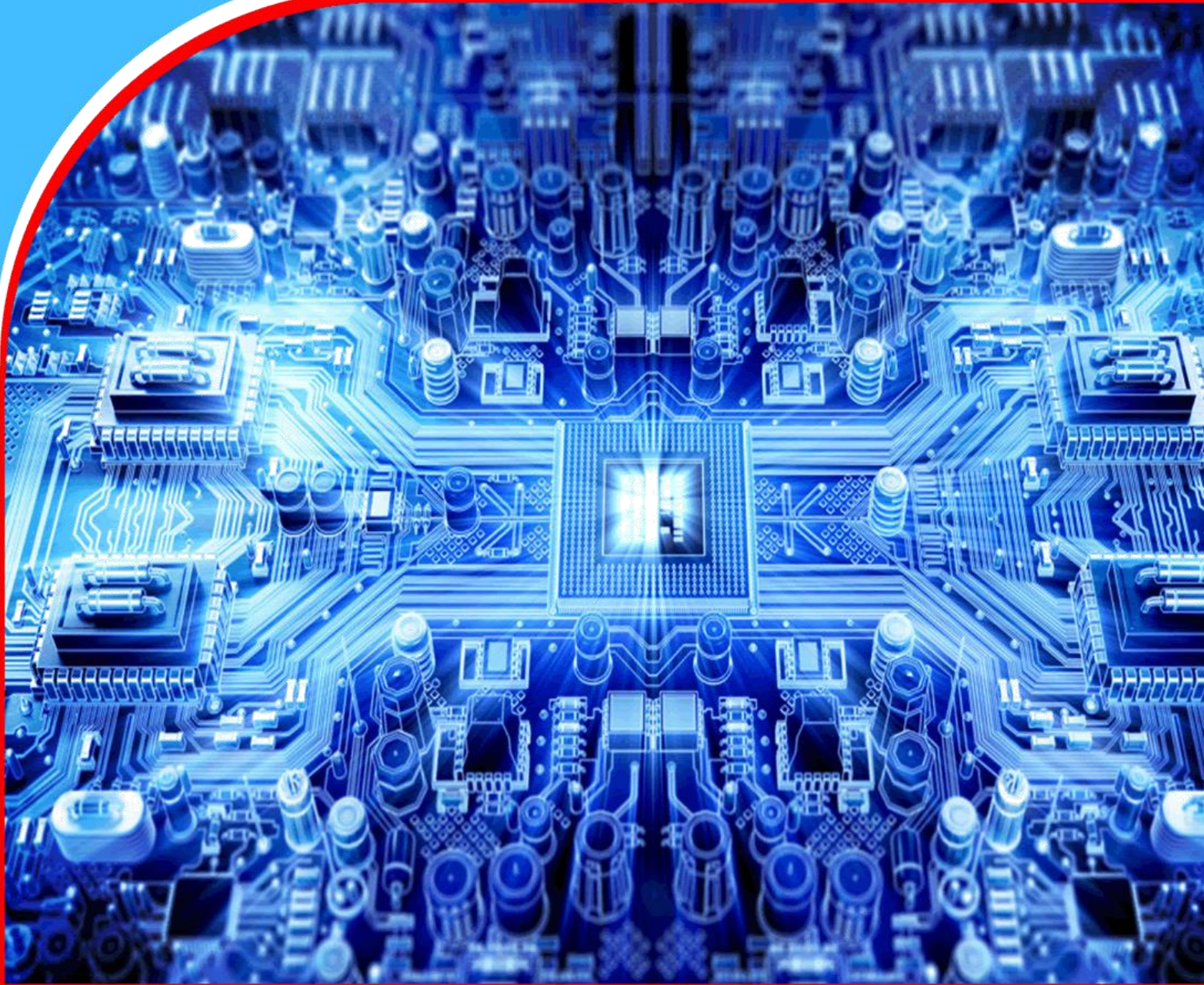


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## Impact of Artificial Intelligence on Accounting, Auditing, and Financial Reporting

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## Impact of Artificial Intelligence on Accounting, Auditing and Financial Reporting

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### Abstract

**Purpose:** The study aimed at portraying the current role of Artificial intelligence in accounting, auditing, and financial reporting.

