



RESEARCH ARTICLE

Exploring Government Capacity and E-Government Performance on Citizens' Adoption Of E-Government

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ABSTRACT

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This study integrated e-government services into the Technology Acceptance Model (TAM) to investigate the effects of government capacity and e-government performance on the use of e-government services. According to the results, there was a significant relationship between perceived usefulness of e-government services, government capacity, and e-government performance. Furthermore, government capacity was found to positively predict e-government success. Also, the study found that perceived usefulness is a strong predictor of willingness to advocate for e-government services, and that perceived usefulness mediates the relationship between government capacity and e-government performance on the one hand, and individuals' attitudes toward e-government adoption on the other. We discuss how these findings impact the way e-government is implemented.

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INTRODUCTION

Information and Communication Technology (ICT) is a vital tool for improving government administration and enhancing the ability of governments to deliver effective services to their citizens. According to Gant (2008), the use of ICTs enhances the capacity of governments to govern and administer, leading to improved human development conditions.

E-government has been defined as the application of information and communications technology to improve the effectiveness and efficiency of government services.

According (Dawes, Gregg, & Agouris, 2004; Faulkner, Jorgensen, & Koufariotis, 2018). It can be defined up as the application of ICT to improve and support all facets of government operations, engage the public in communication, provide top-notch public services, and promote higher levels of public accountability.

This concept reflects the shift that governments are witnessing towards using technology to facilitate access to services and simplify procedures.

In general, e-government is an important step towards achieving sustainable development and improving the quality of life for citizens by facilitating access to public services and enhancing transparency and efficiency.

E-government is an essential part of the digital government concept, which aims to improve the delivery of public services through the use of technological information and the Internet. In this context, it can be exposed to some major impacts related to the organizational development of government in Jordan.

In Jordan, the e-government initiative was launched in 2001, with the aim of developing the overall performance and efficiency of the public sector by providing government services electronically. However, this initiative faced some challenges in its early stages, but work on it was resumed since 2017 with the development of the e-government portal, as the Jordanian government aimed to strengthen its position as a regional center for digital innovation, by developing a strong technological infrastructure and providing innovative government services. It also focuses on enhancing cooperation between the public and private sectors to provide an appropriate environment for investment in the field of technology.

E-government aims to transform government services from traditional methods to the use of the Internet to provide services quickly and easily to citizens, make public sector and government operations efficient and transparent, reduce waste of public resources, and achieve good governance (Waksberg, Guerini, 2008).

According to Ismail, et al. (2020); Castro, et al., (2023); Gasova, et al., (2017). It can be said that e-government seeks to

Improve efficacy and efficiency: It works to improve the effectiveness of governmental operations, reducing the length of procedures and increasing the accuracy of results.

Improving services: It aims to provide citizens with more convenient online access to government data and services, at any time.

Increasing accountability and transparency: E-government increases accountability and transparency by recording government operations and making data and information available to the general public. It also aids in the fight against corruption.

Reducing costs: By streamlining processes and lowering reliance on paper transactions, it helps cut government spending.

Enhancing communication: It seeks to facilitate information sharing and encourage public participation while enhancing communication between the general public and those in positions of authority.

The government's ability and e-government's performance are without a doubt key factors in successful implementation of e-government. Government capacity and e-government performance are closely intertwined, as they constitute two complementary components in developing government administration and improving services provided to citizens (Kaufmann, Kraay, & Mastruzzi, 2011).

In addition to formulating and implementing quality policies, government credibility and its ability to deliver high-quality public services are interrelated factors that depend on transparency, accountability, and the use of technology. Enhancing these aspects can lead to improved trust between citizens and government and better service delivery that meets the needs of society (Kaufmann, Kray, & Mastruzzi, 2010; Kaufman et al., 2011).

On the other hand, e-government performance is related to the availability of a certain organizational, social, economic and technological infrastructure to successfully implement e-government. (Kim, 2007; Suri, 2017).

Through the above, the performance of e-government depends largely on the availability of an integrated organizational, social, economic and technological infrastructure, and citizens' intention to adopt e-government is affected by the government's capacity and e-government performance, which largely depends on the availability of several components according to Zhang, et al., (2021); Maciulyte-Sniukiene, et al., (2022), which are:

Organizational infrastructure: The existence of a clear organizational structure for managing electronic operations based on coordination between various ministries and government agencies.

Surveys and policies: such as data protection and privacy laws, and security between individuals and the government.

