USE OF INFORMATION TECHNOLOGY IN COST AUDITING: TOOLS, TECHNIQUES AND CHALLENGES

Abstract

Cost auditing, beyond its statutory mandate, offers multifaceted benefits to organizations—strategic, operational, financial, managerial, and decision-making. Unlike financial audits, cost audits delve into granular operational data, uncovering inefficiencies, enhancing resource utilization, and supporting pricing and investment decisions. However, the complexity of cost structures, diverse cost drivers, and lack of standardized formats pose significant challenges. To address these, auditors follow a structured methodology encompassing planning, fieldwork, verification, analysis, and continuous improvement. The integration of Information Technology has revolutionized cost auditing by enabling real-time data access, anomaly detection, and predictive analytics. Tools such as ERP systems, audit analytics software, AI, machine learning, IoT, Power BI, and blockchain enhance accuracy, transparency, and efficiency. Despite these advancements, challenges persist—human judgment remains irreplaceable, cybersecurity threats loom, algorithmic errors can mislead, and continuous training is essential. Moreover, integration hurdles and rapid regulatory changes demand agile IT adaptation. Thus, while technology empowers cost auditors, its effective use requires strategic oversight, domain expertise, and robust governance to ensure audit integrity and organizational value creation.

Other than Statutory requirements, Cost Audit is very beneficial to organization in many ways.

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It is due to Cost Audit dives deep into complicated operational activities. Its findings are different than normal financial and internal audit. Cost Audits vary purpose to support strategic decision making but this is not only benefit of Cost Audit. Various organization find too many benefits as well from Cost Audit. Benefits can be bifurcated into some broad heads like

A. Strategic benefits

B. Operational benefits

C. Financial benefits

D. Decision making benefits

E. Managerial benefits

These benefits cannot be fully described but some details of these benefits are as under :-

A. Strategic benefits

a. Value creation: - Cost audit support any organization to create value through cost rationalization, improvement in margins.

b. Planning support- Cost audit make easy to understand cost behavior and business cycle. These elements help to enhance capacity enhancement, create competitive positioning.

c. Pricing competitiveness- Comparison between different vendors offers

B. Operational benefits

a. Cost Savings-though better material usage along-with its alternatives & combination, labor matrix and their positioning cost audit helps organizations to save cost to manifolds.

b. Enhances resource utilization- utilization of resources in better ways this include improved capacity utilization, identification of unutilized assets. Optimization of input output ratio. Pinpoint of excessive consumption of resources. Reduce excessive inventory which improves working capital management.

c. Better operational efficiency- though improved margins, by analyzing internal performance with industry performance. Cost audit also suggests continuous improvement.

d. Finds the weaken area- through ratio analysis, variance analysis with standard , budgeted data.

C. Financial benefits

a. Increase profitability- removes hidden cost elements

b. Funding and investment decisions- through cost discipline organizations may attract lenders and investors for capital allocation, expansion and restructuring

c. Evaluate the performance- Operational as well as Financial

D. Decision making benefits

a. Provide important information- for price determination, budgeting, tendering, negotiations and future planning

E. Managerial benefits

a. Identification of inefficiencies and cost overruns

b. Improved internal control- highlight weakness

c. Enhance transparency and Governance

All the above we got from the process of Cost Audit which is basically systematic examination of organization records. This examination check completeness, accuracy, efficiency along with statutory compliances. Cost Audit verify various records such as Material consumption history, Labor rate contract, Salary structure, Overheads allocation and absorption analysis, production efficiency, examination of cost statement etc.

But outcome of these gems is required very cumbersome efforts and use of extreme skills. Challenges for cost audits are

1. **Understanding of cost structure and its complexity-**Different and various cost elements- Cost auditor needs to analysis cost elements of Direct cost, cost of Utilities, Overheads-administrative and plant, by products, joint products and complexity of Allocation of costs

2. **Different cost drivers**- Material related drivers, labor impacted drivers, machine driven drivers, all these drivers change really fast and for proper costing required frequent validation.

3. **Different cost auditing standards and different formats of reporting**- In costing there is no uniform costing accounting standard. This is because every product or industry have different cost structure and cost flow.

4. **Lack of standard working in organizations-** Many organizations does not follow standardize working which increase manual intervention.

5. **Deep records scrutiny**- Unlike financial audits cost audit does not only verify ledger balances but it required detailed scrutiny of material consumption, Inventory movement, labor allocation, overhead analysis, production logs verification etc.

6. **Different department co-ordination**- Auditor need to understand working of different departments and requires interactions.

