IJMFR
INTERNATINAL JOURNAL OF MULTI FACETED RESEARCH

Volume 1, Issue 1
January to March 2024

Influence Of Demographic Characteristics On E- Governance Adoption

Shazmeen Khan
Faculty of Management Science, Salim Habib University Karachi Pakistan
khanshazmeen2@gmail.com

Sumiya Tariq
Faculty of Management Science, Salim Habib University Karachi Pakistan
sumiyatariq.5@gmail.com

Nida Saeed
Faculty of Management Science, Salim Habib University Karachi Pakistan
nida.saeed2101@gmail.com

Sumaiya Saleem
Faculty of Management Science, Salim Habib University Karachi Pakistan
sumaiyashykh21@gmail.com

Article History

Received: *November 8, 2023*
Revised: *January 2, 2023*
Accepted: *February, 27, 2024*
Published: *March 30, 2024*

Abstract

This research applies the Unified Theory of Acceptance and Use of Technology (UTAUT2) to examine the adoption of e-governance in Pakistan. Utilizing a quantitative approach, the study investigates the moderating impact of age, technology effectiveness, education, geographic location, and trust on the relationship between citizens' behavioral intention and actual e-governance adoption. Results indicate strong internal consistency for key variables, with Effort Expectancy, Social Influence, Performance Expectancy, and Behavior Intention demonstrating reliability. Correlation analyses reveal positive relationships between these variables, underlining the perceived value of e-governance services among Pakistani residents. Regression study demonstrates the importance of effort expectancy, social influence, and trust in affecting governance behavior. However, Performance Expectancy has no substantial influence, suggesting that perceived performance gains may not be a primary motivator of e-governance adoption in this scenario. Acknowledging limitations, such as survey challenges and reliance on international literature, the study underscores its unique value in contributing local insights to the understanding of e-governance adoption in Pakistan.

Key Words: *E-governance adoption, UTAUT2 framework, Moderating factors, Pakistan*

Introduction

In the twenty-first century, we are in an era of "e-services," which is characterized by the crucial shift in the market from commodities to services, in addition to the accelerating development of digital networks and IT-based businesses. In order to provide their citizens with online services, several Governances all over the world are rapidly utilizing advancements in information and communication technologies (ICTs). The process in question is commonly referred to as "E-Governance," which is broadly described as the use of ICTs & their applications by the Governance to provide information and services to a variety of

stakeholders, including citizens and companies (Lavanya and Gayatri, 2015, Padmapriya, 2013). Governances cannot avoid incorporating ICT given that our current economy is information-based. People in these cultures contribute to the issue by ignoring the digitally presented Governance solutions. Due to an absence of governance development, expatriates encounter numerous issues when attempting to connect with their nationalities in other nations. However, EGovernance reforms are intended to increase the effectiveness of service delivery, interaction among all Governance stakeholders, the way decisions are made, and assure the integrity and accountability of Governance officials in today's cutthroat global economy (Dombeu and Rannyai, 2014). E-Governance has a historical record of giving its stakeholders significant benefits, such as lowering corruption, enhancing service quality and administrative effectiveness, fostering e-democracy, openness, and a citizen-focused approach (Zahid, Ali, Abu-Shanab, & Javed, 2022). The fact that Governance agencies around the world are implementing an increasing number of E-Governance initiatives speaks volumes about how important people believe it to be as a tool for modernizing the way that public services are delivered (Venkatesh, Thong, Chan and Hu, 2016). As a result, a lot of academics and professionals are becoming more and more interested in how citizens use the many E-Governance platforms that are accessible (Verkijika, & De Wet, 2018).

Through the application of current technological acceptance models, which include the theory of reasoned action (TRA) employed by Alryalat et al. (2015) in India, E-Governance academics have over the years studied the adoption of E-Governance. Furthermore, Ozkan and Kanat (2011) used the theory of planned behavior (TPB) in Turkey, Susanto et al. (2017) used the deconstructed theory of planned behavior (DTPB) in Indonesia, and Lin et al. (2011) used the technology acceptance model (TAM) in Gambia. Sang et al. (2009) used the enlarged version of TAM (TAM2) in Cambodia, Lawson-Body et al. (2014) used the diffusion of innovation theory (DOI) in the United States, and Boon et al. (2013) used the perceived features of innovation in Malaysia. In addition to this, Rana and Dwivedi (2015) in India used social cognitive theory (SCT), Rabaai (2017) in Jordan used the unified theory of acceptance and use of technology (UTAUT), and Lallmahomed et al. (2017) in Mauritius used the enlarged UTAUT2. The basic conclusion drawn from these models is that user perceptions affect behavioral intention, which subsequently in turn affects how a system is used. Due to the close connection between the internet and E-Governance solutions, the majority of these concepts were derived from earlier e-commerce adoption literature. However, other academics contend that models that are merely adapted from the literature on e-commerce are not sufficiently sophisticated to accurately represent and stipulate the all-encompassing character of citizens' adoption behaviors for E-Governance. Despite the fact that these models offer helpful insights on the adoption and usage of technology, they do not specifically address a crucial part of decision-making—trust in E-Governance (Rana et al., 2015).

