

# IMPACTS OF ADVANCED TECHNOLOGIES IN ACCOUNTING SECTOR

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**Abstract.** *Advancements in technology brought about a shift in the ways that accounting-related duties might be completed, and the use of electronic media for these transactions began. The daily, rapid expansion and development of information technology has resulted in the digital revolution in the fields of economy, society, and culture. The use of technology in accounting has expanded due to advancements in computer technology and the need to generate administrative-purpose data based on integrated accounting information systems for businesses. The market is filled with accounting package software designed for unified accounting systems. Applications for computerized accounting have grown quickly in tandem with unified accounting. The objective of this review study was to find the impact of advanced technologies in accounting sector. To achieve the intended objectives of the study, a total of 11 previous published articles related to the application of advanced technologies in accounting sector were searched on different databases by defining the inclusion and exclusion criteria. The exclusion criteria were to include the articles that are related to the advanced technologies and accounting. The exclusion criteria were not to include the articles that have no link between impact advanced technologies and accounting sector. The study concluded that application of advanced technologies has opened the new horizons in the accounting sector.*

**Key Words:** *Impact, Advanced Technologies, Accounting Sector*

## 1. INTRODUCTION

The process of integrating technology advancements into business models, procedures, competences, and processes in a way that expedites and improves them is known as transformation of advanced technologies. The most general definition of transformation of advanced technologies is the integration of these technologies into all business processes, leading to transformation and changes that result in a comprehensive change, even though this definition cannot be applied to all processes and businesses (Brukhansky & Spilnyk, 2021).

The conventional accounting method, which involved entering data into databases and loading paper, is no longer in use. The internet, electronic data sharing, internal and external internet connections, and electronic financial transfers have all taken the place of this conventional manner in the modern day. Put another way, the aforementioned technology has made it possible for digital apps that employ an integrated platform connected to the internet to be used in the accounting sectors (Spilnyk & Palukh, 2019). Accounting information may then be seen and sent electronically through the use of sophisticated technologies in accounting, such as the electronic usage of accounting information possessed in conventional format. The way that accounting functions has changed significantly with this new method. The categorization, recording, and reporting tasks that were formerly completed physically have been replaced by the phenomena of artificial intelligence. Artificial intelligence that conducts business and operations can now quickly process and analyze very large amounts of data by utilizing various techniques including machine learning and deep learning. Because of this, employing

cutting-edge technology results in lower expenses, more productivity, the emergence of new goods and services, and new economic sectors (Kruskopf et al., 2020).

### **Objectives of the study**

The objective of this review study was to determine the impacts of advanced technologies in accounting sector.

### **Research Question**

In this review study, it was tried to find the answer of the research question that what are the impacts of advanced technologies in accounting sector.

## **2. LITERATURE REVIEW**

### **Advanced Technologies and Accounting**

Due to the speedy development of new technology, technology-based science has applications in the field of information technology; these applications have grown in popularity in accounting and finance (Segal, 2016). According to Mancini et al. (2021), information technology has given rise to a number of uses for the accounting industry's adaptability. The accounting and finance industry has been pushed to become more flexible by the need to regulate and manage vast amounts of data in the quick-paced, intricate world of information technology. In order to improve productivity, a lot of businesses these days are integrating accounting systems with digital information systems.

In addition, Geddes (2020) discussed the research on the accounting sector and outlined how information technology has affected its operation. Based on newly developing information technology trends, the goal or focus of this research was on artificial intelligence, big data, blockchain, cloud computing, and accounting management within the accounting, auditing, and management sector. Information technology was shown to provide a number of benefits and to have a favorable impact on the accounting and finance industries. Moreover, Coyne et al. (2016) emphasized that a large number of employees in diverse firms used to manually save data and information. Keeping and collecting a large amount of data appears to be essential. Information technology has taken the place of conventional labor since its inception. It offers the accounting and financial industries a number of benefits, and future technology developments could reduce their reliance on the job of accountants.