Social awareness infrastructure: Health education efforts are based on how to use government e-services.

Community participation: Community participation in the design and development of government e-services improves the quality of services provided.

Basic economic knowledge for investment in technology: which requires the government to implement large electronic investments in technological information, which helps reduce costs.

Improving the business environment: This comes from improving the business environment by easing procedures, which allows the growth of the national economy.

Infrastructure for developing networks and systems: This requires the establishment of a strong technological infrastructure, fast networks, and integrated information systems that support the provision of government services online.

Secure information: There must be a strong data basket in addition to the security information used in government e-operations.

All of these factors are seen as the basic components of government capacity and improving the performance of e-government.

Therefore, the purpose of this study is to investigate these two interconnected variables in order to show how they affect citizens' adoption of e-government services. The current study aims to explore the relationship between government capability and e-government performance and how it influences e-government service adoption.

By highlighting two important findings, this study contributes to the body of knowledge on e-government adoption: first, that e-government performance and government capacity significantly influence the perceived usefulness of e-government services; and second, that there is a positive correlation between the intention to recommend the adoption of e-government services and their perceived utility.

The rest of the research includes developing theory and hypotheses, designing the research model, research procedures, analyzing data and results, discussion, conclusions, limitations, and future studies.

Theory and hypotheses development

The Technology Acceptance Model (TAM), developed by Fred Davis in 1989, is one of the most influential models for understanding how individuals accept new technology. The model focuses on two main factors that influence a user's intention to use a particular system: perceived usefulness and perceived ease of use. Perceived usefulness refers to the extent to which a user believes that a technology will enhance their performance, while perceived ease of use reflects the extent to which they believe the technology is easy to use.

The Technology Acceptance Model (TAM) is an extension of the theory of rational action. The Technology Acceptance Model (TAM) is very popular and its application covers many fields and provides an understanding of the individual decision to engage and interact with the adoption of a new technology. The TAM model assumes that the expected usefulness and ease of use directly influence the attitude towards use, which in turn influences the actual intention to use. This intention is what determines the user's behavior towards using the technology. The TAM model has been expanded over the years to include additional factors such as social influence and subjective norms, leading to the development of models such as TAM2 that consider other external factors that may influence acceptance, such as administrative support and the social environment.

The TAM model is therefore widely used in information systems studies to understand and predict user behaviors towards new technologies, making it a valuable tool for researchers and practitioners in this field. (Alryalat, 2017; Dahi & Ezziane, 2015; Ma & Zheng, 2018; Mensah, Vera, & Mi, 2018; Sebetci, 2015), e-learning (Abdullah & Ward, 2016; Gamble, 2018; Mohammadi, 2015), e-health (Chauhan & Jaiswal, 2017; de Veer et al., 2015; Hoque, Bao, & Sorwar, 2017; Hossain, Yokota, Sultana, & Ahmed, 2018), e-commerce (Awa, Ojiabo, & Emecheta, 2015; Biucky & Harandi, 2017; Pei, Xue, Li, Chang, & Su, 2015; Pei, Xue, Li, & Su, 2016), e-banking (Fahmi & Rohman, 2018; Munoz-Leiva, Climent-Climent, & Liébana-Cabanillas, 2017; Samar, Ghani, & Alnaser, 2017), mobile payment (Alalwan, Baabdullah, Rana, Tamilmani, & Dwivedi, 2018; Bailey, Pentina, Mishra, & Ben Mimoun, 2017; Humbani & Wiese, 2018). The diverse applications of the TAM provide strong evidence of its importance as a resource for understanding user behavior and the adoption of new technologies. By incorporating external factors and continually refining the model, researchers can enhance their understanding of user behavior and improve the design and implementation of new technologies.

Key Factors in the TAM Model

2.1 Perceived Ease of Use (PEU):

Reflects how easy a system is to learn and use. If a system is easy to use, the more likely a user is to accept it. (Davis, 1989).

2.2 Perceived Usefulness (PU):

Refers to the extent to which an individual believes that using technology will enhance his or her job performance. The greater the perceived benefit, the more likely the user is to accept the technology. (Davis, 1989) defines perceived usefulness as the extent to which an individual user believes that using a new information technology will improve his or her job performance.

When users feel that using new technology would help them achieve their goals, they will naturally be motivated to do so. Research has demonstrated that perceived utility has a significant impact on people's willingness to use e-government services. (Rivett & Chemisto,

2018; Mensah et al. (2018); Sambasivan, Patrick Wemyss, & Che Rose (2010); Hussein, Mohamed, Rahman Ahlan, & Mahmud, 2011).

