

AI-Driven Transformation of Accounting and Financial Systems

Dr. Richa K. Kalyani and Dr. Amit S Nanwani

Assistant Professor, Dept. of Commerce

Dada Ramchand Bakhru Sindhu Mahavidyalaya, Nagpur.

Abstract: *AI has been created with the intent to provide a simulator of human intelligence. Not much late, the idea has now encapsulated into a practical business certainty. It was John McCarthy who introduced the concept of Artificial Intelligence in 1956 followed by many contributors to shape this concept into what it has been today. Its transformative performance has influenced almost every sector without exception to the extent that many fears to get replaced due to extended use. However, such fears arise every time, when a new technology comes into the market. Referring to quote of Sam Altman that AI won't replace humans. But humans who use AI will replace those who don't, suggests directly that use of AI in future will be inevitable. The business & commerce sector in India has also embraced AI and has been using its various tools and techniques in its various areas. In this domain, a wide range of tools supporting areas such as accounting, finance, taxation, cost management, auditing, and economics are playing a crucial role and are continually evolving. The present paper examines the growth of Artificial Intelligence in its present silhouette and analyses how this technology aligns with and augments the expectations of Business and Commerce in India. The present paper explores the progress of AI to contour what it is today and how this technique corroborates with future expectations. The paper also probes various challenges to be encountered by using AI tools and techniques. It explains the various domains of Commerce and Management where AI is quite fruitful to apply. The paper analyses the efficacy of various tools which can be deployed and helps to attain its ultimate objectives.*

Keywords: AI, tools, Account, Business, Commerce, Auditing, Challenges

I. INTRODUCTION

Year 1943 marks the foundation stone of AI when McCulloch & Pitts proposed the first mathematical model of a neuron to reflect that machines could simulate human intelligence. In 1956, John McCarthy coined this term, which led to official beginning of its further research. It has gradually moved ahead formulating the concept of expert systems, machine learning and deep learning. Indian researches at this time have gone in alignment with the help of prominent institutions like IITs, ISI, C-DAC etc. Another landmark in the history of the country could be considered in 2018 through the efforts of Niti Aayog. Very after, the country has taken initiatives for Digital India campaign which has been proven another milestone to enable it as nation building tool. India's major contribution came through Shri Dr. D. R. Raj Reddy (considered as the Father of AI) who, along with Edward Feigenbaum won ACM Turing Award in 1994. Dr. Reddy late honoured with Padma Bhushan in 2001.

Indian contributions to Artificial Intelligence have progressed largely in parallel with global developments that began in the 1940s. Where the British Mathematician Alan Turing proposed the 'Turing Test', TIRFAC was developed by R. Narsimhan. 1956 acted as landmark when the term 'AI' was coined by Father of AI - John McCarthy (while Dr. Raj Reddy is called as Father of AI in India). Another significant contributor was Geoffrey Hinton, considered as Godfather of AI. In India, soon after, ELIZA became very popular as basic chatbox; SHRDLU acted as pioneering natural language. The evolution continued with the development of Expert Systems and AI Winters, Deep Blue, Machine Learning, Deep Learning, AlphaGO and the present era of AI Generative tools. On the Indian front, initiatives include early contributions of IITs & IISC, launch of KBCS, Digital India Programme, contribution of NITI Aayog,



establishment of Centres of Excellence to on-going IndiaAI Mission. At present, the world is at the forefront of developing and continuously upgrading AI tools, marking yet another significant milestone in global AI history and profoundly influencing almost every sector and domain including business and commerce.

II. RESEARCH METHODOLOGY

Objectives of the study

- To examine the growth and technological framework of Artificial Intelligence.
- To analyse how Artificial Intelligence aligns with and augments the expectations of business and commerce in India.
- To assess the role of Artificial Intelligence in shaping the future of commerce and management.
- To evaluate Artificial Intelligence tools, techniques, and the challenges in their adoption.

Collection of data

Secondary sources were the main source of data used in the study. The source included various books, periodicals, articles, daily newspapers, literature, and web references pertaining to the topic.

III. GENERALIZED AI TOOLS

Generalized AI tools help us all in our day-to-day life to ease most of our activities. Alexa (Amazon), Siri (Apple) and Cortana (Microsoft) are quite known to many of us as voice command assistants like virtual obedient servants. However, these intelligent machines always remain to serve the users by following their voice commands and helps on many issues on a comfortable node. When one talks about generalized AI tools, ELIZA the most aged conventional AI tool can never be forgotten. It is known to be the first chatbot designed with long exertion. ELIZA used to act as psychologist with many limitations. Even though ELIZA had raised many expectations of AI developers to move ahead in this concerned area.