Despite the availability of several technical tools and software that potentially replace accountants, many firms still require accountants. Therefore, in order to stay up to date with the rapid growth of technology, accounting professionals need to develop and refine their new abilities in accordance with current demands. According to Marrone and Hazelton (2019), the technological revolution has had an impact on all professions, including finance and accounting. Even while technology advancements can lower costs and enhance automated accounting, there is still a skills gap in the industry. Moreover, Yaremenko et al. (2021) emphasized that the industrial revolution may also be aided by technological and accounting transformations, which can provide additional effort to redefine governance in a revolutionary context that calls for numerous frameworks and nimble, adaptable governance.

According to Kroon et al. (2021), big data, blockchain, cloud, and artificial intelligence implementation can all have a significant impact on how much information technology is used. Blockchain has made cloud technologies and Big Data that enable ledger transactions available. Technology advancements have greatly raised the acceptance of both financial and non-financial data that represent accounting viewpoints. Additionally, Kaya et al. (2019) provided study on information technology applications to look at how IT is affecting the accounting and finance industries.

Olaofe-Obasesin (2020) found a connection between the information technology and accounting information quality. The use of modern technology at all input and output levels, together with policies that support organizational management's internal use of technology and outline its quality or external use by stakeholders like lenders, investors, suppliers, and many more, formed the foundation of this relationship. Moreover, the effectiveness of data in the accounting process contributes to the expansion of the company's competitive advantage.

According to Rîndaşu (2017), information technology and the value of accounting information seem to be closely related since the data in the database seems accurate and dependable, independent of the counterparty's level of confidence. The transaction doesn't happen until every party has confirmed it. The development of information technology has made it possible to transform accounting into a format that is clear, safe, and simple to use.

The advancement of technology has presented several opportunities to increase the effectiveness of accountants. The availability of a large amount of data benefits enterprises. Decision-making authority is gradually shifting from human decision-makers to technical systems. The development of artificial intelligence systems has advanced and accelerated significantly in the modern era. The system's outputs show a remarkable degree of accuracy that is on par with human performance and, in some cases, even better. Artificial intelligence (AI) makes it easier to ask computers questions about a variety of topics, including sales, stock, customer loyalty, fraud incidents, and other relevant topics (Lutfi et al., 2022).

A blockchain is a type of distributed, decentralized digital ledger that keeps track of every transaction that takes place between nodes in a network. Those that utilize blockchain technology as community notaries have the opportunity to use the register to verify the accuracy of the data they cover. It may find use in various financial transactions, user authentication procedures, cybersecurity technology development, and other relevant fields. Blockchain technology has the potential to significantly change how businesses interact with government agencies and completely reorganize several background-level operating procedures. However, the implementation of this technology continues to encounter several obstacles, thereby classifying it as an experimental undertaking (Crookes & Conway, 2018).

## **Technological Tools Being Used in Accounting**

### **1. Automation and Machine learning**

Automation and machine learning are becoming more prevalent in the accounting industry, and it's easy to see why. These technologies help relieve accountants of repetitive tasks, improve accuracy, and enable them to focus on more valuable activities. Automation can now perform tasks such as payroll processing, expense management, and tax preparation with high accuracy, reducing the risk of human error.

### **2. Blockchain technology**

Blockchain technology is another emerging technology that's revolutionizing the accounting industry. It's a distributed digital ledger that stores data securely using sophisticated cryptography. Blockchain technology is highly resistant to data tampering and fraud, making it an ideal solution for storing sensitive financial data. Many accounting firms now use blockchain technology to secure data and documents, automate contracts and transactions, and improve audibility.

### **3. Cloud Computing**

Cloud computing has emerged as a vital tool for the accounting sector quite fast. Numerous advantages come with the cloud, including disaster recovery, automatic backups, and round-the-clock data access. These days, accounting companies may use

the cloud for a number of tasks, including payroll, invoicing, and bookkeeping. Furthermore, cloud computing makes it possible for accounting professionals to operate remotely and more flexibly from any location.

#### **4. Artificial intelligence (AI)**

Artificial intelligence (AI) is another emerging technology transforming the accounting industry. Automating several accounting tasks using AI is now possible, such as invoice and receipt scanning, expense analysis, and fraud detection. AI-powered chatbots are also increasingly used in the financial industry to provide customers with 24/7 support. AI enables accountants to analyze data more efficiently, freeing up more time to concentrate on high-level activities.

