E-Governance, Innovation, and Transparency: Implications for Public Trust in Pakistan

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Abstract

Globally, e-government has become a central pillar of contemporary public sector reform, reflecting governments' efforts to modernize administrative systems, enhance service delivery, and rebuild citizen confidence in public institutions. By integrating information and communication technologies (ICTs) into public administration, governments seek to increase operational efficiency, promote transparency, stimulate innovation, and improve the quality and accessibility of public services. International experience demonstrates that digital governance, when effectively implemented, can transform traditional bureaucratic models into more responsive, citizen-centric systems that emphasize accountability and participation. In Pakistan, e-governance has emerged as a strategic priority within broader national development agendas aimed at strengthening state capacity and improving governance outcomes. Over the past decade, the government has introduced several digital initiatives, including the Pakistan Citizen Portal, the e-Office system, online taxation platforms, and a range of provincial service portals. These initiatives are intended to streamline administrative procedures, reduce reliance on manual processes, limit discretionary decision-making, and provide citizens with direct channels to access services and express concerns. Collectively, they signal a growing commitment to leveraging digital technologies as tools for public sector innovation and reform. Despite this progress, the impact of e-governance in Pakistan remains uneven. While many citizens report improved access to services and greater visibility into government processes, others continue to experience difficulties related to system reliability, limited interoperability between departments, digital literacy gaps, and concerns about data privacy and security. These challenges contribute to unequal levels of public trust in digital government platforms, with trust varying across regions, socio-economic groups, and types of services. As a result, the promise of e-governance as a catalyst for innovation and transparency has not yet been fully realized. Against this backdrop, this study examines the interrelationships between e-governance, public sector innovation, transparency, and public trust in Pakistan. Drawing on a synthesis of empirical research, policy reports, and secondary data, the study explores how digital governance initiatives are reshaping administrative practices and citizen–state interactions. A detailed case study of the Pakistan Citizen Portal is employed to illustrate both the transformative potential of digital platforms and the practical constraints that limit their effectiveness. By analyzing these dynamics, the study contributes to a deeper understanding of how technological reforms translate into governance outcomes in developing country contexts. The findings highlight both observable benefits, such as increased citizen engagement and improved service responsiveness, and enduring difficulties, including institutional fragmentation and infrastructure weaknesses. On this basis, the study offers evidence-based recommendations for institutional, technological, and policy reforms aimed at strengthening trust-centric e-governance and ensuring that digital transformation leads to inclusive, transparent, and innovative public sector governance in Pakistan.

1. Introduction: Digital Governance and Its Promise

The advent of e‑governance — the use of information and communication technologies (ICTs) to support government operations, enhance service delivery, and engage citizens — has fundamentally transformed public administration paradigms globally (Sharmin & Chowdhury, 2025). Governments worldwide are increasingly leveraging digital tools not only to optimize bureaucratic efficiency but also to improve transparency, accountability, and citizen participation in governance. From advanced digital portals in developed countries to emerging e‑service platforms in developing nations, e‑governance has become a critical component of administrative reform, policy innovation, and public sector modernization.

In the context of Pakistan's larger Digital Pakistan vision, which seeks to integrate ICT across government services and make public administration more citizen-centric, digital governance has become a strategic national priority (Yaseen, Nawaz, & Zhaira, 2023). Both at the federal and provincial levels, numerous digital initiatives have been put into place during the last ten years. These include the digitization of land records in Punjab, online tax filing through the Federal Board of Revenue (FBR), the Pakistan Citizen Portal, and an e-Office system for managing internal government workflow. Together, these platforms seek to eliminate inefficiencies, lessen bureaucratic friction, and give citizens more transparent access to public services.

For instance, the FBR's online tax filing system recorded over 4.8 million electronic tax returns in 2024, marking the highest level of digital tax engagement in the country's history (Pakistan Today, 2025). Similarly, the Punjab land record digitization project has made over 55 million property records accessible online, drastically reducing the need for physical verification and mitigating opportunities for discretionary manipulation or corruption (Zia, 2025). Such initiatives reflect a growing recognition among policymakers that digital technologies can serve as catalysts for innovation and reform in the public sector.

