

## **The steps taken towards digitalization of the public sector in Pakistan and its implications for SAI Pakistan**

### **1. Introduction: Supreme Audit Institutions and the relevance of Digitalization:**

Founded in 1953, the International Organization of Supreme Audit Institutions (INTOSAI) has, since then, been responsible for providing an institutionalized framework for developing the capacities and standards of all Supreme Audit Institutions (SAIs). The Lima (1977) and Mexico (2007) Declarations of INTOSAI emphasized that each country needs to build legislative frameworks to ensure the independence of their SAI; their independence from the agencies they audit being a necessary condition for their integrity. It was also judged crucial that the SAIs' methods be up to date with the latest scientific and technological developments. (Citizen Engagement Practice by Supreme Audit Institutions). Technical advancement has now lead to the phenomenon of Big Data, where almost all information is digitalized and in order to function most efficiently SAIs now realize the need to harness this technology to their own ends. (Citizen Engagement Practice by Supreme Audit Institutions)

INTOSAI's Strategic Plan for 2011-16 emphasizes the development of International Standards for SAIs (ISSAIs) and facilitation of Audit Institutions in implementing said Standards (Intosai). The standardization and the strategic goals that are the aim of the INTOSAI's Plan would be much easier to achieve with the standardized recording of public sector data. The digitalization of records and information is a crucial step in ensuring the smooth working of SAIs and enhances the quality of their work.

### **2. SAI Pakistan: Current scenario in public sector auditing:**

#### **2.1. Existing legislative status of digitalization and open data in Pakistan:**

Pakistan is taking strides in the right direction, with major programs for digitalization of public records, as well as legislation requiring various government organizations and departments to digitize their records. Furthermore, the accounting structure of the country has been enhanced and standardized with

implementation of projects like the Project to Improve Financial Reporting and Auditing (PIFRA), the Tax Administration Reform Program (TARP), the Digitization Land Records of Revenue (DLRR) and the like. The provinces are required to legislate for freedom of information and, to this end, the Punjab Transparency and Right to Information (RTI) Ordinance was passed in November 2013; which makes it mandatory to publicly disclose government information. The Open Data Initiative is working to make government information accessible for the public. (Centre for Technology in Governance)

The first National IT Policy and Action Plan was introduced in 2000 and stressed the need to introduce ICT into government departments and ensure the IT literacy of all staff. The emphasis was on moving towards e-government in the future and for this, all provinces were instructed to set up IT boards, make working groups and set aside at least 2% of their annual budgets to achieve the goal of digitalizing data and using Information Technology in all their functions. The digitalization of national databases was another key component of this plan, as well as ensuring their accessibility to the general public through the internet.

Some of the legislation passed concerning Information Technology is as follows:

- i. Electronic Transactions Ordinance 2002
- ii. Freedom of Information Ordinance 2002
- iii. Electronic Crimes Act 2004
- iv. Data Protection Act 2005
- v. Punjab Transparency and Right to Information Act 2013
- vi. Prevention of Electronic Crimes Act 2016

## **2.2. SAI Pakistan and the framework for conducting public sector audit in a digitalized environment:**

The Department of the Auditor General of Pakistan has established a Center for Information Systems Auditing in its Pakistan Audit and Accounts Academy, which focuses on training information systems auditors as well as conducting research in the field of information systems auditing and providing support to field audit offices.

SAI Pakistan has acquired Audit Command Language (ACL) software, which is the main tool used in its conduct of financial and attest audits. It enables auditors to use Computer Assisted Audit Techniques. The SAI applies different substantive testing methods on the auditees' data through this ACL.

### **3. Digitalization, Open Data and Data Mining: Implications for SAI Pakistan:**

The use of digitized data is essential for the work of SAIs in today's day and age. The implications of digitalization, open data and data mining for the work of these Institutions are far-reaching, as will be discussed in this paper.

#### **3.1. Increased Accessibility to records and information for the SAI:**

Trawling through receipts, forms, registers and other paraphernalia of the paper environment of yore was an arduous task. It hindered auditors' work and was a tedious enough process to justify overlooking important records that the auditee may have wanted to hide. With the digitalization of records comes an ease of accessibility that aids the work of Audit Institutions and cuts it in less than half. One recent example of this can be found in the digitalization of land revenue records of the Khyber Pakhtunkhwa province under the aegis of UN HABITAT. (Digitalization Land Records of Revenue (DLRR) of Khyber Pakhtunkhwa). A project like this lays all relevant data at the disposal of the SAI, allowing it to ensure:

- The amount of revenue generated for the government by the department
- That the necessary accounting standards have been met when recording revenues and expenditures
- That laws and rules of procedure have been adequately followed when transferring land
- The progress on any targets that may be set by the government in a given financial year

If the SAI had to expend time and effort to collect the raw data in physical form first, the analysis of said data in time for the completion of an audit cycle would suffer in terms of quality. Digitalization offers greater opportunity for data mining, analysis and reporting on many required parameters.

