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The Impact of Citizen Trust on Adoption of E-GOV Services in the Nellore City, Andhra Pradesh

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Abstract--Taking a number or waiting in line is a thing of the past in public services, thanks to the proliferation of secure websites and mobile apps. More people throughout the globe are benefiting from e-government services, which have made their lives easier. People's willingness to use e-government services depends heavily on their level of awareness & trust in the system. In order to have a better understanding of the factors affecting trust in e-government services, empirical study is required. When it comes to e-government, Nellore residents have a lot of trust and this article's studies show that trust affects their desire to utilize e-government services. In order to acquire information on several trust-related aspects, such as trust in government & technology, information quality & promises of privacy & security, we employed 150 questionnaires in total. Additionally, the TAM model's two dimensions ("perceived usefulness and perceived ease-of-use") are used to predict the likelihood of using e-government utility. According to the study's findings, all of the factors included in the analysis were significant predictors of whether or not respondents intended to utilize e-government services. Despite this, confidence in e-government was predicted by all the hypothesized factors, except for privacy and security guarantee.

Keywords---E-government, Nellore, Perception, Service delivery TAM, Trust.

Introduction

There is a growing interest in using “*information and communication technology (ICT)*” to enhance the way corporations, residents, & other government organizations may access and receive government services and information. This is known as “*e-government*.” “E-government services use the web, mobile app, and internet technologies to provide public services through the Internet to gain economic advantages” [1]. It is imperative to use ICT advancements to construct e-services as more governments value this development.

Using these technologies, governments may lower costs for consumers and companies through ease of access, improve service quality, and improve government efficiency. The result is that every government, especially emerging countries like India, has started implementing electronic services in the public sector [2].

E-government services are not widely used by people in many countries, particularly developing ones, which necessitates government intervention are some of the structures that have been shown to have a strong influence on the intention to use (ITU) technology [3]. According to many researchers, trust is essential to adoption. Determining how technology adoption works and whether or if you need to have faith in the system are crucial considerations [4][5]. As a result, the study’s emphasis will be on the antecedents of trust and how people’s ITU is affected by issues impacting their faith in electronic government. Specifically, it studies the antecedents of people’s “*trust in e-government*” utilities. It explores the mechanisms by which this trust impacts the desire to utilize e-government services in the Nellore city in Andhrapradesh state.

As a result, the rest of the paper is arranged in the following manner: a short literature review of relevant publications is included in section 2. the research model, question, and hypotheses are described in section 3, and the methodology of the study is described in section 4; section 5 summarizes the study’s findings; A concluding discussion is presented in section 6, and author comments are provided in part 7.

Literature Review

E-Government

Public engagement, democratic decision-making, and electronic voting are all now possible via e-government services, which have grown from a service delivery channel based on current information and communication technology [6][7][8]. The need for e-government services goes beyond that technology has become an essential part of our daily lives. Citizens’ relationships with their governments are impacted by it. Until far, studies have shown that implementing e-government services would fail to provide the desired efficiency gains unless significant changes were made to existing services [9][10].

In literature, the term “*e-government*” has been defined in various ways. “*E-government*” is a method to make government services more accessible and usable by enhancing the delivery of services and building platforms that successfully link

people with their government [11]. Consequently, people have access to better, more cost-effective, and speedier service. It is critical to identify and comprehend its many stakeholders when defining electronic governance. Consequently, we can better understand their needs and expectations to offer them better e-service plans.

E-government service providers have a variety of internal and external partners who benefit from their partnership with e-government service providers. “Government to Citizens (G2C), Government to Government (G2G), Government to Business (G2B), and Government to Employees (G2E) are the four partners in this effort”[12][13].

Citizen adoption

In many developing nations, the e-government services development and adoption process is still in its infancy and sometimes unsatisfactory. A variety of issues hampers their acceptance, usage, and execution. Even in remote regions, governments have invested extensively in e-government. There are, however, many hurdles that might delay adoption, restrict the use, and hinder success. In empirical research based on survey data collected from Lucknow people, Chandra, S. (2021)[14] set out to determine the major obstacles individuals in India face while using “e-government services”. Lack of understanding, trust, “privacy and security concerns”, and cultural reluctance to change were found to be the key obstacles to adoption, according to Chatterjee et al. (2021)[15] and Colesca. S.E.(2009)[16] survey, citizens’ main concerns about using e-government services were related to security, openness, and confidence problems.

