

Evaluating the Impact of Pakistan's "Digital Pakistan" Initiative on Public Service Delivery [†]

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Abstract

Digital Pakistan is a pivotal move towards bridging the gap between old bureaucratic methods and new ones, offering a technologically advanced, modernized form of administration for the masses. This paper will critically analyze the initiative's effects on the delivery of social services to the population through a methodical SWOT analysis, highlighting existing shortcomings, such as insufficient infrastructure and the digital divide, that limit access for all. Based on a qualitative study using secondary data (2018–2024), it was found that although the adoption of more than 40 e-governance solutions and the Digital Pakistan Hub has led to an increase in transparency and responsiveness of the administration, there still remain great threats, such as security breaches in the cyber-sphere and a 67 percent gender gap in access to the Internet. The findings emphasize that although digital tools have helped ease bureaucracy, they are not very effective because of unequal digital literacy. This means that the paper advocates inclusive policymaking that focuses on boosting digital equity and infrastructural resilience to achieve sustainable public-sector reforms. The findings offer a practical roadmap for policymakers to bridge the technological vision with citizen-centric service delivery.

Keywords: digital Pakistan; e-governance; delivering government services to its citizens; citizen engagement; SWOT analysis; digital transformation; public-sector reform; digital inclusion; infrastructure development; Pakistan

1. Introduction

The global environment of public administration is undergoing a fundamental change, driven by the rapid development of Information and Communication Technologies (ICTs). The shift, commonly known as E-government or Digital Transformation, is not a simple shift from analog to digital tools; it is a complete redefinition of the state–citizen relationship [1]. In advanced economies, digital governance has fully developed into smooth, integrated ecosystems focused on the user experience and proactive service provision. Nonetheless, in the case of developing countries such as Pakistan, the path to a Digital Pakistan is a negotiated process between the desire to embrace modern technology and the legacies of existing systems.



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The DP initiative, launched with the vision of developing a digitally enabled ecosystem, aims to leverage technology to build an inclusive, knowledge-based economy. The policy framework dwells on the major pillars such as digital infrastructure, e-government, digital literacy, and innovation [2]. Through the digitization of public services, such as identity management through the National Database and Registration Authority (NADRA), the digitization of land records, and online payment of taxes, the government wants to decrease citizens' need to rely on informal intermediaries and brokers through direct digital connection between citizens and public institutions. But the question of whether digital technologies abolish or simply change the role of intermediaries is an important policy question addressed in the study.

Nonetheless, the modernization of Pakistan's public administration is not only a technical issue but also a sociological one. The change necessitates abandoning the "red-tape" culture inherited from the colonial-era administrative structures. Although the government has made significant progress towards mobile connectivity and broadband penetration, the use of these tools in public service is disproportionate. The opening of the citizens portal of Pakistan and the multiple provincial e-Khidmat centers can be considered evidence of the state's responsiveness [3]. However, the effectiveness of such platforms is actively discussed in the academic community because the online interface is often as bureaucratic to use as the paper-based system.

The business-level need for the vision of Digital Pakistan is closely linked to the broader aim of financial inclusion and poverty reduction. Given the nation's considerable number of unbanked, introducing the concept of digital financial services (DFS) to the target population is a groundbreaking opportunity for marginalized groups. Through the National Database and Registration Authority (NADRA) biometric infrastructure, the state has been able to roll out several programs, such as the Benazir Income Support Programme (BISP), through which subsidies are digitally transferred to targeted beneficiaries [4]. Not only will this increase the transparency of social safety nets, but it will also spur the local digital economy by promoting the use of mobile wallets. The effectiveness of such economic interventions, however, depends on overcoming the "last-mile" connectivity problem. In the absence of a solid fiber-optic backbone and cheap data packages, the process of transitioning to a cashless, digitally managed society will remain an urban privilege, further widening the socio-economic divide between urban centers and the farming countryside.

