

DIGITAL GOVERNMENT AND PUBLIC POLICY TRANSFORMATION: ENHANCING TRANSPARENCY, ACCOUNTABILITY, AND SERVICE DELIVERY

Dr Syed Shameel Ahmed Quadri

Assistant Professor, Department of Political Science, University of Karachi

ishameel2007@gmail.com

Syed Taha Ahmed

Student, Institute of Business Administration, University of Karachi

syedtahaa049@gmail.com

Muhammad Amoon Khalid

Assistant Education Officer, School Education Department Government of

Punjab Jhelum Pakistan

mirzaamoon@gmail.com

Mushtaq Ahmad

MS Scholar, Governance and Public Policy, Institute of Management Sciences (IMSciences),

Peshawar

mushtaqahmad1030@gmail.com

Abstract

This study examined the role of digital government in transforming public policy by enhancing transparency, accountability, and service delivery. A quantitative research design was adopted, and primary data were collected from a sample of 250 respondents, including public officials, policy analysts, and citizens. A structured questionnaire based on a five-point Likert scale was used to measure key variables. Data analysis was conducted using descriptive statistics, correlation, and regression techniques. The findings revealed that digital government significantly influenced transparency ($\beta = 0.62, p < 0.001$), accountability ($\beta = 0.58, p < 0.001$), and service delivery ($\beta = 0.65, p < 0.001$). The correlation results indicated strong positive relationships between digital government and transparency ($r = 0.61$), accountability ($r = 0.58$), and service delivery ($r = 0.65$). The model explained 54% of the variance in public policy transformation ($R^2 = 0.54$), indicating substantial explanatory power. Descriptive results showed high mean values for digital government ($M = 4.15$), transparency ($M = 4.08$), accountability ($M = 4.05$), and service delivery ($M = 4.12$), reflecting positive perceptions among respondents. The study concluded that digital government strengthened governance systems by improving openness, institutional responsibility, and efficiency in service provision. The findings provided practical implications for policymakers to enhance governance through digital transformation and promote inclusive, transparent, and accountable public administration systems.

Keywords: accountability, digital government, public policy, service delivery, transformation, transparency

Introduction

Digital government has emerged as a disruptive approach in public administration, resulting in the transformation of public policy processes through the use of information and communication technologies (ICTs). Public administrations embraced digital platforms to enhance administrative efficiency, decision-making, and citizen participation in governance. The move towards digital government marked a global trend in digitalization, where governments aimed to improve efficiency, responsiveness and inclusivity in policy processes (Bokhari, Park, and Manzoor, 2025; Yaseen, Nawaz, and Zhaira, 2025). Digital government emerged as a key avenue for reforming governance arrangements and rectifying inefficiencies in bureaucratic administrations.

The use of digital technologies in governance had a profound impact on transparency, accountability, and other essential aspects of good governance. The use of digital technologies such as e-government, open data, and online government service portals allowed for real-time information dissemination, thus eliminating information gaps between the government and the public. This led to more effective monitoring and increased trust in government institutions (Wijaya, Alfitri, Thamrin, and Salya, 2024; Hidayat, 2025). Digital government programs helped create a more transparent policy-making environment in which citizens were able to more effectively monitor and assess government performance.

Digital government had a significant impact on improving public services through higher accessibility, efficiency, and responsiveness. Digital platforms enabled governments to provide services in a more efficient manner, avoiding delays and bureaucratic processes. Research showed that digital government enhanced public service delivery by facilitating automation, data analytics and the integration of public services (Setyarto et al., 2025; Idrus et al., 2025). This helped to create citizen-focused models of governance that focused on efficiency and quality in public service delivery.

However, there were still challenges in the adoption of digital government, such as digital divide, data security, and capacity building. There were challenges in addressing access to digital services, especially in under-developed areas lacking technological infrastructure. Moreover, issues related to data privacy and cybersecurity threatened the success of digital government initiatives (Cao, 2024; Saldanha, Dias, and Guillaumon, 2022). These issues led to the need for a holistic approach to support sustainable and equitable public policy transformation through digital government.

