

A STUDY OF THE IMPACT OF ARTIFICIAL INTELLIGENCE ON ACCOUNTING

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ABSTRACT

"Change is the only constant" - Heraclitus

In this complex and changing environment, it is crucial to have available adequate, updated and suitable information to make decisions effectively and efficiently. Artificial Intelligence is a new technology available in accounting software, which is making a significant impact on the accounting and finance sector. Artificial Intelligence refers to machine processes that simulate the way humans think. This research paper highlights the impact of new technology in the world of accounting and how Artificial Intelligence enhances several accounting processes. This research paper also studies the impact of Artificial Intelligence on accountants and suggests six different skills and abilities that accountants need to embrace to keep them ahead of their AI counterparts.

KEYWORDS: *Artificial Intelligence, Accounting, Accountants, Technology, Skills.*

Introduction

The organisational environment around the globe has witnessed great changes. In this complex and changing environment, it is crucial to have available adequate, updated and suitable information to make decisions effectively and efficiently. Recent trends have made artificial intelligence a new technology available in accounting software, which is making a significant impact on the accounting and finance sector, just like it has for every other industry. With the help of artificial intelligence, accounting tasks that once took hours and days to accomplish can now be completed more accurately in just a fraction of the time. Accounting is one of the most important, yet daunting and expensive departments in almost all companies. Accountants oversee all financial operations of a business to help it run smoothly and efficiently. These include preparing and analyzing financial statements like cash flow, income statement, balance sheet, paying taxes on time, and maintaining the companies' general ledger. All these tasks require a great deal of human interaction that takes time and money. No matter how careful an employee may be, there is always the chance for human error, which could snowball and lead to devastating financial results in the future. This research paper highlights the impact of new technology in the world of accounting and finance. From saving time and money and providing insights, artificial intelligence-enabled systems for accounting and finance are the way finance professionals and firms will stay competitive and attract the next generation as employees and customers.

Review of Literature

Daniel E. O'Leary and Robert M. O' Keefe (1997) uses Perrow's sociological framework as a basis for a comparative organisation analysis of the impact of expert systems on organisational issues. The study analyses the relative impact of expert systems on auditing and tax. The aggregate results indicate that expert systems are found to allow the user substantial control of the search for solutions and discretion on whether to follow system recommendations, increased access to top management, and a decrease in the need for supervision.

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Luo, J.X., Meng, Q.J. and Cai, Y. (2018) takes the application of artificial intelligence in the accounting industry as the research object, analyzes the impact of artificial intelligence on the development of the accounting industry, and puts forward that the country, enterprises, universities, individuals and other parties must work together for promoting the application of artificial intelligence in the accounting field.

Gou, C. (2020) analyzes the impact of the financial intelligence environment on the quality of accounting information. The paper analyzes the quality requirements such as "prudence", "timeliness", "relevance" and "comprehensibility", finds out the bottleneck for the breakthrough of connotation, and gives innovative suggestions for reference to improve the requirements of financial intelligence on the quality of accounting information

Carl Benedikt Frey and Michael A. Osborne (2013) implemented a novel methodology to estimate the probability of computerisation for 702 detailed occupations. They found that a substantial share of employment in service occupations, where most US job growth has occurred over the past decades (Autor and Dorn, 2013), are highly susceptible to computerisation.

Baldwin-Morgan (1995) surveys some previous research on organisational impact in accounting. Her paper examines many of the key studies and the methodologies used to analyze organisational impact. She finds that only a few papers employ organisation theory as the basis of analysis. Similarly, much of the previous research on the impact of Expert System has focused on specific cases.

Zehong Li and Li Zheng (2018) requires the accounting personnel to have a positive view on artificial intelligence, to continuously improve their comprehensive ability, make their efforts to improve their comprehensive ability, to make changes from traditional accounting personnel to a management type, high-end accounting personnel. Accountants should actively adapt to the development of this society, constantly innovate, change themselves, constantly update their knowledge, and become irreplaceable high-quality accountants.

Research Methodology

We have based our research on the availability of secondary data. Resources such as newspapers, scholarly articles by educators, accessing websites of global organizations and referring research papers that undertake Artificial Intelligence's impact analysis on the Accounting Field.