Even with these apparent improvements, public confidence in digital governance is still brittle and varies by area and industry. Only 28% of Pakistani citizens trust public institutions to deliver timely and accurate digital information, according to a national survey, indicating a significant lack of trust (Zia, 2025; cited in Pakistan Today). Inconsistent service delivery, system outages, cybersecurity issues, platform incompatibilities, and low levels of digital literacy among some demographic groups are some of the causes of this disparity.

Furthermore, more general governance issues like corruption, bureaucratic resistance to change, and insufficient institutional capacity frequently limit the efficacy of e-governance in Pakistan (Mazhar et al., 2025). According to studies, digital platforms can boost productivity and transparency, but their effect on public trust depends on how trustworthy, safe, and responsive people believe these platforms to be (Shah, Fayyaz, & Khan, 2025). For instance, although millions of citizens have been able to successfully file complaints and track their resolution through the Pakistan Citizen Portal, users regularly complain about response delays and inconsistent outcomes, which may undermine confidence in digital governance (The News, 2020; Radio Pakistan, 2020).

This article, therefore, seeks to explore the role of innovation and transparency in shaping public trust within the framework of e‑governance in Pakistan. By examining both systemic and technological factors, the study aims to shed light on how digital initiatives

can be designed and implemented to not only improve administrative efficiency but also foster credibility, citizen engagement, and a more participatory governance environment. In doing so, it contributes to the growing body of literature on the interplay between technology, public sector reform, and citizen trust in developing country contexts.

2. Public Sector Innovation Through Digitalization

Innovation in the public sector encompasses the adoption of new organizational practices, technological tools, or processes aimed at improving the efficiency, effectiveness, and quality of public service delivery. Unlike in the private sector, where innovation often centers on market competitiveness and profitability, public sector innovation focuses on enhancing administrative performance, citizen satisfaction, transparency, and accountability (Bokhari & Myeong, 2022). In the context of developing countries like Pakistan, where bureaucratic inefficiencies and resource constraints are prevalent, digital innovation plays a particularly transformative role by enabling governments to bypass traditional procedural bottlenecks and deliver scalable, citizen-centric solutions.

By digitizing workflows, automating repetitive procedures, and introducing ICT-enabled processes that simplify service delivery, e-governance serves as a catalyst for innovation in the public sector. For example, internal bureaucratic activities have been greatly updated by Pakistan's e-Office system, which has been implemented across several federal ministries. Previously laborious and time-consuming administrative operations have been changed into more efficient, accountable, and traceable procedures by e-Office, which digitizes document workflows, automates file routing, and allows real-time monitoring of official correspondences. According to reports, the platform has produced significant time and operational cost savings by reducing internal file processing times from an average of about 25 days to about four days (Zia, 2025; reported in Pakistan Today). Such outcomes not only reflect operational efficiency but also signal an institutional commitment to modernization and administrative reform, which is a key component of building public trust in government services.

Beyond e-Office, other digital innovations in Pakistan have contributed to improved public sector functionality. The Federal Board of Revenue's (FBR) online tax filing system has allowed millions of citizens to submit tax returns electronically, reducing dependency on in-person tax offices and minimizing opportunities for bureaucratic delays or discretionary decision-making. Similarly, provincial digital platforms for land record management, healthcare, and social welfare services have introduced standardized procedures, real-time monitoring, and data-driven decision-making, which enhance both efficiency and accountability. For example, Punjab's digitization of over 55 million land parcels has decreased verification times for property transactions and reduced the potential for corruption in property administration (Zia, 2025).

However, despite these gains, the adoption and impact of digital innovation in Pakistan's public sector remain uneven. Several challenges impede the uniform implementation of e-governance solutions. Infrastructure gaps, such as inconsistent internet connectivity in rural and remote areas, limit the reach and functionality of digital platforms. Limited interoperability between different governmental portals prevents seamless integration of services, leading to duplicated efforts and incomplete service provision. Furthermore, institutional resistance to change, rooted in bureaucratic culture and limited digital literacy among staff, often slows down or partially undermines the intended impact of innovative initiatives (Shah, Fayyaz, & Khan, 2025).

