



**RESEARCH PAPER**

**Digital Governance Initiatives in Pakistan to Combat COVID-19:  
Current Developments and Challenges for a Sustainable Future**

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**ABSTRACT**

This study aims to investigate the adoption of digitalized service delivery mechanisms by various government and non-governmental institutions in Pakistan to combat the COVID-19 Pandemic. The key study objectives are; to analyze the role of digital governance in managing the pandemic and promoting sustainable social and economic development in Pakistan while focusing on the Digital Pakistan Policy and its implementation; and highlighting its significance in public service delivery in the new normal era. The paper adds value by evaluating the key features of the indigenous digitized governance model of public service delivery in Pakistan to handle the pandemic and also unveils implementation challenges posed by the context which could be addressed in future by offering relevant strategies, policy directives/guidelines and recommendations to the public policy formulators and public managers. The study adopted a descriptive approach to discuss various measures adopted by the government of Pakistan to deliver services in a digitized manner during the pandemic. Data was collected through a review of literature as a secondary source, while official websites of the government were consulted to gather primary data as well. Digital governance policy suggestions proposed in this paper are drawn from recommendations provided by in-service bureaucracy, policymakers and public policy experts in academic conferences. Thus, the study has practical implications for the policymakers aiming to overcome the challenges of the current and future post-pandemic era by developing a resilient and contextually inspired model of digital governance.

**KEYWORDS** COVID-19, Digital Governance, Pakistan, Sustainable Future

**Introduction**

The COVID-19 global pandemic which broke out as a health crisis turned into an economic and a 'human crisis,' as pronounced by Mr Antonio Guterres, the United Nations Secretary-General ("Economic and Social Survey of Asia and the Pacific 2020", 2020). The World Health Organization (WHO) on 30<sup>th</sup> January 2020 announced it to be taken as a public health emergency of global concern. After its initial outbreak in the Chinese city of Wuhan, it was witnessed by more than 209 countries within a short time span of three months (Waris et al., 2020). South Asian Countries met the COVID-19 pandemic when the countries were amidst a fiscal deficit and trapped in public debt. This economic situation posed challenges to their governments while encountering the social, economic, physical and psychological effects of the pandemic. A compromised and inadequate public health infrastructure and inequitable access to internet connectivity and awareness amongst the masses further aggravated the grievances of the governing institutions. These public service agencies experienced a lot of problems at the time of providing financial relief and alternate service solutions in various sectors in a digitized way. Public sector health institutes mainly funded by the state and government-run hospitals of various countries became under operational and financial constraints. Countries need to build robust and sustainable public healthcare systems to survive through this pandemic and also to cope with future global pandemics (De Ceukelaire & Bodini, 2020).

To curtail the spread of the virus, the governments of various countries laid down border restrictions which resulted in a decline in economic activities, eventually leading to layoffs. Lockdowns at regional levels also hampered business activities leaving many jobless. This created extreme poverty and posed further challenges for the governments to take their economies out of recession. Social distancing, self-quarantine, breaking the chain and lockdowns were some strategies adopted to minimize and reduce the spread and effect of the virus. To serve the communities and to combat the long-term effects of COVID-19, mandated e-governance systems and societal solidarity and participation amongst different stakeholders including the citizens (Shaw et al., 2020). Covid-19 has not just affected human activity; it has also had a tremendous impact on the degree of growth in the social and economic sectors which has in turn challenged sustainable development across the globe (Gao & Yu, 2020). To be able to sustain its economy in the post-COVID-19 era it is proposed that Pakistan should legislate such structural reforms which attract foreign investment in the country. Measures like enacting conducive laws for foreign investment which would encourage FDI and reinforce intellectual property laws should be adopted (Ghori-ahmad, 2020).

## **Literature Review**

### **Digital Governance**

The predominant goal of digital governance is the provision of service and dissemination of information to various stakeholders in a society like the citizens, private enterprises, government and its personnel, efficiently and cost-effectively. Capacity building of public institutions and their employees is a prerequisite to achieving a smooth and successful transition from a traditional system of governance to a digital governance framework. Moreover, the extent of digital literacy of public organizations, adaptability to change and e-readiness are parameters determining a successful digital governance framework (Hamid et al., 2020).