However, the user's perception of the usefulness of new technologies such as e-government services can also influence the user's recommendation to adopt them because the user's perception of the benefits of e-government enhances his or her experience of using these services. For example, studies have shown that individuals who perceive the benefits of using these services tend to use them more frequently, Pishnyak, A., & Khalina, N. (2021). Accordingly, the following hypothesis is proposed:

H1: Perceived usefulness is positively related to behavioral intention to adopt e-government services.

2.3 Government Capacity (GC):

Government capacity is closely linked to government effectiveness (Stier, 2015), as government capacity reflects the efficiency and effectiveness of government institutions in achieving national goals and meeting the needs of citizens.

Government capacity refers to the capabilities and resources available to a government, Sari et al., (2023); (Adeoye and Islam, 2019), including:

Human competencies: which show the extent of the qualifications of employees and their ability to implement policies.

Infrastructure: which shows the availability of facilities and technologies necessary to support government operations.

Financing: which is the ability to secure the financial resources necessary to implement programs and projects.

Government capacity, therefore, is the ability of the government and its agencies to formulate and implement effective and sound policies. The relationship between government and agency capacity and e-government effectiveness is of paramount importance for successful governance in the digital age (Kaufman et al., 2010). Studies reveal that e-government performance can be well predicted by government capacity. Stronger agencies are better able to adopt and implement e-government projects, which increases the overall effectiveness of these services.

Government effectiveness is defined as the government's commitment to good civil service and the delivery of public services in a manner free from political manipulation and pressure. This includes the government's approach to dealing with and implementing policy initiatives, as these elements are essential to achieving good governance (Kaufmann et al., 2010, 2011).

Governments can improve e-government performance by leveraging their capacity and effectiveness. In addition, Kim (2007) suggested that government effectiveness may influence the success of e-government functions. Furthermore, the fundamental basis for good e-government performance is the efficiency of public sector agents in delivering public services, the design of a sound bureaucratic system, the efficiency of public sector employees in delivering public services, and the preservation and defense of the civil service from political interference, all of which are essential components of effective e-government (Kim, 2007). E-government performance and perceived usefulness can be influenced by government capacity as e-government performance can be predicted by government capacity, as stated by Steir (2015).

As a result, Hypotheses H2 and H3 were proposed:

H2: Government capacity is positively related to perceived usefulness of e-government services.

H3: Government capacity is positively related to e-government performance.

E-government is a vital tool for improving government performance and promoting social and economic development, the successful implementation of which requires a set of factors, including social, political, organizational, technological and economic factors, according to (Al- Shboul et al., (2014); Mahlangu et al., (2021); Defitri et al., (2020); Siddique, W. (2016)).

1. Social features: which express community participation: E-government should encourage citizen participation in decision-making, which enhances participatory democracy and reduces corruption. Awareness and empowerment: require educating citizens about available services and how to use them, which contributes to enhancing trust in government.

2. Political features: which include transparency and accountability: E-government contributes to enhancing transparency by providing information publicly, which increases accountability between officials and citizens. Government support: The government needs strong political support to ensure the continuity of digital initiatives and provide the necessary resources.

3. Organizational features: which include re-engineering processes: The success of e-government requires redesigning government processes to be more efficient and effective, which facilitates the provision of services to citizens. Coordination between government agencies: Effective mechanisms must be put in place to coordinate between different ministries and government agencies to ensure integration of services.

4. Technological features: These include IT infrastructure: A robust infrastructure including networks and systems must be developed to support e-services. Cybersecurity: Advanced security measures are needed to protect government data and information, which enhances users' confidence in the system.

5. Economic factors: These include cost reduction: E-government contributes to reducing operational costs for both the government and citizens, which enhances economic efficiency. Stimulating economic growth: E-services can create new job opportunities and promote innovation in the private sector.

Based on the fact that the successful implementation of e-government requires comprehensive coordination between social, political, regulatory, technological, and economic factors, and by focusing on these aspects, governments can improve the quality of services provided and promote sustainable development, the performance of e-government, which in turn affects the extent of public belief in e-government services, depends critically on the availability of the above-mentioned indicators. Therefore, the research proposes hypothesis H4:

H4: E-government performance is positively related to the usefulness of e-government services.