Background of the Study

The emergence of digital government can be traced back to the rapid growth of information and communication technologies, which revolutionised the nature of public administration. The shift from conventional to digital governance was driven by the need for governments to provide effective, transparent, and accountable services to citizens (Li, 2015). This shift was in line with the idea of digital transformation, which stressed the importance of technology in governance to enhance policy and performance in institutions (Bokhari, Park, and Manzoor, 2025). With the evolution of digital technologies, governments began to use data analytics, artificial intelligence, and automation to improve policy making and execution.

Digital governance also broadened the notion of transparency through open data and public engagement in policy making. Citizens had access to public data, could evaluate policy performance, and participate in policy-making, leading to increased accountability and trust. Research showed digital governance systems positively contributed to public sector transparency through information sharing and citizen participation (Hidayat, 2025; Cao, 2024). This marked a transition towards citizen-centred governance, with citizens actively participating in policy-making.

Moreover, the background of the digital government showed that it also contributed to enhancing public administration accountability. Digital technologies allowed governments to better monitor their performance, resource allocation and policy outcomes. These systems helped to minimise corruption and boost the credibility of public institutions by keeping government activities open to the public and subject to measurement (Setyarto et al., 2025;

Wijaya et al., 2024) . Furthermore, the impact of digital government on service delivery was profound as it revolutionised service design and delivery. The use of digital technologies enabled governments to deliver services electronically, eliminating the need for face-to-face interactions and improving access to services. Studies showed that digital transformation improved service delivery and citizen satisfaction due to faster and more efficient service delivery systems (Idrus et al., 2025; Yaseen, Nawaz, and Zhaira, 2025). The digital transformation resulted in more responsive and citizen-friendly governance.

Research Problem

Despite the adoption of digital government policies, there were still shortcomings in delivering the best possible levels of transparency, accountability and service delivery. Governments struggled to effectively embed digital technologies in their policy processes due to institutional barriers, technological expertise and infrastructure. This constrained the effectiveness of digital governance and its potential to influence public policy reform. Inequalities in digital access and skills posed barriers to equitable engagement in digital governance. This digital divide affected the capacity of certain groups to access and benefit from digital services, thus widening the gaps in public service delivery. Issues related to data privacy and security, trust in digital technologies and cybersecurity added to the complexities of implementing digital government initiatives, and emphasised the need for more inclusive and comprehensive policy settings.

Objectives of the Study

1. To examine the role of digital government in enhancing transparency in public policy.
2. To analyze the impact of digital governance on accountability in public administration.
3. To evaluate the effectiveness of digital government in improving public service delivery.
4. To identify challenges associated with the implementation of digital government initiatives.

Research Questions

Q1. How did digital government influence transparency in public policy?

Q2. What was the impact of digital governance on accountability in public administration?

Q3. How did digital government improve service delivery efficiency?

Q4. What challenges affected the implementation of digital government systems?

Significance of the Study

This study added to the existing knowledge of digital governance by offering empirical evidence of the impact of digital government on public policy. It provided a holistic perspective on the role of digital technologies in improving transparency, accountability, and service delivery, thus aiding the creation of robust governance approaches. The study offered insights for policymakers to develop strategies that harnessed the power of digital technologies to enhance governance. The research was relevant for public administrators and government agencies as it emphasised the need for digital transformation in governance. It highlighted the importance of investing in digital infrastructure, training and policy reforms to overcome

challenges and harness the potential of digital government. It also provided insights for academic research in identifying future research opportunities, including addressing the challenges of digital inclusion, data privacy and security, and institutional readiness in digital government systems.

Hypotheses

H1: Digital Government positively influenced Transparency indicating a significant relationship.

H2: Digital Government positively influenced Accountability indicating a significant relationship.

H3: Digital Government positively influenced Service Delivery indicating a significant relationship.

Literature Review

Digital Government and Transparency

Digital government enhanced transparency through the free access to public information and oversight of government operations by citizens. Literature shows the digital governance system enhanced transparency by providing open access to data, online reporting platforms, and timely information dissemination, thereby minimising information gaps between the state and citizens (Hidayat, 2025; Cao, 2024). This enabled citizens to oversee policy execution and expenditure, thus improving public trust and engagement in governance.