### **E-Governance: An Indispensable Tool for Sustainable Development**

E-governance is the amalgam of Information and Communication Technology (ICT) into the system of government institutions to execute working processes with ease, efficiency and accessibility. By adopting ICT technologies and the use of the internet, governments can serve their citizens in a more effective and improved way (Hamid et al., 2020). The use of ICT-based tools not only can deliver more effectively and transparently but also enables citizens to access information and renders inclusiveness. It can also act as a mode/means of integration and coordination amongst the different public and private entities, ultimately resulting in an efficient public administration. E-governance refers to the use of the internet and the World Wide Web (WWW) for the sake of communication between the government and the citizens. This serves the purpose of information sharing and service delivery between both stakeholders (Ud Din et al., 2017). Atta-Ullah (2021) defines the concept of e-governance as an electronic system of governance whereby information and communication technology (ICT) are unified and implemented in all the government processes and procedures, to enhance the capacity and capability of the government institutions to serve the needs of the masses in an augmented way (Ullah et al., 2021). Therefore, e-governance may be interpreted as electronically delivering services and information to the citizens of a country by its government agencies (Batoool et al., 2021). It primarily intends to alleviate the government's efficiency and also to have a widespread reach in various government and non-government sectors. Ahmed 2018, in her study about good governance in developing countries, suggested that e-governance is a remedy to bad governance while ensuring the development of indicators of good governance in developing countries. The development of underdeveloped countries is significantly influenced positively by an efficient system of E-government (Srivastava & Panigrahi, 2016).

COVID-19 has affected the outlook of the economies and social sectors of various countries, resulting in an immense loss of social and economic sustainable progress (Gao and Yu, 2020). Considering this impact, a sustainable model of e-governance needs to be developed to ensure sustainable development. Sustainability aims at meeting current prerequisites as well as ensure to address future contingent needs (Ullah et al., 2021).

### **The Era of E-Governance in Pakistan**

Pakistan is gradually adopting e-governance practices and tools to simplify the access and delivery of services and also to disseminate information in an efficient, economical and transparent way (Government of Pakistan, 2022). E-Governance has changed the culture and mode of functioning of public entities in Pakistan. Public service delivery takes place through the integration of multiple functions, processes and data of the government agencies in various policy sectors. Despite being a developing country, citizens of Pakistan demand its government to deliver digitally for a convenient lifestyle and sustainable growth (Rehman et al., 2016). After the conception of The Ministry of Information and Technology in the year 2000, Information Technology(IT) based training programs were introduced at all university and college levels to support the employees and workforce of the local IT industry (Khan and Iqbal, 2020a); (Khan and Iqbal, 2020b). Pakistan's Government under its IT Policy and Action Plan 2000 installed IT facilities and infrastructure to conduct its operations at various levels while accepting it to be a source of sustainable development (Ilyas, 2016). In May 2014, an E-Office Forum 2014 was established to endorse the e-governance initiatives of the e-office and also to acquire support from all the stakeholders for its successful implementation. In this regard, The Electronic Government Directorate of Pakistan launched various digital platforms and online web portals to electronically deliver information and services to the citizens of the country (Batool et al., 2021).

### **Material and Methods**

The study adopted a descriptive approach to explain and discuss various measures adopted by the government of Pakistan to deliver services in a digitized manner during the pandemic. Data was collected by systematically conducting search through Google Scholar, PubMed Central, Web of Science, ResearchGate, media publications and the official websites of the Government of Pakistan. Secondary sources of data included research articles, policy briefs, policy documents, official websites of the Government of Pakistan, reports developed by government institutions and national newspapers.

