International Journal of Advanced Research in Commerce, Management & Social Science (IJARCMSS)
(An International Quarterly Multidisciplinary Open Access Double Blind Peer Reviewed Refereed Journal)
ISSN :2581-7930 (Online), Impact Factor (Cosmos): 7.270 & PIF (I2OR): 5.010, Volume 09, No. 03(II), July-September, 2026, pp 136-144

# Technology-Driven Cost Accounting Practices and their Impact on Operational Efficiency in Audit Firms

**Divya M[1] | Dr. Sudha S[2*]**

[1]MBA, Department of Management Studies, School of Management Studies, Vels Institute of Science Technology and Advanced Studies (VISTAS) Pallavaram.
[2]Professor, Department of Management Studies, Vels Institute of Science Technology and Advanced Studies (VISTAS) Pallavaram.

[*]Corresponding Author: srisudha.research18@gmail.com

***Citation***: *Divya, M. & Sudha, S. (2026). Technology-Driven Cost Accounting Practices and their Impact on Operational Efficiency in Audit Firms. International Journal of Advanced Research in Commerce, Management &Amp; Social Science, 09(03(II)), 136–144. https://doi.org/10.62823/IJARCMSS/9.3(II).9318*

## Abstract

*The Fast-paced development of digital technologies has positively influenced accounting practices by enhancing the process of recording, processing, analyzing and reporting financial information. Technology-driven cost accounting practices in audit firms are helpful in the process of monitoring expenditures, preparing cost reports in time, achieving high accuracy and effective use of organizational resources. This study aims at investigating the influence of technology-driven cost accounting practices and operational efficiency in audit firms. Technology Adoption, Employee Competency, Management Support and Internal Control System were identified as significant factors related to Effective Cost Accounting Practices. Data collection was conducted through primary data, which were gathered from 100 respondents using a structured questionnaire based on a five-point Likert scale. The collected data were analyzed using statistical methods provided by SPSS software including descriptive statistics, reliability test, correlation test, regression test and ANOVA. The results of the study show that technology is able to help improve cost accounting effectiveness and ensure operational efficiency under the condition of proper employee competence, management support and effective internal control system.*

***Keywords***: *Technology Adoption, Cost Accounting, Audit Firms, Operational Efficiency, Accounting Software, Automation, Internal Control, Employee Competency.*

## Introduction

The technology has become a vital element of contemporary accounting and auditing operations. Auditing firms process huge volumes of financial data, source documentation and accounting data. For that reason, efficient processing and reporting of financial and cost information is a vital task for performing accounting and auditing tasks efficiently. The application of accounting software and technology has decreased reliance on traditional manual approach and made accounting information easily available. Cost accounting has great significance in controlling expenses, managing costs and making managerial decisions. At auditing firms, effective cost accounting can assist in assessing operating expenses, expenses associated with employees, expenses on resource utilization and other administrative costs. Cost information helps management to assess their performance and make proper decisions about resource allocation and cost management. Cost accounting using the power of technology can improve the efficiency of accounting operations. Technology can help in registering transactions, preparing accounting reports, analysis of information and cost control.

**Review of Literature**

Technology has become an important issue for accounting and auditing as recent research shows. Accounting information systems have the ability to enhance the speed, accuracy and availability of information in accounting. Using information technology also helps reduce redundant tasks and makes accounting processes more efficient.

**Alsharari (2023):**The effect of digital technology on management accounting and cost management has been reviewed. It should be mentioned that the significance of technology has been emphasized. The use of digital technology will allow improving the processing and analyzing of accounting data. Technology will enable providing information required for decision-making and cost control. Digital technologies may reduce the repetition of work associated with accounting. They may also increase access to cost data. The need for changing accounting processes due to technological innovations has been recognized.

**Afsay, Tahriri and Rezaee (2023**):This research focused on technology adoption within audit practices. It highlighted the need for organizational readiness in implementing any technology. The availability of suitable technological inputs could affect technology adoption. Technology can assist auditors in information processing. It can also lessen manual operations that occur in accounting and auditing. Organizational readiness can motivate employees to embrace technology adoption. There is also the need for employees to have adequate skills in technology usage.

