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Are Auditors Gratified with The Efficient Assistance from Artificial Intelligence?

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ABSTRACT
Artificial intelligence (AI) plays a pivotal role in enhancing various business functions including automating processes, gaining insights from data analysis, and engaging with customers and employees. A recent global survey highlights its extensive use in service operation optimisation, customer service analytics, risk modelling, and sales forecasting. By automating repetitive tasks, AI enables employees to focus on more impactful work while minimising human errors. Moreover, AI's ability to analyse large datasets rapidly uncovers valuable insights and patterns, aiding decision-making across various business segments, such as customer behaviour analysis and cost assessment. Despite its potential benefits, implementing AI requires substantial investment in technology and talent acquisition. While larger companies are more advantage to acquire the relevant resources, smaller ones may face financial constraints. Nonetheless, AI is perceived as an important driver of success, offering opportunities for efficiency and innovation.

Keywords: Artificial Intelligence, Auditing, Efficiency

Introduction

Artificial Intelligence or better known as AI, is a form of technology that combines computer science and extensive data sets to enable problem-solving. It may include sub-fields of machine learning and deep learning. Machine learning is a part of computer science that focuses on data and algorithms to imitate the way humans behave and improve on its accuracy over the period. As more data is acquired, the more accurate the algorithms and outcome of the machine. On the other hand, deep learning is a type of machine learning that is based on neural networks. Where, multiple use of neural networks is used to extract more information from the data. Deep learning is behind many AI applications and services that improve on automation, performing analytical without any human intervention. Among the things we used everyday that are driven from deep learning are gadgets or devices that respond to our voices namely, voice activated smart phones.

There are basically two types of artificial intelligence, namely weak AI, and a strong AI. Weak AI is also known as narrow AI or artificial narrow intelligence (ANI), which is a type of AI that trained and focused to perform specific tasks. Whilst Strong AI is made up of Artificial General Intelligence (AGI) and Artificial Super Intelligence (ASI). The Artificial general intelligence (AGI), or general AI, is a theoretical form of AI where a machine would have an intelligence similar a to human. Whereas, the Super Intelligence would surpass the intelligence and ability of the human brain, which is still very theoretical.

This paper discusses the influence of using AI to the audit discipline, and its impact to audit quality. The paper starts with the fundamental knowledge about AI, followed by AI usage in audit, and auditors' attitude towards AI. Finally, AI influence on the quality of audit and its challenges.

Artificial Intelligence (AI) and Business

AI can support some important business functions, namely: automating business processes, gaining insight through data analysis, and engaging with customers and employees. According to a recent McKinsey Global Survey on AI, the most commonly adopted AI is highly used in service operation optimisation. (McKinsey, 2022). In addition, AI is also commonly adopted in customer service analytics, risk modelling and analytics and in sales and demand forecasting.

AI is used across industries mostly to make a routine or a job more impactful. Repetitive, manual, and mundane tasks are normally very operational and time consuming. With AI, these mundane tasks can be automated, and work can be done more effectively and efficiently. Further, human error can be minimised, if not eliminated altogether. Hence, workers can focus on more impactful and meaningful tasks.

Another significant application of AI in business is analysing large amount of data in split seconds, going beyond what human can do manually. Through this data analytics, AI can identify patterns, trends, or even behaviour of customer buying patterns, cost analysis, or even identifying red flags for irregularities in the revenue stream. The use of big data is crucial in all areas of business creating massive demand for people who experts in data analytics.

AI assists in making informed and robust decision making. Due to the forward features AI and its application with data analytics, there has been an unprecedented increase of data analytics in the 21st century. Data analytics has become the cornerstone of decision making across most business segments, especially those who has the economy of scale. Big data contains varieties of information, large volumes, and bigger data velocity. It allows those in the market to be at the advantage of identifying patterns that suit their interests, challenges that they need to overcome, and threats and risks, that they need to mitigate.

AI in Auditing

Over the years, manual business operations have transformed either into digitalised mode, or data analytics. Accounting and auditing operations are not excepted from these as well. Accounting and auditing are known to be mundane, tedious and time consuming. Hence, the transformation over the years has seen the application of AI in auditing. The influence of AI is not only on the business processes but also to the auditors and firms as well.