The effectiveness of e-government services depends on various factors, not just one. The first is the use of ICT in government service functions, and the second is the economic & financial elements of the investment. Last but not least, citizens’ adoption is a critical element in determining how their conduct is used.

Trust in E-government

The success of “*e-government*” services relies heavily on the level of trust that users have in the system. Governments should first establish trust with their citizenry before introducing such e-channels [17][18]. As a result, governments need to create confidence inside and across agencies, between governments and non-governmental organizations, and enterprises [19]. The ability to put one’s trust in people and to anticipate their good intentions for one’s benefit is a sign of trust [20]. In technology acceptance research linked to e-government, several studies have evaluated trust as the sixth major factor after ITU, perceived ease of use(PEOU), perceived utility(P.U.), social impact(S.I.), and perceived behavioral control (PBC)[21].

Hernandez et al.[22] discussed “*pre-use trust & post-use trust*” separately. Citizens’ lack of familiarity with the aptitude dangers of using “*e-government*” services results in a lack of pre-use trust. After using a product or service, a user’s level of confidence in the product or service increases as they get more familiar with the product or service. Some researchers, such as Rehman et al. [23], have indicated

that faith in government and the Internet are determinants (ITU). Besides “information quality, perceived ease-of-use, transaction security, and service quality”, all two components were significant in predicting ITU.

Researchers know of just a few studies that influence Indian people’s adoption of “*e-government services*”. Peoples’ “*trust in e-government services*” & their desire to utilize them will be examined in this SPS Nellore district to find the elements influencing this trust. In particular, this study will demonstrate the essential variables that must be taken into account when it is hoped to expand e-government services in other districts of the Andhrapradesh State.

Design and Methodology

According to prior research, E-government service uptake has been linked to the use of “Trust in E-government (TiEG)”. To that end, the following questions are being pursued:

- Q.1.** What factors impact the trust in e-government services in Nellore city?
- Q.2.** What variables influence residents’ intentions to use e-government services in the Nellore city?

These research questions need to investigate many elements in the models outlined in prior studies. As each model has its strengths and flaws, an integrated framework of many models might be beneficial in investigating issues that impact trust and the ITU.

Conceptual model

This research uses the TAM concept (“perceived usefulness & perceived ease-of-use”) in conjunction with “trust in e-government” activities to determine ITU. This study also offered a set of trust-influencing elements based on earlier research. These are the factors to consider:

- “Trust in government (TiG);
- Trust in technology (TiT);
- Information Quality (I.Q.); and
- Privacy and Security Assurance (P&SA)”.

Figure 1 depicts the suggested study model & relationships, and the table-1 provides a list of definitions for the eight variables.

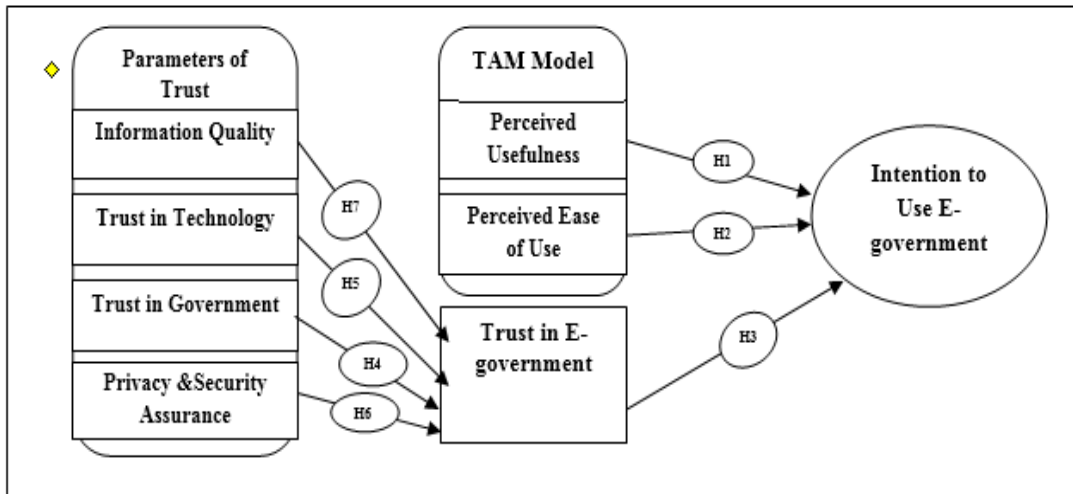


Figure 1. “The conceptual model of the study”