**Moll and Yigitbasioglu (2023):**Therole of technology in accounting practices and the rising impact of digital technologies. The paper analyzed the effect of developing technologies on the tasks that accountants carry out. Digital technologies have the potential to enhance information processing and communication. They can also facilitate the automation of accounting tasks. The change in the technological environment entails the need for accountants to acquire new skills.

**Leitner-Hanetseder et al. (2023)**:The function of accountants in the digital age. The research pointed out the impact of automation and technology in doing accounting work. Automation can render it unnecessary for humans to perform repetitive manual tasks. But accountants must be knowledgeable about technology and possess advanced analytical capabilities. It becomes even more important when a company implements a new system. Technology can ensure the quality and efficiency of accounting information. This depends on the skills of the workers though.

**Moll and Smits (2023):**Technology advancements and their impact on the field of accounting. According to the findings of the study, digitalization affects conventional methods of conducting the accounting process. Technology is capable of supporting automatic processing of information and facilitating its accessibility. Moreover, it enables faster completion of routine tasks. However, it requires qualified employees who will be able to operate it. Digitalization may have an impact on duties of accountants as well.

**Fähndrich (2024):** Investigated the impact of digitization on accounting processes and management control. In particular, Fähndrich indicated that digitization affects the conventional activities of accountants. The use of digital systems allows increasing the accessibility and processing of accounting data. Furthermore, technology may assist in carrying out management control actions owing to the provision of information. Accountants should be able to adapt to new technological demands.

**Appelbaum et al.(2024):**The researchers stressed that sophisticated technology may enhance the processing and analysis of financial data. Automation can decrease routine work and make accounting operations more efficient. Technology can also supply data that will help the management make decisions. However, it is necessary to have proper controls and employee competence for the successful functioning of technology. It is important for organizations to be sure that data provided by technology is trustworthy.

**Sutton et al. (2024):**Changes in accounting and audit due to the advancement of technology. From the findings of the study, it is clear that technology has a major effect on accounting processes. Technology may enhance information processing speed as well as minimize manual work. Furthermore, technology may aid in the analysis of large amounts of financial data. Technological skills are required for accountants. Continuous learning will help workers cope with changing environments in the field of accounting.

**Kokina et al. (2024):**The effects of new technologies on accounting and audit processes. The research found that technology is increasingly used in these processes. It can be used for carrying out

repetitive actions, while people can concentrate on analytical tasks. Moreover, technologies can speed up the process of getting accounting data. On the other hand, workers must have necessary competencies to apply new technologies. They must be trained in technologies and have proper technological infrastructure. Support of management can motivate workers to accept technologies.

**Kumar and Sharma (2025):**The use of digital accounting techniques and its role in accounting efficiency. The research revealed that digital tools can help in decreasing manual labor and enhancing accounting efficiency. Technology can ensure timely availability of financial data to the users. Digital accounting can aid in controlling costs and transactions of the organization. Decreased manual labor can enhance productivity of employees. Technology can help in improving accounting control and accounting functions. Accurate data can contribute to improved managerial decision making. Employees need sufficient knowledge to operate digital accounting tools.

**Fetzer, Gibson and Kuhn (2025):** Highlighted the importance of technology-related skills among accounting professionals. Technological transformation is changing traditional accounting tasks and responsibilities. Employees require appropriate knowledge to operate modern accounting systems. Training can help professionals adapt to technology-driven accounting environments. Technology competency can improve the quality and efficiency of accounting activities. Continuous professional development is important because digital tools continue to develop. Organizations should provide opportunities for employees to improve their technological skills.

**Kokina and Davenport (2025)**Talked about the rising trend of automation and artificial intelligence application to accounting. The research stressed the fact that automation can help in repetitive accounting work. Digital tools can make the process faster and provide more access to accounting information. At the same time, artificial intelligence can be helpful in analysing huge volumes of financial information. But people's judgment is still required when working with technology-based information.

**Sledgianowski et al. (2025):**Looked into the evolving accounting environment brought about by advances in technology. The study stressed the need for technology integration into the accounting process. Technology can facilitate information processing, reporting and analysis. Accounting tasks may be made more efficient by the use of technology in order to eliminate repetitive procedures. The employees have to possess technological skills in order to perform effectively in this kind of environment. Professional development plays an important role in adapting to technology.