### **Results and Discussion**

#### **E-Governance Initiatives in Pakistan: Pre and Post COVID-19**

Since the inception of the government regime of Pakistan Tehreek-e-Insaaf (PTI) in 2018, various efforts have increasingly been undertaken to materialize its vision of "Digital Pakistan". The "Digital Governance Policy 2021" was formed to achieve the foresight of the government to revolutionize the country into a digitalized nation. The primary goal behind the implementation of e-governance practices was to have transparent processes and activities in government agencies. The e-commerce policy of the government primarily stressed upon drafting a regulatory facilitation framework, digitalizing payment systems, and imparting authority to the country's young population and small and medium enterprises by introducing e-commerce frameworks. Issues of taxation and protection of consumer data and privacy were also emphasized (MoC&T, 2019). Moreover, policies mandated for the benefit of the citizens are underway e.g. National Broadband Policy, National Cyber Security Policy and National Freelancing Facilitation Policy are some of the pro-citizen policies proposed to be implemented in the near future (Batool et al., 2021).

The unprecedented breakout of the COVID-19 pandemic further compelled the state institutions to revert to digital platforms for governing day to day affairs and also to serve the service sector. Like the rest of the world, the Coronavirus pandemic has compelled Pakistan to go digital. Though Pakistan is a country where the culture of brick and mortar is profoundly embedded in the thinking and mentality of the community, despite this the changing trend towards adopting online and digital modes of operations in both the public and corporate sectors than became very evident in the first wave of the pandemic (Veqar Aslam, March 31st, 2022, International THE NEWS ). In the first month of the spread of the virus in Pakistan, the country started to assume the status of a “New Normal”. Pakistan ranked at 148<sup>th</sup> position on its E-Government Development Index (EGDI) as reported by the United Nations in the course of the COVID-19 Pandemic. During the pre-pandemic period as well as after the surge of the global virus, the government of Pakistan undertook e-governance initiatives in various policy domains, some of which are discussed here sector wise:

### **Digital Applications in Service Sector**

**E-Khidmat Markaz** aims to combine and offer seventeen public services under one platform for the masses. This was intended to facilitate convenient interaction between the government institutions and the citizens. Some of these public services were issuance of birth certificates, character certificates, marriage certificates, death certificates etc. Some other services included the registration of vehicles, collection of token tax, transfer of vehicle ownership, issuance of computerized national identification certificate (CNIC), domicile and NADRA E-Sahulat. This digitally integrated service platform provides transparent, efficient, cost effective and accountable service accessibility to citizens. It simplifies transaction processes by offering innovative services and enhances government revenue while minimizing costs to both government departments and customers as well.

**City Islamabad App (ICT)** offers the citizens of the capital city hassle free and stress-free access to a wide variety of significant public services, features, and tools to easily carry out their tasks. Some of the services are the e-Police, utility bills payment, payment of excise and taxation, CDA, e-NADRA and many others (National Information Technology Board, 2020)

The National Information Technology Board presented the ‘**Pass Track Platform**’ to register foreign travellers in airport systems while keeping a record and tracking the passengers’ basic information. Both passengers and airport administration can conduct the registration process. International travellers can update their medical and travel records by accessing this application (National Information Technology Board, 2020).

### **PM Citizen Portal**

The citizen portal was launched by the Prime Minister of Pakistan in 2018 to enable the citizens to register complaints and suggest improvements in public sector delivery through this digital platform (Ullah et al., 2021).

### **On-line Portals and Apps for Socio-Economic Development**

The National Information Technology Board (NITB) is a leading public department engaged in digitalization of multiple government departments and their services. It intends to provide IT related services and build the infrastructure of various government departments who aim to govern their organizations in a modernized and digitized way, thus to serve the citizens efficiently and transparently, while empowering them digitally. Some of the digital platforms developed by the government are:

**Board of Investment Visa Portal** is another application that provides the facility of processing visa applications of the business community. Through this portal the government

aimed to encourage companies and the business community to file for their work visa by themselves electronically.

**Kamyab Jawan** Program aims to empower the youth by augmenting their entrepreneurial skills and potential through provision of loans, with the intention to incentivize them to contribute to boost and stabilize the country's economy ("Kamyab Jawan", 2021). Kamyab Jawan aims to synergize institutions through collaborations while endorsing and developing the concept of gender equality and rights-based youth empowerment. The program depicts the government's objective of creating opportunities for the young population and also to enhance their will to succeed while building their confidence. For this purpose a Kamyab Jawan portal was built to provide loans to the potential youth striving to set up their startups and also to expand their current businesses.