Source: authors own Compilation

Table 1
Factors list used in the present conceptual model

Factor	Description	References
Intention to Use (ITU)	To what extent do individuals want, plan, and anticipate utilizing e-government services.	Davis. F.D et.al.(1989) ^[24] & Abu. E. et.al.(2014) ^[25]
Perceived Usefulness(P.U.)	This metric measure how much better life is for citizens when they can access government services online.	Davis. F.D et.al.(1989) ^[24]
Perceived Ease of Use(PEOU)	The measure to which e-government services are simple to use, understand, and available.	Davis. F.D et.al.(1989) ^[24]
Trust in e-government (TiEG)	Trust in a service provider (such as an individual, a department, or an organization) and the instruments used to provide it.	Chen.J.V. et.al (2015) ^[26] Shajari.M. et.al (2012) ^[27]
Trust in Government (TiG)	Trust the provider (e.g., employee, departments, and institution) of a service.	Chen.J.V. et.al (2015) ^[26] Shajari.M. et.al (2012) ^[27]
Trust in Technology (TiT)	Trust the technology the government uses to offer its services.	Chen.J.V. et.al (2015) ^[26] Shajari.M. et.al (2012) ^[27]
Information Quality (I.Q.)	The website’s data and information are	Abu. E. et.al.(2014) ^[30]

	comprehensive, accurate, recent, original, and relevant to the services provided.	
Privacy and Security assurance (P&SA)	The degree to which e-government websites can protect citizens' information and adhere to privacy requirements.	Abu. E. et.al.(2014) [25]

Source: Authors own compilation

Hypothesis

- H1: "Citizens' willingness" to utilize "e-government services" will be influenced significantly by their perception of their usefulness.
- H2: The "perceived ease of use of e-government services will significantly" impact citizens' willingness to utilize them.
- H3: People's willingness to utilize e-government services is strongly influenced by their level of trust in the system.
- H3: People's willingness to utilize e-government services is strongly influenced by "their level of trust" in the system.
- H4: E-government trust is influenced by public confidence in the government.
- H5: There will be a strong correlation between "trust in technology and trust in e-government".
- H6: Personal privacy and safety E-ability governments to inspire trust will significantly influence the level of assurance provided.
- H7: Trust in "e-government will be influenced significantly by the quality of the information" it contains.

The Questionnaire used

This research employs a quantitative approach to data collection by evaluating questionnaire data. In the first portion, respondents from Nellore city were given an overview of the research and its goals, such as an introduction. Gender, age, and education were all asked in the second part. There were 24 items in this part that determined eight characteristics based on prior studies using the "5-point Likert scale," which ranged from "strongly agree" to "strongly disagree" (from 5 to 1). Usefulness, "trust in e-government and technology, trust in government, information quality, and privacy and security assurance were among these qualities. E-government services were easy to use, valuable, and trustworthy".

There are no well-known classical models that include trust, although earlier research has looked at it in depth. The concept of trust was incorporated into the TAM model in this research to the original model. The remainders of the trust antecedents were taken from earlier research [28, 29, and 30]. The Indian context necessitated that certain pieces be reworked.

Sample and sampling process

Those who utilize e-government services in the city of Nellore were included in this study's population. As a result, participants were asked about their

familiarity with e-government services and then asked to complete a survey. Online and in-person distribution of the questionnaire started on December 1, 2021, and will continue until the end of the month. Within four weeks, a random sample procedure was carried out. A total of 165 questionnaires were gathered, with 150 of them being useable. 51.9 percent of survey participants are female, 49.6 percent have earned a bachelor's degree, and 43.3 percent are between the ages of 17 and 30 years old, as shown in Table-2. The majority of those who responded had a bachelor's degree, according to these figures. The results of the survey were evaluated statistically using the SPSS-24 software.