To meet these challenges cost auditor follows normally following procedure

a. **Planning of the audit and preparation for the same-** This is very important phase of any audit as said *"A focused start ensures that no cost element hides in the shadows."*. In this step auditor do many activities like understanding the scope of work. Do risk assessment. Resource allocation works also required to be done in this phase. This phase ends with

b. **Fieldwork -** This phase includes on site walkthrough for cost occurrence and deployment of resources. Also, interaction between departments to understand work flow. Use of IT environment and its tools for scoped work.

c. **Obtain records and verification: -** Collection of records for verification and reconciliation is important phase in cost records audit. Reconciliation between physical records with system records. Reconciliation between financial and costing records.

d. **Analytical review-** Variance analysis, ratio analysis, trend analysis, comparison between actual and standard/budgeted data is part of cost audit. Comparison between inter plants and inter company also provide useful information.

e. **Preparation of the reports: -** This step includes General information, Cost Accounting policy, Observation and suggestions, Quantitative information, Reconciliation statement.

f. **Follow up-** Via this step auditor check that organization has done corrective action, track the recommendation.

g. **Continuous Improvement: -** This is not a step but a process which use findings of audit for betterment in cost accounting practices and internal controls.

As world is going to adopt technology in rapid pace, these technologies not only make transaction accurate but also complicated. It is therefore auditors are also required to adopt technologies to make their job fast and accurate. Question arises that which technology can be used for which purpose.

Following tools and technologies are available to better work, reducing effort and quality improvement.

1. **ERP systems-** which consolidate data, provide audit trail. This tool also provides to check real time transaction auditing. Auditor also verify cost flow real time suggestions. This tool provides tracking of cost among different department and cost center.

2. **Audit Analytics Software**: - This tool provide automatic data sampling, finds anomalies and show cost trends.

3. **Cloud platform-** provide auditors facility to do remote audit and easy collaboration. This provide centralized data access, internal accounts & finance team and auditors can work simultaneously.

4. **Artificial intelligence** – Cost prediction, by using of previous data, report the deviation with actual data and comparison with budget. These tools also provide test audit scenario

5. **Machine learning-**. identification of abnormal transactions. Classification of expenses. By using this tool actual data flow check done which provide comparative data with actual log. Outcome of this provide details of manual intervention, unauthorized access,

6. **ACL-** Audit Command Language or commonly known as Access Control List. This tool or software used by auditors for tracking forgery, malfunctioning and managing risk through irregular data transactions and pattern in data.

7. **Data Visualization platforms** like Power Business Intelligence commonly known as Power bi which provide detailed insight of data through interactive screens which make decision making comparatively easy.

8. **IoT-** Internet of Things this technology connects through network of objects without any human intervention. These devices do work continuously to gather various data, which enable continuous monitoring by auditor. This reduces risks, Do automated checks.

9. **XBRL reporting tools-** These tools convert

data into MCA prescribed taxonomy formats. Some tools provide validation and backup facility.

10. **Document management and workflow automation**- This tool does scan, classification, automation, combines notes, database.

11. **Blockchain-** enhances transparency and ensure immutable records of accounting and audit. Its benefit is that entries once recorded cannot be altered. This technology helps to do continuous audit with time stamped data. This help detect unauthorized modification, duplicate entries, inflated costs.

Use of tools and techniques makes work comparatively easier than ever before but Challenges of use of information technology in use of costing also exist.

1. **Human intelligence required**- Technology can provide data, pre-defined analysis etc there will always be space for human intelligence. Because this is essential for deeper thinking, new creation, Innovation, adaptability where uncertainty exist, decision making after evaluation all the necessary factors.

2. **Cybersecurity**- this is one of the biggest challenges in the field of auditing while using information technology as a tool. Cyber-attack can tamper data and integrity of audit evidence.

3. **Wrong algorithms used in**- This is very risky circumstance. In this situation firstly very difficult to identify the problem. Secondly this situation can show very misleading results, overlook fraudulent transactions and flag legitimate transactions. These also can produce biased results. By wrong algorithms transparency can also be compromised.

4. **Training requirement**- As IT environment vary fast pace in nature. It continuously and constantly keeps changing. New tools, framework and language continuously emerging.

5. **Integration requirements**: - For better audit results, hassle-free integration between different system is required. In absence of those results in delay in reconciliations, complexity in audit trails, creates internal control testing. Many times over customization of any standard software create obstacles for upgradation of software.

6. **Complex requirements**: - Business and statutory requirements changes rapidly. In IT environment change management is always difficult to adopt and to get correct results. Every time to meet change requirement in it environment is not trivial. After frequent change exhaustive testing and validation is required. MA

References

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Celebration of Maa Saraswati Puja at the Institute Offices