**Methodology:** The study used a descriptive research design. This form of research design aims at describing the current status of an identified variable. Data was collected from secondary materials.

**Findings:** Currently, multiple AI technologies are being utilized in accounting, auditing, and financial reporting. The AI expert systems accept human experiences as well as technical

know-how as their fundamental and try to develop aggregate behavior or practice. Also, AI has allowed for factors such as automated data input, thus enhancing the scope of accounting, and enabling modern accounting to integrate and process huge data.

**Recommendations:** It is critical for future policymakers to ensure standardization of the AI system in the accounting paradigm to ensure high-quality systems that adhere to the principles of accounting.

**Keywords:** *Artificial Intelligence, Accounting, Auditing, and Financial Reporting.*

## 1.0 INTRODUCTION

Over the decades, Artificial Intelligence (AI) has profoundly developed, impacting multiple fields such as accounting, healthcare, learning design, technology, manufacturing, and education. AI has been described as the science and engineering of developing intelligent machines, especially intelligent computer programs that enable computers to comprehend human intelligence (Davenport & Ronanki, 2018). One area that AI has significantly impacted constitutes accounting, auditing, and financial reporting. Accounting professionals have started embracing automation segments to enhance effectiveness and efficiency in their routine work. Subsequently, accounting, auditing, and financial reporting systems are becoming more complex and entering computer-based formats (Li & Zheng, 2018). Accounting databases are getting bigger, prompting the need to integrate AI paradigms to mitigate the difficulties that could occur in the traditional system. This report will identify various AI technologies in the field of accounting, auditing, and financial reporting, project the advantages and limitations of AI in the field, and the overall impact of AI in the accounting profession.

## 2.0 LITERATURE REVIEW

Currently, multiple AI technologies are being utilized in accounting, auditing, and financial reporting. One of the most developed clusters of AI utilized in accounting involves expert systems. The system was created with the aim of advising accountants on various issues. Expert systems constitute software programs that can store information and knowledge obtained from a human expert (Luo *et al.*, 2018). The system hence appears to simulate human experts in a given domain or field, such as accounting, auditing, or tax. The AI expert systems accept human experiences as well as technical know-how as their fundamental and try to develop aggregate behavior or practice. These systems are intrinsically pragmatic and integrate the rules from the experts to define diffuse knowledge as well as other elements of knowledge depiction. The AI expert system incorporates the knowledge of multiple human experts and hence assists the accounts or other users to enhance the quality of the services offered in domains of internal control, evaluation, and identification (Luo *et al.*, 2018). In addition, the system could easily rectify procedures and actions that could be easily applied. The application of AI expert systems in the accounting domain is categorized into financial and management accounting, auditing, personal financial planning, and auditing.

Multiple global industries such as banking, oil and gas, insurance, governments, and pharmaceuticals are utilizing the AI expert systems into their accounting, auditing, and financial report paradigms. One of the global companies that have implemented this technology involves Chevron (Amershi *et al.*, 2019). The company utilizes an expert system as a predictive model to evaluate the management and performance of its financial systems. The system allows the company to go beyond the conventional keyword mechanism for the quick formulation of its structured and unstructured data. Subsequently, the system delivers solutions to the company's accounting domain and business requirements, including open-source intelligence, semantic search integration, multilingual text analytics analysis, data processing, and administration of various ontologies and taxonomies (Amershi *et al.*, 2019).

Another AI technology developed and utilized in accounting is the Data Input Automation System. The system integrates mechanisms such as automatic data incorporation and processing of documents, automatic generation of financial reports, and automatic detection of any form of

anomalies in auditing (Davenport & Ronanki, 2018). Using AI technologies such as Optical Character Recognition, the computer could receive a given data and process the data as requested by the user. The system continuously learns to realize effective and efficient data entry and document processing paradigms that eliminate the manual, error-prone process. Subsequently, Data Input Automation Systems such as the Natural Language Generation technology (NLG) allow the user to convey charts and various forms of data in languages that the user can easily comprehend; it could also customize reports for particular usage. One company that has successfully used this technology involves the Commerzbank in Germany. The company utilizes AI Natural Language Generation technology to produce reports on equity and translate the data. The AI technology now produces over 75 percent of its equity research report and processes the data (Carpenter, 2020). Also, the technology has revolutionized other aspects of the organization, enhancing the consumer banking experience.