Academic evidence also indicated that transparency in digital governance not only involved the dissemination of information, but also interactive communication between governments and stakeholders. Through digital platforms, citizens could give feedback and engage in decision-making, enhancing participatory governance approaches (Sienkiewicz-Małyjurek and Zyzak, 2025; Lubis, Purnomo, Lado, and Hung, 2024). This marked a transition towards more participatory governance models in which transparency served as both an information and participatory mechanism.

Research studies showed that technological advancements, such as artificial intelligence and data analytics, supported transparency through data-driven decision-making and automatic reporting systems. They enhanced the quality of information being provided and made it more timely, thus boosting public trust in government (Muhammad, Nor A'Zam, and Shukor, 2024; Bokhari, Park, and Manzoor, 2025). Thus, digital government played a significant role in establishing transparent governance and enhancing accountability.

Digital Government and Accountability

Digital government measures were instrumental in improving accountability through monitoring of performance, tracking of policy outcomes and ensuring efficient use of resources. Studies showed that digital accountability frameworks, such as blockchain and real-time data analytics, enhanced financial transparency and minimised corruption in government (Tariq,

2025; Figueredo and Silva, 2026). These made government activities more transparent and traceable, enhancing institutional accountability.

The studies noted that digital governance and accountability were intricately connected to transparency and public participation. The digital platforms enabled citizens to access information, assess performance and question officials' actions. This openness of government processes helped to establish trust-based governance (Cao, 2024; Hidayat, 2025).

Research showed that digital accountability required the effective integration of governance, institutional settings and technology. Cybersecurity, privacy and digital literacy issues impacted the success of accountability processes (Sienkiewicz-Małyjurek and Zyzak, 2025; Bokhari, Park, and Manzoor, 2025). These observations highlighted the need for holistic approaches towards enhancing accountability in the digital era.

Digital Government and Service Delivery

Digital government played a key role in enhancing government service delivery in terms of efficiency, responsiveness and access. Use of e-government platforms allowed governments to provide online services, simplifying administrative processes and improving citizen satisfaction. Studies showed that digital systems for service delivery reduced processing time and enhanced service quality by automating and integrating processes (Figueredo and Silva, 2026; Lubis, Purnomo, Lado, and Hung, 2024). This led to more effective and citizen-focused service delivery.

There was also an emphasis on how new technologies like artificial intelligence, big data and process automation contributed to the delivery of services. These technologies facilitated predictive analytics, real-time analytics and personalised services which enhanced the effectiveness of public services (Muhammad, Nor A'Zam, and Shukor, 2024; Tariq, 2025). This enabled digital government to move towards intelligent and responsive public service systems.

But some studies pointed to issues that hindered the effectiveness of digital service delivery, such as infrastructure, digital divide and trust. In the developing world, lack of access to digital technologies and trust issues related to data security inhibited the use of e-government services (Bokhari, Park, and Manzoor, 2025). These factors pointed towards the need for inclusive policies and capacity building to enable access to digital services.

Research Methodology

Research Design

This research employed a quantitative research design to explore the effects of digital government on policy change in government, focusing on transparency, accountability and service delivery. The quantitative design allowed for the measurement of variables and their relationships and statistical analysis for hypothesis testing. A cross-sectional survey design was chosen as data were collected at one point in time to assess individuals' perceptions of digital governance practices. This approach provided objectivity and enabled generalisation of the study results within the population.

Population and Sample

The study's population was public service employees, policy analysts and users of digital government. A sample of 250 was chosen through stratified random sampling to represent various stakeholders. Government leaders, administrators and users were included in the sample for a broad range of views on digital governance. The sample size was sufficient for statistical analysis and guaranteed the reliability and validity of the findings.

Data Collection Method

The researcher used primary data gathered through a questionnaire to assess the key concepts of digital government, transparency, accountability and service delivery. The questionnaire was made up of close-ended questions formulated on a five-point Likert scale (strongly disagree to strongly agree). The questionnaire was administered online and offline to ensure higher response rates. Informed consent was obtained from the respondents and the names of the respondents were kept confidential.