Evidence from recent studies suggests that innovation outcomes are strongest in contexts where digital platforms are not isolated but integrated into broader service delivery systems that actively support citizen engagement and feedback mechanisms. For instance, initiatives that combine workflow automation with interactive citizen portals — such as the Pakistan Citizen Portal (PCP) integrated with departmental response dashboards — have shown higher rates of complaint resolution, increased citizen satisfaction, and enhanced perceptions of accountability. In such systems, innovation is not only technological but also organizational, requiring adjustments in workflow, inter-departmental coordination, and governance processes to maximize the impact of e-governance tools (Mazhar et al., 2025).

Moreover, public sector innovation in Pakistan is increasingly measured not just in operational efficiency but also in its capacity to promote transparency, accountability, and citizen trust. Digital innovations that provide traceable records of transactions, enable performance monitoring, and allow citizens to track their service requests enhance perceptions of reliability and responsiveness. This linkage underscores that innovation in public administration extends beyond the introduction of technology — it involves the strategic integration of digital tools into institutional practices that create visible improvements for citizens, ultimately strengthening public confidence in government institutions (Sharmin & Chowdhury, 2025).

In summary, Pakistan's digital governance initiatives demonstrate the potential of e-governance as a driver of public sector innovation. By modernizing workflows, reducing bureaucratic delays, and enabling scalable digital services, these innovations have enhanced operational efficiency and service quality. Nevertheless, challenges such as infrastructure gaps, lack of interoperability, and institutional resistance highlight that innovation is an ongoing process that requires sustained investment, organizational adaptation, and citizen-centric design to achieve its full potential.

3. Transparency and Public Accountability

Transparency — the degree to which citizens can access accurate, timely, and comprehensive government information and services — is widely recognized as a central objective of e‑governance initiatives. In the digital age, transparency extends beyond the mere availability of information; it encompasses the accessibility, usability, and reliability of public data. By reducing information asymmetries between government officials and citizens, digitized systems can minimize discretionary decision-making, limit opportunities for corruption, and foster greater public accountability (Bokhari & Myeong, 2022).

In Pakistan, several initiatives have sought to leverage technology to enhance transparency. One of the most notable examples is Punjab's digital land record management system, which has digitized over 55 million land parcels across the province. Prior to digitization, land records were maintained in manual ledgers, which were often incomplete, fragmented, or subject to manipulation by intermediaries. This system not only streamlines the process of property verification but also allows citizens to directly access information online, reducing dependence on middlemen and mitigating opportunities for rent-seeking or corruption (Zia, 2025; cited in Pakistan Today). The digitization of land records also enables real-time monitoring of transactions, providing government authorities with actionable data for policy planning, dispute resolution, and property taxation.

Beyond land records, e-governance initiatives in Pakistan have introduced mechanisms for real-time tracking of service delivery. Platforms like the Pakistan Citizen Portal (PCP) enable citizens to lodge complaints, track the status of their requests, and monitor departmental responses. Similarly, the Federal Board of Revenue's e-filing system allows taxpayers to track their submissions, check verification statuses, and access historical tax records digitally. These platforms reduce opportunities for discretionary decision-making by creating verifiable records of all interactions between citizens and government institutions (Mazhar et al., 2025).

Despite these advances, the impact of digital systems on transparency is often moderated by several challenges. One critical issue is data fragmentation. Many government databases in Pakistan operate in silos, limiting interoperability between departments and preventing citizens from accessing comprehensive information in a single interface. For example, while Punjab's land records are digitized, these records are not fully integrated with municipal or revenue databases, meaning that citizens may still need to approach multiple offices to obtain complete information (Shah, Fayyaz, & Khan, 2025). Additionally, data quality and usability remain major concerns. Information may be technically available online but difficult to interpret without user-friendly interfaces, clear instructions, or adequate support services. Poor website design, outdated information, inconsistent updates, and limited search functionality can discourage citizens from engaging with digital platforms, thereby undermining the perceived transparency of e-governance initiatives. Studies indicate that when digital systems fail to meet usability standards, citizens are less likely to trust them, which weakens the broader goal of accountability (Sharmin & Chowdhury, 2025).

