accountabilitylab
PAKISTAN

POLICY BRIEF

ADVOCATING AI IN PAKISTAN'S PUBLIC SECTOR

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Executive Summary

In an era where governments around the globe are leveraging AI to enhance efficiency, transparency and service delivery, Pakistan stands at a critical juncture. This study examines the opportunities, challenges and policy imperatives associated with AI adoption in the public institutions of Pakistan.

AI is increasingly proving to be a game changer in resolving the long-standing governance challenges such as bureaucratic inefficiencies, sluggish decision-making, and weak citizen engagement. By using tools like automated data systems, predictive analytics, smart service delivery platforms and digital monitoring mechanisms, productivity of public institutions could be improved significantly. Simultaneously, AI contributes to enhancing workforce capacity by taking over routine tasks, strengthening decision-support mechanisms, and allowing civil servants to concentrate on innovation and policy formulation.

However, AI adoption and adaptation could not take place in a vacuum. It requires overcoming critical obstacles, including underdeveloped digital infrastructure, insufficient institutional preparedness, limited AI literacy among public employees and pressing concerns about data protection and ethical oversight. Existence of these challenges compromise AI adoption; deepening existing disparities and perpetuating inefficiencies within the governance system.

The brief concludes with a comprehensive strategy that encompasses capacity building, public–private partnerships, ethical governance frameworks, and investment in digital infrastructure for sustainable AI adoption in Pakistan. If effectively implemented, AI can serve as a catalyst for governance reform, improved service delivery, and workforce empowerment, positioning Pakistan to meet the demands of a rapidly evolving digital economy.

Where do we stand – An Overview

In today's world, describing Artificial Intelligence (AI) as a transformative technology with revolutionary potential across governance, business, health, education, and other sectors has almost become self-evident. Thus, framing and advocating for its adoption in the public sector as an engine for growth and efficiency may already appear to be an old concept. The real imperative now is to harness this immense potential and align it with the nation's broader economic and human development strategies.

Despite all the AI hype in Pakistan, its adoption in the public sector stays limited and often misunderstood, restricted to basic analytics or automation rather than citizen-centric innovation. This is primarily driven by the sector's historically paper-based and centralized bureaucratic structure. This leisurely and limited embrace of AI is reflected in Government AI readiness Index 2024, where Pakistan ranked at 104 globally while India at 46th, China at 23rd and Bangladesh at 80th.[1]

A lack of AI training modules in pre-service and in-service trainings poses a serious challenge to the AI adoption initiatives in public sector of the country. Other obstacles consist of insufficient digital literacy, resistance to change within the public sector, a lack of proactive institutional planning for AI implementation, significant gaps in essential AI infrastructure, and the lack of an all-encompassing data protection framework. Considering the challenges, the compelling and visibly incisive nature of AI, policy makers and the government is mandated to

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[1] Oxford Insights – Government AI Readiness Index 2024

reduce public's trust deficit around AI by developing comprehensive AI policy frameworks. Such frameworks may provide a conducive structure for the promotion of cyber security, data safety, and tech-based innovation.

A strategic framework with these five key features could assist with harnessing AI's potential in Pakistan:

- Legal framework that is pro AI/innovation, coupled with official executional strategies
- Robust governance frameworks for AI awareness to build public trust.
- Fostering multi-stakeholder collaboration.
- Comprehensive human capital development
- A conducive and pro-tech environment

Existing State of Play: Hindrances to AI Adoption in the Public Sector

I. Constrained Utilization & Perception

Public sector employees often perceive AI as a threat to job security, creating psychological resistance rooted in career insecurity, which in turn hinders its adoption within government institutions. A positive correlation between employees' perception of AI and career anxiety is clear as approximately 17% of jobs in Pakistan face a considerable risk of displacement due to automation and AI adaptation.[2]

II. Bureaucratic Stagnation and Organization Blockade

The historical institutional inertia in public sector organizations that use redundant paper-based systems enhance the chronicity of the issue resulting in a large digital divide apart from the psychological barrier. Pakistan's limited technological infrastructure constrains both the willingness and capacity to integrate AI, particularly as effective adoption relies on real-time data processing and cloud computing. Weak and inconsistent internet connectivity, coupled with declining literacy rates and low levels of digital awareness, further undermine the productive use of AI tools. Additionally, high import tariffs on essential technologies such as Graphics Processing Units (GPUs) and AI chips, along with the burden of soaring energy costs restrict investment in AI infrastructure. The realization to reduce cost of tech-products is important for Pakistan as businesses and institutions often struggle with limited technological resources.[3]

This makes it even more important to prioritize and address these issues to speed up adoption of AI. The process needs to be demand driven rather than imposed in haste.