**Recent Studies (2026):**In recent years, from the year 2026 onwards, researches have been increasingly concentrating on AI, automation, and data-based accounting. Technology can help in conducting routine accounting, reporting, and analysis. Automation can result in reduction of processing time and enhance information availability. Technology can also help in forecasting, budgeting, and cost analysis. But, the organization needs to have proper internal control for ensuring the accuracy of information produced by technology. The employees need to develop the right set of skills in using such technologies.

**Technology and Operational Efficiency(2026):**In the studies conducted in 2026, there is also an important link between digital accounting and organizational efficiency highlighted. Technology can assist in minimizing human effort and contribute to increased speed of reporting and effective use of resources. The use of digital cost accounting system can offer relevant information regarding organizational costs. Automation can assist in performing consistent processes in accounting operations. Proper training and support by management will be necessary for effective integration. Internal controls will contribute to the assurance of information accuracy along with increased efficiency**.**

**Research Gap**

A lot of recent research has been conducted about digitalization, technology utilization, and technical competencies in accounting and auditing. But there are very few pieces of research that consider the actual results of technology-oriented cost accounting, especially regarding fast reporting, reduction of manual labor, cost control, accuracy, and efficient use of resources.

Another significant issue is the conditions in the organization that need to be provided for the efficient implementation of technology. Having accounting software does not necessarily mean that cost accounting will become more efficient due to technology use.

**Research Questions**

- What technology-driven cost accounting practices are followed in audit firms?
- To what extent do accounting software, digital tools and automation support cost-accounting activities?
- Is there a significant relationship between technology-assisted cost reporting and effective cost accounting practices?
- Do technology factors significantly contribute to effective cost accounting practices?
- What organizational factors are important for obtaining effective results from technology-driven cost accounting?

**Research Objectives**

- To examine the role of technology-driven cost accounting practices in improving operational efficiency in audit firms.
- To identify the technology adoption practices used in audit-firm cost accounting.
- To examine the perceptions of respondents regarding accounting software, digital tools and automation.
- To determine the relationship between technology-assisted cost reporting and effective cost accounting practices.
- To examine the contribution of technology factors to effective cost accounting practices.

**Research Hypothesis**

- Technology-driven cost accounting practices have no significant relationship with operational efficiency in audit firms.
- Technology-driven cost accounting practices have a significant positive relationship with operational efficiency in audit firms.
- The underlying study measures **Effective Cost Accounting Practices** as the dependent construct. It includes aspects related to operational efficiency, effective decision-making, accuracy and reliability of cost information and organizational cost control.

**Research Methodology**

The study adopted a **descriptive and analytical research design** to examine technology-driven cost accounting practices and their relationship with effective cost accounting practices in audit firms. Primary data were collected from **100 respondents** using a structured questionnaire. The questionnaire consisted of demographic questions and statements relating to Technology Adoption, Employee Competency, Management Support, Internal Control System and Effective Cost Accounting Practices. A **five-point Likert scale** ranging from Strongly Disagree to Strongly Agree was used to record the perceptions of respondents. Convenience sampling technique was used for selecting the respondents.

**Data Analysis**

The obtained data were analyzed systematically with the use of SPSS for the purpose of assessing the perceptions of the respondents and finding out the factors affecting effective cost accounting. Descriptive statistics including frequency, percentage, mean and standard deviation were used for the analysis of the data. The Cronbach's Alpha method was used to check the reliability of the questionnaire. The Pearson correlation was used to find out the relationship between the selected variables and effective cost accounting practices. Multiple regression analysis and ANOVA were used to measure the contribution and significance of the independent variables.

**Freuency Analysis**

**Table 1: Age Wise Distribution of Respondents**

| Age | Frequency | Percent |
|---|---|---|
| Below 25 years(1) | 50 | 50.0 |
| 25-34 years(2) | 25 | 25.0 |
| 33-44 yeara(3) | 20 | 20.0 |
| 44&Above | 5 | 5.0 |
| Total | 100 | 100.0 |

**Interpretation**

This suggests that the majority of respondents are young adults. **25% (25 respondents)** belong to the **25–34 years** age group, representing the second-largest category. Additionally, **20% (20 respondents)** are in the **35–44 years** age group, while only **5% (5 respondents)** are **44 years and above**, making it the smallest group.