## **2.1 Advantages and Limitations of AI in Accounting**

AI has projected both benefits and drawbacks to the accounting profession as a whole. One of the significant advantages resulting from AI use in accounting involves the improvement of the quality of accounting information. The traditional or manual integration of accounting practices is often prone to error and labor intensive, resulting in a reduction of the quality of accounting information. Nevertheless, the use of AI financial and accounting systems results in enhanced efficiency, elimination of mistakes, and increased effectiveness (Polak *et al.*, 2020). Furthermore, the AI systems, such as the expert systems or the NLG technologies, could easily detect any form of error or anomalies in the data and convey feedback to the users. AI accounting systems could also result in the alignment of data entry and analysis. This reduces the occurrence or commitment to time-consuming or repetitive accounting activities. For instance, the AI technologies could assist in expense tracking, collect data from receipts, and group the involved expense automatically based on the required segment (Polak *et al.*, 2020). It could then create reports on these obtained financial data, thus saving on time and the requirement of intensive labor. Subsequently, AI systems provide forecasting and predictive solutions to the accounting practices. Predictive and forecasting patterns could assist the enterprise to have a comprehensive understanding and insights associated with its finance.

Despite these advantages, AI has portrayed various limitations in the accounting profession. The costs of AI implementation are profoundly high, thus resulting in high accounting and financial management costs. The organization implementing these systems is compelled to utilize many resources, including implementation resources and retraining of their workforce to operate the systems, further increasing the cost of AI in accounting (Ucoglu, 2020). Also, AI accounting systems require quality data to learn. Without profound valid, and quality data, the models would not be able to learn. This would create further challenges and anomalies in the system and the accounting paradigms. Another challenge of AI in accounting involves the issue of privacy and ethics (Ucoglu, 2020). This limitation is often experienced when the involved AI systems connote intellectual property based on personal data.

## **2.2 Theoretical Framework**

### **2.2.1 Value Creation Theory**

The theory holds that from the viewpoint of the value chain, value chain accounting enhances the association between management accounting data and other elements, such as management

planning and control practices. Accounting should thus enhance value appreciation and the value of the business. Through mechanisms such as AI integration, the phenomenon could be achieved.

### **2.2.2 The Control Intelligent Mechanism Theory**

The theory establishes that under particular conditions based on good control practice, the organization can respond intelligently and automatically based on the adaptive system in the event of uncertain transformation in the external domains. These intelligent control mechanisms could involve elements such as dynamic financial intelligent decision-making systems which enhance process cooperation and control. Therefore, artificial intelligence could be integrated to assist in achieving control intelligent mechanisms.

## **3.0 METHODOLOGY**

The study used a descriptive research design. This form of research design aims at describing the current status of an identified variable. The descriptive research design was selected since the study provided systematic information about artificial intelligence. Therefore, the study did not start with a hypothesis. Instead, inferences were developed after data collection. The evaluation and synthesis of the data provided the tests of the hypothesis. Data was collected from other secondary materials that had already investigated, analyzed, and evaluated the topic. The data was analyzed using.

## **4.0 CONCLUSION AND RECOMMENDATIONS**

Conclusively, AI has impacted accounting, auditing, and financial reporting in various ways. AI systems, such as expert systems and NLG technologies, have enhanced the quality of accounting information by enhancing accuracy and efficiency. Also, AI has allowed for factors such as automated data input, thus enhancing the scope of accounting, and enabling modern accounting to integrate and process huge data. Furthermore, AI systems have transformed the traditional mechanisms of accounting, steering the modern methods of accounting that eliminate intensive labor and repetitive work. In addition, AI has increased the cost of accounting by resulting in higher implementation and the need to retrain the workforce on how to utilize the novel systems. It is critical for future policymakers to ensure standardization of the AI system in the accounting paradigm to ensure high-quality systems that adhere to the principles of accounting. This will also assist in risk elimination that could occur as a result of the AI integration.

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