The digital path Pakistan is taking is increasingly being analyzed against international standards; the best example is the United Nations E-Government Development Index (EGDI). The country is recording gradual improvements in its Online Service Index (OSI) component, but it is still struggling with lower scores in human capital and telecommunication infrastructure [5]. These international rankings can be used as an incentive to change the policy and as an analysis of gaps in existing implementation. An example would be how the current e-government systems in Pakistan, which are more transactional, as citizens simply download the forms, need to be more connected as they move across departmental boundaries, as this would necessitate a degree of horizontal integration, which Pakistan is grappling with at the moment. Here, the problem lies in the balance between provincial initiatives in the digital realm (e.g., the Punjab Information Technology Board) and federal requirements. This absence of a single Whole-of-Government (WoG) solution tends to result in overlapping digital platforms, which create confusion for end-users and dilute overall effectiveness in a digital state [6].

The core theoretical conflict in the "Digital Pakistan" debate is: is technology a solution to fix failed systems, or is it only a way to automate existing failures? The computerization of land records and the "Pakistan Citizens Portal" in Pakistan are efforts to circumvent

the gatekeeper mentality of old civil servants. Nevertheless, scholars argue that in the absence of an overhaul of the civil service, digital instruments are likely to be used by the bureaucracy to maintain the status quo in the name of modernization [7]. For example, a grievance redressal digital portal can only be as successful as the officer handling the grievance; in such cases, the administrative culture behind it will be an unresponsive, shimmering facade, since no substantive justice will be served. Consequently, the purpose of this study is to transcend the celebrity rhetoric of so-called tech-utopianism and to evaluate critically the institutional collision points where digital policy runs into administrative reality. This paper contends that, to succeed as a knowledge-based economy, Pakistan needs to approach digital transformation holistically rather than as a technical issue, as a reorganization of the social contract between the citizen and the state.

1.1. Research Problem

The main issue discussed in this research is that the efficiency of public services in Pakistan remains stagnant, despite the widespread implementation of the digital government framework as part of the Digital Pakistan program. Although policy documents provide a smooth path for migration to e-governance, deep-seated bureaucratic inertia impedes it, and the civil service systematically resists efforts to abandon non-transparent, paper-based hierarchies that support informal power relations [8]. This issue is also aggravated by an increasing digital divide, in which infrastructural shortfalls, frequent power outages, and a 67 percent gender gap in mobile Internet access block the lowest-income groups' access to essential services [9]. As a result, digital change is not uniform; even in urban areas, there is only a slight change in service responsiveness, while diverse communities are marginalized and more rural. In the absence of these institutional and technical barriers, the "Digital Pakistan" project will be an empty show of automation that will not fix the fundamental problems of administrative latency, a lack of transparency, and citizens' mistrust of the state in service delivery processes.

1.2. Rationale

The justification for the present study lies in the urgent need to shift to rigorous, evidence-based assessment of digital performance in the Global South rather than celebratory policy rhetoric. The technology architecture of particular applications, or the grandiose vision of the state as a whole, has been much discussed in the literature, without paying much attention to the practical socio-political bottlenecks that determine the success or failure of such projects. This paper takes a step beyond metaphorical explanations of how social contracts can be reformed by applying the SWOT (Strengths, Weaknesses, Opportunities, and Threats) framework to offer a concrete analysis of how digital tools intersect with administrative action. This analysis is important to policymakers who need a clear roadmap to guide them on which e-services are generating significant citizen interaction, which are failing due to cybersecurity vulnerabilities, and which are failing due to poor policy implementation [10]. Finally, the paper provides a needed academic basis for allocating resources effectively, ensuring that any further digital reforms are not only technologically sophisticated but also integrated into the institution at the institutional level and socially inclusive.

2. Literature Review

Digitization of governance is a multi-layered process that involves technological, institutional, and social changes. The sections below analyze the current literature on the concept of global e-governance, its implementation in Pakistan, and the ongoing digital divide.

The digital public administration movement across the globe has its fundamental basis in the Digital Era Governance (DEG) paradigm, as discussed by Dunleavy and Margetts. They focus on re-aggregating citizen-centered services and on the full digitization of the administrative process. This theoretical framework goes beyond the efficiency of transactions in the early 2000s. It is more concerned with Vertical and Horizontal Integration, in which information shared across agencies provides a single state interface to the user [11].