**Table 2: Gender – Wise Distribution of Respondents**

| Gender | Frequency | Cumulative Percent |
|---|---|---|
| Female(1) | 53 | 53.0 |
| Male(2) | 47 | 100.0 |
| Total | 100 | |

**Interpretation:**

Gender distribution among the respondents is such that 53% (53 respondents) are females whereas 47% (47 respondents) are males. Females constitute the larger group among the respondents. It is clear from the results that both the genders are well-represented. In total, there are 100 respondents in the study.

**Table 3: Showing Designation of Respondents**

| Designation | Frequency | Percent |
|---|---|---|
| Student(1) | 46 | 46.0 |
| Employee(2) | 42 | 42.0 |
| Other(3) | 12 | 12.0 |
| Total | 100 | 100.0 |

**Interpretation:**

From the above data on the designation wise breakdown of the respondents, it can be seen that 46% (46 respondents) are students, hence the largest number of the sample population. This is followed by 42% (42 respondents) who are employees, showing that a significant number of the respondents are professional workers. The other 12% (12 respondents) fall into the third category, which is the least number of respondents. In all, the results show that there is an equal proportion of both students and employees among the respondents.

**Table 4: Showing Educational Qualification**

| Educational Qualification | Frequency | Percent |
|---|---|---|
| Undergraduate(1) | 39 | 39.0 |
| Postgraduate(2) | 35 | 35.0 |
| Professional qualification(3) | 10 | 10.0 |
| Diploma(4) | 12 | 12.0 |
| Upto Higher Secondary(5) | 4 | 4.0 |
| Total | 100 | 100.0 |

**Interpretation**

This educational level reveals that 39% (39 respondents) are undergraduates, which is the highest among the four. It is followed by 35% (35 respondents) of postgraduates. 12% (12 respondents) are diploma holders, while 10% (10 respondents) possess professional qualification. Thus, most respondents are either undergraduate or postgraduate.

**Table 5: Showing of Year of Experience**

| Experience | Frequency | Percent |
|---|---|---|
| 0 to 1 years | 49 | 49.0 |
| 2 to 4 years | 32 | 32.0 |
| 4 years&Above | 19 | 19.0 |
| Total | 100 | 100.0 |

**Interpretation:**

Experience-wise breakdown of the respondents reveals that 49% (49 respondents) are those with experience of 0-1 year, which constitutes the highest percentage in the survey. After that comes the second-highest percentage of 32% (32 respondents) with experience of 2-4 years. The lowest percentage of 19% (19 respondents) comprises those with more than 4 years of experience.

**Table 6: Showing Monthly Income**

| Monthly income | Frequency | Percent |
|---|---|---|
| Below 25000(1) | 34 | 34.0 |
| 26000-35000(2) | 39 | 39.0 |
| 36000-45000(3) | 17 | 17.0 |
| Above 45000(4) | 10 | 10.0 |
| Total | 100 | 100.0 |

**Interpretation:**

The monthly income frequency of the respondents indicates that 39% (39 respondents) belong to the income category of ₹26,000-₹35,000, which makes it the highest category of income among the respondents. This is followed by 34% (34 respondents) having an income less than ₹25,000. Moreover, 17% (17 respondents) fall into the category of income between ₹36,000-₹45,000, whereas 10% (10 respondents) fall into the category

**Reliability Analysis**

Reliability analysis is conducted to measure the consistency and reliability of the questionnaire that is employed in the research process.It examines whether the set of questions measuring a certain variable yields reliable results.

The reliability analysis is done in this research process to examine the reliability of the research tool. Cronbach's Alpha is used to determine the consistency of the research tool. A high value of Cronbach's Alpha implies a higher level of reliability of the items. Low values of Cronbach's Alpha imply low levels of consistency among the items. The reliability test ensures the suitability of the research tool items for statistical analysis. Hence, reliability analysis ensures reliability of the data collected.

**Table 7: Reliability Analysis**

| Particulars | Value |
|---|---|
| Total cases | 100 |
| Valid cases | 100 |
| Excluded Cases | 0 |

**Interpretation:**

The test of reliability was done using Cronbach's Alpha. The result of this test revealed that the Cronbach's Alpha value was 0.929 for 25 variables with 100 valid cases, where there were no invalid cases. As the value of Cronbach's Alpha is above 0.90, it means that the internal consistency of the variables is very good.