III. Ensuring the Right to Privacy – Data Protection

Although the recent National Artificial Intelligence Policy 2025 is a welcome step, yet the citizens require appropriate legislative framework to safeguard their constitutional right to privacy. The absence of extensive and inclusive data protection law in Pakistan deters and delays AI adoption. There is a considerable threat of systemic misuse and serious breaches of civil rights, particularly in areas such as healthcare, education, law enforcement, and others.

IV. Lack of Specialized Skills and Talent Scarcity

Ever increasing Rural-Urban disparity in education sector coupled with lack of alignment of academic policies with the market demands, limited focus on vocational tech-training aspect, deficient AI skills and low data literacy

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[2] AI Adoption in the workplace: Employee Perception and Career Insecurity – Ayesha Sohail and Dr. Bashir Ahmad
[3] Advancing Pakistan's Growth with AI: Opportunities, Challenges, and the Road ahead – Invest2Innovate

aggravate the issue of skills gap and human capital deficit for a thriving, AI driven public sector. Therefore, a significant challenge is the absence of a comprehensive strategy to develop a pipeline of market-ready human capital.

Harnessing AI for Public Service Transformation: Practical Illustrations

AI offers a transformative pathway for Pakistan's public sector, moving beyond incremental improvements to fundamental reforms in governance efficiency and service delivery. The following practical use cases illustrate AI's potential to address long-standing challenges and foster a more responsive, transparent, and effective government.

I.   From Reaction to Anticipation: Advancing Governance Efficiency

AI has the potential to optimize administrative processes by automating routine bureaucratic functions, including file routing, citizen grievance handling, public safety management, law enforcement support, traffic regulation, and subsidy distribution, among others. Importantly, AI adoption also strengthens the political dimension of governance reform by enhancing effectiveness and efficiency through data-driven decision-making. It reduces bureaucratic red tape while accelerating service delivery and improving both its quality and responsiveness.

Globally, machine learning algorithms proved their effectiveness in helping tax authorities detect fraud and revenue leakages, thereby improving both collection efficiency and fairness. The question stays: why not in Pakistan?

The ignored aspect of timely maintenance of infrastructure requires AI capable models as a quick fix. Such systems can obtain data from sensors on strategic infrastructure like bridges, roads, power-grids, and others to predict required maintenance pro-actively – reducing costs and put a stop to service disruptions. It is a fact that Pakistan's annual spending on infrastructure maintenance is notably low, typically less than 3% of the total asset cost, in stark contrast to the 8% spent in many other Asian countries[4]. The remedy is adopting modern technologies and evolve.

In Pakistan's major cities, public safety, law enforcement, and efficient traffic management lie at the core of governance reform and public sector modernization. Beyond basic automation, the application of AI presents opportunities for predictive policing and smarter mobility solutions. Through the analysis of historical crime data, AI algorithms can figure out potential "hot spots," enabling more effective allocation of limited resources and the deterrence of criminal activities. Similarly, AI systems can process both real-time and past traffic data to predict congestion points and refine signal timings, thereby improving traffic flow and reducing travel time.

II.   Improving Service Delivery & Increasing Transparency

Tech-savvy approach in public sector needs to be the new normal to enhance efficiency, ensure accountability and instill the concept of pro-active governance. AI holds significant promise for curbing corruption and increasing transparency within Pakistan's governance structures. By reducing human discretion in high-risk areas such as public procurement, licensing, or fund disbursement, AI systems can automatically flag irregularities, thereby ensuring greater compliance and fairness.

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[4] Infrastructure maintenance: Pakistan spends below three percent against eight percent in Asia – The Business Recorder 30th November 2008

The case study of Performance Management & Reforms Unit (PMRU) Peshawar reflects a step in right direction. With the tagline of 'Measure to Manage' the institution specifically focuses on the missing push factor in the governance regime – an automated complaint management system, the Citizen's Portal, which is a tool of regular data driven accountability for field formations. The system also provides public service trends which aid in predictive analysis of issues. The unit works regularly on performance management frameworks, both at district and provincial level, using the tech-tools to ensure public service delivery. The shift from automation to AI adoption is something that can strengthen such initiatives and make them sustainable.