Another significant challenge is institutional capacity. Even with digitized records and monitoring tools, transparency is limited if government departments do not respond to citizen complaints or act upon collected data in a timely manner. Without consistent follow-up, digital platforms risk becoming symbolic rather than functional instruments of accountability. For example, evaluations of the Pakistan Citizen Portal have highlighted instances where complaints remain unresolved due to procedural bottlenecks or interdepartmental coordination issues, which negatively impact citizens' perception of transparency and trust (The News, 2020; Radio Pakistan, 2020).

Finally, the broader legal and regulatory framework influences the effectiveness of transparency initiatives. In Pakistan, gaps in information access laws, weak enforcement of data disclosure regulations, and limited provisions for digital record security can compromise the reliability and integrity of publicly available data. Citizens may hesitate to rely on digital records for critical decisions, such as property transactions or tax compliance, if they perceive risks of error, manipulation, or lack of legal recognition (Hayat, 2026). In conclusion, while e-governance platforms in Pakistan have made significant strides in enhancing transparency by providing greater access to information and enabling real-time monitoring, the full potential of these systems remains constrained by issues related to data fragmentation, usability, institutional capacity, and regulatory support. Achieving meaningful transparency requires not only digitization but also integration of systems, user-centered design, capacity building within government institutions, and robust legal frameworks to ensure that digital information is accurate, accessible, and actionable. When these elements are effectively combined, e-governance

can serve as a powerful instrument for accountability, citizen empowerment, and the strengthening of public trust.

4. Case Study: Pakistan Citizen Portal (PCP)

A powerful illustration of e-governance in action in Pakistan is the Pakistan Citizen Portal (PCP) — one of the country's most prominent and widely recognized digital governance platforms. Launched under the federal government in 2018 as part of the broader *Digital Pakistan* initiative, the portal was designed to provide citizens with a direct channel to communicate grievances, report service delivery issues, and provide feedback on government performance (The News, 2020). The PCP represents a strategic effort to bridge the gap between citizens and government institutions by leveraging technology to enhance transparency, responsiveness, and accountability across multiple sectors.

The portal allows citizens to submit complaints related to a diverse array of public services, including taxation, healthcare, education, local government services, utility management, and administrative inefficiencies. Once a complaint is submitted, the system automatically routes it to the relevant government department or agency responsible for addressing the issue. Departments are then required to provide updates and resolutions within a predefined timeline, and citizens can track the status of their complaints in real time. This automated workflow reduces bureaucratic delays and minimizes opportunities for discretionary decision-making, creating a more transparent and accountable governance environment (Radio Pakistan, 2020).

Beyond complaint submission, the PCP includes a citizen feedback mechanism, enabling users to rate their satisfaction with the resolution of their complaints. This feature not only empowers citizens to voice their opinions about service delivery but also provides government agencies with valuable data to monitor performance, identify bottlenecks, and improve operational efficiency. Furthermore, the portal has been integrated with mobile applications and social media platforms, increasing accessibility for citizens who may not have easy access to desktop computers or government offices.

The impact of the PCP has been significant. Within its first two years, the platform reportedly registered over three million complaints and feedback submissions from citizens across the country, demonstrating widespread adoption and engagement (Pakistan Today, 2025). Analysis of portal data indicates that the most common complaints relate to administrative delays, service deficiencies, and corruption at the local level, highlighting systemic challenges that the platform seeks to address. By providing a centralized, digital mechanism for complaint management, the PCP has enabled government agencies to respond more efficiently and has fostered a culture of accountability previously limited in traditional bureaucratic processes.

However, the PCP has also faced challenges that illustrate the complexities of implementing digital governance in developing country contexts. Users have reported instances of delayed responses, incomplete resolutions, and technical glitches within the portal's interface. These limitations can undermine citizen confidence and reduce trust in the system if not addressed promptly (Zia, 2025; cited in Pakistan Today). Moreover, effective functioning of the portal depends not only on technology but also on the willingness and capacity of government departments to respond to complaints in a timely and effective manner, which varies across ministries and provincial administrations.