Today many AI tools are available to act as much better versions of ELIZA to ease our life and ready to serve in convenient manner. Such tools save our time, efforts and money so as to provide instant solutions for many of our problems. In recent years, AI seems to have covered even wider area through many revolutionized tools like ChatGPT, Gemini, Copilot, Perplexity, Claude etc. ChatGPT has been the most popular AI tools which helps to generate texts, codes instantly and do much of analysis work. Many such AI tools provide coding steps also. Moreover, many tools narrate the process to perform many of generalized tasks. The future in generalized AI tools seems to be confirming the way these tools are influencing our daily life and are increasing its popularity. It assures India's vision to be digital enriched country to become a reality very soon.

IV. AI IN BUSINESS AND COMMERCE

Business and Commerce are interconnected with each other. Business activities are extensively dependent on Commerce which comprise financial, accounting, taxation, management, economics, costing etc. All these areas play a very crucial role in economic development and leads to ensure long term sustainability. As business is directly connoted with profit; AI tools are helpful in savings efforts and cost thereby enable business personnel to concentrate on their core objectives. Most of the activities which comes under the category of Commerce can be handled effectively and instantly through AI tools. The same invariably helps to bring efficiency and productivity. It helps to perform most of the B2B and B2C activities.

If one considers the areas of Finance, like inventory management, issuing bills, extracting store data, real time reporting, pay management system, tax processing, calculation of costing, cost control activities, operation research applicability etc. AI is everywhere to tackle the business and commerce activities. It is considered that around 23% business houses in India have adopted AI and in coming 2-3 years the percentage is expected to arise due to increased usability of AI. It has been utilized mostly in IT and Banking Sectors at present. The SMB market is flourishing from



this new technology. Most of the online business apps are using AI tools to analyse the tastes and buying patten of the consumers and nowadays more than 2/3rd of the customers is using AI tools for buying goods and services from online market. In the coming years, it is expected to be utilized greatly in the areas of in the Business and Commerce with promising future ahead.

V. EMERGING ROLE OF AI IN PERTINENT AREAS

Automated bookkeeping and real-time financial reporting have become highly efficient with the use of AI. It can easily handle tasks such as transaction mapping, processing large volumes of data, preparing instant final accounts, conducting ratio analysis, price analysis, fraud detection, invoice processing, and predicting future cash flows. Many tools under this category are available in the market which include Botkeeper, Xero, Finalert, Datasnipper, Zoho etc. which helps in various types of businesses. Accounting is regarded as art as well as science. Accountants and auditors are expected to perform numerous routine tasks like processing the transactions, ledger posting, preparing trial balance, rectification of errors and mistakes, detection of frauds and manipulations etc all these can be done through AI tools. When one analyse the overall finance work, it does not entail only accounting and auditing work. Apart, inventory management, billing and invoicing, payment system, collection system, expense tracking, salary management system, pay management, report generations, tax management system etc all can be handled well through AI. Human efforts can be applied in the areas where AI fails. So inspite of the magical performance done by AI, it fails to replace the human beings.

One of the most major benefits of AI is to perform instantly in the real time scenario. It implies it can make analysis or facilitates in decision making instantly at any moment. It can work with substantial flexibility and enable the user to take right decision instantly. Here the financial decision making can be more precise though AI. One of another essence of AI tools is its ability to make predictive analysis. AI aids in taxation as well by performing all tax calculations, transactions and moreover compliance analysis by analysing the statutory requirements. AI does not restrict its application only to accounting functions; rather, it extends its capabilities to several other important financial domains such as finance, auditing, taxation, compliance, and risk management. Tools like Datarials, AlphaSense, Vena Insights are very effective in the field of finance. From processing of financial data, preparation of financial reports to conducting financial analysis, predictive analysis, budgeting, AI tools can be utilized. With advanced data-processing abilities, AI systems are able to analyze complex financial information and support strategic financial decision-making. AI improves transparency of financial functions and one of the key aspects is its decision support system which helps in taking significant financial decisions.