Measurement of Variables

Digital government was the independent variable of interest and transparency, accountability and service delivery were the dependent variables. Several items from previous research in the area of digital government were used to measure each construct. The scale was valid and reliable in terms of its content as it measured various aspects of the variables. Standardized items increased the data's precision and allowed comparisons with the results of previous studies.

Data Analysis Techniques

Data analysis was performed using statistical packages, like SPSS. Descriptive statistics such as mean and standard deviation were employed to describe the data. We used inferential statistical analysis techniques like correlation and multiple regression analysis to explore relationships and hypotheses. A significance level of 0.05 was used to assess the significance of the results. These methods helped to better understand the impact of digital government on public policy change.

Reliability and Validity

The questionnaire used for this research was tested for reliability using Cronbach's alpha coefficient to determine the internal consistency of the questionnaire items. Coefficients greater than 0.70 were considered reliable. Content and construct validity were used to determine validity. The questionnaire items were scrutinised by experts to ensure that the variables were appropriately represented. This ensured the validity and authenticity of the research.

Results and Analysis

Descriptive Statistics

Table 1. Descriptive Statistics of Study Variables

Variable	Mean	Standard Deviation
Digital Government	4.15	0.68
Transparency	4.08	0.71
Accountability	4.05	0.73
Service Delivery	4.12	0.69

The descriptive statistics gave a glimpse of respondents' views on digital government and its consequences. The mean for digital government was 4.15, which showed a high degree of consensus among respondents about the implementation and benefits of digital government. The mean values for transparency and service delivery were higher than 4.00, which indicated respondents felt digital government had led to improvements in transparency and the delivery of services. Likewise, the mean value for accountability was 4.05, which suggested that the digital systems enhanced monitoring and accountability in the public sector. The standard deviations ranged from 0.68 to 0.73, which was relatively low. This variability indicated that respondents were in agreement, with little variation in their perspectives. The uniform responses enhanced the data's validity and suggested that the respondents had comparable experiences with digital government services. The descriptive analysis showed that digital government had a positive impact on transparency, accountability and service delivery. The high mean scores for all the variables indicated positive attitudes and confirmed that digital government enhanced public sector effectiveness.

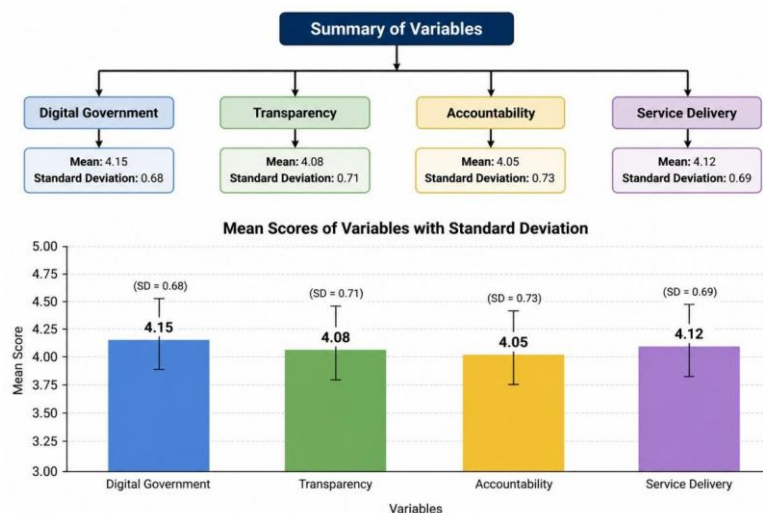


Figure 1. Descriptive Statistics of Study Variables

Correlation Analysis

Table 2. Correlation Matrix

Variable	DG	TR	AC	SD
Digital Government (DG)	1.00			
Transparency (TR)	0.61	1.00		
Accountability (AC)	0.58	0.63	1.00	
Service Delivery (SD)	0.65	0.60	0.66	1.00