The current economic concerns have raised alarms about investors' financial security who lack the knowledge and resources to navigate market reversals and increasing leverage. Pakistan's low ranking in the E-Governance development index, combined with shortages in skilled human resources, lack of state-wide IT policy execution, and insufficient IT infrastructure, hinders effective governance in the country and calls for urgent improvements to support economic stability and mitigate financial risks (Arif, 2015). The improvement of corporate governance is crucial for enhancing a corporation's long-term performance. However, it remains a contentious issue that has sparked extensive debates. Over the years, the legal framework in Pakistan has undergone multiple amendments, aligning with economic liberalization and the emergence of electronic governance. In 2005, Pakistan's Governance established the Electronic Governance Directorate (EGD) to implement various e-governance projects in the country. These developments aim to strengthen the foundation for corporate performance and facilitate efficient governance practices (Arif & Syed, 2015) and also to set standards and infrastructure that provide services like the application of Hajj, e-enablement of the Senate and automation of the Prime Minister Secretariat, online board results, mobile passport and visa services, submission of documents to SECP, etc. Every province has its own

website to help citizens. In 2019, the services were upgraded, including digital payment, digital health initiatives, vaccination projects, and many more (Wijekuruppu, 2016). Although e-governance depends on e-readiness, the Governance currently seems to be in a stronger position to adopt the system since ICT development in Pakistan has improved (Ali, Ahmed, 2016), but it is still below global average

Literature Review and Hypothesis Development

This study is going to be centered on the UTAUT2 concept, which an expansion of the UTAUT theory with some minor changes is made by taking away some of the preexisting independent and moderating factors while simultaneously adding new ones. The UTAUT is a model of adoption of technology that combines eight ICT adoption theories, making it appropriate, valid, current, and trustworthy to account for a significant portion of variances (Alawadhi and Morris, 2008). The initial UTAUT Model could account for around 40% of the variation in actual usage and 56% of the variation in behavioral intention to use (Venkatesh et al., 2003).

Good corporate governance strategies play a vital role in fostering transparency, accountability, and reliability in the financial market, thereby supporting economic growth and boosting investor confidence. They also promote harmony of interest between various stakeholders of the company, ensuring a balanced and inclusive approach to corporate decision-making and performance evaluation (S. B. Ali, 2012). Despite numerous studies on global E-Governance service usage and behavior, there is no universally acknowledged model demonstrating how E-Governance can be effectively embraced and utilized, leaving room for further research and development in this field (Arif, Isa, & Mustapha, 2023). This is because the adoption of E-Governance models by citizens has been influenced by factors such as socioeconomic norms, economic conditions, and political conditions (AL Mansoori, 2017).

In the context of Pakistan, this study aims to theoretically comprehend the importance of moderating variables affecting individuals' behavioral intention to utilize E-Governance services. It presents an E-Governance adoption model made up of five moderating elements that are then quantitatively assessed for significance in affecting one's decision to adopt E-Governance, drawing on the UTAUT2 model of technology acceptance and adoption. The behavioral intention to utilize E-Governance services is highly influenced by a variety of circumstances, according to previous studies. Lack of awareness, the digital divide, trust, self-confidence and knowledge, hedonic drives, performance expectations, improving system use, perceived economic benefit, believed social benefit, enhancing use behavior, attitude, self-efficacy and anxiety, job fit, self-efficacy and anxiety, self-efficacy, and many more are among them.

Researchers have explored connections between capital structure, capital budgeting, and working capital management and their impact on firm value. Particularly, they have focused on identifying if there exists an optimal capital structure for individual firms. Despite the increasing availability of online Governance services, many individuals still prefer traditional communication channels over online forums, primarily due to concerns about internet security, potential data breaches, and a lack of trust in E-Governance platforms, leading to hesitancy in embracing E-Governance services (S. Ali, Arif, Galani, Khan, & Mubeen, 2022). E-Governance services' limited uptake also inhibits both individuals and Governances from making full use of their huge potential (Chen & Aklikokou, 2019). Santhanam and Keller (2018) contend that understanding the elements influencing a person's behavioral intention to embrace E-Governance services is essential for E-Governance development.

Research Objectives

RO 1: To find out the moderating effect of age of citizens between the relationship of behavioral intention to adopt e-governance and actual use of e-governance

RO 2: To find out the moderating effect of effectiveness of technology between the relationship of behavioral intention to adopt e-governance and actual use of e-governance
RO 3: To find out the moderating effect of education between the relationship of behavioral intention to adopt e-governance and actual use of e-governance
RO 4: To find out the moderating effect of geographic location of citizens between the relationship of behavioral intention to adopt e-governance and actual use of e-governance
RO 5: To find out the moderating effect of the trust of the citizens between the relationship of behavioral intention to adopt e-governance and actual use of e-governance

RESEARCH MODEL

UTAUT 2

Unified Theory of Acceptance and Use of Technology is known as UTAUT. It is a framework that makes it easier to comprehend how people may take up and make use of new technology. In 2002, Venkatesh, Morris, and Davis presented it; later, in 2003, Venkatesh, Thong, and Xu extended it. Hedonic motivation, price value, and habit are the three main components of the UTAUT model, and three new components—performance expectancy, effort expectancy, social influence, and facilitating conditions—are included in the UTAUT 2 model. The UTAUT 2 model identifies limitations in technology uptake and design intervention. The model is applied to understand the adoption of e-governance in Pakistan by its citizens. It involves the delivery of public services by Governance to its citizens.

Performance expectation is a person's assessment of the usefulness of a new technology. An individual's view on how technology has benefited performance, productivity, and job completion Therefore, citizens are going to be more inclined to adopt e-governance if they believe that it will allow them accessibility to Governance services digitally and that doing so will enable them to do so more quickly, successfully, and efficiently.