Artificial Intelligence

Artificial Intelligence refers to machine processes that simulate the way humans think. They can analyze data and make decisions based upon it. AI systems can process huge amounts of data extremely quickly, much faster than the human brain and help to detect patterns that give businesses greater insight. It is not only their ability to analyze enormous quantities of data that make AI systems valuable. They are far more consistent decision-makers than people. They never get tired or bored and do not exhibit human biases. Using AI to complete tasks reduces the danger of human error or prejudices. Machine learning is a subset of AI, by which computers can learn from the data they are given without being explicitly programmed to do so. A common example of this is online advertising, which uses browsing and purchase history to personalise ads based on what one thinks one is most likely to be interested in. AI and machine learning are used like this across many industries. Facebook no longer needs one to manually tag their friends in each photo. Facebook uses facial recognition to ask if a photo is of a particular person. It then uses machine learning to become more accurate. Eventually, Facebook can tag people accurately without human input. Uber now uses AI to predict arrival times and suggest pick-up locations based on previous users' activity and feedback. Spotify or Apple Music also uses machine learning to establish one's likes and dislikes. This information is used to offer them song suggestions and create personalised playlists. Similarly, Netflix uses machine learning to study the type of TV shows and films one likes and then uses the data it gathers to recommend programs.

Impact of Artificial Intelligence on Accounting

Artificial Intelligence is important in accounting and finance as it streamlines and optimizes many repetitive accounting processes. The overall outcome is that organizations can save more time and money as artificial intelligence provides valuable insights to accounting and financial analysts and assists in analyzing large amounts of data fast, generating more accurate, actionable data at lower costs. This data can then be used to deliver insights and analytics, driving strategic decision making that affects the whole company.

- **Automation of Repetitive Tasks:** Artificial Intelligence in accounting and finance has the potential to uncover trends and additional insights by analyzing and interpreting data. As mentioned previously, the biggest impact of artificial intelligence in these departments is the increased efficiency and accuracy that comes from automating repetitive and administrative tasks, helping accounting teams add real value to their company.
- **Enforce Corporate Policy:** One of the top accounting functions that can perform using artificial intelligence is corporate policy enforcement. Artificial Intelligence can be used to reduce the amount of time it takes to uncover issues of non-compliance in finance data. For instance, AI can scan employee receipts, credit card transactions and travel bookings to check if any purchases were made outside of the policy. This makes it possible for auditors to quickly assess errors and ensure employees are following all policies.
- **Streamline Data Entry and Analysis:** AI can help financial managers keep better track of transactions that are time-consuming and tedious. AI will allow you to extract data from receipt images and classify it automatically based on the spend category. It then populates reports so they can be analyzed in one place. Some of the tasks that artificial intelligence can help automate and streamline are gathering and sorting data for further analysis, uploading documents, understanding entries and classifying them into the correct General Ledger and generating real-time reports.
- **Reduce the Risk of Fraud:** Applying Artificial Intelligence to data sets can also help in reducing fraud by providing continual financial auditing processes to make sure companies comply with domestic and international regulations. Artificial Intelligence uses its algorithms to rapidly sort through large data sets and flag potential fraud and suspicious activity. It searches through past behaviour of different transactions to highlight odd behaviour, such as deposits or withdrawals that are sometimes larger than normal sums. Artificial Intelligence also continuously learns from General Ledger audits and corrections by humans or flagged transactions so it can make better judgments in the future. In addition, Artificial Intelligence helps to reduce fraud with digital banking, especially as the volume of transactions and data increases. It looks for suspicious and dishonest payments that could have slipped through the cracks due to human error.
- **Helps in Auditing and Compliance:** One of the most important, yet tedious jobs of accounting teams are auditing their data and records to comply with government regulations. Artificial Intelligence applies continuous auditing and captures business activities and transactions in real-time. By performing continuous reconciliations and adjustments to accruals, a company's books are more accurate throughout the month, while removing some of the burdens of month-end close for finance and accounting teams. Artificial Intelligence enabled algorithms in this software use these audits to help ensure the company's documents and processes are abiding by the laws and rules set forth by different government institutions.

Artificial Intelligence also enhances several other accounting processes, such as accounts payable and accounts receivable, invoicing, billing, expense management, and procurement or purchasing. Artificial Intelligence can analyze large volumes of transactions to detect hidden errors or trends, while procurement and invoicing or billings teams can detect potential issues with future purchases, such as late payments and deliveries.

Impact of Artificial Intelligence on Accountants

It is estimated that by the year 2030, many manual tasks such as audits, data entry and banking will be fully automated through the use of AI-based technologies. With the continuous development of science and technology, artificial intelligence is gradually replacing some part of the accounting personnel. This will result in enterprises gradually reducing the demand for accounting personnel in the accounting department thereby making the accounting personnel face job loss. But as long as accountants are willing to learn and use automation technologies, they do not have to panic. Technology alone cannot lead the future. Reports of machines replacing accountants are likely overblown, and capable accountants will be needed to oversee and utilize advanced technology. The key is that they can make good use of new technology to make it more valuable on a long-term basis. As automation begins to replace accounting, accountants should no longer be people who look through documents and carry out routine work but should be more technologically advanced to carry out more sophisticated work. AI will simply take over monotonous, time-consuming manual data work and free up accountants to complete more lucrative, higher-value tasks such as planning, advising and counselling.

