

## AUDIT DATA ANALYTICS

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We all here are associated with a Supreme Audit Institution – SAI in various capacities but predominantly as an auditor. As an auditor we all aim at one thing, a better audit and before that an opportunity to think as to what we want from the audit after all and what we want audit to be. With the latest in technological advancements, the things otherwise considered as limitations have vanished. Data today can be captured and communicated digitally on an increasing speed and with very little delays and errors. The new information systems have become increasingly capable of handling, analyzing, communicating and responding to all such gathered data. The main questions to be asked in such a scenario are whether we should automate further or should we redesign our work processes around the new tools that the technology provides with? The answer to these questions largely depends on the working structure of the SAI, its strength, its scope and domain, the general attitude towards technology and the current stage of automation in the SAI.

One such field that has explicitly challenged the auditing profession and the professionals at the same time is data analytics. Data analytics is about drawing conclusions by examining a set of data. Unlike past years, data analytics as a term and field has gained currency because of the changing nature, source, the increasing velocity of data and the multiple sources generating various types of data and ultimately the interlinking of all this data to draw a meaningful

conclusion from it and take relevant decisions related to it. The technology that helps in doing this uses specialized software capable of utilizing both qualitative and quantitative data. This all begets the question of the possible uses of the data analytics. The aim is to arrive at a conclusion or a decision but what is the use of these conclusions and decisions? The answer is rather simple: as diverse as the entity employing data analytics. It can be simple like identifying Key Performance Indicators – KPIs – or data mining to identify trends and mind set of the client. All these possibilities are for now limitless because artificial intelligence has increased the pace of data analysis manifolds.

### Auditing and Data Analytics

When it comes to audit, data analytics is defined as the art and science of discovering and analyzing patterns, deviations and inconsistencies, and extracting other useful information in the data underlying or related to the subject matter of an audit through analysis, modelling and visualization for the purpose of planning and performing the audit. In short it is about obtaining the right kind of audit evidence. The main propelling idea behind incorporating data analytics into audit was to enhance the quality of audit.

Data analytics software gives auditors the opportunity to test and audit the whole population of the data, a 100% audit instead of a sample based audit. This means that the outliers and the exceptions in the data will



also be a part of the audit now, which earlier had the chances of being ignored as a result of using sampling techniques. Too much depended upon the type of sampling technique and on the quality of sample thus drawn. Furthermore, it helps in increasing the auditor's understanding of the auditee (client) and its environment which makes it easier to identify risks. This means that the risk assessment process, substantive procedures and tests of controls are also improved. Once this is improved, the auditor is better able to apply professional skepticism and professional judgment. The computerized audit procedures used under data analytics allows the auditor to arrive at a result in a more efficient manner. Efficiency here does not really mean less time consumed, although yes, that is one of the major advantages of using data analytics. Here efficiency is about getting to the things that matter quicker and spending more time on them instead of ploughing slowly through random samples that more than often tell us very little. These techniques shrink the population at risk. It means that the auditors can go to high risk areas straight away.

### **Fraud and Audit Data Analytics**

Fraud, for most of the times has been a grey area in the practice of audit, the question being whether fraud detection and fraud prevention is a function of the audit or not. Should it be an end product of audit? Or an area to be hinted upon while conducting audit? Nevertheless, the debates are still on. With audit data analytics coming into play, fraud has become even more of a debatable idea, to be included or not included within the jurisdiction of audit. Keeping aside the fight

of the standards and regulatory regimes on one side about the conjunction or disjoining of fraud and audit, the benefits that can be derived on all fronts under audit data analytics are many. Audit data analytics increases the chances of fraud detection as data analytics can work through all the data, irrespective of the size of the transaction for example, and hence can identify avenues of possible fraudulent activity. In short, data analytics adds value to the audit by identifying material misstatements due to fraud in an audit of financial statements.

### **Challenges and limitations**

Of course everything has its challenges and limitations and hence the same goes for auditing data analytics as well. The most basic question asked is the level of automation that an auditee has gone through as well as the auditor and its SAI. This automation forms the basis of the extent of applying digital techniques in auditing. Furthermore, data analytics requires ability and dexterity in a completely new skill set. One of the basic skill required in analytics is programming. Auditors do not have to be able to program scripts for data analytics, but should have functional knowledge of it so that they will know what analytics is to be performed on a dataset. The auditor should also develop a habit of critical thinking which is essential for analyzing datasets to reach a decision. Much relies on the capabilities of the auditor himself, like understanding the nature of the data and the output to draw appropriate conclusions. It can end in insufficient and/or inappropriate evidence ultimately impacting the conclusion.

As with every digital system, data privacy, confidentiality, protection and prevention of misuse of data is a very apparent issue. Hence the challenge is multiplied when data sharing between the auditing institute and the auditee is enabled. Strong data protection laws as well as systems are required to make it possible for stakeholders to be confident about their data. Under the domain of data, another important issue to be dealt with is the interface used to access data, extract it and analyze it. There is a possibility that the auditees store their data in a different format as that of the auditing institution. This gives rise to the difficulty of extracting data from the auditee in a useful format. Hence issues of transformation, that is making the data useable, have to be clearly sorted in advance because this will impact the quality of audit evidence used to draw a conclusion upon.

Much depends on the quality of the data analytic tools and routines being used for the audit. This complex system requires even more complex quality assurance procedures and even stringent set of internal controls. There should be extensive quality controls over the processes that would thus ensure that the auditors and other staff using analytics tools as well as the machines to do so do it properly. It is not just about the tools and routines in data analytics, it is about complying with the standards, rules, the regulations and then also about having a secure infrastructure.

Over confidence should be avoided in technology, in which auditors lacking a clear understanding of the uses and limitations of technology falsely believe the results to be infallible.

### Conclusion

Applying the tools of data analytics in conducting audit is the growing requirement of the day as the work places transform themselves towards automation of their processes or enhance the level of automation within. Those SAIs which have so far ignored data analytics will have to embed this concept incrementally in their strategic plans as well as future considerations. SAIs have to move with time and the time for mass digitization is here. Auditing data analytics indeed aims at facilitating the work of an auditor but it is not a substitute for professional skepticism and professional judgment. The basic skills required by the auditor will not change. A system is as good as the person behind it, so trained and learned auditors would enable a smooth functioning and increased acceptance of data analytics in auditing.

Data analytics provide an opportunity to maximize the effectiveness of the human element. For example, technology solutions can reduce the amount of time dedicated to manual analysis, allowing more time to be spent by the auditor on the more judgmental aspects of an analysis. It also gives the opportunity to allow every transaction and balance to be analyzed and reported upon. If maximum can be reaped from this system, it will not only improve auditing but will also enable the auditee to perform better by rectifying its loopholes, issues and inefficiencies. The ultimate benefit to the public sector and governance would be improved public financial management.