A person's view of how challenging using technology is and how much effort is required is referred to as their effort expectation. The complexity of the internet, the way users engage with its layout, and how much instruction is needed to use it correctly are all factors that are considered in this component of the model. The citizens now have a simple way to complete any Governance-related paperwork thanks to e-governance. They should absolutely implement e-governance if they can quickly and easily fulfil the need online. This is because it makes it easier for the citizen to comply with the requirement.

This section looks at a person's technological preferences from a social standpoint. This component takes into account factors such as pressure and encouragement from family members, those who matter, and other people to use technology. It could be negative or good depending on a variety of factors. When people realize that those around them are having success with e-governance, they are more likely to adopt it themselves. They'll be more inclined to believe that they ought to use it as well.

The last facilitating condition factor considers factors like organizational and technical support, which are crucial for the adoption and utilization of technology. Infrastructure, compatibility with modern technology, assistance from professionals and educators, and incentives to promote its use are all taken into consideration. There is a potential that people may adopt e-governance if they think the technology's infrastructure is simple to use and that they have the tools needed to use it.

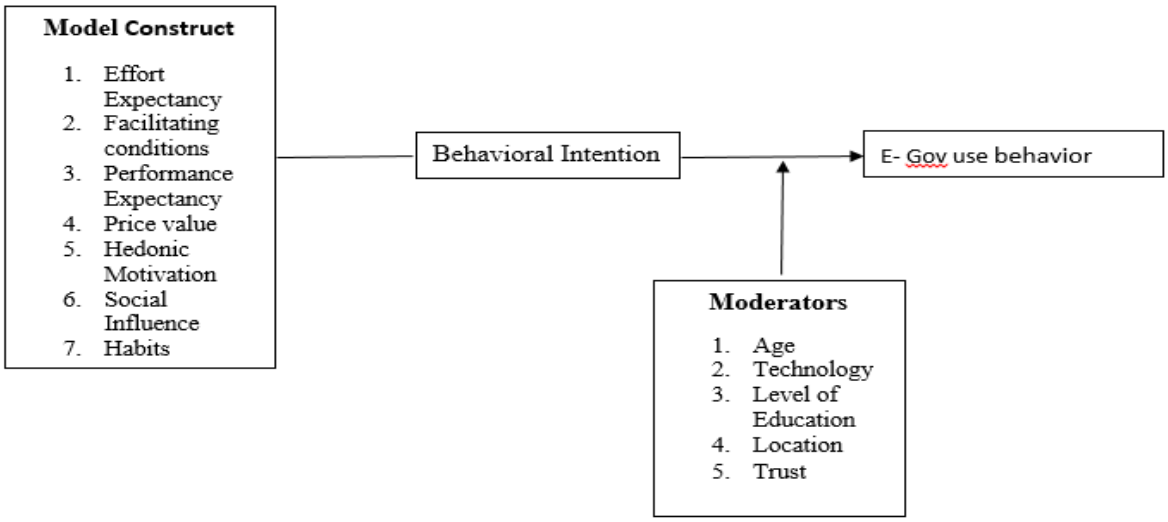
Hedonic motivation is the idea that using technology is enjoyable and happy for oneself. If e-governance has a user-friendly interface, more people will accept it.

According to price values, a person who can get the benefit of using it justifies the cost. People are more inclined to adopt e-governance if they think the ease of use overcomes any costs involved in utilizing it. The way someone's schedule for using technology is referred to as a habit'' People are more inclined to use e-governance in the future if they have already done so and consider it convenient.

This model takes into account all variables that affect things like an individual's prior experience with related technologies, their level of skill, and their anticipated appropriateness with the technology. A helpful framework for comprehending the elements influencing citizens' acceptance of e-governance is offered by the UTAUT 2 model. Governances can use this model to design and implement e-governance systems that are more likely to be adopted by citizens, leading to greater efficiency and effectiveness in public service delivery.

To research the adoption of e-governance in Pakistan by citizens, the model outlined the effect of five moderator variable such as age, gender, level of education, Citizen's location and trust on Citizens behavioral intention to adopt the e-governance.

Fig. 1. Conceptual Framework



H1: The age of citizens have a significant impact on the adoption of e-Governance.

Scholars have discovered data that explains the considerable, direct, and moderating impact of age on behavioral intention, adoption, and usage behaviors (Morris and Venkatesh, 2000; Venkatesh et al., 2003). In their study, Venkatesh et al., (2000) discovered that the age group that adopts computers the most in the USA is that of 15–17 years old, followed by that of 26–35 years old. The younger and middle age groups are expected to be more indifferent to adoption, whilst the older age groups are expected to be more relevant to non-adopters. In this study, the authors adopted Dwivedi and Lal's (2007) premise that age (as a social variable) may be used as an independent variable to explain differences between e-Governance adopters and non-adopters. (Shafi Al-Shafi, Vishanth Weerakkody, 2010).

H2: The adoption of e-Governance is heavily influenced by technological efficacy.