### **Ehsaas Program**

In March 2019, the Government of Pakistan introduced the Ehsaas Programme to meet the goal of provision of social safety and poverty alleviation. It was launched under The Division of Poverty Alleviation and Social Safety, which was established for this specific umbrella program. It was a key initiative of Imran Khan who was the Prime Minister of Pakistan from August 2018 till March 2022 to form a welfare state. He aimed to rely on 21st-century tools; technology and data to deliver services digitally and also to endorse financial inclusion. He further believed in empowering the female population and engaging them in contributing to the economic development of the country. The primary objective of Ehsaas Program is to curtail social community disparity by developing the masses and working to alleviate poverty prevalent amongst the unfortunate sectors of the country. Innumerable projects are initiated under this program, such as Ehsaas Kafaalat Program, Ehsaas Emergency Cash (EEC), Free Langar, Food Card, Prime Ministers Fund Portal for COVID-19 affectees, its Rashan distribution scheme and daily-wage platforms. In the field of education, it launched an online education channel and offered stipends, scholarships and interest-free loans for students.

Ehsaas program is based on the principles of utilizing a whole-of-government approach in which multiple government agencies operating at different levels of the government would collaborate to provide solutions to societal needs. Not just this, but it also envisioned engaging the private sector as well to deliver entrepreneurial ideas and serve the citizens in an innovative way, ultimately resulting in the creation of employment and ensuring a source of earning. (Ministry of Poverty Alleviation and Social Safety, 2022). The Ehsaas Emergency Cash program catered to 15 million vulnerable families, which includes almost half of Pakistan's vulnerable and underprivileged population (Rasul, 2020).

**Central Information Dashboard** provides relevant ministries detailed account of the PM COVID relief fund that was allocated, released and distributed. It enables them to keep track and maintain a record of real-time distributed cash amounts across various cities of the country. With this dynamic dashboard, the development of the Relief Fund can be assessed for further decision making (Government of Pakistan, 2022).

### **Health Sector Applications**

**The WE CARE app** was launched during COVID times to protect frontline health workers working directly with affected people and managing the virus and its effects. Its purpose was to sensitize the masses visiting healthcare facilities to lessen the risks of the spread of the virus. The Ministry of National Health Services Regulation and Coordination (MoNHSRC) launched this application. The app aims to educate and familiarize the health workers about the usage of personal protective equipment (PPE) and also to build an overall environment of compassion and support.

## **COVID-19 Mobile App**

This is another digital platform created by the Ministry of IT and Telecom with the National Information Technology Board providing solutions to tackle the COVID-19 pandemic in Pakistan. This Platform provided updated, latest and credible information about Covid-19 cases in Pakistan and keeps citizens posted about the total number of affected persons province-wise (Haque and Nayab, 2020)

## **Telehealth**

COVID-19 has compelled many countries to shift towards digitalization and adopt digitalized delivery of services, primarily to increase the outreach of public health services. When it got risky to physically access health services, the government and various non-governmental organizations reverted to introducing telehealth services in Pakistan (“Telehealth initiative answers ‘the need of the hour’ in Pakistan”, 2020). Telemedicine refers to the delivery of healthcare services in a digitalized manner. This concept has proven to play a highly significant role during COVID as well as in post-COVID-19 times. (“How telemedicine is helping in the fight against COVID-19 (and why it should be here to stay) | UNDP in Pakistan”, 2021). Since people who were at a higher risk, specifically women and the elderly with pre-existing ailments were scared to visit hospitals during the pandemic were able to consult health experts by utilizing the services of telemedicine. To provide support to the health care system in Pakistan, The United Nations Development Programme (UNDP) Pakistan collaborated with Sehat Kahani, which has a network of 27 e-clinics all over the country. This social enterprise enables patients to reach and connect with doctors in a digitized way (“How telemedicine is helping in the fight against COVID-19 (and why it should be here to stay) | UNDP in Pakistan”, 2021).

