Policy Brief

TRANSFORMING PUBLIC SECTOR THROUGH DIGITAL GOVERNANCE INITIATIVES IN KHYBER PAKHTUNKHWA: BUREAUCRATIC CONDUCT, TRANSPARENCY IN SERVICE DELIVERY AND CITIZEN CENTRIC E-GOVERNANCE

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INTRODUCTION

The introduction of Information and Communication Technology (ICT) tools in governance of Khyber Pakhtunkhwa province has been a unique experience with policy making in this otherwise economically and socially under-developed province. These changes in governance, often known as e-governance are aimed at providing cost-efficient, transparent and inclusive services. Since 2013, the province of Khyber Pakhtunkhwa is leading this race by introducing innovative e-governance reforms in various departments, such as health, revenue, education, and district administration. This research attempts to investigate the e-government reforms and impacts on service delivery in two of the Khyber Pakhtunkhwa government's departments: Education and Health, where several e-policy initiatives are introduced, focused on provision of quality education and improved healthcare to the residents of Khyber Pakhtunkhwa.

PURPOSE

This study explores the ICT initiatives and impacts on service delivery on the two provincial government departments of education and health. The aim is to analyze critically such impacts on efficiency, transparency and inclusivity aspects of public service delivery and improvement of citizen's trust in the government. It attempts to do so from the perspective of public service providers, i.e., the bureaucracy and end users, i.e., the public (school and college students and hospital patients). It also evaluates the cultural and organizational changes in the provincial bureaucracy under such changes.

METHODOLOGY

The methodology of the study is based on mixed methods, deriving data from both qualitative and quantitative sources. Qualitative data was collected from 25 in-depth semi-structured

interviews and FGDs from officials of education, health and IT focused departments of Khyber Pakhtunkhwa province. Additionally, structured survey questionnaire was used to collect data from 305 respondents based in 10 survey sites, which included students studying in 8 government secondary and higher secondary schools and colleges, and patients in 2 largest tertiary hospitals in Peshawar and Abbottabad districts in Khyber Pakhtunkhwa. Primary data sources are complemented with secondary data from books, journal papers, and online sources.

FINDINGS

The findings of the study suggest that significant digital interventions were made by the provincial government in both education and health sectors and the Covid 19 emergency provided a big push to digitalization of government services. These interventions are driven by first, the desire to generate policies based on evidence-based data and second, to optimize efficiency, transparency and accessibility of services. However, the ICT induced impacts on service delivery varied depending on the nature and the context of digitization interventions, which resultantly had differing results. In the context of most notably the education sector, for example, access to online tele-learning services were limited by student's economic background and paucity of funding inhibiting IT infrastructure in public schools. Most of the health and education e-initiatives focus on registering online complaints, applying for e-transfers, online admissions, or printing online forms, which made it a managerial type of government, as Chadwick and May (2003) suggest, measures that are steered towards greater government control and less public participation in policy making. Additionally, the propensity of significant groups being left out, either due to the non-availability of resources, such as computers, internet, or accessibility being limited to ICT literate population only, made limited accessibility greater possibility. The findings also suggest that ICT induced transformations in bureaucracy's organizational culture in terms of its values, expectations, processes and practices have led at times to bureaucratic resistance and skepticism of the ICT introduced reforms. Such limitations may prove a big stumble in the Khyber Pakhtunkhwa government's vision and attempts at providing speedy, efficient, accountable, and inclusive services to the public.

KEY POLICY RECOOMMENDATIONS

Pakistan is relatively slow in adoption of e-governance practices as its position on the **UN 2018 e-Government Index ranked at 148 out of a total** of 193 countries (The World Bank, March 18, 2019, 75-78). Whereas the Global Information Technology Report 2016 in its Networked Readiness Index cited Pakistan's position at 110 with a 3.4 score (Maximum is 6) among a total of 139 countries in terms of adoption of factors, policies and institutions for ICT adoption and

usage in increasing economic competitiveness and well-being. It was up from last year by two positions (World Economic Forum, July 2016; Bellar, Dutta and Lanvin, 2016, p. 16; Zeb, 2015).[1]
The following policy implications and recommendations are suggested:

- In Khyber Pakhtunkhwa, much needs to be done to involve citizens in the participatory practices of e-governance, where the citizens are not just involved in utilizing digital governance steps for citizen complaints and redressal, but also play their roles in policy formulation and direction. For this to be practical, it is important that the IT wings (HEMIS, EMIS and HIS) of both education and health departments must engage citizens in the process of online consultations before an app or digital service is launched. It is important to mention here that such online consultations may be popularized through social media projection. The only recent attempt at engaging citizens is on the KPESED website, which opens a window inviting citizens to pen their suggestions on school syllabus changes. Such steps are noteworthy because citizen participation will further boost their trust in government's service delivery undertaking through the ICTs.
- It is not without saying the transparency's starting point is availability of open sources of information, easily accessible to the public on their websites. Open sources of information generation from the government also increases the trust of people. Therefore, there is an urgent need to update the websites of both Health, as well as Education Departments. This is highly essential because the websites of both the departments contain mostly outdated information, or some very basic set of information. Within the Health Department, the Directorate General of Public Health (DGPH), which is a very critical policy implementation as well as monitoring and evaluation institution has a website that only contains some very fundamental and rudimentary information. Similarly, several affiliate institutions of both the KPESED and HED do not even possess their own websites. A click on several subsites on their website takes us to messages about URL not functioning. That needs a thorough and in-depth revamping. Here, the responsibility of updating can be

[1] The UN assesses and releases every two years the E-Government Development Index (EGDI) to ascertain the level of e-government readiness across different countries. This is done through an in-depth analysis of survey data across different ministries and levels of government in three components: scope and quality of online public services (Online Service Index: OSI); the development of telecommunication Infrastructure (Telecommunication Infrastructure Index: TII); and that of the Human Capital (HCI). Pakistan ranks among the 66 middle E-Government Development Index countries (Middle EGDI group), which are ranked at a score of around 0.25 to 0.50 in terms of e-preparedness. The scores for the very high and high groups in e-preparedness ranges from more than 0.75 to more than 0.50 respectively (UN E-Government Survey 2018, 85-86). It mentions Pakistan among the 6 Asian countries to have improved its e-presence in terms of service provision (Online Service Index- OSI) online from 2016 rankings (UN E-Government Survey 2018, 94).

tasked to the department's respective IT wings. For this purpose, data administrators specifically tasked with uploading current set of information on government websites can be hired and tasked with uploading new information every fortnight.

- The World Bank's report, 'Pakistan@100: Shaping the Future' recommends within governance domain essential transparency and accountability reforms, which comprise provision of 'transparent and accessible information' on reforms and service delivery to citizens, including budget documentation transparency. Pakistan had by 2016 declared its intention to join the Open Government Initiative and undertake fiscal transparency, however, no major plan has been initiated so far (The World Bank, March 18, 2019, 79).[2] Therefore, another policy recommendation is that the government, including the Khyber Pakhtunkhwa one must ensure online access to the public about government's financial statements relating to various expenditures and on various projects. This is imperative in achieving the goal of transparent service delivery.
- The interviews and survey questionnaire and informal chat with public also raised the important issue of public's non-awareness of the different service providing digital apps. This led to under-utilization of service generation apps. At times, the public was even unaware of what ICT service generation constituted and how to access the same. Therefore, it is the recommended that the government should seriously project its new as well as old ICT initiatives on social and print media platforms and educate public on how such apps may be optimally utilized. This implies that all such digital programs for learning should be exposed to proper media coverage campaigns, so that the people have awareness about these initiatives. This is not an unattainable task; since all departments already have PR and media officials or spokesperson, they can be engaged and tasked with the responsibility of proper projection of digital tools in service delivery. It is also recommended that the concerned departments can hold small seminars and workshop in educational institutions, especially higher secondary schools and colleges to train and educate the students and teachers about the potential usage and benefits of such apps. Awareness campaigns can also be generated through the primary school teachers who

[2] The report emphasizes that there is lack of access to centralized and digitized staff records creating inefficiencies and lack of transparency as well as lack of coordination and collaboration within and across departments. Among its recommendations, it places increasing transparency in public financial management (Right to Information Act on financial information; timely disclosure of budget documentation and execution; publicizing audited financial statements of SOE; e-procurement for transparency, competition and reduced corruption), and strengthening citizen's voices in holding public officials accountable and expansion of monitoring efforts at the state level. For this, Technology holds the key.

are in a better position to motivate and educate their communities on specific benefits to gain from accessing service generation through such apps.