The positive aspects of e-Governance are undeniable. The Internal Revenue Service (IRS) in the United States saves millions of dollars each year by reducing costs on printing, sorting, and shipping tax documents by providing taxpayers with web access to tax return forms and publications. Online services are less expensive, quicker, and more widely available. They also cut travelling costs and waiting time (from in-person to online), provide more efficient payment methods, promote transparency in Governance operations, improve governance and eliminate systemic corruption, and finally lead to governance change. (Al-adawi, Yousafzai, Pallister, 2005). In 1996, the Malaysian Governance launched Multimedia Super Corridor Malaysia (MSC-Malaysia) as a platform for developing a competitive market for ICT firms and sectors. As a member of The MSC Malaysia Flagship Applications, e-Governance

program was launched to enhance how the Governance provides services to its citizens and industry. In the past 10 years, projects under the e-Governance banner have been launched with the goal of creating a more efficient and effective way to communicate and interact with citizens and industries. One of the initiatives is the Online Tax System, often known as e-Filing. (Ramlah Hussein, Norshidah Mohamed, Abdul Rahman Ahlan, Murni Mahmud, and Umar Aditiawarman, 2010)

H3: The level of education has a significant impact on e-Governance adoption.

There may be significant differences in attitudes toward e-governance based on education level, research indicates that there is no difference in the intention to adopt e-governance among people with diverse educational backgrounds. This conclusion suggests that, despite differences in views, education level only sometimes influences readiness to accept e-governance initiatives. (Hooda Nandal, Apeksha; Singla, M.L., 2019). Persons and Individuals with educational skills are more likely to attain higher-paying professions and accept technological improvements. Education level, technology ownership, and usage all show a favorable link. Dwivedi and Lal (2007) suggest that education may be utilized as an independent variable to explain the differences between e-Governance adopters and non-adopters. According to Shafi Al-Shafi and Vishanth Weerakkody (2010), people with a higher degree of education are more likely to use e-government services. According to Jaeger (2003) and Brahim Akman et al. (2005), this is attributable to such people's increased internet usage and capacity to use information technology for a range of jobs. (Mercy Samuel, Gayatri Doctor, Perez Christian, Manvita Baradi, 2020). The drive of the study was to determine the impact of seven predictor factors on people' behavioral intentions to utilize e-Governance technologies in Zimbabwe. Education level, enabling conditions, e-Governance knowledge, pricing value; privacy, security, and trust; political self-efficacy and influence were all identified as significant predictors of e-Governance adoption. (Willard Munyoka, 2019). The decision to accept new technology is tied to one's understanding of how to use that technology wisely, and complex technologies, such as e-Governance, need more expertise. Early adopters of new technology have a higher educational level, maybe showing their capacity to grasp "how-to" information faster than individuals with less education. (Sara ELKheshin1 and Noha Saleeb, 2020).

H4: The location where a person lives significantly affects their adoption of e-Governance.

The study discovered that a citizen's background impacted their accessibility to use e-Governance services in an urban location problem with the same existed in rural locations due to location-related obstacles. The UK Governance still faces obstacles because it needs to convince people to have internet connection so they have access to the online services offered by the Governance. (Jyoti Choudrie, Vishanth Weerakkody, Stephen Jones, 2005). The research used the partial least squares approach to analyze the data, sampling 212 firms in Ghana. According to the research, companies are more likely to be aware of and use e-Governance services if they are located in urban areas. (Adu Adolph Sedem Yaw, Agbenorto Mawuli, Shadrack Bortier Quaye, 2017). The adoption of e-Governance by the people of the country is faced with significant difficulties because of the inherent disparities in sociodemography, access to ICTs, Internet use as well as in the patterns of Internet use, and awareness of available e-Governance services in Philippines. (Aldwin Uy Urbina Naoya Abe, 2017). This qualitative multiple-case study’s objectives were to identify and examine user adoption patterns for e-Governance services in Sindh, Pakistan, fourth-class, third-class, and constitutional charter cities. The assessment of user adoption patterns for e-Governance services in small cities in Sindh, Pakistan, served as the basis for this study. The assessment of

user adoption trends for e-Governance services in small cities in Sindh, Pakistan, served as the basis for this study. The issues addressed included a gap in the identification of user adoption patterns of e-Governance services and what a content analysis of patterns of adoption of e Governance indicated about engagement of citizens. (Zulfiqar e al., 2015).

H5: Trust on the online services provided by Governance significantly affects the Behavioral intention of individual to adopt the e-Governance.

Internet trust has a positive effect on Behavioral intention to use online Governance services. (Lemuria Carter, Vishanth Weerakkody, Brandis Phillips and Yogesh K. Dwivedi, 2016). According to the findings, trust on the internet is one of the most important variables to consider when evaluating the adoption of e-Governance services in Jordan. (Mohammad Kamel Alomari, 2014). Trust in e-Governance services is a challenging relationship since it includes many complicated elements that influence individuals' trust in Governance services. "Trust" is a universal element that drives e-Governance adoption. Before accessing e-Governance services, individuals must believe that their Governance will give them the efficacious managerial and technological resources to develop and protect these online systems. Individuals must be confident in using e-Governance and must intend to use e-Governance services (Latifa Alzahrani, 2017). It has been proposed that perceived system quality, perceived information quality, and perceived service quality influence citizens' adoption of e-Governance services, both directly and indirectly, via the perceived ability to use, perceived functional benefit, trust in the medium, trust in the Governance, and user satisfaction. (Muhammad Shakaib Akram and Aneela Malik, 2012).
In recent studies, researchers have focused on exploring the impact of capital structure theories on a company's performance, emphasizing the need to discuss the systematic approach adopted for financing business activities in Pakistan's corporate sector. However, previous research has largely overlooked the crucial trust-generating elements when it comes to utilizing social media for e-Governance services (S. B. Ali et al., 2021). To address this study gap, antecedents of trust must be identified across various dimensions, which are classified as individual behaviors, Governance elements, risk factors, and social media features. (Sohrab Khan, Nor Zairah Ab. Rahim, Nurazean Maarop, 2020).