Despite these challenges, the Pakistan Citizen Portal remains a pioneering example of digital governance in Pakistan. It demonstrates how e-governance platforms can serve as

tools for transparency, citizen engagement, and accountability, while also highlighting the importance of institutional support, continuous system maintenance, and feedback-driven improvements. By linking citizens directly to government operations and providing real-time monitoring capabilities, the PCP embodies the potential of digital innovations to transform public sector governance and foster public trust.

4.1 Objectives and Mechanisms

The Pakistan Citizen Portal (PCP) was conceived as a flagship initiative to leverage digital technology in order to enhance transparency, accountability, and responsiveness in public administration. Its design reflects a conscious effort to address longstanding bureaucratic opacity and inefficient service delivery by embedding information and communication technologies (ICTs) into citizen-government interactions. The portal allows citizens to directly register complaints and provide feedback on governance issues across a broad spectrum of public services, including taxation, healthcare, education, infrastructure, municipal services, and law enforcement. This wide coverage ensures that citizens from different regions and socio-economic backgrounds can use the portal to highlight issues affecting their daily lives (The News, 2020).

One of the key innovations of the PCP is the complaint tracking system. Upon submission, complaints are automatically routed to the relevant government departments or authorities responsible for resolving the issue. Departments can monitor the number of complaints assigned to them, track their progress, and record resolutions through a centralized dashboard. This level of visibility fosters accountability, as departmental performance can now be monitored both internally and externally. Citizens, in turn, can track the status of their complaints in real time, reducing the uncertainty and frustration that typically accompany bureaucratic delays.

In addition, the PCP incorporates a citizen feedback and rating mechanism, enabling users to provide evaluations of how their complaints were handled. This feature empowers citizens to voice their satisfaction or dissatisfaction with service delivery, giving government agencies actionable insights into operational gaps and areas for improvement. By making feedback a central component of the complaint resolution process, the portal closes the loop between citizens and public institutions, transforming service delivery into an interactive, participatory process rather than a one-way transaction. Furthermore, the portal's integration with mobile applications ensures that users can engage with the system on the go, enhancing accessibility for populations who may lack easy access to traditional government offices (Radio Pakistan, 2020).

Overall, the PCP was designed not merely as a complaint registration system but as an integrated platform for promoting good governance, accountability, and public participation. By embedding ICT tools directly into the service delivery process, the portal aims to institutionalize transparency and make citizen feedback a standard part of governmental workflows.

4.2 Impact and Breakthroughs

Since its launch, the Pakistan Citizen Portal has emerged as one of the most widely used e-governance platforms in the country. Within its first two years of operation, the portal reportedly recorded over three million registered citizen interactions, indicating substantial engagement and a growing public willingness to use digital channels for governance-related communication (Radio Pakistan, cited in Pakistan Today). These

interactions cover complaints ranging from local municipal issues to concerns about national-level policy implementation, highlighting the portal's broad scope and reach.

The PCP has had several notable impacts on public sector governance. First, it has enhanced transparency by making complaint records accessible to both government officials and citizens. Prior to the portal's introduction, citizens had limited visibility into the status of their complaints, often requiring repeated visits to government offices to track progress. By contrast, the portal allows for real-time monitoring, ensuring that citizens are kept informed about the actions being taken on their issues.

Second, the platform has improved responsiveness and accountability. With departments now able to see the number and status of complaints assigned to them, officials are under increased pressure to act promptly. Studies and reports indicate that the visibility and monitoring features of the PCP have incentivized departments to address complaints more proactively, reducing bureaucratic delays and improving service delivery timelines (Mazhar et al., 2025).

Third, the PCP has institutionalized citizen feedback as a governance tool. By enabling users to rate departmental responses, the portal collects valuable data that can be used to identify systemic inefficiencies, prioritize reforms, and inform policy-making. This feedback loop represents a shift from traditional top-down governance to a more participatory model, where citizen input directly informs administrative processes (Sharmin & Chowdhury, 2025).