Certain AI-based tools are specifically designed to support auditing and compliance-related functions. Tools such as MindBridge and Trullion fall under the category of audit and compliance technologies. These platforms use advanced analytics and machine learning to perform continuous auditing, identify risk areas, and ensure regulatory compliance. AI further helps in facilitating internal control system. Whether it requires in preventive controls, detection controls or corrective controls, AI provide its best services for the users. As stated earlier, AI tools can be best utilized for audit purpose, whether it's finding out errors, mistakes, anomalies or detection of frauds, misappropriation, embezzlement, it can help in tracking the transactions from various angles. The auditors can use AI tools to save their cost, time and efforts. Likewise, it can be used by the companies to audit their own transactions and strengthen their internal control system. However, for real-time monitoring, continuous auditing, automated compliance, improved audit traceability, these tools are magnificent. One of the most significant aspects of big business houses, corporates, PSUs is use of ERP. AI tools like Xero and NetSuite plays vital role in ERP and automated reconciliation.

Overall, the use of AI in various fields of account and finance yields very productive results and it shall not be taken as replacement of account and finance personnel as the same facilitate the concerned tasks and can't be smarter enough to replace the key personnel of the organizations. As Satya Nadella stated well that the purpose of AI is to amplify human ingenuity, not to replace it.



VI. UPCOMING CHALLENGES

Elon Musk once stated that with artificial intelligence, we are summoning the demon. To handle something powerful like a demon, it is surely a challenging task. Though, AI is quite fruitful, there are certain challenges and threats which shall be taken care of. One of the most important factors with AI tools is the input data it requires to respond the queries of the users. Obviously, the system needs to access the real time databases as it requires a lot of data and information to respond. Moreover, the companies who rely on AI has to interact with AI tools with their input crucial data. There always remain the major threat of data breach and fear of data security issues, while sharing the crucial data with the AI tools. It has been a very challenging issue in the light when most of the persons in India have not yet fully adopted even cyber security measures.

AI era can be regarded as upcoming era where most of the AI tools are available for demonstration. The cost of utilizing AI is another crucial factor which need to accessed on the basis of companies' needs and requirements. Making use of advanced AI tools in the fields of accounts and finance further require specialized training which is required to imparted by financial and AI experts. This factor cannot be neglected so as to get the best results by way of its advanced tools and techniques.

Finance and accountancy in India follow certain regulatory standards. To make use of AI it is very important to ensure that AI must be compliant with those Indian standards to be helpful as decision making and compliance tool.

Employee reluctance, somewhere over reliance, ethical considerations, regulation gaps are few of the most aspects which need to take care of. Further there can be instances which can be overlooked by the system due to mathematical or conceptual accuracy but may be wrong ethically or morally which can better be detected by human intervention. At such, too much reliance on system may lead to providing inappropriate results.

VII. CONCLUSION

The Government of India is striving hard to achieve the vision of democratizing technology and has been amongst the top rankers in AI skill penetration. It has been the 2nd largest contributor in 2024 and the industry reckons it's concerned talent base to become more than twice by 2027. In spite many AI tools in India are available free, paid and some on demonstration stage. People are gradually started using AI for various fields. In accounts and finance, it has been adopted mostly by big organizations, corporate sectors where its efficiency can be observed easily. However, at small and mid-level, awareness to use right tools for the work is one of the important factors affecting its utility. Especially in the field of accounts and finance, where money is involved, the tools have to show it reliance to maximum level to get adapted at all levels. There is no doubt, that it performs many tasks very instantly and accurately and its speed is incomparable as it can process many transactions in fraction of seconds. It is very beneficial because of its 24 X 7 availability and can respond untiringly. The decision making in case of AI can be considered as unprejudiced as human decisions, at cases, may influenced due to many factors including emotional, fear, coercion, covetousness etc. Again, use of AI tools in long term specially for monotonous tasks in the fields of accounts, auditing and finance is certainly a good substitute option which cut down the overall cost.

At such it is quite natural to create a sense of fear in many personnel to get replaced. However, it can be analysed with the time when computers were invented. The human brain is unmatched and can be utilized for the tasks where AI fails. It does not understand the context like humans do. The creativity and innovation thinking like we humans have, can't be expected from AI. Moreover, areas of generalized knowledge, self-awareness, use of consciousness, emotional judgement, taking moral judgements can be expected from humans. Summing up, AI shall be analysed as supportive technology for humans and shall be utilised openheartedly for taking assistance to humans. The Government initiatives including IndiaAI Future Skills, National Career Service, FutureSkills PRIME are keen to encourage AI talent. In the words of Fei-Fei-Li, the godmother of AI, there is nothing artificial about artificial intelligence, it's made by humans, it's deployed by humans, it's used by humans and it's governed by humans. So, it's on us, humans, to make best and safest use of AI for our sustainability.



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