## **Sehat Tahaffuz**

In February 2020, at the beginning of the virus, the Government of Pakistan launched a helpline number of 1166 to provide complete health related information and services to COVID-19 affected people. The Sehat Tahaffuz 1166 Helpline which acted as a strong support system for the Pakistanis was initiated by the Government of Pakistan with the assistance of the Global Polio Eradication Initiative (GPEI) partners namely; United Nations Children’s Fund (UNICEF), World Health Organization (WHO) and Bill and Melinda Gates Foundation (BMGF). This helpline was set up by a private company that conducted sessions to train the call agents on helpline technology and communication skills. The National Institute of Health also provided these agents with complete training on COVID-19 primary information and commonly experienced disease indications (“‘Call 1166’ The COVID-19 helpline centre in Pakistan - Endpolio”, 2020).

Dennis Chimanya, the UNICEF C4D team leader, supporting Sehat Tahaffuz 1166 in Pakistan to secure a healthy and safe life for them, stated that in this challenging and arduous period, the Global Polio Eradication Initiative (GPEI) partners are assisting the Government by deploying resources allocated for polio eradication for the management of COVID-19 in Pakistan. (“‘Call 1166’ The COVID-19 helpline centre in Pakistan - Endpolio”, 2020)

## **Pak Nigehban – National Emergency Response**

It is a part of the COVID-19 application which allowed its users to locate the nearest hospital and obtain information about the availability of beds or ventilators and also upon conducting coronavirus tests.

**CORONA Relief Tigers’ Registration Application** was launched for those citizens who volunteered to register with the Tiger force. It was formed by the Punjab Information and Technology Board (PITB) for the purpose of reporting volunteer tasks undertaken by the Prime Minister’s Tiger Force.

## **E-Governance Induced Challenges Faced by Pakistan: Pre and Post Pandemic**

Despite the fact that digitalization of government sector practices holds numerous benefits, its widespread reliance on digital technologies and tools has posed various challenges to the government institutions (Bonina and Eaton, 2020). During both pre and post Pandemic times, the government of Pakistan met with various concerns and challenges associated with the extensive use of digital infrastructure. One of the major limitations to the successful transformation of Pakistan into a digital economy is related to the lack of infrastructure, skills and funds required for the implementation of an e-governance structure (Batool et al., 2021). Another global challenge is concerned with the breach of data privacy and data security. Overall data governance which involves developing organizational systems to manage data processing, analyzing, usage, sharing and data transactions is the big issue (Parker et al., 2020). Most of the human resources working in organizations and the users (citizens) of digital tools for transactions are deficient in digital skills and know-how (Rasool et al., 2021). This limitation of human resources creates the need for proper training by the government to achieve the desired results of digital technology for more transparent and efficient governance (Khan, Bashir, et al., 2021);(Khan, Bhatti, et al., 2021). In Pakistan citizens' access to the internet, its connectivity and an unequal level of internet skills is an additional challenge for the government (Batool et al., 2021). The Ministry of IT & Telecommunication of Pakistan aimed to ensure the provision of affordable, reliable and consistent delivery of internet access to the citizens (Batool et al., 2021). Despite these shortcomings, the digital policies of the government in Pakistan have remained steadfast for the continuous and sustainable development of its digital infrastructure.

### **Conclusion**

The Government of Pakistan in partnership with other non-governmental entities successfully managed to overcome the challenges posed by the outbreak of COVID-19 pandemic. The factors that contributed to this achievement were e-government initiatives taken by the government and other private and social enterprises. The formation of specialized organizational platforms to address the rising social and financial needs of the affected community was another hallmark of success. Introduction of digital mechanisms of service delivery in all the sectors was another measure adopted to respond to the effects of the health crisis.

### **Recommendations**

To promote social and economic sustainable development in the post pandemic era, the Government in Pakistan should aim to enhance its e-governance mechanism by refurbishing and implementing value-added digital policy. This objective can be achieved by creating and sharing common data bases amongst ministries in various related policy sectors, thus to address the needs of the citizens (Ullah et al., 2021). The educational ecosystem in Pakistan should have e-governance systems integrated in public schools and health systems for a future sustainable social sector. An improved system of e-governance can also reduce the gap prevalent between the rural and urban communities (digital divide) of the country, due to lack of universal digital connectivity and access to internet.

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