The modernization process is explained as an evolutionary path, as suggested by theoretical models of e-government development, including the four-stage model suggested by Layne and Lee [12]. They state that governments are generally moving to a higher stage of infrastructure development, from simple cataloging (the presence of information online) to complete vertical and horizontal integration, where agencies can easily share information and provide a single citizen experience [12]. This model plays a crucial role in understanding the current stage of development of initiatives such as Digital Pakistan, which aims to fill these functional gaps.

Given the specific situation in Pakistan, Ahmed and Sajjad view e-government through a citizen-centered lens to underscore the importance of enhancing service delivery and responsiveness [3]. According to their study, the development of digital governance in Pakistan has occurred primarily in response to traditional challenges of red tape in the bureaucracy [3]. They claim that processes such as the introduction of platforms, such as the Pakistan Citizens Portal, have been crucial tools in restoring citizens' confidence, as they offer a direct and traceable way to redress their grievances against state institutions [3].

Malik evaluates the essence of a strong digital identity system as the foundation of administrative efficiency, focusing on the National Database and Registration Authority (NADRA) [13]. Malik notes that centralized systems provide a secure digital identity used to access a wide array of government services, such as disaster relief and targeted social protection nets [13]. According to this study, these systems are crucial for overcoming bureaucratic inertia by eliminating the discretionary use of humans in gatekeeping and replacing it with automated, rules-based processing systems [13].

Digital disintermediation is related to the concept of digital transformation in public administration, and informal intermediation in public administration is regarded as a challenge to citizens' access to public administration services, especially when there are middlemen involved. Public services provision in many developing countries like Pakistan is complex and involves a number of intermediaries like unofficial agents, facilitators, clerks, and brokers who provide services to citizens. These intermediaries usually appear due to a lack of information about official processes, the amount of time it takes to complete the process, and information asymmetry, along with the excessive number of bureaucratic procedures.

Sometimes, these intermediaries facilitate citizens' interaction with administrative processes, but at other times, they encourage informal payments, lack of transparency, corruption, and discretionary decision-making and increase the cost for citizens to interact with administrative processes. This results in a lack of trust in governments and unequal and restricted access to public services.

To reduce such inefficiencies, e-government programs are launched, which are based on digital identity systems, web interfaces, e-payments and integrated service delivery platforms, which directly involve citizens and government institutions in their communication. Digital technologies can create transparency as they can provide digital records that can be traced back, and they can have standardized administration processes, hence reducing excessive face-to-face interactions where rent-seeking and bureaucracy can occur.

However, intermediation is not the same as “no” intermediation in the digital government. In contrast, however, new intermediaries can replace traditional ones, such as cybercafés, mobile service agents, and private digital facilitation centers that can assist citizens who are not digitally literate or do not even have an Internet connection or smartphone. In addition to technological innovation, digital transformation requires investments in the development of digital literacy, cost-effective Internet connections, and the design of services for inclusiveness and institutional accountability. Digital Pakistan, in the case of Pakistan, can have a significant impact on removing the need for traditional middlemen, but such efforts can still yield positive results if digital middlemen are not going to become the new middlemen for access to public services.

The digital divide remains a prominent topic in the literature, and van Dijk views it as a level-one (material access) and level-two (usage skills) gap [14]. His work underscores that having physical access to hardware is not enough when citizens are not digitally literate to use the tricky government portals [15]. Such a theoretical approach is of great significance to Pakistan, where large proportions of the population do not enjoy the benefits of digitization because they cannot access them due to limited digital literacy and the high cost of connectivity [15].