### **3.2. Enhanced Accuracy of SAI's findings:**

Digitalized data aids SAIs in terms of accuracy as well. It reduces the chances of human error or laziness, which would be far more likely in case records were kept by hand. After the implementation of PIFRA in Pakistan, accounts have been digitalized and are now maintained through an ERP. This ensures that the records of receipts, expenditures, loans, pensions, various funds etc. are more accurate.

One of the major audit areas of any SAI is the strength of controls in any organization or department. The use of digital data and platforms enables the auditor to affix responsibility in case of fraud, misrepresentation or bypassing of rules and regulations. For example, when conducting audit of payments made by any department, it is now easy for the auditor to mine data for the largest samples of payments and ensure whether all relevant protocols were followed regarding documentation, authorization and recording.

Digital data also enables the auditor to generate various reports with a greater degree of reliability. For example:

- The utilization of budget by a government entity
- The increase in financial outlay as compared to a previous financial year
- The acquisition of assets
- The respective financing of an entity through government revenue, loans or donor-funded grants.

The above reports would be more accurate and reliable if based on digitalized and accurate data, not to mention that very few of them would be generated at all if the auditor were not facilitated by the openness of the data itself.

### **3.3. Transparency and compliance with UN Resolutions:**

The UN General Assembly Resolution A/66/209 calls for the independence of SAIs for the purpose of ensuring “the efficiency, accountability, effectiveness and transparency of public administration”, which are indispensable for achieving countries’ national development objectives as well as the Millennium (and now the Sustainable) Development Goals (UN General Assembly Resolution). The 21<sup>st</sup>

UN/INTOSAI Symposium, held in 2011 in Vienna, was on the subject, “Effective practices of cooperation between SAIs and citizens to enhance public accountability” and it concluded with recommendations on methods for increasing citizens’ participation in the work of SAIs. The goal of citizen involvement can only be achieved by making the relevant data available to them (Citizen Engagement Practice by Supreme Audit Institutions).

Open Data is an essential tool for making government activity transparent for its consumers; a fact emphasized by the World Bank as well. The World Bank has developed an Open Data Toolkit to facilitate governments in making data freely accessible to the public, including financial information such as budget, expenditure, audit reports, performance evaluations, balance sheets etc. (Supply and Quality of Data)

The digitalization of data allows SAIs to identify fraud more easily. Pakistan is in the process of digitalizing pension data of all its pensioners through the Direct Credit Scheme (DCS), which removes the manual interface between the banks and pensioners, ensuring a smoother, efficient and more reliable flow. In the district Muzaffargarh in Punjab a fraud of more than Rs. 400 million was detected through the process of post-audit of the manual pension rolls. This brought home the realization that manual records would always be vulnerable to fraud and instigated the authorities to speedily convert the district’s pensioners to the DCS. (Rs. 500 million bank fraud revealed in Muzaffargarh, 2016)

#### **3.4. Enhancement of Advisory Capacities:**

One of the most important reasons for guaranteeing the independence of SAIs is the fact that they are also responsible for advising public bodies on methods of improvements and follow up on the implementation of said advice. Digitalization enables the SAI to perform this function more efficiently and regularly.

Moreover, open data allows not just the SAI but also other non-government organizations and think-tanks to formulate policies and papers which facilitate the auditor’s work. Papers by local policy advisors like the Pakistan Institution of Legislative Development and Transparency (PILDAT) and Pakistan Institute of Development Economics (PIDE) use public entities’ data to formulate policy advice

documents which have the potential to help the SAI analyse progress in various areas, as well as highlight issues which could potentially be the focus of performance audit exercises.

International organisations/ bodies may also use the open data provided by a government to advise on policy, especially for projects that they have funded and whose impact and effectiveness need to be assessed. An example of this can be found in the UK's Department for International Development-funded Medium Term Budgetary Framework (MTBF), whose policy briefing was prepared after monitoring and evaluating the project's success through authentic data. (MTBF in Pakistan: Reform against the odds)

### **3.5. Role in post-2015 development agenda:**

SAIs are indispensable for achieving the UN's post-2015 Sustainable Development Goals, which lay emphasis on accountability, transparency and promoting the administrative efficiency of the government. For the allied improvement in public accountability, accurate and accessible data is essential. (Role of Supreme Audit Institutions in implementing the post-2015 development agenda, 2017) Its essentiality may be judged from the basic example of the education department of any developing country. In order to analyse the progress being made, the SAI would have to keep the following in view when conducting various audits (certification, regulatory, financial, performance) of the department:

- The amount of budget demanded by the various formations working under the departments
- The amount spent as compared with the amount saved – this will be an important indicator of the entities' capacity to spend and develop
- The vacancies as a proportion of the total number of positions available – the human resource capabilities will indicate the performance capacity
- The assets acquired – the potential of the department to invest in the infrastructure required to develop.
- Analysis against key performance indicators – digitalized and accurate data would allow the SAI to analyse the department's performance according to some given parameters. These could,

for example, be the acquisition of a building for a girls' school in a small district and comparing this information with the increase or decrease in school-going girls in the area. Data mining and further analyses would also yield interesting and beneficial information regarding the age groups affected, the teacher-student ratio, the effect of introducing amenities (like toilets, drinking water or free lunch) on school population.