Six Ways Accountants can Stand out against Artificial Intelligence

The right way to strike a balance between human brainpower and modern technology involves utilizing artificial intelligence for aspects that make work easier for humans while allowing humans to use their unique brainpower in ways that artificial intelligence cannot yet function. Nevertheless, humans will always have certain advantages over their AI counterparts in the ways like;

- **Polishing Consulting and advising skills:** One of the top ways accountants can stand out against AI is by offering consultations and advising services. If a client requires a consultation, they will undoubtedly seek out human intelligence over AI.
- **Learning how to use complex software:** Using complex software is a skill that AI cannot offer. Although it can perform certain functions, it cannot perform these functions on its own. Moreover, a human eye is still required to ensure things are being done properly.
- **Enhance Analytical Skills:** The accountants should enhance their analytical skills to analyze a lot of financial information through the accounting statement. This will help to analyze and evaluate risks reasonably and accurately.
- **Improve Decision-Making Skill:** Accountants have a very important role in decision making, especially when related to investments. The reason being, accountants are involved in the explanation of financial statements, preparation of budgets, identification of measurable outcomes, and any other quantifiable information and statements. (Rawlinson, D. and B. Tanner, 1989). By providing the necessary quantitative information about the business, including financial statements and other forms of quantitative evidence, accountants show an important role in taking relevant decisions (Gray, 1990, Owen and Bebbington, 1993).
- **Reasoning Ability:** Reasoning ability is something that the mind thinks about why what and how. It is the ability to take the inputs from five sensory organs, process the data and give the relative solution. The only way to test reasoning ability is taking a problem, solving it and checking the time taken for the problem to be solved. The accountants need to embrace this skill to counter their AI counterparts.
- **The Human Touch:** Finally, one of the top things that accountants can make themselves stand out against AI is to remain personable and compassionate. No matter how efficient AI may be, most people prefer interfacing with a living, breathing person who is capable of understanding their needs and concerns, and empathizing with them.

Suggestions for Improving the Effectiveness of Artificial Intelligence

- **Governments Support:** The government should implement relevant plans and measures in various industries and actively create favourable environmental conditions for the development of artificial intelligence in the accounting field. Relevant policies and regulations are needed for the application of artificial intelligence in the accounting industry. The organisations that actively use AI technology should be given benefits in the form of subsidies and tax relief.
- **Management Willingness towards Adoption of Artificial Intelligence:** The management should view Artificial intelligence as a new focus for transformation and upgrading of business to improve their core competitiveness. They should apply artificial intelligence at the accounting level for accurate financial analysis and proper accounting compliance. Although the cost of the enterprise in the short term will increase, but in the long term it will enable the company to have more sustainable development capabilities and will occupy a place in the future of artificial intelligence.
- **Improving Accounting Education Quality:** Colleges and universities should strive to improve the quality of accounting education by bridging the gap between theoretical knowledge and the practical accounting world. Greater practical opportunities should be created to improve students' practical ability and to cultivate applied accountants. The curriculum should always keep abreast of the changes and trends in the development of international financial standards. By improving the teaching level, we cultivate excellent accounting talents that meet market demands.
- **Embracing Continues Learning Process by Accountants:** Accountants should pay attention to the improvement of personal professional skills and the cultivation of professional ethics, and establish the idea of continuous learning to adapt to the rapid changes and development requirements of the accounting industry in the future. Accountants should change their concepts, actively study and creatively apply artificial intelligence.

Conclusion

The science of accounting is centuries old, but today's artificial intelligence and automation technologies are challenging it. Machine learning is being consistently built into the technologies that humans rely on for sending and receiving information, and the future of artificial intelligence is built on the presumption that smart machines will continue to reduce the need for human labour. Artificial Intelligence is not the only software that can draw conclusions from large quantities of data and adjust its activities based on those conclusions, but it's also a system that can learn quickly in real-time and be applied to an entire organization. Currently, there remain many elements of the financial services sector that AI can't replace, at least partially because humans continue to prefer working with other humans, rather than robots. Artificial Intelligence in accounting is not something to be afraid of – in fact, the potential benefits far outweigh the negatives. AI represents an opportunity for accountants to take on more valuable, high-level work, becoming strategic business advisors able to provide key insight to clients. AI can make accounting more efficient while reducing mistakes and taking the time-consuming, boring work out of accountants' hands.

"The accountants of the future will exist, but they will know how to interact with machines,"
(Bang).

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