The digital divide in the Global South is critically examined as a gendered phenomenon, switching to digital platforms that minimize the risk of discretionary delays and informal rent-seeking. However, the results indicate that digital transformation does not necessarily come with the elimination of intermediaries. Citizens who do not have the skills to use the Internet or access to it can still use cybercafés, mobile agents, or family members to access online public services. Digital Pakistan, in this way, diminishes the reliance on traditional middlemen but also emphasizes the importance of avoiding new digital middlemen by investing in digital literacy, cost-effective connectivity and inclusive service design. The GSMA Mobile Gender Gap Report [9] presents tangible information that, in countries such as Pakistan, the difference in mobile Internet access between men and women has almost reached 67 percent [9]. According to this literature, digital-first policies can be unintentionally discriminatory against women and vulnerable groups unless they are supported by specific literacy initiatives and inclusive design approaches that eliminate social disparities that exist [9].

The growing emphasis on the importance of a strong cybersecurity system is becoming the primary focus of the emerging literature as Pakistan consolidates its data on its citizens through the so-called Digital Pakistan initiative. Butt and Mahmood (2022) state that the rapid pace of state functional digitization has outpaced the evolution of legal protections, exposing national databases to advanced cyberattacks and data breaches [10]. Their study highlights the need for a broad Data Sovereignty policy, or migration to cloud-based governance may leave sensitive biometric and financial data vulnerable to both domestic and foreign forces. This demonstrates the main shortcoming in the current digital roadmap: the emphasis on service speed rather than data security, which eventually poses a long-term risk to citizens’ trust in digital platforms [10].

There is substantial literature analyzing the impact of e-governance in breaking the patron–client system that dominated the Pakistani bureaucracy. Pathak et al. (2020) present a comparative analysis suggesting that the digital interface, including online land record systems, helps disintermediate the delivery of public services, thereby reducing the risk of petty corruption and bribery [15]. By eliminating the human-to-human, discretionary interactions, these tools create an auditable trail that enhances administrative accountability. Nevertheless, the literature also warns that when digital tools are deployed without transparency, they can only substitute the physical intermediary with an online counterpart accessed through a digital gatekeeper [15].

The global pandemic was a kind of stress test for Pakistan's digital infrastructure, which not only accelerated the transition to e-services but also shortened the country's development time in this direction by years. Research by the World Bank (2023) indicates that the necessity of social distancing compelled the government and the citizenry to overcome psychological barriers to past digital transactions [4]. It was the time of an enormous influx of use of the so-called Tele-education and Tele-health portal and a remarkable rise in the number of digital cash transfers via the Ehsaas program. The pandemic has not only been recognized as a health crisis in this literature but also as a digital awakening that revealed the scalability of Pakistan's ICT building blocks under extreme pressure and the extent of the rural–urban connectivity gap [4].

Lastly, the influence of the 18th Amendment on digital governance is an emerging topic of academic interest. Researchers discuss the concept of the decentralization of powers and its resulting dispersed digital space where individual provinces, such as Punjab and Sindh, come up with their own, and often incompatible, digital ecosystems [6]. Such a provincial silos effect does not allow the formation of a well-coordinated national database, where various regions use different standards to encrypt data and service architecture. Their research concludes that provincial autonomy enables localized innovation. Still, the absence of the National Interoperability Framework remains a significant challenge in pursuing the vision of the One-Window operation, which is core to the Digital Pakistan policy [6].

Literature Gap

The gap in the literature regarding the proposed research is the need to bridge the transition from theoretically formulated policy to the realities of institutional life through the support of the concept of the Digital Pakistan program. Whereas the technical architecture of e-governance and the sweeping “transformative vision” of the state are well documented, there is a major gap in research on the human and organizational dynamics behind it: how the fostering of organization and power in traditional forms within digital processes actively obstructs or cripples digital workflows. Moreover, there is a quantifiable disparity in performance metrics, as the existing literature tends to rely on theoretical success stories rather than quantitative data on real citizen participation rates, service response times, and the second-order digital divide, especially the gender gap in technical literacy. This research paper fills these gaps by going beyond metaphorical language to provide a systematic SWOT-based analysis that explains the institutional bottlenecks in detail and explains why the initiative has not achieved its full potential.