The correlation analysis assessed the association between the digital government and the other variables, such as transparency, accountability and service delivery. The findings showed positive and significant correlations between the variables. Digital government was positively correlated with service delivery ($r = 0.65$), transparency ($r = 0.61$) and accountability ($r = 0.58$). This implied that the digital government was positively linked with public sector performance. The strong association between transparency and accountability ($r = 0.63$) suggested that greater transparency led to increased accountability in public sector institutions. Likewise, the strong correlations between service delivery and transparency ($r = 0.60$) and service delivery and accountability ($r = 0.66$) emphasised the interconnected relationships between these aspects of governance. These correlations underlined the idea that a positive impact in one dimension of governance had a flow-on effect to other aspects of governance. The lack of very high correlation values (above 0.90) implied that multicollinearity was not an issue in the data. This ensured that regression analysis could be conducted with confidence. These correlation findings indicated that digital government played an important role in facilitating transparency, accountability and service delivery, as postulated in the study's theory.

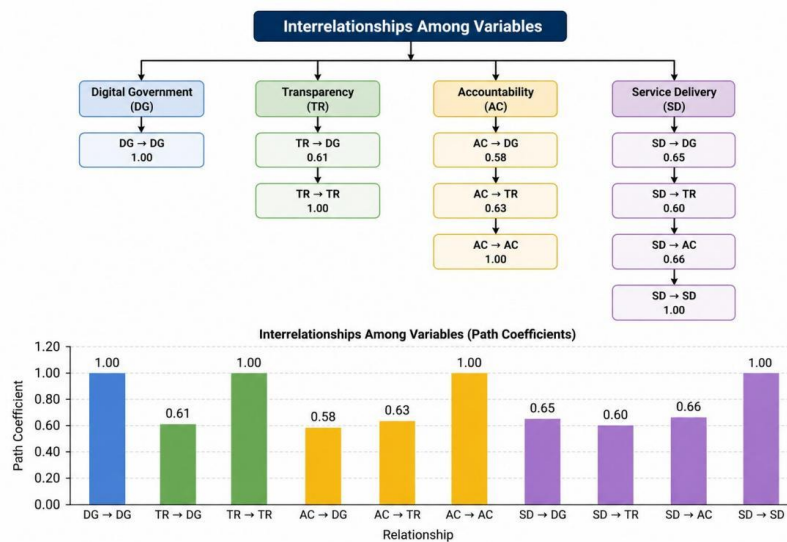


Figure 2. Correlation Matrix

Regression Analysis

Table 3: Regression Results

Hypothesis	Relationship	Beta (β)	t-value	p-value	Result
H1	Digital Government \rightarrow Transparency	0.62	8.45	0.000	Supported
H2	Digital Government \rightarrow Accountability	0.58	7.92	0.000	Supported
H3	Digital Government \rightarrow Service Delivery	0.65	9.10	0.000	Supported

This study used a regression analysis to assess the effects of digital government on transparency, accountability and service delivery. The findings showed that there was a significant impact of digital government on all three dependent variables. The greatest impact was on service delivery ($\beta = 0.65$), which implied that digital government has had a significant role in enhancing the delivery of public services. The influence on transparency was also strong and positive ($\beta = 0.62$), suggesting that digital technologies improved the information openness and transparency of governance. The link between digital government and accountability ($\beta = 0.58$) showed a strong positive effect, which suggests that digital government enhanced monitoring and reporting practices and improved accountability. The t-values of all the relationships were significant, which demonstrated the validity of the findings. The p-values were less than 0.05, which suggested the significance of the findings and confirmed all hypotheses. This study reiterated the role of digital government in improving policy outcomes. The findings showed that using digital technologies enhanced governance arrangements through increased transparency, accountability and service efficiency. This study confirmed the conceptual framework and the role of digital transformation in public administration.