2.5 Perceived Usefulness Mediates Roles

The e-government adoption process is indirectly affected by perceived usefulness and attitude. The study suggests that perceived usefulness is an important mediating factor

linking government capacity and citizens' attitudes, as well as e-government performance and their attitudes. These findings highlight the vital roles that perceived usefulness and attitude play in promoting adoption. Therefore, we can formulate Hypotheses H5 and H6 in the following way:

H5: Perceived usefulness mediates the relationship between government capacity and individuals' attitudes toward adoption.

H6: Perceived usefulness mediates the relationship between e-government performance and individuals' attitudes toward adoption.

2.6 Research Model

In the research model as shown in Figure: 1. The researcher assumes that the perceived usefulness of e-government services has a direct effect on Attitude towards Adopting e-government. It is also assumed that: Attitude towards Adopting e-government has a direct effect on e-government adoption. The research also assumes that government capacity has a direct effect on both the perceived usefulness of e-government services and e-government performance. It is proposed that e-government performance affects the perceived usefulness of e-government services.

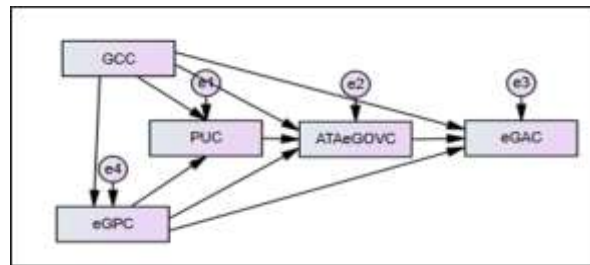


Figure 1: Study Model.

3. Research Methodology

Data for this study were collected using a questionnaire approach, adapting the variables of perceived usefulness, government capacity, e-government performance, and attitude towards e-government adoption to align with the current study's content. We adapted the concept of perceived usefulness from Davis (1989) and Tarhini et al. (2017), while Oliveira et al. (2016) provided the intention to use it.

Kim (2007) and Steir (2015) inspired government capacity and e-government performance, while Al-Hujran et al. (2015) influenced the attitude toward e-government adoption. The researcher independently developed the question items related to government capacity and e-government performance, reflecting a deep understanding of the topic and research requirements.

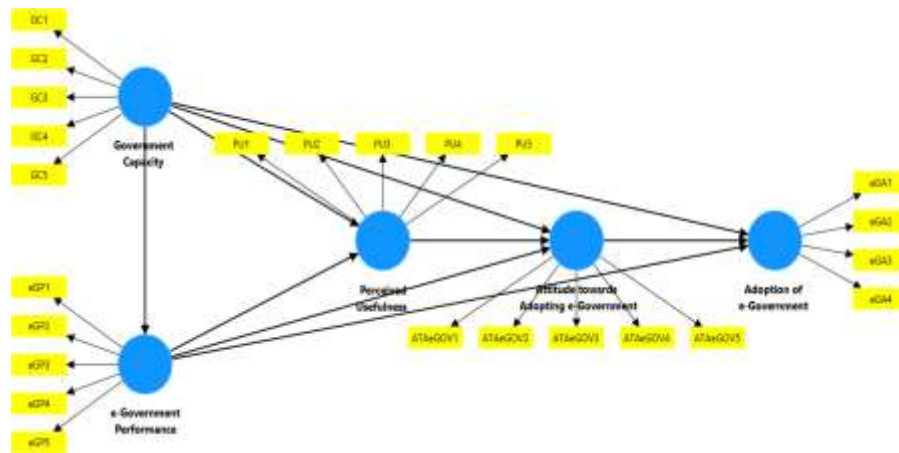
The target sample size of 500 participants in Jordan received the questionnaire via the Internet. We initially developed the questionnaire in English and then translated it into Arabic to improve the respondents' understanding. After distributing the questionnaire, we retrieved 491 completed questionnaires from the total but decided not to count the 17 partially completed ones.

The analysis included 491 completed questionnaires. The researcher used SPSS and Smart PLS4 to conduct the analysis and extract the results. The study uses structural equation modeling (SEM) to explore the impact of government capacity and e-government performance on citizens' adoption of e-government through perceived usefulness and attitudes towards e-government adoption.

4. Data Analysis And Results

The research using Smart PLS4 to investigate the connections between government capability, e-government performance, perceived utility, and attitudes toward adopting e-government the data for this study came from a sample of 491 individuals who participated in the study. For the purpose of validating constructs, the approach included a measuring model, and for the purpose of testing hypotheses, it included a structural model.