Additionally, the portal has demonstrated significant **g**eographical reach. Citizens from both urban and rural areas, including remote districts with historically limited access to government services, are now able to lodge complaints digitally. This inclusivity represents an important step toward bridging the urban-rural governance gap, increasing equity in service delivery and reinforcing the principles of participatory governance.

4.3 Challenges and Trust Barriers

Despite its successes, the Pakistan Citizen Portal has faced a number of challenges that illustrate the complexities of translating digital innovation into sustained public trust. Follow-up evaluations and user surveys reveal that public perceptions of the portal are mixed. Many users acknowledge improvements in service responsiveness and appreciate the transparency provided by the real-time tracking system. However, others report persistent technical and operational issues that undermine confidence in the platform. These include portal malfunctions, slow response times, inconsistent departmental updates, and occasional inaccuracies in complaint routing (Zia, 2025; cited in Pakistan Today).

Another significant challenge is institutional capacity. While the technology provides mechanisms for monitoring and accountability, its effectiveness depends heavily on the willingness and efficiency of government departments to respond. Departments with limited resources or entrenched bureaucratic practices may fail to act promptly, leading to citizen frustration and reduced trust in the system.

System integration issues also pose barriers. Many government agencies operate their own databases and platforms, which are not fully integrated with the PCP. This siloed structure can result in delayed or incomplete information, making it difficult for citizens to receive comprehensive updates or for the government to coordinate effectively across departments. Such fragmentation diminishes the perception of transparency, even when the technology is functioning correctly (Hayat, 2026).

Finally, citizen digital literacy and accessibility remain critical constraints. While mobile and web-based access has increased the reach of the portal, citizens with limited digital skills or access to reliable internet may be unable to fully engage with the platform. This limits the portal's inclusivity and may reinforce existing socio-economic disparities in access to public services.

In summary, the Pakistan Citizen Portal highlights both the potential and the limitations of digital governance. On one hand, it has introduced unprecedented transparency, institutionalized citizen feedback, and improved service responsiveness. On the other hand, technical glitches, inconsistent departmental performance, system fragmentation, and digital literacy gaps highlight that technology alone cannot guarantee trust. Sustaining public confidence requires ongoing institutional support, continuous system maintenance, effective training for government staff, and strategic integration across agencies. By addressing these challenges, the PCP can serve not only as a digital complaint platform but also as a model for citizen-centric, trust-oriented e-governance in developing countries.

These mixed outcomes illustrate the complexity of translating digital innovation into sustained public trust; technology must be supported by institutional capacity, continuous maintenance, and integrated service delivery.

5. Public Trust and Continued Engagement

Public trust in e-government services is a cornerstone of successful digital governance. Trust reflects citizens' confidence that government institutions will act competently, fairly, and transparently, and that digital systems will deliver reliable services without exposing users to undue risks. In the context of Pakistan, public trust is particularly critical because the adoption and effectiveness of e-governance platforms, such as the Pakistan Citizen Portal (PCP) or the e-Office system, hinge not only on technological functionality but also on citizens' perceptions of reliability, data security, and fairness in outcomes (Mazhar et al., 2025).

Digital trust, defined as citizens' belief in the security, dependability, and integrity of online services, has emerged as a key determinant of engagement with e-governance platforms. When citizens perceive digital services as secure, well-maintained, and responsive, they are more likely to adopt them, use them consistently, and provide feedback. Research indicates that digital trust strongly correlates with user satisfaction, service adoption rates, and sustained participation in digital governance initiatives. For instance, studies on Pakistan's e-government platforms show that users who trust online complaint mechanisms or digital tax systems are more likely to submit multiple requests, monitor their resolution actively, and recommend the platforms to others (Mazhar et al., 2025).