3. Materials and Methods

3.1. Study Design

This study employs a qualitative document review of secondary sources. The qualitative approach is especially appropriate for assessing complex policy projects such as “Digital Pakistan” because it allows exploration of institutional behavior, socio-political obstacles, and the human aspect of digital change, which can be overlooked by quantitative indicators [16]. In this way, it will be easy to synthesize existing information using an interpretive approach to discover patterns in the delivery of public services and in bureaucratic responsiveness.

3.2. Selection and Search Strategy of the Sources

The selection of secondary sources was carried out in accordance with a set of inclusion and exclusion criteria to ensure the rigor and credibility of the findings. The search plan was based on the three main types of data:

Academic Literature: Peer-reviewed journals covered in Scopus and Web of Science on e-governance, public management, and ICT development in South Asia.

1. Government and Policy Documents: The official reports of the Ministry of Information Technology and Telecommunication (MITT), the National Information Technology Board (NITB), and the Pakistan Telecommunication Authority (PTA).
2. International Diagnostic Reports: Technical publications of international institutions, such as the World Bank, Asian Development Bank (ADB), and United Nations (UN) E-Government Survey.
3. Selection Criteria: The sources were eligible to be included if they included:
 - Empirical data on the digital infrastructure of Pakistan.
 - Critical assessments of the policy framework called Digital Pakistan.
 - Indicators of citizen engagement and responsiveness of the service.

Sources in other languages or those not clearly affiliated with any institution were filtered out to ensure data quality.

Overall, a total of 32 documents were reviewed and these consisted of 16 journal articles (peer-reviewed), 6 government policy documents and institutional reports (including publications by MIT&T, NITB, and PTA), 8 reports by international organizations (including reports by the United Nations, World Bank, GSMA, and Asian Development Bank), and 2 policy briefs. The documents were purposively sampled based on their relevance to the Digital Pakistan Initiative, the publication's credibility, the availability of empirical evidence, and direct relevance to e-government, digital governance, public service delivery, and digital inclusion. After the selection of documents, they were analyzed using thematic content analysis to determine the common themes of institutional strengths, implementation challenges, opportunities and external risks. The above themes were then synthesized and structured in the SWOT analytical framework to provide a systematic evaluation of the digital governance initiatives in Pakistan.

3.3. Scope and Timeframe

The choice of the 2018–2024 period will intentionally be timed to include the entire lifecycle of the current digital transformation in Pakistan, where conceptual policy development will be succeeded by massive operational reality. This era began with the formal endorsement of the Digital Pakistan policy in 2018, which laid the principal pillars of infrastructure, e-government, and e-literacy. The focus of the research is on this window, which explains the radical change in the philosophy of governance that placed importance on digital-first service delivery, in contrast to traditional, manual bureaucratic procedures.

One of the landmark periods of this time is the 2020 to 2022 period, when the COVID-19 pandemic served as an external driver, compelling the pace of digital initiative implementation to accelerate in an unprecedented manner. The period provides vital information on the scalability of the Ehsaas program and the Pakistan Citizens portal during times of emergency. Lastly, the current data through 2024 will provide an opportunity to incorporate the most recent performance diagnostics, offering a concise picture of the long-term sustainability and the existing bottlenecks of these systems.

From a geographical perspective, the coverage extends beyond federal efforts to include provincial developments in Punjab and Khyber Pakhtunkhwa. Such areas have served as experimental grounds for digital innovation, including land record digitization and e-Khidmat centers. The synthesis of federal mandates and these provincial case studies provides a comprehensive national perspective, accounting for regional differences and the institutional silo effect that tends to define the country's administrative decentralization.

3.4. Strategic Analysis: SWOT Analysis

The collected data were synthesized using the SWOT (Strengths, Weaknesses, Opportunities, and Threats) framework. This strategy tool was utilized so that results would be grouped into four different dimensions to offer an equal assessment of the initiative:

- Strengths (Internal): NADRA identity database and operational e-portals are existing institutional strengths.
- Weaknesses (Internal): Internal bottlenecks such as bureaucratic sluggishness and departmental silos.
- Opportunities (External): External forces that have the potential to support the initiative, including the large number of youths in the population and the international technological relationships.
- Threats (External): Macro-environmental risks, such as cybersecurity vulnerabilities, digital illiteracy and political instability.