Capacity-Building and Skill Development Strategies for the Public Sector

The successful integration of AI in Pakistan's public sector depends on enhancing its acceptance through behavioral change communication strategies, strengthening human capital, and upgrading technological infrastructure. Achieving this requires a comprehensive, multi-dimensional strategy that includes enriching the training programs for new entrants in civil services, implementing extensive orientation and capacity-building initiatives for the existing workforce, and setting up robust mechanisms to figure out future skill requirements. Furthermore, embedding AI into educational curricula will promote broader adoption; while forging progressive partnerships with leading technology.

I.   Re-designing the training regime for Civil Servants

The administrative and political resolve to embrace AI rely on imparting technical skills and fostering a "curiosity velocity" - the ability of employees to independently explore data, ask more incisive questions, find meaningful insights, and translate those insights into prompt actions. Hence, acquisition of technology needs to match resolute demand for data literacy and AI fluency. Therefore, it is imperative to bring pre-service and in-service training technology modules at par with modern administrative requirements. Rather than continuing with the age-old and outdated pedagogy techniques related to theoretical administrative frameworks the trainings need to incorporate issue-based simulation exercises instilling tech-based solutions to the work force. For example, introduction of tailored workshops for key data use cases within individual departments, ensuring relevance and immediate applicability may add required value to the work force. Collaboration of public sector entities with leading technology vendors such as AWS, Microsoft, Google & Coursera can facilitate learning and instructive arrangements.

II.   Strategic Workforce Planning – An International Best Practice

Regrettably, strategic workforce planning stays an unfamiliar practice in Pakistan's public sector, despite being widely recognized as an international best practice. Such a framework emphasizes skills foresight—a forward-looking and proactive mechanism aimed at workforce empowerment. Given the rapid pace of technological advancement, governance structures are continually evolving, making organizational skill foresight an essential requirement. Strategic workforce planning and skills foresight not only identify the reskilling needs of employees but also serve as an internal "think tank," enabling institutions to forecast challenges and adapt effectively. Public sector in Pakistan needs to evolve from a reactive 'hiring for today' to a strategic 'building for tomorrow' mindset; promising that it has empowered and skilled workforce to navigate future challenges.

III. AI Integration: Advancing Curriculum Development

The Chinese Government has recently made AI education compulsory from the sixth standard for every student to acknowledge critical thinking and an innovative mindset[5]. Undoubtedly, it is easier to inculcate AI adoption in young minds and develop it into a culture rather than enforcing or imposing strategies for people resistant to adopt. The National AI policy 2025 of Pakistan envisages a 'Digital Nation' and aims at setting up an AI ecosystem. It reflects a potential start of the long-awaited realization in public sector of the country. The policy outlines strategies to incorporate AI into the curriculum for an AI literate future is a welcome step. Education being a devolved subject, it is imperative after 18th Constitutional Amendment in the Constitution of Pakistan 1973 that the Provincial Governments adopt the key features of National AI policy 2025 and up-grade the academic curriculum and contribute to AI adoption in Pakistan.

IV. Re-Skilling & Value Addition in Existing Workforce

The fear of job displacement in employees naturally diverts them from tech-adoption. The increasing pace of AI and automation worsens the risk of job displacement. With approximately 17% of jobs in Pakistan at elevated risk due to automation. A study by World Economic Forum estimates that by 2030 up to 1.2 million jobs could be displaced in Pakistan6. Consequently, thorough reskilling initiatives are not only helpful but also necessary to meet the rising demand for technology and to ease the adoption of AI. Such programs act as a crucial social safety net, helping to avert mass unemployment and possible social unrest.

Strengthening Collaboration: Linking Academia and Policy for AI Governance

Considering AI adoption as an opportunity, Pakistan needs to explore meaningful collaboration among public, private, and academic sectors for effective AI integration and governance reform. The potential in this partnership is huge because a lot of base work is being done in academia as well as private sector, although un-explored and un-utilized. This also bridges trust deficit issues over public sector. An all inclusive, multi-stakeholder approach is crucial for developing AI based context-specific solutions, building trust, and setting up a sustainable AI ecosystem in Pakistan.