Research Methodology

Research Design:

This study applies a quantitative research approach to look at how people are using e-governance. Data collection from participants was done using a cross-sectional survey method. With the help of this design, data was gathered at a specific point in time and correlations between variables was examined.

Participant Selection:

The study's target audience consists of people who are familiar with e-governance services. Convenience sampling was used to choose the participants. People who had previously interacted with e-governance platforms received the survey. The sample consists of diversified participant they were from different age groups, educational backgrounds and geographic location; hence the sample represents the target population in a well manner.

Techniques for Data Collection:

Through the use of a standardized questionnaire, the data was gathered. The survey was divided into two sections: demographic data and questions about the variables influencing the adoption of e-governance. According to the UTAUT2 model, the survey questions were created and they were addressing the following factors: effort expectation, performance expectation, trust, governance behavior, and social impact.
To collect demographic data like age, education level, and locality, questions that are open-ended were used.

Electronic survey platform or email were used to administer the survey form. Participants were informed of the independent nature of their involvement and given clear instructions regarding how to answer the questionnaire. The survey was open with a statement requesting informed consent.

Data Analysis:

Both descriptive and inferential statistical methods were used in data analysis. The demographic data and responses to survey items were compiled using descriptive statistics like means, frequencies, and percentages.
The use of inferential statistics were used to test the study hypotheses. In particular, multiple regression analysis were used to look at the correlations between the variable that were dependent (behavioral intention to adopt e-governance) and the independent factors (age, technology, education level, location, and trust). At p 0.05, the significance threshold is determined.

To investigate the connections between the independent variables, additional analyses, such as correlation analysis, may be carried out. To investigate possible differences in the adoption of e-governance depending on demographic factors, subgroup analysis may also be carried out.

Ethical Considerations

The research approach gives ethical considerations the weight they deserve. The confidentiality and privacy of participants is protected, and their data is securely saved and anonymized. Participants are asked for their informed consent before participating, and they have the option to leave the study at any time.

Research Questionnaire

Demographics
Q1 Age
Q2 Gender
Q3 Education
Q4 Occupation
Q5 You are staying in:
Q6 You access internet through
Q7 E-governance is an online service provided by the governance to its citizens. Pakistan also provides services like Passport, NADRA, and FBR. Have you heard of these services before?
Q8 8.I am satisfied with Pakistan’s e-governance services
Q9 I trust online services
Q10 I believe that our governance should completely move towards online services (e-governance)

Q11. I believe E-governance can reduces visits to governance offices.

Q12 I think that E-governance will reduce corruption.

Q13 I agree that Pakistan's E-governance offers Error-free transaction.

Performance Expectancy (PE)

PE 1 Using the e-governance services increases the equity between all citizens.

PE 2 I think using e-governance services would save citizens' time.

PE 3 Using e-governance services enables me to accomplish my needs from the public sector more quickly and more efficiently.

Effort Expectancy (EE)

EE 1 By using the e-governance system, I am able to get governance services easily.

EE 2 Using the e-governance services system will be easy.

Social Influence (SI)

SI 1 Based on the opinions of my friends and family, I agree that using e-governance services is important.

SI 2 If my friends and coworkers used E-governance services, my willingness to do so would increase.

SI 3 Governance sectors encourage citizens to use the e-governance services system

Behavior of Governance (BG)

BG 1 I really want to use e-governance services to fulfil my governance requests.

BG 2 Most of my governance requests are done through e-governance services.

Trust (T)

T1 I believe that e-governance services are trustworthy.

T2 I have confidence in the technology used by governance agencies to operate e-governance services.

T3 Governance agencies can be trusted to carry out online transactions faithfully.

BI1 To what extent do you trust the government's ability to implement and manage e-governance initiatives effectively?

BI2 How easy do you perceive it to be to learn and use e-governance systems and platforms?

BI3 In your opinion, will e-governance systems provide you with a better overall experience compared to traditional methods of interacting with the government?

BI4 How influential do you consider the opinions and experiences of others in your decision to use e-governance platforms?

BI5 How likely are you to actively participate in e-governance activities, such as submitting online forms or applications?

Results: Influence of Moderator Variables on E-Government Adoption

Reliability

This study indicates E- Government use behavior, Performance Expectancy, Effort Expectancy, Behavior Intention and Social Influence shows high levels of internal consistency while Trust shows (0.424) which is below the normal range. The normal range is (0.6 – 0.8). The variables Effort Expectancy (0.761), Social Influence (0.783), Performance Expectancy (0.763), and Behavior Intention (0.851) in particular have excellent reliability, proving their suitability as reliable measures in the research framework.

Table 1

Construct	Cronbach's Alpha	No. of items
E- Gov. use behavior	**.673**	**3**
Performance Expectancy	.763	**5**
Effort Expectancy	.761	**3**
Social Influence	**.783**	**2**
Trust	**.424**	**2**
Behavior intention	**.851**	**3**

Correlation

Performance Expectancy: There is a positive correlation between Performance Expectancy and Effort Expectancy (0.549), Social Influence (0.592), Trust (0.524), Governance Behavior (0.561), and Behavior Intention (0.310). This suggests that Pakistani residents perceive e-governance services as valuable and beneficial.
Effort Expectancy: Effort Expectancy is positively correlated with Behavior Intention (0.033), Social Influence (0.649), Trust (0.524), Governance Behavior (0.561), and Performance Expectancy (0.549). These findings indicate that using e-governance services can significantly enhance the overall experience for Pakistani citizens, providing them with organized data, efficient access to services, and time savings.