Table 2
Demographic profile of the participants in Nellore city

Variables	Item	Percentages
Gender	Male	48.1%
	Female	51.9%
	Total	100.0%
Age	17-30 years	43.3%
	31-45 years	33.8%
	46-60 years	21.0%
	Above 60 years	1.9%
	Total	100.0%
Qualifications	High school (or) less	11.6%
	Diploma	5.3%
	Bachelor degree	49.6%
	Postgraduate	33.5%
	Total	100.0%

Source: Primary data

Reliability and Validity

The “validity and reliability of the data” collected from the questionnaire were evaluated in advance of the investigation. The face validity test and Pearson correlations were used to assess the validity. Each question in the survey is evaluated for its face validity, which looks at things like the quality of the design, the amount of time allowed, the level of accuracy, and the amount of useful information that can be gleaned from it. Two experts in the subject assessed the questionnaire before it was administered to five master's students at Vikaram Simahpuri University for a pilot test. The pilot test was designed to determine the questionnaire's responsiveness to eliminate ambiguity or uncertainty. Responses to all complaints about the questionnaire questions' lack of clarity have been handled appropriately. Pearson correlations between statements were calculated as the second test of validity. Table-3 reveals a Pearson correlation coefficient spanning 0.579 to 0.731, showing a moderate to very strong affiliation, which verified scales.

Table 3
Pearson correlation coefficients across each factor

Dimension	Pearson correlation coefficient	P-Value (Sig)
Trust in government	.602**	.000
“Perceived Ease of use	.684**	.000
Perceived Usefulness	.577**	.000
Trust in e-government”	.632**	.000
Trust in Technology	.731**	.000
Privacy and security assurance	.681**	.000
Information Quality	.780**	.000
Intention to use	.662**	.000

Source: Primary data

The results were “analyzed using Chronbach’s alpha, which measures the internal consistency” & reliability of scales, the results was analyzed. Chronbach’s alpha is 0.944, indicating a high internal consistency and reliability level. In addition, we used the “*Kaiser-Mayer-Olkin (KMO)*” test to see whether the sample size was enough. The KMO was 0.925, which is adequate since it was higher than the suggested value of 0.6.

Results of the study

Before addressing the “two research questions, it may be necessary to examine the correlation matrix, which explains the bivariate relationships between every two variables. These predictors (independent variables) may illustrate the relationship between the dependent and independent variables”. In Table-4, you’ll see the correlation matrix created by comparing data from various participants.

Table 4
Correlation Matrix utilizing Pearson correlation

		Trust in government	Perceived ease of use	Perceived Usefulness	Trust in e-government	Trust in Technology	Privacy and security assurance	Informationn Quality	Intentionn to use
“Trust in government	Correlation	1.00							
	P-alue	0.00							
Perceived ease of use	Correlation	0.41**	1.00						
	P-alue	0.00							
Perceived Usefulness	Correlation	0.38**	0.56**	1.00					
	P-alue	0.00	0.00						
Trust in e-government	Correlation	0.45**	0.5**	0.63**	1.00				
	P-alue	0.00	0.00	0.00					
Trust in Technology	Correlation	0.40**	0.47**	0.34**	0.47**	1.00			
	P-alue	0.00	0.00	0.00	0.00				
Privacy and	Correlation	0.51**	0.40**	0.28**	0.40**	0.6**	1.00		

security assurance	P-alue	0.00	0.00	0.00	0.00	0.00			
Information Quality	Correlation	0.47**	0.58**	0.44**	0.49**	0.60*	0.57**	1.00	
	P-alue	0.00	0.00	0.00	0.00	0.00	0.00		
Intention to use	Correlation	0.38**	0.59**	0.67**	0.56**	0.43*	0.38**	0.55*	1.00
	P-alue	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
There are statistically significant relationships at the level of significance (0.01) or less”									

Source: Primary data

It seems that the correlations between these variables are all significant at the 0.01 level, which validates our proposed model. In addition, strong correlations across predictors (divergent validity), where all correlations ranged from 0.28 to 0.63, were necessary for confirmation—this measurement. The one associated with perceived usefulness has the highest correlation (0.67), while the one related to trust in government & privacy and security assurance has the lowest correlation (0.38).

Regression model analysis was utilized to solve the two study questions. Results of the multiple regression tests are shown in Table-5 and Table-6. The dependent variables were intended to “use and trust in e-government services”.