A combination of these factors enables one to develop strategic recommendations that narrow the gap between the policy vision and ground-level service delivery.

SWOT analysis is a method of organization and interpretation of data; it does not create data. Therefore, the results of this study are secondary sources and not from the primary data collection process. The SWOT was not used as a research method, but rather as an analytical approach to the evidence obtained from the literature review and thematic analysis.

4. Results

The secondary data analysis of the Digital Pakistan project reveals a complex situation in the sphere of technological advancement, moderated by institutional and infrastructural factors. The subsequent paragraphs outline the systematic results, organized using the SWOT approach, and provide quantitative indicators of the initiative's current scope.

4.1. Digital Pakistan Initiative SWOT Analysis

The SWOT framework identifies major internal strengths and external demands that shape the success of digital public service delivery in Pakistan. Although the state has successfully created the platform for core digital identity, internal bureaucratic opposition and external accessibility gaps have been known to affect the effectiveness of these tools (see Table 1).

Table 1. Digital Pakistan initiative SWOT Framework.

Dimension	Key Findings
Strengths	Better ministry performance through the NADRA; greater exposure through the Pakistan Citizens Portal; increased coverage of services to cities.
Weaknesses	Drastic infrastructural restrictions in rural regions; unequal levels of digital literacy among the population in general; interdepartmental information silos.
Opportunities	These include the rapid growth of mobile e-services, the strong potential for youth-led innovation, and the prospects for international technological cooperation.
Threats	The growing threat of cybersecurity, the uneven application of policy in different administrations, and bureaucratic inertia.

SWOT (Strengths, Weaknesses, Opportunities and Threats) Framework of the “Digital Pakistan” Initiative: This is a matrix that classifies internal institutional capabilities and external environmental pressures [2,8].

4.2. Performance Indicators and Quantitative Indicators

To address the need for tangible evidence of impact, this research identifies a set of key performance indicators (KPIs) to describe the current state of the process for delivering digital services. Although the number of deployed e-services has increased considerably, engagement across demographics varies widely as illustrated by the quantitative indicators in Table 2.

Table 2. Quantitative Indicators of Public Service Improvement (2018–2024).

Performance Indicator	Measured Status Metric	Impact on Service Delivery
Number of E-Services	>40 combined federal and provincial services.	Fewer physical visits to the government.
Citizen Engagement	3.7 million registered users of the Citizens Portal.	A more immediate response linkage between the state and citizens.
Service Accessibility: Rural Internet penetration	21% rural vs. 55% urban.	Cites the chronic “Digital Divide” in service coverage.
Gender Digital Gap	67% difference in mobile Internet usage.	This indicates the high level of women’s marginalization in digital services.

Key Performance Indicators (KPIs) and Quantitative Metrics of Public Service Delivery (2018–2025): The Table 2 highlights the imbalance between service growth and user availability [9].

4.3. Planning the Digital Ecosystem

The Digital Pakistan project is run on a multi-tiered conceptual platform, with digital infrastructure as the backbone of e-governance applications that subsequently lead to citizen empowerment and public-sector reform.

The shift from paper-based to a digital platform is not a technological upgrade, as shown in Figure 1, but an iterative process of institutional adjustments. The results indicate that, although “Digital Pakistan” has mitigated some of its bureaucracy, the program has not realized its potential due to the threats outlined in the SWOT analysis, particularly cybersecurity threats and policy inconsistencies [11,12].