The United Nations Development Programme's goals of building more accountable and efficient institutions are contingent on improved access to data. Policymakers, donors, bilateral agencies etc. all depend on data to achieve their goals and this accessibility can be ensured most effectively through digitalization and its subsequent open dissemination. (UNDP: Our Projects)

#### **4. The road ahead for SAI Pakistan:**

The need to update an SAI's mandate and capacities to keep abreast of the changes taking place in the world is essential. As discussed in this paper, Pakistan is putting in place a digital infrastructure that changes the way information is perceived and accessed by the public as well as its SAI. The digitalization of data calls upon public sector institutions to modify their processes in accordance with the new technologies being used.

SAI Pakistan conducts various types of audit, such as Financial, Performance, Compliance and IT Audits. These are all governed by the relevant International Standards of Supreme Audit Institutions (ISSAIs) and, as a member of INTOSAI, SAI Pakistan follows these standards when conducting public sector audit exercises.

##### **4.1. Updating the Constitutional Mandate:**

The ISSAI 5300, which governs IT Audit, refers to all the other audit exercises as part of its function and each SAI's mandate to do so as a function of its larger mandate. In this context, SAI Pakistan derives its mandate to conduct public sector audit from the Constitutional Provisions that empower it. The rapidly evolving field of information technology has changed the way information is processed, therefore the mandate for SAI Pakistan also needs to be updated to reflect this new state of affairs.

##### **4.2. Implementing all the ISSAIs:**

Furthermore, the audit techniques and framework for SAI Pakistan are contained in the manuals published by the Department of the Auditor General of Pakistan as part of its World Bank-funded Project to Improve Financial Reporting and Auditing (PIFRA). These have been updated frequently to reflect the changing audit environment. However, they need to be brought up to date in accordance with the latest ISSAIs, especially ISSAIs in the 5300 series, which govern IT audit, and the new Framework for Professional Pronouncements.

## **5. Conclusion:**

Digital data is one of the most significant tools for achieving development goals in today's world. The digitalization of data, open data and data mining are all tools that are essential to increase the efficiency, transparency and accountability of government. In line with the UN's goals as well as INTOSAI's, institutions need to be strengthened in order to contribute towards the development of the planet. Supreme Audit Institutions perform the unique function of aiding and strengthening all other government institutions through their audit functions. SAIs' reports are essential for giving a true picture of the ground being gained or lost by public entities. In order to facilitate these functions, digitalization of and open access to data are of crucial importance. By enshrining the independence of SAIs in a General Assembly Resolution, the UN has highlighted the importance of this work. Moreover, INTOSAI, by working on International Standards for SAIs is contributing to the standardization of Audit functions and bringing all its member countries on the same page with respect to monitoring and evaluating progress.

In order to accomplish all these ambitions, however, both UN and INTOSAI will need support of their member countries' governments in promoting awareness and legislating for digitalization of all information of their public entities. Such change is difficult to foster because of the vested interest, lack of awareness or inefficiencies in state structures. However, the standardization of parameters and institutionalization of requirements by organisations like the UN and INTOSAI and donors such as the World Bank would go a long way towards encouraging governments to digitize their records and make it available for public consumption as well as their SAIs.