- This brings us to our next policy recommendation of how to bridge the digital divide. The quantitative survey analysis brings home the point that a large majority of public schools are populated by children who come from very low-income groups (with family income less than PKR 25000); similarly, mostly very poor patients access public hospitals. There is therefore a serious problem of affordability of digital tools on account of differences in socio-economic backgrounds. To bridge the digital divide in education, it is essential that students be provided with very subsidized microcredits for the purchase of computers and tablets. The banks can take up the initiative, with a focus on emulating the Grameen bank (Bangladesh) example in micro-financing. The Pakistani companies can assemble or make basic tablets with low prices for consumption by low-income households. For this the government of Pakistan may provide such companies with different tax concessions for inducing them to produce cheap tablets in bulks for consumption and use in public schools, or its cheap affordability for the general public.
- Another form of digital divide is emerging within the public sector schools, between those schools that are exposed to IT and computer labs (60 %) and those that are not (around 40%). Unless proper infrastructure is not provided, other related changes in syllabus, etc., will not help the cause of ICTs. For this, the government besides raising its funding of infrastructure provision, can also approach the donor agencies and NGOs for assistance in bridging the lack of essential IT infrastructure as well as training of teachers in IT skills. Some such attempts at IT trainings are already attempted in the past.
- Public sector school children are exposed to computer education from secondary and higher secondary levels, which given the importance of IT learning at early age is a very late exposure. It is important that computer should be introduced in public sector primary and middle schools as a compulsory subject. Only by introducing children at a very early age to computer programming and coding, we can expect to produce a generation of IT experts. There is another side to the story. Even at the secondary and higher secondary level, computer is an optional subject, which in turn is directly related to lack of essential infrastructure in all schools. Here, mandatory intervention of making the computer subject compulsory and provision of essential infrastructure at all levels of schooling to see this decision implemented is imperative. We should not forget that in specific schemes, where children of early age were introduced to computer programming and coding, under specific interventions made by the KPITB, they ended up winning international prizes. There is a need to bring out more of such computer programming

and coding programmes by the specialized IT department of the Khyber Pakhtunkhwa government, i.e., KPITB and other IT focused departments, such as the ST&IT.

- The agreements with cell phone companies for student packages or teaching packages for school and college teachers is also a desirable step; this has been attempted by government of Pakistan in the case of successfully running the online admissions system for colleges; the service was generated with the help of a renowned cell phone company.
- One suggestion is for the Khyber Pakhtunkhwa government to combine the efforts of its various IT focused departments under one IT ministry and task the same with developing, implementing and assessing the ICT tools. In its current form, the Khyber Pakhtunkhwa Information Technology Board (KPITB), the Science and Technology & Information Technology department (ST&IT); the Directorate of Science and Technology (DoST); and the Directorate of Information Technology (DoIT) all perform some overlapping set of functions. Although recently the DoIT was merged into KPITB, there still is a need to streamline the technology focused departments under a single ministry, so that duplicity of work and friction could be avoided.
- The overall performance monitoring of government departments on ICT tools can be managed solely by the Performance Management and Reforms Unit (PMRU). Though the PMRU is a cell established in 2016 in the Office of the Chief Secretary, Khyber Pakhtunkhwa with the aim to monitor, analyze and improve the performance of all tiers of provincial government through the innovative use of ICTs. However, this institution has been established as a unit, whose term of office is renewed every three years. There is a need to establish this unit as a department on permanent basis with legal status defined so that it is able to perform it function of evaluation of service generation through the ICT's regularly. This regular evaluation will help understand the short comings and underperformance through ICTs by different provincial government departments.
- An essential aspect to overcome resistance to ICT usage among the officials is regular on-job IT trainings. The fact of the matter is that the e-filling system failed to take-off in many government departments because of clerical staff and officers' unfamiliarity with it. Let's admit that ICTs are a technical domain and need to be continuously reinforced through regular in-service trainings. Such trainings can be managed by those specialized cells, which either are taking care of HMIS and EMIS systems within the health and education departments or by affiliate institutes that have specific mandates on trainings, for example the Directorate of Professional Development in the Education Department. In big MIT hospitals, there are already IT sections functioning and they have reported on providing regular IT trainings to hospital staff.