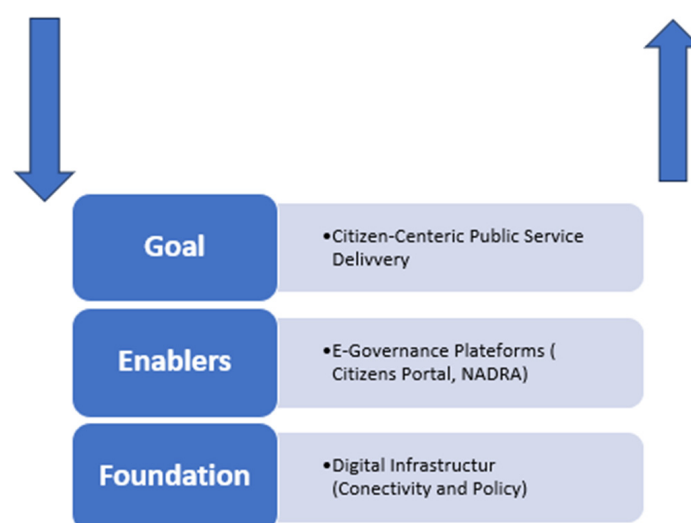


Figure 1. Digital Pakistan plans as a conceptual framework.

5. Discussion

5.1. Impact Assessment: Lessening the Stamp of Bureaucracy

Outcomes of this research indicate that the Digital Pakistan project has been a pivotal force in minimizing bureaucracy that has bedeviled the state administration. The state has successfully avoided the use of conventional human gatekeepers by switching to digital platforms, thereby minimizing the risk of discretionary delays and informal rent-seeking. The adoption of over 40 integrated e-services has transformed service delivery from a department-centric to a more integrated model. This trend aligns with the Digital Era Governance paradigm, which aims to re-engineer services based on user needs. The fact that the Pakistan Citizens' Portal can process millions of complaints shows that the administrative body has become more responsive, enabling a direct feedback mechanism that did not exist during the paper-based period.

5.2. Key Issues: Security and Policy Imagery

Although these improvements have been made, it is necessary to discuss the key weaknesses and threats identified in the SWOT analysis, namely, cybersecurity and institutional stability. The absence of a strong, unified cybersecurity framework is a major weakness as the state consolidates sensitive citizens' personal data, such as biometric data, through NADRA. This threat is aggravated by policy inconsistency, whereby changes in the political administration commonly mean that current digital projects are repackaged or abandoned, losing institutional memory and squandering fiscal resources. Moreover, the identified bureaucratic inertia in the results indicates that the technology is indeed up to date. In contrast, an administrative culture not underpinned by digital workflows tends to resist transparency and accountability.

5.3. International Environment: In Keeping with E-Government Tendencies

Comparing these results with those of the rest of the global constituency, however, the path taken by Pakistan addresses most of the dilemmas faced by other Global South countries at the integrated phase of e-government. The world is not simply about high-speed connectivity; it depends on digital equity to successfully undergo digital transformation. The threat of digital exclusion, with the benefits of modernization enjoyed only by an urban elite, can be posed by Pakistan, with its chronic 67 percent gender gap in mobile Internet use and its dramatic rural–urban divide. Pakistan should go beyond the cataloging stage, which is the world leader in e-governance, to full horizontal integration, where digital tools are not only accessible but also trusted by all citizens.

6. Conclusions

The Digital Pakistan project is a paradigm shift in the country's system of government, as it has left behind the archaic, colonial-era administrative architecture and stepped into the realm of modernized, technology-infused social contracting. The results of this study, however, indicate that the sustainability of this transformation in the long term remains dependent on forces much broader than the very act of technological implementation. Although digital tools have served well in bypassing the traditional gatekeepers in bureaucracy, which in turn has enhanced transparency and reduced the red-tape culture, a comprehensive systemic transformation demands a two-fold pledge: capital investment in infrastructure and, most importantly, the sustenance of political leadership to eliminate policy stanzas.

A critical analysis of the SWOT analysis indicates that the program is in a dangerous hybrid state. On the one hand, the state has been able to develop digital pillars of the world, the most remarkable one being the NADRA biometric identity ecosystem, which

has become a safe point of financial inclusion and social safety nets. Conversely, external threats and internal institutional frictions often undermine such advances. The absence of a national interoperability structure has led to piecemeal provincial applications, with regional digital silos that do not effectively interact with federal databases. Besides, the growing threats to cybersecurity and data privacy are a major weakness. To get out of this half-breed position, the roadmap for Digital Pakistan needs to be transformed into a sequence of digital projects into a single, secure, legally safeguarded national ecosystem that considers the national digital rights and literacy of every citizen.