Table 5
The outcomes for multiple regressions for (“Trust in e-government”)

Dependent Variable	“Trust in e-government”				T	Sig.
	Unstandardized Coefficients		Standardized Coefficients			
Independent Variable	B	Std. Error	Beta			
(Constant)	1.53	0.19			**8.16	0.00
Trust in government	0.25	0.05	0.29		5.23**	0.00
Trust in Technology	0.27	0.06	0.30		4.34**	0.00
Privacy and security assurance	0.04	0.05	-		-0.72	0.47
Information Quality	0.19	0.06	0.21		3.23**	0.00
	R				0.62	
	R Square				0.39	
	Adjusted R Square				0.38	
	F-Value				47.97**	
	P-Value				0.00	
(**) “There is a statistically significant effect at the level of significance (0.05) or less (*) There is a statistically significant effect at the level of significance (0.01) or less”						

Source: primary data

Table-5 reveals that independent factors (“trust in technology, trust in government, and information quality”) account for 39% of the variability in trust in e-government, which is a significant degree of prediction in social sciences. Table-5 shows that privacy and security assurances have little influence on trust. As a result, no impact is statistically significant at a significance level of 0.05 or below. Other independent factors, including “trust in technology, confidence in

government, and information quality, have a statistically significant influence on trust in e-government services”. Table-5 also displays the regression coefficient where trust in technology was the strongest predictor of “*trust in e-government*”, with a beta of 0.30. With a beta of -0.05, “privacy and security assurances failed to predict trust in e-government”.

Table 6
Outcomes for multiple regressions for (Intention to use)

Dependent Variable	Intention to use				
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Independent Variable	B	Std. Error	Beta		
(Constant)	0.82	0.19		4.37**	0.00
Perceived Ease of use	0.27	0.05	0.29	5.64**	0.00
Perceived Usefulness	0.45	0.06	0.45	8.16**	0.00
Trust in e-government	0.11	0.05	0.12	2.27*	0.02
	R			0.74	
	R Square			0.55	
	Adjusted R Square			0.54	
	F-Value			122.22*	
	P-Value			0.00	
(**) There is a statistically significant effect at the level of significance (0.05) or less					
(*) There is a statistically significant effect at the level of significance (0.01) or less”					

Source: primary data

Table-6 shows that all three independent variables—reported “ease-of-use, perceived usefulness, & trust in e-government”—have a statistically significant influence on the dependent measure, ITU. ITU’s perceived usefulness was shown to have a beta value of 0.45 in this regression analysis. The ITU’s e-government services had a variance explanation of 55%.

Discussion

The suggested model incorporates eight variables typical in the technology acceptance sector when it comes to factors that impact trust and, subsequently, ITU. The first variable, the Intention to Use (ITU), has been extensively studied as a proxy for technology utilization. Table-7 shows the relative importance of the three critical components used to predict ITU. ITU was predicted by factors such as “perceived ease of use, perceived usefulness, and trust”.

Table 7
Hypothesis testing

Variable	Beta	Significant level	H	Hypothesis status
“Information Quality (IQ)	0.21	0.00	H7	Supported
Privacy and Security Assurance(P&SA)	-0.05	0.47	H6	Not-supported
Trust in Technology (TiT)	0.30	0.00	H5	Supported
Trust in Government (TiG)	0.29	0.00	H4	Supported
Trust in E-government (TiEG)*	0.12	0.02	H3	Supported
Perceived Ease of Use (PEoU)	0.29	0.00	H2	Supported
Perceived Usefulness (PU)	0.44	0.00	H1	Supported
Intention to Use *	-	-		

Note: *dependent variable for this predictor”

Source: Primary data

The most influential construct was perceived usefulness, which had a beta of 0.44, followed by perceived ease of use, which had a beta of 0.29. According to earlier research, Colesca. S. E. (2009)^[16], Ranaweera. H (2016)^[31], and Horst, M. et al. (2007)^[32] as well as this one, this conclusion is correct. Therefore, individuals are more likely to continue using this e-service if they think that e-government services benefit and strengthen their connection with government institutions. As a result, designers and programmers alike should keep end-users in mind as they go through the creative process. A beta of 0.12 indicates that “*trust in e-government*” has a considerable impact on the ITU. It is also confirmed by previous studies on the importance of trust ^{[24][25][26][30]}.