Automated Processes

Accounting involves bookkeeping processes that could be very repetitive, mundane and time consuming. And, not limited to human error. The first automated accounting system was created in the 1960s through the process of punch card system. Then, in 1998 a computerised accounting system was developed that made automated calculations. Until present times, general ledger, sales and purchase ledger, or account receivables and payables, may become obsolete due to the process of automation. Hence, the basic accounting and bookkeeping functions, may be extinct by the next decade.

The Deloitte Millennial Survey 2017 showed that automation would induce people to spend on a more value-added activity. What we see today, small, and medium industries can access and afford automations such as e-invoicing, reconciliation, e-bill, e-payment, from the enhanced features that come readily with the accounting software. Though some manually task functions such as scanned receipts and invoices may still present but is immaterial as to the benefits from the automation system. The AI is deployed to overcome the repetitive tasks of data recording, sorting, and matching in the accounting processes. Whilst in audit, AI could automate mundane audit tasks such as extracting and cross-referencing documents, matching debtors' list with sales' invoices, and vendors' list with purchase invoices. AI can improve the work of audit tremendously, streamline all the manually and repetitive task, making it more efficient to collaborate for audit documentation. Consequently, allowing auditors to focus on more value-added services.

Robotic Assistance

As modern technology advances over time, business and financial services, and accounting system have improved tremendously with the assistance from Robotic Process Automation (RPA). The RPA software is widely used to capture, interpret data, enable transaction processing, data manipulation and communication across systems. The time spent on the mundane, complex, and voluminous transactions, are now being replaced by RPA. Hence allowing accountants to focus on more effective and progressive's role in the business. Further, automation could be regarded as a potential benefit for overall productivity and economic growth as disclosed in Deloitte Millennial Survey 2017. Among the examples of robotic assistance are the accounting software available in the market. It reduces the actual manual processes of bookkeeping that is time consuming.

Data Analytics

What does 'data' mean here? It is about the data or information regarding the clients that the firm needs, to allow the firm builds model for the AI audit analysis. Theoretically, it is about examining the data available to draw conclusion and performing data analytics to identify critical areas for investigation.

Data analytics have been used in various sectors and segments. Even in our own smartphones. For instance, identifying our walking trends and capturing when it is time to go home, and many more. The smartphone captures a lot of our personal daily life information. In order to identify those trends and displaying the information that we need, it requires AI. AI and big data needs and feeds one another to produce results. Technically, big data provides an immensely rich source of input data for AI to develop and learn from.

Therefore in business, data and digital platforms allow practitioners the advantage to analyse complete datasets that was impossible previously. Subsequently, practitioners can perform advanced statistical analysis to assess risk and prepare effective audit plan that prioritise on essential matters. Auditors can effectively perform risk assessments, and prepare audit plan that take consideration of anomalies that may go undetected if it were to be done manually.

In internal audit, risk-based audit approach is a common practice to address management's concern to prioritise key risk areas. The risk-based audit method allows the identification of risks that traditional approach unable to do, and customised the audit tasks to be aligned with the risk assessments and the specific objectives to be achieved. The intervention of AI allows practitioners to analyse big data quickly, and accurately. At the same time reducing human

error to identify unusual patterns or anomalies that may suggest irregularities in financial reporting, errors or non-compliance.

Multi-Talented Professionals
As for the auditors, as technology gets more sophisticated, more tasks are being automated. Accountants and modern-day finance professionals may acquire higher skill roles like financial planning and analysis, or strategic business planning and reporting. The advances of data science and AI have open ways human do things today and that transcends in all aspects of business segments. Modern-day accountants and business professionals could generate insights pertaining to market across business divisions such as sales, marketing and financial information, market analysis or strategic business plan, for more informed decision making. The key role of accountants and auditors have revolutionised from their traditional functions, to be more involved in making strategic business decision.

Audit Quality
The audit on financial statements is not spared from the automation processes. From the bookkeeping process and accounting system, companies are required to prepare for closing of accounts at year end, and have them audited, i.e., audit of financial statement. Traditionally, external auditors would spent long hours on tedious audit tasks, prior to the introduction of audit management software.

Prior to audit management software, auditing was performed manually with heavy reliance on junior auditors to collect data. However with the intervention of AI, the amount of audit work has been reduced, allowing more time for value-added work, and reducing human errors. According to a KPMG Survey in 2023, 72 percent of financial reporting leaders believe external auditors are ahead of financial reporting functions on using AI and expect AI to enhance audit quality. The survey further highlights that auditors must lead in deploying AI responsibly, engaging various stakeholders on the best practices, and bring experts together to mitigate risks related to financial reporting. AI may improve on the audit quality by improving on the accuracy from risk assessment and seamless automation that reduces human errors. Further data mining could be done faster and analytics could provide better decision making.