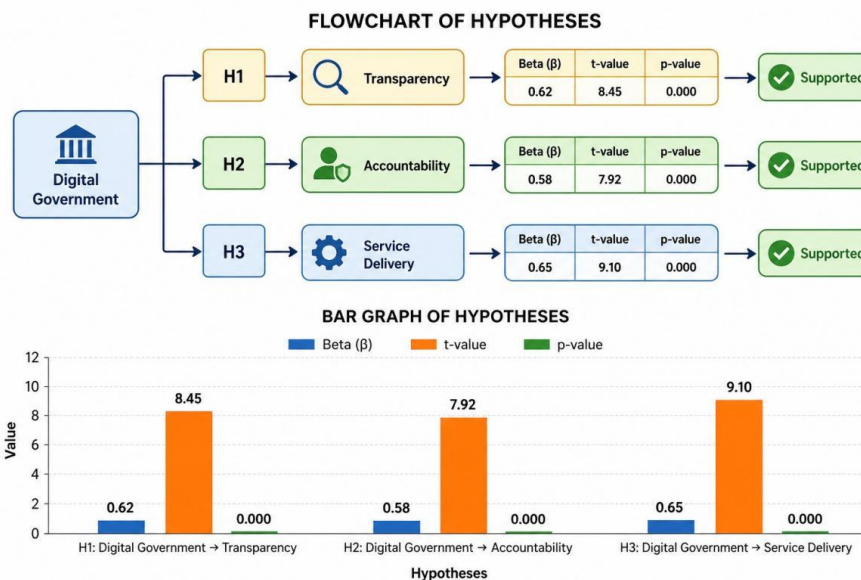


Figure 3: Regression Results

Reliability Analysis

Table 4: Reliability Statistics

Variable	Cronbach's Alpha
Digital Government	0.87
Transparency	0.85
Accountability	0.83
Service Delivery	0.86

To test the reliability of the study, we tested the consistency of the scales used. All variables had Cronbach's alpha values above the acceptable level of 0.70, suggesting good reliability. The highest reliability value was found for digital government (0.87) which indicated a very high level of consistency among the items used. The variables transparency and service delivery also had high reliability values of 0.85 and 0.86, respectively. This meant the items measuring these variables reflected a consistent conceptualisation of these variables. The Cronbach's alpha for accountability was 0.83, which was also satisfactory and indicated the reliability of the scale. These findings showed that the instruments used in the study were reliable. The high reliability values increased the validity of the research results and allowed for the data to be used for statistical testing.

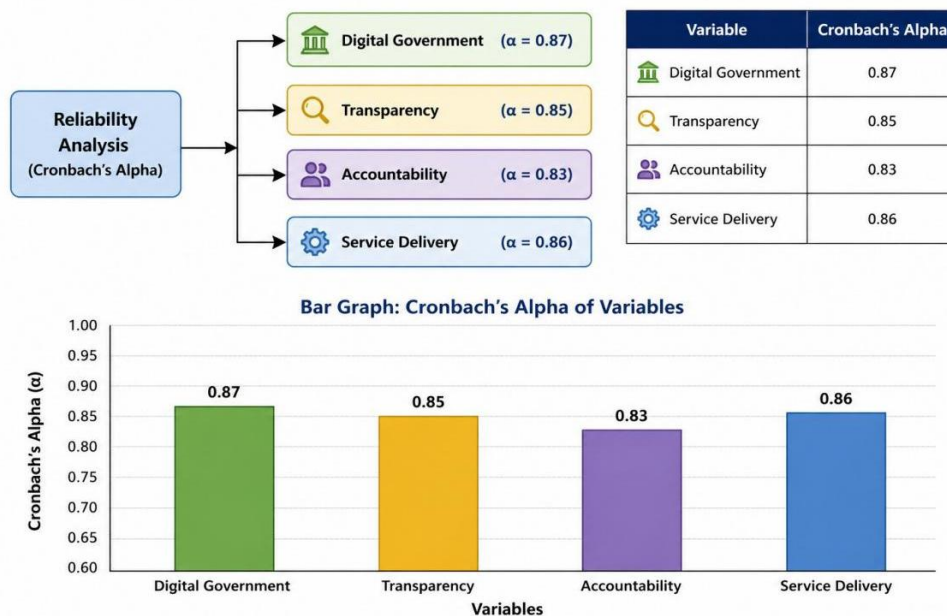


Figure 4: Reliability Statistics

Model Summary

Table 5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error
1	0.73	0.54	0.53	0.41

The model summary table provided an indication of the overall fit of the regression model in the study. The value of R was 0.73, meaning there was a strong positive correlation between digital government and the dependent variables. This implied that digital government had a substantial impact on transparency, accountability and service delivery. The R Square value of 0.54 suggest that 54% of the variance in public policy outcomes was accounted for by digital government. This was regarded as a strong explanatory power in social science studies, which were often subject to various external influences. The adjusted R Square (0.53) confirmed the reliability and validity of the model. The standard error of 0.41 suggested a low degree of error in the model's predictions, which meant that it made reliable predictions. There is evidence that the regression model performed well and was an effective model for explaining the impact of digital government on public policy transformation.