Social Influence: Social influence is positively correlated with behavior intention (0.180), trust (0.518), governance behavior (0.684), performance expectancy (0.592), and effort expectancy (0.649). This shows that social influence has a substantial impact on attitudes and actions regarding e-governance services, as people are inspired to utilize them when they see others do so.

Trust: Trust has a positive link with behavior intention (0.178), social influence (0.518), governance behavior (0.614), performance expectancy (0.524), and effort expectancy (0.379). This demonstrates that Pakistani residents have a high level of faith in the Government's services and regard them as dependable.

Behavior of Governance: The behavior of Governance, as the dependent variable, shows positive associations with Behavior Intention (0.033), Trust (0.614), Social Influence (0.684), Performance Expectancy (0.561), and Effort Expectancy (0.739). This highlights the link between the desires of Pakistani citizens to utilize e-governance services and meet the requests of their Governance.

Mediator Variable: The mediator variable exhibits positive correlations with various variables, including Behavior of Governance (0.033), Trust (0.178), Social Influence (0.180), Performance Expectancy (0.031), and Effort Expectancy (0.033). These correlations indicate a positive relationship between the mediator variable and the other variables. In other words, the results suggest that people's intention is strongly influenced by factors such as trust, performance expectancy, effort expectancy, behavior of Governance, and social influence. These characteristics have a substantial impact on individuals' intentions in the context of the research.

Table 2. Correlations

		PE	EE	SI	Trust	BOG	BI
PE	Pearson Correlation	1	.549**	.592**	.524**	.561**	.031
	Sig. (2-tailed)		.000	.000	.000	.000	.771
	N	95	95	95	95	95	92
EE	Pearson Correlation	.549**	1	.649**	.379**	.739**	.033
	Sig. (2-tailed)	.000		.000	.000	.000	.758
	N	95	95	95	95	95	92
SI	Pearson Correlation	.592**	.649**	1	.518**	.684**	.180
	Sig. (2-tailed)	.000	.000		.000	.000	.086
	N	95	95	95	95	95	92
Trust	Pearson Correlation	.524**	.379**	.518**	1	.614**	.178
	Sig. (2-tailed)	.000	.000	.000		.000	.089
	N	95	95	95	95	95	92
BOG	Pearson Correlation	.561**	.739**	.684**	.614**	1	.033
	Sig. (2-tailed)	.000	.000	.000	.000		.753
	N	95	95	95	95	95	92
BI	Pearson Correlation	.031	.033	.180	.178	.033	1
	Sig. (2-tailed)	.771	.758	.086	.089	.753	
	N	92	92	92	92	92	92

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

Regression analysis

Coefficient

Effort Expectancy: The behavior of Governance is statistically significantly impacted by the variable Effort Expectancy (t-value = 6.098, p-value = 0.000). This implies that the behavior of Governance is significantly influenced by Effort Expectancy.

Social Influence: The behavior of Governance is likewise statistically significantly impacted by the variable Social Influence (t-value = 2.317, p-value = 0.023). This suggests that Social Influence has a major role in influencing how governance behaves.

Trust: The statistical importance of the variable Trust (t-value = 4.522, p-value = 0.00) suggests that it significantly influences the governance behavior. One of the most important factors affecting governance behavior is trust.

Performance Expectancy: On the other hand, the variable Performance Expectancy does not show statistical significance (t-value = 0.918, p-value = 0.918). This means that Performance Expectancy does not have a significant impact on the behavior of Governance.

Table 3. Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.319	.307		-1.038	.302
	PE	.009	.085	.008	.103	.918
	EE	.511	.084	.483	6.098	.000
	SI	.233	.101	.198	2.317	.023
	Trust	.282	.062	.324	4.522	.000

a. Dependent Variable: BOG

Descriptive Statistic

The skewness values in this situation indicate that all variables, with the exception of BG2, show negative skewness. Negative skewness shows that, with the exception of BG2, where lower ratings were found, the majority of respondents gave higher ratings for these variables. This suggests that, in contrast to the other variables, there might be a special factor influencing the scores for BG2. The kurtosis values show that various variables have various properties. Some variables, such PE1, EE1, EE2, SI1, BG1, T1, T2, T3, and BI5, exhibit positive kurtosis, indicating that their rating distributions are more rounded or concentrated around the mean than they would be if they had a normal distribution. . The ratings for the variables like PE2, SI2, SI3, BG2, BI1, BI2, BI3, and BI4 on the other hand, show negative kurtosis, indicating that they are flatter or more dispersed than a normal distribution. The mean value of all variables, which indicates the average rating provided by the respondents, is also provided in the table. The mean, a statistic that expresses central tendency, indicates the average rating for every variable.