**Correlation Analysis**

Correlation analysis refers to the statistical technique that is employed to measure the strength and direction of the relationship between two variables. Correlation analysis helps determine the existence of any associations between the changes in one variable and changes in another variable. The correlation coefficient can vary from -1 to +1 and reflects the strength and direction of the relationship. The positive value of the correlation coefficient denotes a positive relationship, whereas the negative value means the inverse relationship. In the current research, correlation analysis will be conducted to find out the relationship between selected variables and effective cost accounting.

**Table 8: Correlation Analysis**

| Variables | Statistics | TA | EC | MS | ECAP |
|---|---|---|---|---|---|
| **TA** | Pearson Correlation | 1.000 | — | — | **.207*** |
| | Sig. (2-tailed) | — | — | — | **.039** |
| | N | 100 | — | — | 100 |

| | | | | | |
|---|---|---|---|---|---|
| **EC** | Pearson Correlation | — | 1.000 | — | **[value]** |
| | Sig. (2-tailed) | — | — | — | **[value]** |
| | N | — | 100 | — | 100 |
| **MS** | Pearson Correlation | — | — | 1.000 | **.377*** |
| | Sig. (2-tailed) | — | — | — | **<.001** |
| | N | — | — | 100 | 100 |
| **ECAP** | Pearson Correlation | **.207*** | **[value]** | **.377*** | 1.000 |
| | Sig. (2-tailed) | **.039** | **[value]** | **<.001** | — |
| | N | 100 | 100 | 100 | 100 |

**Interpretation:**

The results reveal that both variables are positively and significantly correlated with overall cost accounting effectiveness. The correlation between management promoting continuous improvement in cost accounting processes and overall cost accounting practices was **r = 0.377 (p < 0.001)**, indicating a moderate positive relationship. Similarly, technology helping generate cost reports quickly and accurately showed a **positive and significant relationship** with overall cost accounting practices (**r = 0.207, p = 0.039**).Among the observed relationships, management support showed a stronger positive relationship with overall cost accounting effectiveness (**r = 0.377**) compared to technology-assisted cost reporting (**r = 0.207**). Both relationships are statistically significant, as their p-values are less than 0.05. Overall, the results indicate that improvements in technology-assisted cost reporting and greater management support for continuous improvement are associated with better and more effective cost accounting practices in the firm.

**Table 9: Regression Analysis**

**Model Summary:**

| Model | R | R | Square | Adjusted |
|---|---|---|---|---|
| 1 | .786 | .617 | .601 | .530 |

- **Predictors:**(Constant), Technology Factors, Employee Competency, Management Support, Internal Control Practices
- **Dependent Variable:** Effective Cost Accounting Practices

**ANOVAa**

| Model | Sum of square | df | Mean square | f | Sig. |
|---|---|---|---|---|---|
| Regression | 43.113 | 4 | 10.778 | 38.312 | <.001 |
| Residual | 26.726 | 95 | .281 | | |
| Total | 69.838 | 99 | | | |

**Regression Coefficients**

| Model | B | Std. error | beta | t | Sig. |
|---|---|---|---|---|---|
| (Constant) | .581 | .289 | | 2.010 | .047 |
| Technology Factors | .226 | .092 | .226 | 2.464 | 016 |
| Employee Competency | -.084 | .102 | -.079 | -.821 | .414 |
| Management Support | .068 | .114 | .063 | .595 | .554 |
| Internal Control Practices | .617 | .089 | .626 | 6.917 | <.001 |

**Discussion**

From the findings of the research, it can be stated that technology plays an important role in enhancing effective cost accounting practices in audit firms. Significant positive relation between technology assisted cost reporting and effectiveness reveals that the use of technology can play a positive role in accounting practices. From the perspective of the regression analysis, the role of technology is further supported by the results. Technology factors contributed significantly and positively towards effective cost accounting practices. It can be said that the use of appropriate technology can help in improving accounting processes. In addition to that, management support also has an important role to play. Significantly positive correlation between management support of continuous improvement and overall effectiveness reveals that management support of organizations can create a conducive atmosphere for improving accounting practices. The most contributing factor in the regression analysis

was the internal control practices. This means that technology based accounting system needs to be accompanied by suitable controls such as authorization, verification, access management, review process and record keeping in order to ensure the quality of accounting information. It is also necessary for employees to remain competent as the employees are supposed to operate the accounting system and interpret the information provided by accounting systems.