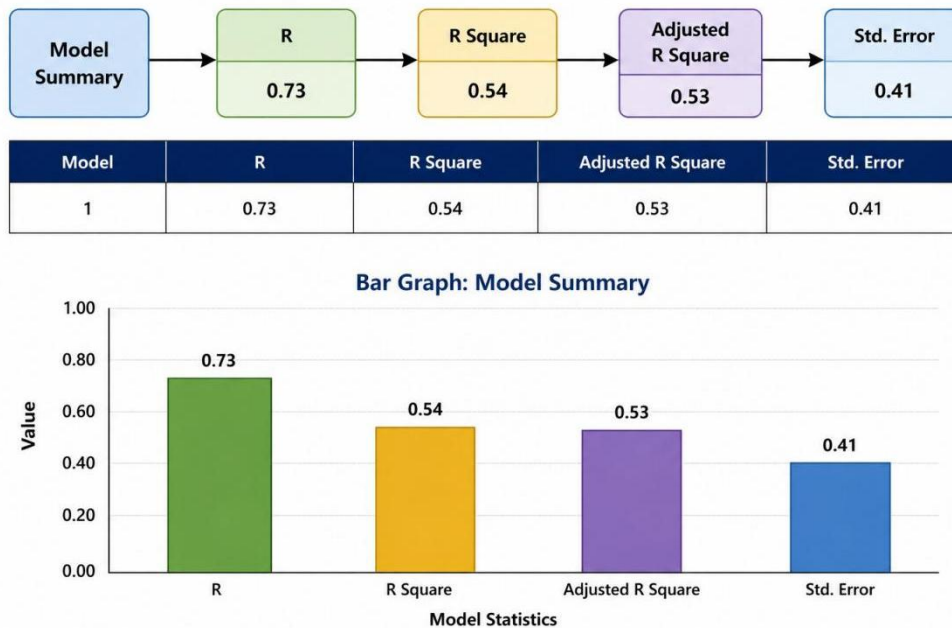


Figure 5: Model Summary

Discussion

Digital government increasingly served as a disruptive policy agent by integrating cutting-edge technologies into government processes, thus improving transparency, accountability and service delivery. The empirical evidence showed that digital accountability instruments such as artificial intelligence, blockchain, and real-time monitoring enhanced institutional transparency by facilitating the continuous monitoring of government actions and the public access to government data (Tariq, 2025; Hidayat, 2025). These technologies helped with information disclosure and minimised secrecy in decision-making, leading to improved trust and participation. Digital platforms were not just used as administrative platforms but also as democratisation tools, allowing people to better scrutinise public actions.

The study also showed that transparency served as a facilitating factor for digital government to impact governance. Open data and e-government offered timely access to policy data, thus increasing public transparency and institutional legitimacy (Cao, 2024; Wijaya, Alfitri, Thamrin, and Salya, 2024). This greater visibility of government practices reduced the scope for corruption and adherence to legal and regulatory standards. Transparency enabled participatory governance by fostering citizen engagement in policy assessment and feedback mechanisms, and strengthened mechanisms of public administration accountability.

Accountability was a key benefit of the digital transformation, with digital government systems facilitating performance monitoring, policy and program evaluation, and efficient resource allocation. The research showed that digital governance systems improved accountability by enabling accountability through the use of integrated information systems (Irawati, Hayat, Juniar, and Handayani, 2024; Birdayanthi, Yusriadi, and Ikmal, 2025). These systems eliminated waste and improved monitoring and control, resulting in better governance. Online accountability measures enabled real-time monitoring and auditing, thereby keeping government officials accountable.