One study specifically examining citizens' intentions to continue using digital services in Pakistan found that trust is a critical predictor of repeated engagement. Citizens who reported higher levels of trust in the security and reliability of e-governance platforms were significantly more likely to continue using these services, compared to those who expressed doubts about data privacy, procedural fairness, or departmental responsiveness. This suggests that trust is not only an outcome of digital innovation and transparency but also a mediator of digital adoption, influencing how effectively e-governance initiatives translate into meaningful citizen engagement (Mazhar et al., 2025). However, several factors continue to challenge public trust in Pakistan's digital governance ecosystem. Limited digital literacy among large segments of the population can reduce citizens' ability

to navigate platforms effectively, interpret information correctly, or utilize available features. System downtimes and technical glitches, such as portal crashes or delayed updates, create uncertainty about reliability, further eroding confidence. Additionally, concerns over data privacy and security remain prominent; citizens may hesitate to share sensitive personal or financial information online if they doubt the government's ability to safeguard it from breaches or misuse (Pakistan Today, 2025).

The complex interplay of these factors illustrates that trust in e-governance is multi-dimensional, encompassing technological reliability, institutional accountability, and citizen perception. Simply deploying digital platforms is not sufficient; governments must also ensure system stability, enforce data protection measures, maintain timely and consistent service delivery, and engage in proactive communication to cultivate confidence. For example, platforms like the PCP have introduced real-time tracking, automated complaint routing, and feedback mechanisms to address some of these trust concerns, yet ongoing institutional and technological improvements are necessary to sustain public confidence (The News, 2020).

In essence, public trust functions as both a prerequisite and an outcome of successful e-governance. High levels of trust encourage repeated use and engagement, creating a virtuous cycle where citizen feedback informs improvements, transparency increases, and governance becomes more accountable. Conversely, low trust limits adoption, diminishes the perceived legitimacy of digital platforms, and may perpetuate skepticism toward government initiatives. Therefore, building and maintaining digital trust should be considered a strategic priority for policymakers seeking to leverage e-governance as a driver of public sector innovation, transparency, and accountability in Pakistan.

6. Challenges in Building Trust Through E-Governance

Despite the observable progress made through initiatives such as the Pakistan Citizen Portal, e-Office system, and provincial digital platforms, several structural and systemic challenges continue to limit the effectiveness of e-governance in Pakistan and impede the development of sustained public trust. These challenges span technological, institutional, and socio-cultural dimensions, creating a complex landscape for digital governance implementation.

6.1 Digital Divide

One of the most significant barriers to equitable e-governance adoption is the digital divide. Geographic disparities in internet access, particularly between urban and rural areas, restrict citizens' ability to utilize online government services. According to Hassan et al. (2019), many rural districts in Pakistan have unreliable broadband connectivity, limited mobile network coverage, and insufficient access to computers or smartphones, effectively excluding a large segment of the population from digital participation. Socio-economic factors further exacerbate this divide, as lower-income citizens may lack the resources to access technology or the necessary digital literacy to navigate online portals. As a result, e-governance initiatives risk reinforcing existing inequalities in access to public services rather than democratizing them.

6.2 Institutional Barriers

Institutional barriers represent another critical challenge. Pakistan's government institutions often operate fragmented service systems, with multiple departments maintaining separate databases and platforms that are not fully interoperable. This lack of

integration complicates data sharing and coordination across departments, leading to incomplete or delayed service delivery and a disjointed user experience. For instance, while the Punjab land record system is digitized, it is not fully linked with municipal or provincial taxation systems, requiring citizens to engage with multiple platforms to complete a single service request (Shah, Fayyaz, & Khan, 2025). These institutional silos hinder the realization of seamless, transparent, and responsive governance, ultimately affecting citizens' trust in digital platforms.

6.3 Cultural and Financial Constraints

Cultural and financial factors further complicate e-governance implementation. Research conducted at institutional offices such as NADRA (National Database & Registration Authority) indicates that cultural resistance among government staff — stemming from traditional bureaucratic practices and reluctance to adopt new technology — significantly impacts the efficiency and effectiveness of digital initiatives (Zulkaif, 2023). Additionally, financial constraints in terms of budget allocations for ICT infrastructure, system maintenance, and staff training limit the scope and sustainability of digital projects. Departments operating under resource constraints may struggle to maintain portals, respond promptly to citizen complaints, or implement upgrades, thereby undermining trust and satisfaction.