4.1 The Measurement Model



4.2 Outer Loadings

Based on the outer loadings, the validity of the measurement model is demonstrated. The majority of the indicators are higher than the suggested threshold of 0.7, which indicates that the item dependability is high. The two most notable exceptions are GC1 (0.55) and eGP2 (0.57), both of which are numerically lower than this criterion but were most likely kept because of their practical significance. Both the adoption of e-Government indicators (eGA1–eGA4) and the perceived usefulness indicators (PU1–PU5) demonstrate a high level of reliability, with values that are consistently high enough to be over 0.8.

Table 1: Outer Loadings

	Adoption of e-Government	Attitude towards Adopting e-Government	Government Capacity	Perceived Usefulness	e-Government Performance
ATAeGOV1		0.64			
ATAeGOV2		0.83			
ATAeGOV3		0.81			

ATAeG OV4		0.81			
ATAeG OV5		0.83			
GC1			0.55		
GC2			0.87		
GC3			0.83		
GC4			0.80		
GC5			0.69		
PU1				0.80	
PU2				0.82	
PU3				0.93	
PU4				0.91	
PU5				0.90	
eGA1	0.89				
eGA2	0.91				
eGA3	0.93				
eGA4	0.87				
eGP1					0.68
eGP2					0.57
eGP3					0.85
eGP4					0.76
eGP5					0.84

4.3 R-Square

The adoption of e-Government demonstrates a strong model fit, with 61% of its variation explained by predictors. The coefficient of determination (R²) for this model is 0.61. A small amount of explanatory power is demonstrated by perceived usefulness (R² = 0.57) and attitudes toward the adoption of e-government (R² = 0.46); this illustrates the significance of government capacity and performance.

Table 2: R-square

	R-square	R-square adjusted
Adoption of _e-Government	0.61	0.60
Attitude towards_ Adopting e-Government	0.46	0.46
Perceived Usefulness	0.57	0.57
e-Government_ Performance	0.43	0.43

4.4 Construct Reliability and Validity

The constructs demonstrate high reliability, with Cronbach's alpha and composite reliability exceeding 0.8 for all constructs. Average Variance Extracted (AVE) values range from 0.56 to 0.81, surpassing the 0.5 threshold and confirming convergent validity. The adoption of e-Government construct shows exceptional reliability and validity (AVE = 0.81).

Table 3: Construct reliability and validity

Construct	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Adoption of _e-Government	0.92	0.93	0.95	0.81
Attitude towards_ Adopting e-Government	0.84	0.85	0.89	0.62
Government_Capacity	0.81	0.84	0.87	0.58
Perceived Usefulness	0.92	0.93	0.94	0.76
e-Government_ Performance	0.80	0.84	0.86	0.56

4.5 Discriminant Validity

Discriminant validity is confirmed through the HTMT matrix, where all values are below the 0.85 threshold, ensuring distinctiveness among constructs. The strongest relationships are observed between Perceived Usefulness and Attitudes toward Adopting e-Government (HTMT = 0.73), highlighting their interdependence.

Table 4: Discriminant validity, Heterotrait-monotrait ratio (HTMT) - Matrix

Construct	Adoption of _e- Government	Attitude towards_ Adopting e- Government	Government _Capacity	perceived Usefulness	e- Government_ Performance
Adoption of _e- Government					
Attitude towards_ Adopting e-Government	0.85				
Government _Capacity	0.59	0.63			
perceived Usefulness	0.74	0.73	0.73		
e-Government_ Performance	0.64	0.68	0.79	0.81	

4.6 Collinearity Statistics (VIF)- Outer Model

The VIF values are within acceptable limits, mostly below 5, indicating no severe multicollinearity. PU3 (4.50) and PU4 (4.73) approach the upper limit but remain acceptable. These results confirm the robustness of the outer model.