Transparency and accountability also seemed to be tightly linked as improvements in one were seen to have a positive impact on the other. Research also verified that transparency enhanced accountability by enabling stakeholders to access information to assess and hold governments accountable (Yaseen, Nawaz, and Zhaira, 2025; Cao, 2024). This relationship underlined the need for holistic digital governance policies that enhanced both. The success of accountability initiatives and practices was contingent on the effectiveness of digital information systems, which stressed the importance of digital infrastructure and governance.

The other significant dimension that was affected by digital government was the service delivery, as digital platforms enhanced the efficiency and accessibility of services. Research indicated that digital governance improved service delivery through process automation and integration, which led to faster and more efficient service delivery (Ibrahim, Qureshi, and Inayat, 2025; Tariq, 2025). This allowed governments to deliver quicker and more efficient services to citizens, leading to greater satisfaction and confidence in the government. The impact of emerging technologies enhanced service delivery by facilitating predictive analytics, real-time decision making and personalised services. AI and data analytics enabled better resource allocation and responsiveness to citizen needs (Bokhari, Park and Manzoor, 2025; Yaseen, Nawaz and Zhaira, 2025). These technologies helped to evolve responsive governance approaches to meet the changing needs of citizens. This allowed digital government to promote more proactive and citizen-focused service delivery models.

While digital government brought about these benefits, the conversation also identified issues related to its implementation. Factors like digital divide, cybersecurity concerns and digital trust affected the success and efficiency of digital government, especially in low-income nations. Research stressed the importance of trust in digital technologies as a key element of adoption and performance of e-government services (Khan, Moon, Swar, Zo, and Rho, 2022)

Governments were hindered by institutional and infrastructural constraints in using digital technologies. Digital government was effective when there was access to technical resources, infrastructure and policies. Research suggested that for digital transformation to be successful, it involved not just technology innovation but also organisational transformation and capacity building (Tariq, 2025; Ibrahim, Qureshi, and Inayat, 2025). This highlighted the need for a

comprehensive understanding of digital governance, considering technological, institutional and social factors.

The debate showed that digital government played a crucial role in the transformation of public policy through increased transparency, accountability and support for service delivery. Digital technologies were deployed to enhance efficiency, increase trust and drive engagement. But the success of digital government required overcoming challenges like digital divide, security and institutional capacity. These findings indicated the need for holistic approaches to the effective and inclusive roll-out of digital governance programs.

Conclusion

The findings of this study confirmed that digital government had a crucial impact in the evolution of public policy in terms of transparency, accountability and service delivery. The empirical results showed that through the adoption of digital technologies in governance, information access, institutional monitoring, and efficiency in service delivery were enhanced. The use of digital platforms allowed for governments to be more responsive, which resulted in increased trust and engagement in the policy process. The empirical findings verified that digital government had a significant impact on all aspects of governance, particularly on service delivery, followed by transparency and accountability. These findings suggested that digital transformation helped build to build new, responsive governance models that met a society's changing expectations. The study also acknowledged the importance of supportive infrastructure, institutional capacity and public trust in digital government systems for the success of digital government.

Recommendations

Governments should build on digital infrastructure to enable effective digital governance, the study recommended. Governments should focus on creating secure and easy-to-use digital platforms for openness and citizen participation. Training initiatives for government officials should be enhanced to improve their digital skills and the effective use of digital platforms. It's also important for governments to establish robust data protection and cybersecurity measures to enhance trust and promote the use of digital services. Moreover, measures should be taken to bridge the digital divide and promote greater access to technology and digital literacy for vulnerable groups. Public-private partnerships between public institutions, private companies and technology vendors should be promoted to drive innovation and achieve lasting digital transformation in governance.

Future Directions

The impact of emerging technologies like artificial intelligence, blockchain and big data analytics should be studied to deliver improved digital governance outcomes. Longitudinal research should be undertaken to assess the long-term effects of digital government on policy and governance. Cross-country and cross-governmental comparative research should be undertaken to gain more insights into the best practices and pitfalls of digital transformation. Research should also delve into the social and ethical aspects of digital governance, including data privacy, security and inclusion. Future research should explore the impact of trust and behavioural aspects on the success of digital government initiatives, which would help understand digital public policy transformation more fully.

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