## Bibliography

1. (n.d.). Retrieved January 5, 2017, from Intosai:  
[www.intosai.org/uploads/intosaispenglishv9web.pdf](http://www.intosai.org/uploads/intosaispenglishv9web.pdf)
2. (n.d.). Retrieved December 31, 2016, from [www.olacefs.com/wp-content/uploads/2015/07/EUROSAI\\_OLACEFS\\_GS\\_INTOSAI.pdf](http://www.olacefs.com/wp-content/uploads/2015/07/EUROSAI_OLACEFS_GS_INTOSAI.pdf)
3. (n.d.). Retrieved December 26, 2016, from United Nations Development Programme:  
[www.rs.undp.org/conetnt/dam/serbia/Publications%20and%20reports/English/UNDP\\_SRB\\_ODRA%20ENG&20web.pdf](http://www.rs.undp.org/conetnt/dam/serbia/Publications%20and%20reports/English/UNDP_SRB_ODRA%20ENG&20web.pdf)
4. *UN General Assembly Resolution*. (n.d.). Retrieved December 30, 2016, from INTOSAI:  
[www.intosai.org/fileadmin/downloads/downloads/0\\_news/2012/UN\\_Resolution\\_A\\_66\\_209\\_E.pdf](http://www.intosai.org/fileadmin/downloads/downloads/0_news/2012/UN_Resolution_A_66_209_E.pdf)
5. *UNDP: Our Projects*. (n.d.). Retrieved January 4, 2017, from United Nations Development Programme: [open.undp.org/#about/open](http://open.undp.org/#about/open)
6. (2017, January 4). Retrieved from Open Government Partnership:  
[opengovpartnership.org](http://opengovpartnership.org)
7. *Centre for Technology in Governance*. (n.d.). Retrieved January 2, 2017, from ITU:  
[itu.edu.pk/research/centre-for-technology-and-governance/](http://itu.edu.pk/research/centre-for-technology-and-governance/)
8. *Citizen Engagement Practice by Supreme Audit Institutions*. (n.d.). Retrieved January 5, 2017, from INTOSAI:  
[http://www.intosai.org/fileadmin/downloads/downloads/4\\_documents/publications/eng\\_publications/Compendium\\_UNPAN92198.pdf](http://www.intosai.org/fileadmin/downloads/downloads/4_documents/publications/eng_publications/Compendium_UNPAN92198.pdf)
9. *Concept Note: The Independent Oversight Role of SAIs in Implementing the Post-2015 Development Agenda Panel Discussion*. (n.d.). Retrieved January 2, 2017, from United Nations Public Administration Network:  
[workspace.unpan.org/sites/Internet/Documents/Concept%20Note.Independent%20Oversight%20Role%20of%20SAIs.docx.pdf](http://workspace.unpan.org/sites/Internet/Documents/Concept%20Note.Independent%20Oversight%20Role%20of%20SAIs.docx.pdf)
10. *Data for Peace*. (n.d.). Retrieved December 25, 2016, from UNDP in Pakistan:  
[pk.undp.org/content/pakistan/en/home/presscenter/articles/2016/06/15/data-](http://pk.undp.org/content/pakistan/en/home/presscenter/articles/2016/06/15/data-)

for-peace-khyber-pakhtunkhwa-experts-and-policymakers-explore-open-data-in-governance-through-the-virtual-platform.html

11. *Digitalization Land Records of Revenue (DLRR) of Khyber Pakhtunkhwa*. (n.d.). Retrieved December 31, 2016, from UN HABITAT Pakistan: <http://www.unhabitat.org.pk/home/digitalization-land-records-of-revenue-dirrat-khyber-pakhtunkhwa/>

12. *Institutional Reforms and Governance*. (2016, December 29). Retrieved from Planning Commission of Pakistan: [pc.gov.pk/uploads/docs/Ch17-Institutional-reforms-governance.pdf](http://pc.gov.pk/uploads/docs/Ch17-Institutional-reforms-governance.pdf)

13. *MTBF in Pakistan: Reform against the odds*. (n.d.). Retrieved November 10, 2016, from Oxford Policy Management: [www.opml.co.uk/sites/default/files/OPM%20Briefing%20Note%20July%202014-%20MTBF%20in%20Pakistan.pdf](http://www.opml.co.uk/sites/default/files/OPM%20Briefing%20Note%20July%202014-%20MTBF%20in%20Pakistan.pdf)

14. *Pakistan*. (n.d.). Retrieved from Global Open Data Index: [index.okfn.org/place/pakistan](http://index.okfn.org/place/pakistan)

15. *Supply and Quality of Data*. (n.d.). Retrieved January 4, 2017, from The World Bank: [opendatatoolkit.worldbank.org/en/supply.html](http://opendatatoolkit.worldbank.org/en/supply.html)

16. *Right to Information and Freedom of Speech*. (2016, December 25). Retrieved from Centre for Peace and Development Initiatives: [www.cdpi-pakistan.org/archives/9516](http://www.cdpi-pakistan.org/archives/9516)

17. *Role of Supreme Audit Institutions in implementing the post-2015 development agenda*. (2017, January 3). Retrieved from United Nations Department of Economic and Social Affairs: [www.un.org/en/development/desa/news/administration/role-of-sai-post2015.html](http://www.un.org/en/development/desa/news/administration/role-of-sai-post2015.html)

18. Rs. 500 million bank fraud revealed in Muzaffargarh. (2016, May 30). *The Daily Times*.

19. *The Punjab Transparency and Right to Information Act 2013*. (n.d.). Retrieved January 2, 2017, from Punjab Laws: [punjablaws.gov.pk/laws/2547.html](http://punjablaws.gov.pk/laws/2547.html)