Table 4. Descriptive Statistics

	N	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Age	95	1.463	.9544	2.095	.247	3.366	.490
Gender	95	1.432	.4979	.281	.247	-1.963	.490
Education	95	4.095	.6027	-.337	.247	1.003	.490
Occupation	95	1.684	1.2570	1.870	.247	2.987	.490
Location	95	1.295	.6503	1.993	.247	2.427	.490
Internet	95	1.179	.5255	3.334	.247	11.779	.490
E-Services	95	1.063	.2445	3.650	.247	11.563	.490
Satisfaction	95	2.789	1.1660	.175	.247	-.599	.490
Trustworthy	95	3.600	.8920	-.584	.247	.389	.490
10- I believe that our Governance should completely move towards online services (e-Governance).	95	4.147	.8247	-.863	.247	.429	.490
11- I believe E-governance can reduces visits to Governance offices.	95	4.263	.8278	-1.563	.247	3.799	.490

12- I think that E-governance will reduce Corruption	95	4.042	.9666	-.735	.247	-.431	.490
13- I agree that Pakistan's E-governance offers Error-free transaction.	95	3.695	.9234	-.509	.247	-.130	.490
PE 1	95	3.989	.9167	-.910	.247	1.017	.490
PE 2	95	4.326	.6754	-.504	.247	-.746	.490
PE 3	95	4.095	.6370	-.081	.247	-.505	.490
EE 1	95	4.074	.6230	-.589	.247	1.695	.490
EE 2	95	3.947	.7631	-.644	.247	1.334	.490
SI 1	95	4.084	.6631	-.317	.247	.134	.490
SI 2	95	4.084	.6468	-.080	.247	-.572	.490
SI 3	95	3.832	.8587	-.799	.247	.756	.490
BG 1	95	4.032	.7359	-.050	.247	-1.129	.490
BG 2	95	3.411	.9282	.064	.247	-.826	.490
T 1	95	3.695	.7999	-.535	.247	.662	.490
T 2	95	3.568	.8951	-.574	.247	.297	.490
T 3	95	3.600	.9156	-.642	.247	.635	.490
BI 1	93	3.505	.9281	-.183	.250	-.816	.495
BI 2	94	3.468	1.0442	-.290	.249	-.510	.493
BI 3	94	3.330	1.0914	-.541	.249	-.383	.493
BI 4	94	3.532	1.0339	-.624	.249	-.095	.493
BI 5	93	3.591	1.1155	-.907	.250	.373	.495
Valid N (list wise)	92						

Discussion

Given that the present economy is information-based, Governances cannot resist adopting ICT. By dismissing the Governance remedies that are given online, people in these societies contribute to the problem. When trying to interact with other members of their nations in other countries, expatriates run into a number of problems due to a lack of governance development. The aim of this research is to study the Citizens' ages have a significant impact on the adoption of e-Governance, the effectiveness of technology has a significant impact on the adoption of e-Governance, the level of education has a significant impact on e-Governance adoption, The location where a person lives significantly affects their adoption of e-Governance, Trust in the online services provided by the Governance significantly affects the behavioral intention of individuals to adopt e-Governance. The adoption of e-Governance by citizens is benefited by the Performance Expectancy, which is extremely important. It indicates that Pakistani individuals hope for improved communication with the Governance. The independent factors (effort expectations, trust, and social influence) show a considerable influence on the Governance's behavior. The variable performance expectation, however, does not appear to have a substantial effect. The behavior intention is favorably impacted by trust in online resources, which is significant. (Hussain, Baig, Fatima, Sati & Alam, 2017). If individuals believe the technology's framework is easy to use as well as that they've got the resources needed to use it, they may decide to adopt e-governance. The good governance leads to increase public trust on Governance (Shaikh, Shah, & Wijekuruppu. 2016).The strong connection suggests that the independent variables (effort expectancy, trust, social influence,

and performance expectancy) can account for a significant amount of the variation in the dependent variable (Governance conduct). Since an e-Governance website serves as both an IT platform and a medium for citizen interaction with the Governance, trust- and technology-based preconditions should interact to impact the decision to use e-Governance (Al-Adawi, Yousafzai & Pallister 2005).

Limitations

The survey method and the informational accessibility on the adoption of e-governance in Pakistan were both impacted by a number of limitations in our research. First of all, the lengthy survey process presented difficulties because participants were had to fill out the survey form repeatedly, which could have resulted in responder weariness and non-response bias. To combat this, we offered rewards and guaranteed confidentiality to promote participation. Another drawback was a lack of studies specifically on Pakistan's embrace of e-governance. We were forced to go to more substantial literature from other international contexts because of this information vacuum. Notwithstanding this limitation, our research is valuable since it generates factual information and perspectives specific to the region that aid in the comprehension of e-governance's uptake in Pakistan. It was challenging to perform a literature review due to the dearth of research papers. We had to broaden the scope of our search, search through more databases, and evaluate literature from other countries. The scope and depth of coverage may have decreased, despite the fact that these efforts ensured that every item of available material was carefully scrutinized. Furthermore, researching a topic as new as Pakistan's e-governance adoption came with its own set of challenges. The lack of prior research limited the availability of established technique and proven tools. In order to overcome this, we examined pertinent research from a number of fields and ensured the validity and reliability of our survey questions. Despite the limitations, it is imperative to evaluate the data critically and avoid making rash judgments. Because of the scarcity of accessible data and the unique conditions of our research in Pakistan, it is possible that the findings are situation-specific and not readily applicable to other settings or demographics. Still, our analysis provides valuable insights into the factors influencing Pakistan's adoption of e-governance and establishes the framework for future, more thorough studies.