Table 5: Collinearity Statistics (VIF), Outer Model - List

CONSTRUCT	VIF
ATAeGOV1	1.45
ATAeGOV2	2.17
ATAeGOV3	2.10
ATAeGOV4	2.05
ATAeGOV5	2.26
GC1	1.51
GC2	2.76
GC3	2.45
GC4	2.03
GC5	1.38
PU1	2.03
PU2	2.25
PU3	4.50
PU4	4.73
PU5	3.73
eGA1	2.82
eGA2	3.85

eGA3	4.41
eGA4	2.51
eGP1	1.48
eGP2	1.25
eGP3	2.01
eGP4	1.52
eGP5	2.10

4.7 Model Fit

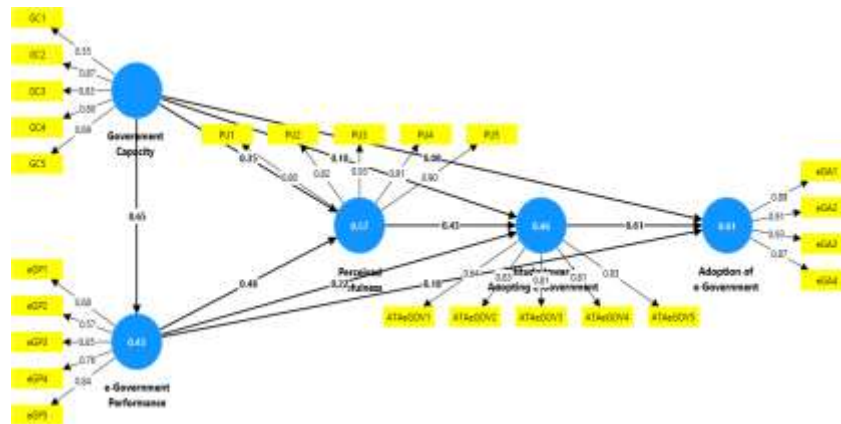
The model fit indices confirm an acceptable model fit. The Standardized Root Mean Square Residual (SRMR) is 0.08, within the recommended threshold of 0.08. Other indices, such as Chi-square and NFI (0.74), indicate room for improvement but overall alignment with the data.

Table 6: Model fit

	Saturated model	Estimated model
SRMR	0.08	0.08
d_ULS	1.88	2.03
d_G	1.04	1.05
Chi-square	2519.87	2550.96
NFI	0.74	0.74

4.8 Structural Model and Path Analysis

The structural model examines the relationships between government capacity, e-government performance, perceived usefulness, attitude toward adopting e-government, and the ultimate adoption of e-government.



4.9 Path coefficients

The path coefficients highlight the direct effects of variables on each other. Attitude toward adopting e-government has the strongest impact on e-government adoption ($\beta = 0.61$, $p < 0.01$), underscoring its importance as a mediating variable. Government capacity

significantly influences e-government performance ($\beta = 0.65$, $p < 0.01$) and perceived usefulness ($\beta = 0.35$, $p < 0.01$), confirming its foundational role in shaping citizens'

perceptions and attitudes. E-government performance positively affects both perceived usefulness ($\beta = 0.48$, $p < 0.01$) and attitude ($\beta = 0.22$, $p < 0.01$), emphasizing its dual contribution to shaping perceptions and attitudes. The direct effect of government capacity on adoption is weaker ($\beta = 0.08$, $p = 0.07$), indicating that its influence is predominantly indirect.

Table 7: Path coefficients, Mean, STDEV, T values, p values

	Original sample (O)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
Attitude towards_ Adopting e-Government -> Adoption of _e-Government	0.61	0.04	15.70	0.00
Government _Capacity -> Adoption of _e-Government	0.08	0.04	1.84	0.07
Government _Capacity -> Attitude towards_ Adopting e-Government	0.10	0.05	2.06	0.04
Government _Capacity -> Perceived Usefulness	0.35	0.05	7.23	0.00
Government _Capacity -> e-Government_ Performance	0.65	0.03	18.87	0.00
Perceived Usefulness -> Attitude towards_ Adopting e-Government	0.43	0.05	8.33	0.00
e-Government_ Performance -> Adoption of _e-Government	0.18	0.05	3.87	0.00
e-Government_ Performance -> Attitude towards_ Adopting e-Government	0.22	0.07	3.29	0.00
e-Government_ Performance -> Perceived Usefulness	0.48	0.04	11.33	0.00