Table-7 shows the substantial effect on trust of the four factors selected as trust predictors, excluding privacy and security assurance components. In accordance with earlier research, the findings demonstrate that confidence in government and trust in technology had the most significant impact on trust, with beta = 0.29 and beta = 0.30, respectively. A government’s image and technology are essential to gaining confidence from citizens, particularly in emerging countries. Furthermore, with beta = 0.21, the quality of the information offered by “*e-government services*” has a considerable effect on user confidence in the services. To improve accuracy, comprehensiveness, up-to-datedness, and originality of the material. In contrast, prior research ^[25, 31] found that “*privacy and security assurance*” had a considerable impact on trust, contradicting the findings of this study.

Conclusion

In developing nations, overcoming difficulties such as low technology adoption owing to a lack of confidence is critical to the success of e-government services. A conceptual model has been developed to help measure the effect of trust on the ITU and identify elements that affect trust. Based on an analysis of several ideas and models of technological acceptability, this research suggested a framework. A quantitative approach was used to test the proposed framework aimed at Nellore

city residents. E-government trust was shown to be impacted by more than only privacy and security assurances, such as confidence in government, faith in technology, and information quality. It was demonstrated that user perceptions of utility and usability heavily impacted ITU e-government services.

Limitations and Future Work

However, this research has certain drawbacks. In the first place, a cross-sectional study only looks at a certain period of time, but it does not illustrate the long-term impact of the trust component. Many e-government services in Andhra Pradesh cannot be generalized to other districts and states in India; hence, additional research is necessary. More study is needed to understand the harsh reality of privacy and security considerations. In addition, more research is required to verify this study's findings. However, the study's findings are valuable to all stakeholders, allowing them to understand better and correct current issues linked to e-government programs and their execution.

References

1. Basu, S. (2004). E-government and developing countries: an overview. *International Review of Law, Computers & Technology*, 18(1), 109-132. Available at: <https://www.tandfonline.com/doi/abs/10.1080/13600860410001674779>
2. Ndou, V. (2004). E-Government for developing countries: opportunities and challenges. *The electronic journal of information systems in developing countries*, 18(1), 1-24.
3. Curtin, G. G., Sommer, M. H., & Vis-Sommer, V. (2003). The world of e-government. *Journal of Political Marketing*, 2(3-4), 1-16.
4. Slade, E. L., Dwivedi, Y. K., Piercy, N. C., & Williams, M. D. (2015). Modeling consumers' adoption intentions of remote mobile payments in the United Kingdom: extending UTAUT with innovativeness, risk, and trust. *Psychology & Marketing*, 32(8), 860-873.
5. Lin, H. F. (2011). An empirical investigation of mobile banking adoption: The effect of innovation attributes and knowledge-based trust. *International journal of information management*, 31(3), 252-260.
6. Palvia, S. C. J., & Sharma, S. S. (2007, December). E-government and e-governance: definitions/domain framework and status around the world. In *International Conference on E-governance* (Vol. 5, pp. 1-12).
7. Liu, S. M., & Yuan, Q. (2015). The evolution of information and communication technology in public administration. *Public Administration and Development*, 35(2), 140-151.
8. Rao, K. P. (2018). A study on e-governance in India: problems, and prospectus. *International Journal of Management, I.T., and Engineering*, 8(6), 270-289.
9. M.S.R. Krishna Prasada Rao, Raghavulu. B.V.(2019). A Study on the Concept, Measurement, Dimensions, and Current Cachet of Digital Divide in India, *RESEARCH REVIEW International Journal of Multidisciplinary*, Volume-04, Issue-07, pp-172-182. Available at: https://www.academia.edu/40035637/A_Study_on_the_Concept_Measurement_Dimensions_and_Current_Cachet_of_Digital_Divide_in_India