Conclusion

This study used Pakistan as a case study to examine the significant influence that 5 UTAUT2 moderating variables have on citizens' behavioral intentions to embrace the use of e-Governance services. Based on the expanded UTAUT2 model, this study provided an E-Governance adoption study framework that was thought to be pertinent (Venkatesh et al., 2012). IBM SPSS Statistics version 23 was used to analyze the empirical data that was gathered from 100 respondents in order to examine and confirm the model. The study's findings highlight numerous elements of the variables influencing Pakistani people' intention to use e-Governance services. The adoption of e-Governance services by citizens is positively and significantly influenced by five moderator elements, according to research findings. As a whole, the empirical results of this study served as a foundation for confirming the moderator aspects of the suggested adoption research framework for e-Governance. The report also provides policymakers with further information on the adoption and use of e-Governance by highlighting important demographic factors deemed pertinent to the Pakistani context. This study contributes to the expanding corpus of research on the adoption and usage of e-Governance in developing countries by giving new insights into the crucial aspects influencing people's intentions to utilize it. Future research should focus on understanding the link between determinant and moderating factors that influence e-Governance adoption and use in Pakistan.

References

(2008, January). The Use of the UTAUT Model in the Adoption of E-Governance Services in Kuwait. In *Proceedings of the 41st annual Hawaii international conference on system sciences (HICSS 2008)* (pp. 219-219). Ieee.

Ali, M., & Ahmed, M. (2016). E-governance mechanism in Pakistan: An analytical perspective. *Journal of Social Sciences and Humanities*, *55*(1), 63-74.

Ali, S. B. (2012). Corporate Governance and Accounting Practices in Pakistan.

Ali, S. B., Hussain, B. M., Baig, U., Khan, Z. S., Raza, A., & Murad, H. (2021). The Enigma of Capital Structure Theories: An Empirical Investigation Between Peer Corporations in Pakistan. *International Journal of Advanced Research in Engineering and Technology*, *12*(4), 113-124.

Ali, S., Arif, K., Galani, S., Khan, Z., & Mubeen, M. (2022). A Review on Valuation and Corporate Finance. *Periodicals of Social Sciences*, *2*(2).

Al-Mamary, Y.H. Al-nashmi, M. Hassan, Y.A.G. and Shamsuddin, A. (2016). A Critical Review of Models and Theories in Field of Individual Acceptance of Technology, International Journal of Hybrid Information Technology Al Mansoori, K. A. (2017). Use of a modified UTAUT model to investigate Emirati Citizens' adoption of E-Governance in Abu Dhabi.

Al-Adawi, Z., Yousafzai, S., & Pallister, J. (2005, September). Conceptual model of citizen adoption of e-Governance. In *The second international conference on innovations in information technology* (pp. 1-10). IT Innovation Dubai.

AlAwadhi, S., & Morris, A., 9 (6), pp. 143-158.

Arif, K. (2015). Financial literacy and other factors influencing individuals' investment decision: Evidence from a developing economy (Pakistan). *Journal of Poverty, Investment and Development: An International Peereviewed Journal*, *12*(2015), 74-84.

Arif, K., & Syed, N. (2015). Impact of corporate governance on performance of a firm: A comparison between commercial banks and financial services companies of Pakistan. *European Journal of Business and Management*, *7*(10), 54-60.

Arif, K., Isa, C. R., & Mustapha, M. Z. B. (2023). A Review of the Corporate Governance Structure of Pakistan. *JISR management and social sciences & economics*, *21*(2), 41-58.

Hussain, S. A., Baig, S., Fatima, K., Sati, Z. F., & Alam, S. H. (2017). ADOPTION OF E-GOVERNANCE SERVICES IN PAKISTAN: WHAT'S MISSING? *Journal of Business Administration and Management Sciences (JOBAMS)*, *2*(1), 205-213.

Shaikh, A. Z., Shah, U. L., & Wijekuruppu, C. (2016). Public service delivery and e-governance: The case of Pakistan. *International Journal for infonomics*, *9*(2), 1161-1170.

Shaikh, A. Z., Shah, U. L., & Wijekuruppu, C. (2016). Public service delivery and e-governance: The case of Pakistan. *International Journal for infonomics*, *9*(2), 1161-1170.

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS quarterly*, 425-478.

Venkatesh, V., Thong, J. Y. L., Chan, F. K. Y. and Hu, P. J. H. (2016). Managing Citizens' Uncertainty in E-Governance Services: The Mediating and Moderating Roles of Transparency and Trust, Information Systems Research, 27 (1), pp. 87-111.

Venkatesh, V., Thong, J.Y.L. and Xu, X. (2012). Consumer Acceptance and Use of Information Technology: Extending the Unified Theory of Acceptance and Use of Technology, MIS Quarterly, 36 (1), pp. 157-178.

Verkijika, S. F., & De Wet, L. (2018). E-Governance adoption in sub-Saharan Africa. *Electronic Commerce Research and Applications*, *30*, 83-93.

Verkijika, S. F., & De Wet, L. (2018). E-Governance adoption in sub-Saharan Africa. *Electronic Commerce Research and Applications*, *30*, 83-93.

Xin, Y., Dilanchiev, A., Ali, M., Irfan, M., & Hong, Y. (2022). Assessing Citizens' Attitudes and Intentions to Adopt E-Governance Services: A Roadmap toward Sustainable Development. *Sustainability*, *14*(22), 15183.

Yusuf, H.M. and Xiaoyun, L. (2016). Limitations of E-Governance Adoption by Local Governances: A Case Study of Ilala Municipal Council, Tanzania, Information and Knowledge Management, 6 (2), pp. 34-39.

Zahid, H., Ali, S., Abu-Shanab, E., & Javed, H. M. U. (2022). Determinants of intention to use E-Governance services: An integrated marketing relation view. *Telematics and Informatics*, *68*, 101778.