I. Fostering Synergy Between the State, Private Sector and Academia

Drawing on lessons from past experiences and ensuring initial protection for technological advancements in Pakistan, a practical strategy for embracing AI would involve promoting local startups and actively collaborating with research institutions and universities. Establishing in-house IT hubs within public organizations can aid the development and adaptation of AI solutions tailored to address routine administrative tasks. Engaging tech interns in these initiatives can further accelerate adaptation while enhancing the efficiency and effectiveness of public sector operations. This approach not only fosters relevance and inclusivity but also reduces reliance on external technologies, ensuring that AI applications are better aligned with local needs and governance challenges.

A ray of hope for Pakistan is the establishment of islands of Excellence, such as the National Center of Artificial Intelligence (NCAI) and the Sino-Pak Center for Artificial Intelligence (SPCAI). These centers are pivotal for driving Research and Development (R&D), fostering human resource development, providing high-value shared services

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[5] Integrating AI for Inclusive and Innovative Education in Pakistan – PARADIGM SHIFT
[6] AI and Automation in Pakistan: Threat or Opportunity for Jobs? – akademosresearch.com

to academic and industrial partners, and cultivating an advanced workforce. NCAI, for instance, has developed over 221 AI products and designs across various sectors, actively promoting collaboration within Pakistan's AI community.[7]

II.   Developing Robust AI Governance frameworks:

A vigorous AI Governance framework in Pakistan requires a strategic, consistent, and multi-faceted approach. Pakistan joins a select group of South Asian countries with AI policies like India, Srilanka, Bangladesh and Nepal[8]. Although, the National AI Policy 2025 reflects a great leap forward, promulgation of a well thought out data protection law is the most urgent pre-requisite for responsible AI deployment in Pakistan. The legal framework needs to clearly define standards for data collection, user consent, secure storage and offer effective mechanisms for redressal in cases of breaches.

Legal frameworks and data protection, enhanced connectivity, tech-infrastructure, ethical oversight, algorithmic bias, public awareness, and AI literacy are pre-requisites to building a sustainable AI ecosystem in Pakistan.

III.   Policy-Academia Dialogue

Although the implementation is awaited, the National AI Policy 2025 acknowledges the need for setting up formal and informal platforms for consistent, productive dialogue among policymakers, academics, industry experts, and civil society to bridge the existing gap. This dialogue is the key to developing a culture of evidence-based policy making, evaluating the risks associated with AI ecosystems, speeding up talent development and defining the AI ethical frameworks. The key step to promote Policy–Academia dialogue is the formalization and activation of AI Council – brainchild of National AI Policy 2025. Besides this, the National AI fund needs to specifically target applied research projects that address public sector issues such as use of AI in urban planning, agriculture, public health, and others.

Conclusion

Artificial Intelligence presents a profound opportunity for Pakistan, though challenging in nature, to fundamentally reshape and redefine its governance paradigm. The strategy is to approach AI as a public good, evolve AI processes with utmost transparency, position its pillars with fairness, and synchronize its implementation with democratic accountability. While governance inefficiencies, limited digital infrastructure, low AI literacy and institutional inertia have slowed progress, the transformative potential of AI is undeniable. If harnessed effectively, AI can streamline bureaucratic processes, strengthen accountability, improve service delivery, and empower the public workforce with new skills and tools to meet the demands of a rapidly evolving governance landscape compatible to international standards.

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[7] How AI Policy 2025 can shape a Digital Future for all – The Express Tribune

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About Accountability Lab Pakistan

Accountability Lab Pakistan is part of a trans-local network of 13 independent, locally registered, governed, and managed organizations. As a locally registered think tank in Pakistan, Accountability Lab is committed to fostering transparency, accountability, and good governance. With a focus on driving positive change through innovative approaches, the Lab has been at the forefront of initiatives aimed at enhancing the democratic processes in the country.

The Lab's profound impact on the discourse surrounding women's empowerment in Pakistan is a testament to its commitment to catalyzing positive change through innovative and forward-thinking approaches. In the purview of strengthening women's role in the country's development, the Lab has consistently occupied headship by harnessing the power of innovative methodologies, actively contributing to the evolution of inclusive practices in Pakistan. Central to the Lab's mission is its unwavering emphasis on factors such as social acceptability, institutional insulation, and the holistic strengthening of democracy. These core principles not only underpin the Lab's approach but also resonate deeply with the recommendations outlined in this policy brief.