AI and Audit Quality
Financial reporting is an important element to a well-informed market. Quality of financial reports stem from the audit quality and consistency of audit execution by the independent audit. Therefore, ensuring audit quality is pertinent to ensure quality financial reporting and maintaining market confidence.

Audit Delivery Process
Audit quality involves the whole cycle of auditing tasks from inputs, processes and output of the audit. Input may comprise of values, ethics and attitudes of auditors, culture of audit firm, the knowledge, skills, and experience of auditors and the time allocated for them to perform. Whilst process is the rigour of the audit process and quality control procedures the audit firms exercise. It is in this phase or process that AI is being applied, to reduce on the repetitive and manual tasks being performed. Notably, it improves on the audit delivery process and reduction of human error. The final output are reports and statements that are formally being prepared and presented the client, and relied by stakeholders for decision making process.

AI are able to reduce the amount of mundane and routine tasks in business and accounting, such as data entry, reconciliation, chart of accounts and preparing ledgers. Through these advanced technology, manual processes that are time consuming can be streamlined and digitalised, reducing a lot of time that can be spent on it. Thus, these allow auditors to allocate time and focus on more value-added activities and processes such as risk evaluation and assessment on high risk transactions, scrutinise further high risk transactions and decision-making process. Subsequently improves the efficiency of the auditors, allowing them to focus on more critical areas. Hence, improves on the audit quality.

Depth and Accuracy Improve
As auditors, it is pertinent to identify accounting transactions that warrant further investigation if elements of irregularities are found to exist. Irregularities are instances of non-compliance with laws and regulations, such as fraudulent financial reporting. With the deployment of AI, an experience auditors could easily identify and isolate transactions that triggered their doubts, via various statistical tools and diagrammatic presentation.

AI technologies enable auditors to analyse large amount of data more efficiently and effectively than traditional methods. Machine learning algorithms can detect patterns, anomalies, and trends in financial data, which can help auditors identify potential risks and errors more accurately. This improved data analytics capability enhances the depth and accuracy of audit procedures, leading to higher quality audit outcomes. Examples of common simple analysis that could be handy for auditors are, stem and leaf, or boxplots diagrams.

Detection Risk
The purpose of using the statistical tools, audit software, or data analytics, is to reduce the audit risk for the particular engagement. It is vital for any extreme values to be scrutinised and investigated. This may not be possible if sampling method is opted, where some critical areas are undermined and overlooked particularly when it relates to Cash and other types of assets.

The auditor needs to understand the client's business and control environment, so that relevant substantive procedures could be carried out effectively covering, cash, banking transactions and cash flow movements. Similarly the auditor need to note as well for any type of fraud or misappropriation of assets. If the auditors could not have access on these irregularities, the implication is the high audit risk and high risk detection to the auditors. Further, the organisations may be exposed to severe losses and audit firms' reputation will be at stake.

Data analytics and AI may be able to identify unusual patterns in the financial data that may suggest some irregularities in financial statements. Through the advanced technology on machine learning algorithms, patterns or trends, or outliers, can be identified that may suggest further investigation or enquiries. This early enquiries may be able to detect fraud risk or material misstatements. Subsequently improves audit quality.

Ensuring Consistency
In order to ensure quality reporting and subsequently quality audit, continuous monitoring of financial data in real time is pertinent. Auditors can continuously assess financial transactions with technologies from robotic process automation and data analytics. These may ensure early detection of non-compliance or errors, or even fraud. Through advanced technologies auditors become more receptive with the real time data in their audit process, as more

accurate data are gathered that may prompt any red flags. Indirectly, it acts as a risk reduction effort on irregularities or material misstatements in financial statements.

AI and Challenges

Undeniably there are benefits gained from this recent way of life, AI in business, accounting and auditing. Though the benefits outweigh the costs, there are still some challenges either from the auditors or the firms themselves, on implementing AI.