10. Fang, Z. (2002). E-government in the digital era: concept, practice, and development. *International Journal of the Computer, the Internet and management*, 10(2), 1-22.
11. Cahlikova, T. (2021). Defining e-Government. In *The Introduction of e-Government in Switzerland* (pp. 19-43). Palgrave Macmillan, Cham.
12. Mihai, P. D., Liviu, T., & Maria, N. (2022). E-Government and the General Population's Digital Skills in the European Union and the OECD Member States. In *Digitalization and Big Data for Resilience and Economic Intelligence* (pp. 41-53). Springer, Cham.
13. Kaluti, M., & Rajani, K. C. (2021). E-governance for Public Administration. In *ICCCE 2020* (pp. 1059-1065). Springer, Singapore.
14. Chandra, S. (2021). The perceptions of citizens towards e-governance: a study of Lucknow urban agglomeration of India. *International Journal of Electronic Governance*, 13(3), 245-263.
15. Chatterjee, S., Khorana, S., & Kizgin, H. (2021). Harnessing the Potential of Artificial Intelligence to Foster Citizens' Satisfaction: An empirical study on India. *Government Information Quarterly*, 101621.
16. Colesca, S. E. (2009). "Increasing e-trust: A solution to minimize risk in e-government adoption," *J. Appl. Quant. Methods*, vol. 4, no. 1, pp. 31-44.
17. Li, W., & Xue, L. (2021). Analyzing the critical factors influencing post-use trust and its impact on citizens' continuous-use intention of e-government: Evidence from Chinese municipalities. *Sustainability*, 13(14), 7698.
18. Almamy, A. (2021). Factors impacting the adoption in Saudi Arabia of e-government, investigated with the use of fuzzy set qualitative comparative analysis and PLS path modelling (Doctoral dissertation, University of Plymouth).
19. Androniceanu, A. (2021). Transparency in public administration as a challenge for good democratic governance. *Revista» Administratie si Management Public «(RAMP)*, (36), 149-164.
20. Liu, B. F., & Mehta, A. M. (2021). From the periphery and toward a centralized model for trust in government risk and disaster communication. *Journal of Risk Research*, 24(7), 853-869.
21. Xie, Qijun & Song, Wei & Xiaobao, Peng & Shabbir, Muhammad. (2017). Predictors for e-government adoption: Integrating TAM, TPB, trust and perceived risk. *The Electronic Library*. 35. 2-20. 10.1108/EL-08-2015-0141
22. Hernandez. B. Ortega. z. (2011) "The role of post-use trust in the acceptance of a technology: Drivers and consequences," *Technovation*, vol. 31, no. 10, pp. 523-538.
23. Rehman, M, Esichaikul V. ,and . Kamal, M (2012). "Factors influencing e-government adoption in Pakistan," *Transform. Gov. People Process Policy*, vol. 6, no. 3, 2012, pp. 258-282.
24. Davis F. D., Bagozzi R. P., and Warshaw P. R., (1989). "User acceptance of computer technology: a comparison of two theoretical models," *Manag. Sci.*, vol. 35, no. 8, pp. 982-1003.
25. Abu-Shanab E. and Al-Azzam, A. (2012). "Trust Dimensions and the adoption of E-government in Jordan," *Int. J. Inf. Commun. Technol. Hum. Dev. IJICTHD*, vol. 4, no. 1, pp. 39-51.
26. Chen, J. V. Jubilado R. J. M. Capistrano E. P. S. and Yen D. C.(2015). "Factors affecting online tax filing-An application of the I.S. Success Model and trust theory," *Comput. Hum. Behav.*, vol. 43, pp. 251-262.

27. Shajari M. and Ismail Z.(2012). "Trustworthiness: a key factor for adoption models of e-government services in developing countries," in International Conference on Education and Management Innovation, vol. 30, pp. 22–26.
28. Gupta, K. P., Singh, S., & Bhaskar, P. (2016). Citizen adoption of e-government: a literature review and conceptual framework. *Electronic Government, an International Journal*, 12(2), 160-185.
29. Faisal, M. N., & Rahman, Z. (2008). E-government in India: modelling the barriers to its adoption and diffusion. *Electronic Government, An International Journal*, 5(2), 181-202.
30. Patel, H., & Jacobson, D. (2008). Factors influencing citizen adoption of e-government: a review and critical assessment.
31. Ranaweera. H (2016). "Perspective of trust towards e-government initiatives in Sri Lanka," *SpringerPlus*, vol. 5, no. 1, 2016, p. 22.
32. Horst, M. Kuttschreuter, and J. M. Gutteling (2007)"Perceived usefulness, personal experiences, risk perception, and trust as determinants of adoption of e-government services in The Netherlands," *Comput. Hum. Behav.*, vol. 23, no. 4, pp. 1838–1852
33. Fischli, A. E., Godfraind, T., & Purchase, I. F. H. (1998). Conclusions and Recommendations. *Pure and Applied Chemistry*, 70(9), 1863-1865. <https://doi.org/10.1351/pac199870091863>