- In the field of education, remoteness and accessibility issues hinder student's access to tele-education apps; it is suggested that since the PTV has wider access across all regions of Khyber Pakhtunkhwa, therefore its services could be utilized by the KPESED as well as the HED for coordinated efforts at televising quality course contents teaching for school and college students to follow. This is essential especially in pandemics times, as Corona emergency and resultant school and college closures wasted precious educational time of majority students, who had little access to online education system. The PTV has its own limited tele-education programme, but it is not connected with the education departments of Khyber Pakhtunkhwa and their efforts at tele-education.
- Another policy recommendation is that there must be inter-provincial sharing of best practices in ICTs and service delivery. During our field work, it came to light that there was no co-ordination between the IT departments of different provinces; resultantly all were working in silos, duplicating resources and infrastructure. The coordination between these IT departments will also help them learn from shared experiences and avoid failures from any new experimentations in ICT induced service generation initiatives.
- There is underutilization of primary and secondary level of healthcare systems because of poor referral system, placing a burden on the tertiary level hospitals. According to rough estimates, around 5000 patients visit the OPDs of each one of the tertiary hospitals on daily basis which becomes a great burden on the hospitals, which are essentially meant to provide highly specialized medical care by medical specialists. In the realm of digital health, one important aspect missing is e-referrals in hospitals. If the MIT hospitals in major cities want patients to access their local BHUs and district hospitals first, especially for common illnesses, it is essential that the patients and doctors be connected digitally with specialists in big hospitals. Since the government has already provided technicians in BHUs with tablets, and there was also planning underway for installing fixed tablets for disease monitoring, the same can also be utilized to connect district hospitals and BHU patients electronically with the consultants and doctors in tertiary hospital. This will lessen the burden on major hospitals and encourage people to access basic health services in their hometowns. An introduction of e-referral system will necessitate: training courses on e-referral system to healthcare professional; a mechanism for feedback; educating people about life threatening diseases and non-critical diseases; and developing people's trust towards primary healthcare facilities (BHUs, RHCs etc.) in their respective areas.

- There is a need to provide information through "Citizen Charters" at all healthcare facilities, ranging from tertiary hospitals to primary healthcare centers. This will help the patients and their attendants understand available health care services, including drugs, service providers, user fees or cost of service, etc. The charter should also include information about the patient medical data protection rights. In countries like Bangladesh, for example, the Ministry of Health and Family Welfare (MOH &FW) has introduced Citizen Charter at all its healthcare facilities. An additional component of this initiative could be that information corners can be established to help patients and attendants register their complaints. The health department should make it mandatory to publicly display it for the patients to read and understand their right to equitable and quality healthcare. Independent Monitoring Units (IMU) of the Health Department (already in service) could be assigned the task of assessing the outcome of the citizen charter initiative.
- In Pakistan, there is lack of mechanisms that could assess the effects of the new technology interventions in the different sectors. There is a need to introduce 'technology assessment' in order to aid policymakers by providing them information about the possible impact of a new technology and assessing the short and long-term consequences of old technology. Technology assessment is a form of policy research which will provide policymakers with information on policy alternatives. Political action is required in the form of laws that would mandate or restrain the government (or the private sector) to pay or not pay for certain technologies in the presence of available data or absence of evidence, for example evaluation of the effective use of technologies in education and health sector at different levels to know if they are working.

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