Table 8: Specific indirect effects, Mean, STDEV, T values, p values

Construct Path	Original sample (O)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
Government _Capacity -> Attitude towards_ Adopting e-Government -> Adoption of _e-Government	0.06	0.03	2.06	0.04
Government _Capacity -> e-Government_ Performance -> Perceived Usefulness	0.32	0.04	8.75	0.00
Perceived Usefulness -> Attitude towards_ Adopting e-Government -> Adoption of _e-Government	0.26	0.03	7.82	0.00
e-Government_ Performance -> Perceived Usefulness -> Attitude towards_ Adopting e-Government	0.21	0.03	6.35	0.00
e-Government_ Performance -> Attitude towards_ Adopting e-Government -> Adoption of _e-Government	0.13	0.04	2.97	0.00
Government _Capacity -> e-Government_ Performance -> Attitude towards_ Adopting e-Government -> Adoption of _e-Government	0.09	0.03	2.94	0.00
Government _Capacity -> e-Government_ Performance -> Perceived Usefulness -> Attitude towards_ Adopting e-Government -> Adoption of _e-Government	0.08	0.02	5.52	0.00
Government _Capacity -> Perceived Usefulness -> Attitude towards_ Adopting e-Government -> Adoption of _e-Government	0.09	0.02	5.40	0.00
Government _Capacity -> e-Government_ Performance -> Perceived Usefulness -> Attitude towards_ Adopting e-Government	0.14	0.02	5.59	0.00
e-Government_ Performance -> Perceived Usefulness -> Attitude towards_ Adopting e-Government -> Adoption of _e-Government	0.13	0.02	6.36	0.00
Government _Capacity -> e-Government_ Performance -> Adoption of	0.12	0.03	3.62	0.00

_e-Government				
Government _Capacity -> e-Government_ Performance -> Attitude towards_ Adopting e-Government	0.14	0.04	3.27	0.00
Government _Capacity -> Perceived Usefulness -> Attitude towards_ Adopting e-Government	0.15	0.03	5.96	0.00

4.10 Specific Indirect Effects

The specific indirect effects reveal the mediation pathways in the model. Government capacity indirectly influences e-government adoption through e-government performance, perceived usefulness, and attitude ($\beta = 0.09$, $p < 0.01$). Similarly, e-government performance has an indirect effect on adoption through perceived usefulness and attitude ($\beta = 0.13$, $p < 0.01$).

Notably, perceived usefulness significantly mediates the relationship between government capacity and attitude ($\beta = 0.09$, $p < 0.01$), and between e-government performance and attitude ($\beta = 0.13$, $p < 0.01$). These findings emphasize the critical mediating roles of perceived usefulness and attitude in the adoption process.

5. DISCUSSION AND CONCLUSION

Smart PLS4 was utilized in order to investigate the capability of the government, the performance of e-government, the perceived usefulness of e-government, and the attitudes of 491 participants on e-government. The constructs were validated by a measurement model, and then the assumptions were checked by a structural model. The majority of outer loading indicators were found to be higher than the indicated threshold of 0.7, which is indicative of high item dependability and measurement model validity. GC1 (0.55) and eGP2 (0.57) were kept for their theoretical significance despite the fact that they did not meet the criterion. It was shown that the indicators of e-government adoption (eGA1–eGA4) and perceived utility (PU1–PU5) were highly trustworthy, with loadings that were greater than 0.8.

Values of the R-square statistic demonstrated the structural model's capacity for explanation. The adoption of e-Government had a strong model fit, with 61% of its variance being explained by predictors. The coefficient of determination (R^2) was 0.61. Both perceived usefulness ($R^2 = 0.57$) and attitudes towards e-Government ($R^2 = 0.46$) demonstrated a moderate level of explanatory power, indicating the influence of government capacity and performance. Cronbach's alpha and composite reliability scores that were more than 0.8 for each concept provided evidence that the model's construct reliability and validity were indeed established. Convergent validity was demonstrated by the fact that the AVE values ranged from 0.56 to 0.81, which was greater than the minimum requirement of 0.5. Adoption of electronic government was extremely trustworthy and authentic, with an average value of 0.81.

Strong linkages between variables were demonstrated by the structural model. According to the findings of the study, attitudes regarding the adoption of e-Government had the most significant direct impact on adoption ($\beta = 0.61$, $p < 0.01$), demonstrating that it plays a vital role in moderating the adoption process. The capability of the government has a significant impact on the performance of e-government ($\beta = 0.65$, $p < 0.01$) and the perceived utility of e-government ($\beta = 0.35$, $p < 0.01$), underscoring the significant role governments play in shaping views and attitudes. The effectiveness of e-government has a positive influence on perceived usefulness ($\beta = 0.48$, $p < 0.01$) and attitudes ($\beta = 0.22$, $p < 0.01$), indicating its dual role in influencing perceptions and fostering adoption. Interestingly, it is worth noting that the capability of the government had a less direct impact on the adoption of e-Government ($\beta = 0.08$, $p = 0.07$), indicating that it has an indirect influence.