**Practical Implications**

- First, audit firms need to increase the application of modern accounting software and digital tools in the process of cost accounting. The adoption of technology should be guided by the needs of the company and should aim at increasing speed, precision and availability of information.
- Second, audit firms need to offer their employees regular training sessions. The training will help to improve employees' skills in using the accounting software, digital reporting, information handling, standards and innovations in accounting.
- Third, management of an organization should promote technological advancements. Provision of necessary means and encouragement can assist in making employees adapt to the new accounting system.
- Fourth, robust internal control measures should be put in place in digital accounting. Access controls, authorization, verification, data validation, backup and review measures will assist in safeguarding the reliability of accounting information.
- Finally, audit firms may track a number of indicators like preparation of reports, manual adjustments, accuracy of the cost report, reconciliation and use of resources.

**Conclusion**

The reliability analysis produced a Cronbach's Alpha value of 0.929, confirming excellent internal consistency of the research instrument. The descriptive results indicated generally positive perceptions of the selected accounting practices. Technology-assisted cost reporting showed a significant positive relationship with Effective Cost Accounting Practices, with $r = 0.207$ and $p = 0.039$. Management support for continuous improvement also showed a significant positive relationship, with $r = 0.377$ and $p < 0.001$. The regression model produced $R = 0.786$ and $R^2 = 0.617$, indicating that 61.7% of the variation in Effective Cost Accounting Practices was explained by the selected predictors. The overall model was significant with $F = 38.312$ and $p < 0.001$. Technology Factors showed a significant positive contribution with $\beta = 0.226$ and $p = 0.016$, while Internal Control Practices recorded the strongest contribution with $\beta = 0.626$ and $p < 0.001$. Overall, the study concludes that technology can strengthen cost-accounting effectiveness in audit firms when it is supported by competent employees, management involvement and effective internal controls.

**References**

1. Alsharari, N. M. (2023). Digital transformation and management accounting practices: The role of emerging technologies in accounting information and decision-making.
2. Afsay, Z., Tahriri, A., & Rezaee, Z. (2023). Technology acceptance and digital transformation in auditing: Organizational readiness and facilitating conditions.
3. Moll, J., &Yigitbasioglu, O. (2023). The role of digital technologies in accounting and the changing nature of accounting work.
4. Leitner-Hanetseder, S., Lehner, O. M., Eisl, C., &Forstenlechner, C. (2023). Digital transformation and the changing role of accountants in the accounting profession.
5. Moll, J., & Smits, A. (2023). Digitalisation and its implications for accounting processes, professionals and organizations.
6. Fähndrich, S. (2024). Digitalisation and its implications for accounting and management control.
7. Appelbaum, D., Kogan, A., Vasarhelyi, M. A., & Yan, Z. (2024). Digital technologies, automation and the transformation of accounting and auditing practices.
8. Sutton, S. G., Holt, M., & Arnold, V. (2024). Emerging technologies and their impact on accounting and auditing processes.

9. Kokina, J., Mancha, R., &Pachamanova, D. (2024). Emerging technologies and the changing landscape of accounting and auditing.
10. Kumar, R., & Sharma, P. (2025). Digital accounting practices and accounting effectiveness: The role of technology in modern accounting.
11. Fetzer, J., Gibson, B., & Kuhn, J. (2025). Technology-related skills and the changing accounting profession.
12. Kokina, J., & Davenport, T. H. (2025). Artificial intelligence and automation in accounting: Opportunities and challenges for accounting professionals.
13. Sledgianowski, D., Gomaa, M., & Tan, C. (2025). Digital transformation, technology adoption and the future of accounting and auditing.
14. International Federation of Accountants (IFAC). (2026). Technology, digital transformation and the future of the accounting profession.
15. International Auditing and Assurance Standards Board (IAASB). (2026). Technology and digital transformation in the audit environment.

❑❑❑