6.1. Study Limitations

This study relies only on the secondary data that are available from the academic literature, government publications, and reports made by international organizations. Consequently, the results are based on the information available at the time of the study and do not necessarily present citizens' and other stakeholders' (frontline public officials) experiences of digital government initiatives in Pakistan. The results of the present research must be supported by primary empirical studies conducted in different regions of Pakistan, challenges in implementation, and the performance of institutions, including interviews, surveys, focus group discussions, and case studies, to explore the citizens' experience.

6.2. Policy Implications

The digital transformation will not happen when the digital divide is eradicated. Rather, a parallel approach, where the growth of digital public services and the effort to diminish digital exclusion both develop in parallel, should be embraced by policy-makers. Properly designed e-government applications can be tools that help address the digital divide, if they are built to take the needs of a wide range of users into account, rather than assuming a universal digital readiness.

Digital government programs and projects should move towards a participatory and citizen-centered service design approach, rather than a top-down approach. Citizens, civil society actors, local government, and private sector actors should be involved in the planning, pilot testing, implementation, and evaluation of digital services by government agencies. Women, rural people, persons with disabilities, older people, and low-income households in particular continue to experience high access barriers to digital public services.

Digital platforms need to be made more accessible and adopted by providing the option to use the platform in multiple languages, using simpler user designs, being equipped with mechanisms to support user feedback, and having assistive digital service centers to provide support to citizens in accessing online government services. New digital platforms should be complemented by investments in affordable broadband infrastructure, digital literacy programs, and mobile connectivity so that technological innovation will complement rather than exacerbate existing inequalities and contribute to social inclusion.

Last but not least, Pakistan must have a phased implementation plan. In the near term, broadband connectivity expansion, comprehensive data protection legislation, and cybersecurity are the top priorities. In the medium term, the federal and provincial governments should work to increase the interoperability of digital platforms and develop or adopt common technical standards to provide for integrated service provision. To make Digital Pakistan a citizen-centered digital government ecosystem in the long term, its implementation needs constant monitoring, citizens' feedback, and regular assessment of the level of services. Such a balanced approach would help to reduce digital exclusion, increase public trust in government institutions, and increase the efficiency of the administration as a whole through digital government applications.

6.3. Future Research

Further studies should focus on the primary empirical evaluation of citizen satisfaction across socioeconomic quintiles. The problem of the rural population and its usage gaps is a pressing issue that needs to be identified. Also, longitudinal research is needed to assess the long-term effects of e-governance in alleviating administrative corruption in Pakistan, enabling a better roadmap towards the vision of the Digital Nation Pakistan 2024–2030 (see Table 3).

Table 3. Roadmap for Strengthening Pakistan’s Digital Government.

Time Frame	Strategic Priority	Key Actions	Expected Outcomes
Short term (1–2 years)	Improve digital accessibility	Increase availability of broadband in out-of-reach rural areas, create assisted digital service centers, streamline e-government applications, add Urdu and regional language interfaces, and boost digital literacy, especially for women and marginalized communities.	Improved citizens’ access to digital public services and reduced digital exclusion
Medium term (3–5 years)	Strengthen institutional integration	Set up a National Interoperability Framework, connect the cyber-platforms of the federal and provincial governments, improve secure digital identity services via NADRA, develop the Personal Data Protection framework, and build cyber security capacity.	Improved public service delivery—more efficient, secure, and integrated—and citizens’ trust in public services.
Long term (5+ years)	Think and create a citizen-centered digital government	Provide for continuous citizen feedback systems; adopt performance indicators to measure digital services; augment public administration with AI, as appropriate; and institutionalize periodic monitoring and evaluation of efforts towards Digital Pakistan.	Sustainable and citizen-centered, inclusive, and transparent digital government ecosystem.

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