There were particular indirect affects that shed light on mediation mechanisms. The adoption of e-government was found to be indirectly influenced by government capability, which encompassed performance, perceived usefulness, and attitudes ($\beta = 0.09$, $p < 0.01$). Furthermore, it was observed that the performance of e-government had an indirect influence on adoption by means of perceived usefulness and attitudes ($\beta = 0.13$, $p < 0.01$). In a significant manner, the association between government capabilities and attitudes was mediated by perceived usefulness ($\beta = 0.09$, $p < 0.01$).

Additionally, e-government performance ($\beta = 0.13$, $p < 0.01$) played a role in mediating this relationship. These findings highlight the significance of attitudes and perceived usefulness as mediators in the adoption of electronic government and highlight their importance.

6. PRACTICAL IMPLICATIONS

The ability of a government to implement e-government depends on sound policies and an effective regulatory framework. It is essential that the government demonstrates its commitment to achieving these policy objectives, which positively impacts citizens' perceptions of the benefits of e-services. Freedom of expression must be maintained as a key element, enabling citizens to provide their views on government programs without fear of repercussions.

E-government requires a strong infrastructure, including education and internet availability, to ensure that citizens benefit from digital services. Improving economic well-being is also vital, as economic conditions affect individuals' ability to use the technology needed to access these services.

Civil liberties must also be protected to ensure effective interaction between government and citizens. Kim (2007) points out the importance of providing platforms for citizens to express their views and monitor government activities online.

Education also plays a pivotal role, as educated citizens will be better able to benefit from e-government. Therefore, the government should ensure that basic education is provided to enhance the social and economic benefits.

Ultimately, e-government aims to improve the quality of public services and enhance transparency and accountability, which helps reduce corruption and enhance trust between citizens and the government. If the government can achieve these goals, it will be able to build a positive relationship with citizens, which will encourage them to use e-government services.

7. LIMITATION AND FUTURE RESEARCH

Government capabilities and issues affecting e-government performance vary across countries. Therefore, the results of this study may be applicable in certain contexts, while they may not reflect or support current findings in other countries. In addition, the sample size used in the study may not be sufficiently representative, which calls for caution in interpreting and generalizing the results.

8. RESEARCH RECOMMENDATIONS

The research recommendations derived from the research include the following:

Enhancing government capacity: Governments should work to improve their institutional capacities through continuous training and development of employees, which contributes to enhancing e-government performance Mensah, I. K. (2020).

Improving e-government performance: Focus should be placed on developing digital infrastructure and e-government applications to ensure more efficient and transparent services are provided to citizens, Abdulnabi, S. M. (2024).

Raising awareness of the benefits of e-government: It is important to implement awareness campaigns for citizens about the benefits of using e-government services, which enhances the adoption of these services.

Evaluating the usefulness of services: Periodic studies should be conducted to evaluate the usefulness of e-government services and their impact on citizens, which helps improve these services based on feedback.

Enhancing transparency and accountability: E-government strategies should include mechanisms to enhance transparency and accountability, which contributes to reducing corruption and increasing citizens' trust in government. Encouraging e-participation: Citizens should be encouraged to participate in decision-making processes through electronic platforms, which enhances participatory democracy and increases the effectiveness of government services.

Developing information security policies: Strict information security policies should be put in place to protect government data and citizen data, which enhances confidence in the use of e-services.

These recommendations contribute to improving the implementation of e-government and providing high-quality public services to citizens.

9. STUDY CONCLUSION

This study emphasizes the importance of government ability and e-government performance in molding citizens' perceptions and attitudes, which drive e-Government adoption. Government capacity is a key enabler of e-government performance and perceived usefulness. E-government performance improves perceived usefulness and adoption attitudes, indicating its dual role in favorable views and behaviors. The structural model shows that attitudes toward e-Government adoption are the strongest direct predictor of adoption, stressing their mediating role. Government capability has a weaker direct effect on adoption, but e-government performance, perceived usefulness, and attitudes mediate it. These data show that perceived usefulness mediates the relationship between government capability, e-government performance, and adoption. The measurement model shows significant outer loadings, high R-square values, and robust convergent and discriminant validity. Acceptable model fit indicators support the study's theory and findings. The results show that policymakers should prioritize government capacity and e-government performance to improve perceived usefulness and favorable attitudes, which are necessary to increase e-Government adoption rates. These findings could be expanded by studying trust and user happiness to further understand e-Government uptake. These findings can help create and implement targeted e-Government system improvements.

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