper. As for as data is concerned sample size of 173 was gathered and analyzed. The hypothesis is acknowledged on the base of the result. The results show that there is an inverse relation between challenges of e-governance and capabilities and government infrastructure. Results indicate that 1-unit increase in Capabilities leads to .165 increased and 1 unit increased in Government Infrastructure leads to .135 units increased in E-Governance Challenges. Other variables like demographic characteristics, education, age and income has not significant values.

To overcome these challenges, there needs to be a concerted effort by the government, civil society organizations, and the private sector to work together to address these issues. This could involve investing in technology and infrastructure, building capacity and skills among government officials and citizens, and improving transparency and accountability through effective monitoring and evaluation mechanisms. Overall, the successful implementation of e-governance initiatives in Pakistan requires a holistic and collaborative approach that addresses the various challenges and works towards building a more inclusive, efficient, and effective governance system. In conclusion, a lack of political will is a significant challenge to e-governance in Pakistan. The government has been slow to adopt e-governance initiatives, and there is a lack of political will to address the challenges associated with implementation. Addressing this issue requires political leadership and commitment to e-governance as a priority. While e-governance has the potential to improve the delivery of government services in Pakistan, several challenges must be addressed to ensure its effectiveness. Addressing these challenges requires investments in infrastructure and digital literacy programs, as well as measures to address corruption, cybersecurity, and political will. With these measures in place, e-governance has the potential to transform the relationship between citizens and the government in Pakistan.

6.1.1. Research implications

This thesis has numerous practical as well as a theoretical implication. However, a lot of work has been done on Challenges of e-governance in the past but this study subsidizes to the field of public organization in Pakistan which has no prior research work has been occurred. Especially this research work is helpful in government sectors. Results show that challenges of e-governance cannot be solved without government infrastructure. In Pakistan, there is great need for creating awareness on use e-governance because majority of the public do not know about it.

6.1.2. Future Directions

This thesis is cooperative for the student of research. The owners of organizations and managers can also get the help of this thesis. The limitation is that it is accompanied for the cause of BS degree accomplishment, but in the future, this study can have a wider scope. Moreover, separate researches may be conducted on each variable used in this thesis.

6.1.3. Limitations

The foremost aim of this quantitative thesis is to discover the effect of Capabilities, government infrastructure and trust on challenges of e-governance.

Though this thesis obliges its

persistence well for future research studies, there are some limitations. One limitation is that this study does not focus on other factors or variables it's just focused on challenges of e-governance in an organization. The other limitation is that this study only measures capabilities, trust and government infrastructure of general public by keeping others variable aside but in the future study other factors like the importance of the e-governance may be considered in future researches. The third limitation is that the questionnaire is close-ended,

so the respondent did not get the chance to answer out of this questionnaire. So it guaranteed that each one of them provided the best and authentic response. The taster size of this thesis is narrow to 173 so it was not promising to discover the variables fully as many other factors affect the variable.

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