Resistance

Resistance may come from concerns over job displacement, loss of control or fear of technology. As mentioned earlier, AI supports the audit processes, but the output is still relied on the auditors to interpret the findings and prepare the necessary reporting. The knowledge and skills to interpret the output does not come without having to acquire the relevant knowledge. Even to feed the information into the system also requires the relevant product knowledge and skills. Among the big challenges is the resistance and gaining support from the staff on emerging technologies. Technology life cycle is short and there will always be constant upgrades and updates. That indirectly would implicate on the staff product knowledge on the relevant functions of the systems applied. Therefore, reskilling and upskilling requires training and adaptation. Studies show that upskilling continues to be a major issue in China for both employers and employees (PWC, 2023). Hence, the slow adaptation and application on implementation of the new technologies may induce resistance among staff.

Agile

Apart from that, it is vital to recognise the digital skills necessitate as part of the workplace requirement. Hence, modern-day professionals need to embrace these changes to stay relevant in the industry. Though there may be slow adaption due to the process of learning and adaptation, modern-day practitioners need to be agile to the necessary knowledge requirement. Prior study has documented that it is essential for new job comers to acquire the agility in acquiring new knowledge and skills, especially in this era of Industrial Revolution 4.0 (IR4.0) (Azhar, Jalaludin, Ghani, Ramayah & Nelson, 2023). According to ACCA Study in 2020, digital skills are documented to be relevant to the accountancy and finance profession, therefore it is prevalent keep up to date with the relevant technological developments. Studies also have shown that being adaptable or flexible are extremely important skills in the next five years (PWC, 2023). Therefore, there is a need to improve the mind set of auditors or future workforce in being adaptive to change.

Data

Audit firms may face some challenges on the availability of data that the firm could have from the clients, whether it is sufficient or not for the audit analysis. There is internal and external data, that are also in quantitative and qualitative in nature. Hence, the process of integration of different data management and analytics outcome, that varies across the businesses may be a challenging task to modern-day practitioners. Among the challenges are integrating data from one source with another source. And they are of different system and operations. For instance, current company utilise a current system known as ABC software, but to integrate a collaboration service with another company for which they have a different system known as ABD software; some data migration and integration need to be done manually. Which will be time consuming and might need extra costs that firms not willing to invest.

Data Privacy

With many theft identity and huge losses individuals faced from scammers and online fraud, data privacy has become a grave concern. AI systems rely heavily on big data to produce results that humans expected. Hence dealing with sensitive information such as personal data or business data, need to be tactfully taken care off. A way to ensure data protection is compliance to the Personal Data Protection Act (PDPA), where the risk of data breaches or abuses, could have a potential legal consequence.

Ethical Dilemma

As mentioned earlier, AI requires big data to produce the output that human expected. These may need to be acquired from different segments and market, therefore may indirectly take up personal data that individuals may not have agreed to share. Consequently, it raises ethical concerns on transparency of personal or business data, or the accountability and autonomy of the owner of the system. For instance, to identify expected credit loss in accounts receivables may acquire data from debtors such as their credit worthiness and financial status. Because the company need to identify the estimate that the company unlikely recover their debt. Thus, it is crucial in ensuring transparency in AI usage to build trust among stakeholders.

Conclusion

As the world we evolve in are drawn to a digital environment, spanning from could computing and accounting, to e-receipt and front door delivery, the exposure to cyber threats and risks are inevitable. Despite the benefits of AI in auditing and business transactions, organisations need to equip themselves with the relevant software and hardware necessitate for the cyber risk. And these do not come cheap at the expense of the firm. Hence, deciding on investing in these technologies require expansive preparation and decision. The impact to data leaks could cause companies massive losses, whilst to the audit firms, lawsuits, and a stained reputation.

Business leaders have considered AI as an essential driver of success for their companies, as stated in a study by EY in 2019. Applying AI is among the good things that can happen in an organisation, such as face recognition for certain access into company system and data base. But it is not without financial implication and challenges. Companies that managed to invest highly in technology advances in their companies, must have prepared and acquired the necessary resources, comprising related talents and acquiring the relevant assets, such as hardware and software for the system to run. Hypothetically, large organisations are the one who have the opportunities for this. Nevertheless, for small and medium organisations, they might just have to accommodate technology that meet their deep pockets. We cannot deny that AI brings better than harms, but not at the expense of the company. It is not easy to introduce new concept in the industry. A paradigm shift is warranted these days for us to move forward.

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Discussion Questions

1. What is the area that can be used to adopt AI in the practice or business?
2. How can AI improve on the output of practitioners?
3. Give examples of AI application that you know in the industry.
4. As modern-day practitioners, what are the challenges you may face in applying AI?
5. What are the expected skills from modern-day practitioners?
6. How does AI enhanced audit quality?