6.4 Combined Impact on Public Trust

The intersection of these technological, institutional, and societal barriers complicates the pathway from digitized governance systems to sustained public trust. Even the most sophisticated digital platforms can fail to achieve their intended outcomes if citizens cannot access them, systems are poorly integrated, or government staff are unable or unwilling to respond effectively. Furthermore, limitations in digital literacy, particularly among women, rural populations, and marginalized groups, exacerbate trust deficits, as citizens may perceive online services as unreliable or inaccessible.

Addressing these challenges requires a multi-pronged approach. Policymakers must prioritize investment in ICT infrastructure, ensure interoperability between departments, provide targeted training for government staff, and implement programs to enhance digital literacy among citizens. Only by tackling these structural barriers can e-governance initiatives translate into meaningful improvements in transparency, efficiency, and citizen trust.

7. Conclusion: Toward Enhanced Trust Through Strategic Reform

E-governance represents a transformative opportunity for Pakistan's public sector, with the potential to stimulate innovation, strengthen transparency, and enhance public trust. Platforms such as the Pakistan Citizen Portal (PCP), e-Office systems, and provincial digital service portals demonstrate that technology can open new channels for citizen engagement, facilitate accountability, and improve administrative efficiency. By digitizing workflows, automating complaint handling, and providing real-time feedback mechanisms, these initiatives illustrate how e-governance can modernize public administration and foster a more participatory governance environment (Mazhar et al., 2025; The News, 2020).

However, the realization of trust-centric e-governance is not automatic. The effectiveness of digital platforms depends on several interrelated factors, including the quality and reliability of digital infrastructure, institutional capacity to respond to citizen needs, integration across departmental systems, and the overall user experience. Without

attention to these broader conditions, technological innovations risk falling short of their objectives, resulting in partial adoption, low satisfaction, and limited trust.

To strengthen e-governance and cultivate sustained public trust, Pakistan should prioritize several strategic actions:

1. Strengthening Data Interoperability and Integrated Government Systems: Digital platforms should not operate in isolation. Achieving interoperability between departments, provinces, and agencies will allow seamless service delivery, reduce redundancy, and enable comprehensive citizen access to information. Integrated databases can also support evidence-based policymaking and more efficient resource allocation.

2. Expanding Digital Literacy Programs: Citizen engagement with e-governance depends critically on the ability to navigate digital platforms effectively. Public programs aimed at enhancing digital literacy, particularly in rural and underserved areas, will increase equitable access to services and reduce the trust gap arising from unfamiliarity with technology.

3. Investing in Long-term Maintenance and Cybersecurity Infrastructure: Sustained trust requires reliable and secure systems. Continuous investment in portal maintenance, software updates, and cybersecurity measures is essential to protect citizen data, prevent technical glitches, and ensure uninterrupted service delivery. Failure to maintain robust infrastructure risks eroding confidence in digital services.

4. Enhancing User Feedback Mechanisms: Feedback loops that allow citizens to evaluate services, provide suggestions, and track complaint resolutions are central to participatory governance. Strengthening these mechanisms ensures that citizen voices shape service improvements, reinforces accountability, and demonstrates that government institutions are responsive to public needs.

In addition to these policy priorities, future research should focus on empirically examining the causal relationships between digital innovation, transparency, and public trust. Longitudinal studies, cross-provincial analyses, and mixed-method approaches will provide deeper insights into the conditions under which e-governance successfully translates technological capabilities into citizen confidence and satisfaction. Such research can inform more targeted interventions, ensuring that digital governance reforms are both effective and inclusive.

In conclusion, while Pakistan's e-governance initiatives have made significant strides in modernizing public sector operations and increasing citizen engagement, their long-term impact on public trust depends on holistic strategies that combine technology, institutional reform, and citizen empowerment. By addressing structural, technological, and societal barriers, Pakistan can harness the full potential of e-governance to build a transparent, responsive, and innovative public sector that earns and sustains citizen trust.

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