Emerging technologies can change the accounting industry in ways we never thought possible. By leveraging these technologies, accounting firms can position themselves as leaders in the industry, improve efficiency, reduce costs, and provide their clients with more value-added services. Accounting professionals must stay current with emerging technologies and adapt to technological advancements.

### **3. RESEARCH METHODS**

#### **Article Selection Process**

The Prisma diagram was followed for the selection of the articles. Its procedure is discussed in the following lines:

##### **i. Identification**

###### **a. Databases and Time Limit for Literature Search**

The researchers searched the articles on the action learning theory and leadership development from January 2018 to November 2023 from the major electronic databases including ERIC, Web of Science, Google Scholar and Scopus. The key terms used for literature search for articles were: Advanced Technologies and accounting sector.

###### **b. Inclusion Criteria for Literature**

The articles were included based on the following inclusion criteria:

- Only those articles were included that reported the action learning theory and leadership development. The studies that have no link between advanced technologies and accounting sector were excluded.
- The studies that were published in a peer reviewed journal, from the year 2018 to 2023 and written in English were included in the study. The studies that did not meet this criterion were excluded. So, initially 76 studies were identified.

##### **ii. Screening**

After removing the duplicate records of 27 studies, the remaining studies were 49 based on inclusion and exclusion criteria. Records excluded on the basis of the abstract review were n=13, not relevant n=7, and not in English n=4.

##### **iii. Eligibility**

The total full-text articles assessed for eligibility obtained were n=25. The full-text articles that have no link between advanced technologies and accounting sector were also excluded n=14.

##### **iv. Included**

So, the final studies included in the review were obtained as n=11.

#### 4. RESULTS AND DISCUSSION

The objective of this review study was to determine the impacts of advanced technologies in accounting sector and the research question regarding this objective was what are the impacts of advanced technologies on accounting sector. To achieve the intended objective of the review study and to find the answer of the research question, previous published literature was reviewed and the results of the literature review are presented in the table 1.

**Table 1: Impacts of Advanced Technologies on Accounting Sector**

Sr. No	Reference	Sector	Results
1	Al-Okaily et al. (2023)	Banking	The findings indicated that implementing cutting-edge technologies in accounting is one of the main factors boosting company success.
2	Izzo et al. (2022)	Multinational computer technology corporation	The findings of the study showed that integration of computer technology significantly affected the accounting sector of the corporation
3	Ahmad et al. (2024)	Central Bank	The study concluded that by the application of advanced technologies in the accounting sector of the bank, its performance improved very significantly.
4	Lohapan (2021)	Audit Sector	The study's findings demonstrate the significant impact that the use of digital accounting has on audit competency, audit performance and audit report.
5	Çetin and Bozdoğan (2023)	Accountant Sector	The application of advanced technologies significantly improved the accountant work.
6	Asuquo et al. (2020)	Accounting line of work	The investigation's findings demonstrated that information technology significantly affects the accounting field of employment.
7	Chinoracký and Čorejova (2019)	Transport	The advanced technologies improved the audit section of the transport sector.
8	Khalid and Kot (2021)	Banking	The study's findings showed the digital technologies applied significantly improved the performance of the banking sector.
9	Kuzmenko et al. (2023)	Energy and Fuel Sector	The accounting industry is greatly impacted by cloud computing, big data, AI-based automation, internet of things, blockchain technology, artificial intelligence (AI) and machine learning.
10	Gunawan and Serlyna (2018)	Bank Sector	The technologies applied significantly improved the financial performance of the bank.
11	Elessa (2023)	Stock Exchange	The stock exchange performance improved by using the advanced technologies.

Table 1 shows the results of the studies reviewed to determine the impacts of the advanced technologies on the accounting sector. Table shows that application of the advanced technologies significantly improved the performance of the accounting sector.

#### CONCLUSION

The objective of this review study was to find the impacts of the advanced technologies on the accounting sector. The previous published literature reviewed

showed that the advanced technologies have changed the way of the accounting sector. The application of advanced technologies in accounting sector has made the business world very advanced and useful.

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