

An Investigation into the Effect of Artificial Intelligence in the Accounting and Finance Practice in Oman

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Abstract

This research examines the adoption of Artificial Intelligence (AI) in the fields of accounting and finance with special reference to Sultanate of the Oman in an endeavour to evaluate its advantages, disadvantages, and preparedness to adopt. AI has revolutionised the world, providing immense value in decision-making, efficiency, and accuracy. Its practicality and effects in the fields of accounting and finance in Oman, however, are under researched. This paper used mixed methods to address its research objectives. A detailed survey was conducted from handpicked experts and practitioners in the field of accounting and finance, including accountants, financial analysts, auditors, and IT professionals. To investigate further, an in-depth interview was conducted guided by open-ended questions survey. The results indicated experts' awareness of AI usage in accounting and finance field and found its positive impact on decision-making due to accuracy in financial reporting, task efficiency and bridging gap of lack of availability of skilled employees. On the flip side, concerns were expressed in terms of high costs of implementation, security of data and resistance to change. These challenges are seen as impediment for speedy implementation of AI. The study found that even as the adoption of AI is in the formative stages, the potential of AI to revolutionise the accounting and finance functions in Oman is high.

Keywords: Accounting and Finance, Artificial Intelligence, AI Adoption, Sultanate of Oman

JEL: M41, M42, M48, L86

Introduction

AI has emerged as one of the most influential 21st-century technologies, transforming the operations of most companies, including those in finances and accounting (Duan, Edwards & Dwivedi, 2019). Globally, AI is in high demand for its ability to enhance decision-making, apply routine functions automatically, and increase the accuracy and efficiency of an organisation (Kok, Ribbers & van der Valk, 2021). These are most critical in the accounting and finances sectors, where the analysis of data in a timely fashion, the management of risk, and the compliance with regulation are essential. In the case of Oman, a major process of economic diversification under the master plan of Oman Vision 2040 aims to digitalise, innovate, and be sustainable (Oman Vision 2040, 2020). One of the pillars of the vision is financial sector development achieved through the adoption of the latest technology, including AI, in an aim to improve productivity and to attract foreign investment (Ministry of Transport, Communications and Information Technology [MTCIT], 2022).

The AI technologies of Machine Learning (ML), Robotic Process Automation (RPA), and Natural Language Processing (NLP) are already making an impact in core financial functions such as transaction processing, fraud detection, auditing, and financial forecasting (Schroeder, 2020; Am et al., 2023). RPA, for instance, can mechanise bookkeeping by reducing routine tasks, while the use of ML can aid accountants in the detection of anomalies in accounts. Furthermore, NLP software can help in the

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How to cite: Ansari, J. M. A. A., & Suresh, V. (2025). An investigation into the effect of artificial intelligence in the accounting and finance practice in Oman. *International Journal of Business Analytics and Intelligence*, 13(2), 24-34.

analysis of unstructured financial data such as reports and contracts. These developments improve operational accuracy and strategic insight but also stimulate concern about data privacy, job displacement, and the ethics of using AI (Culot et al., 2024). In Oman, even though AI is still in the early stages of adoption in the fields of accounting and finance, the National Program for Artificial Intelligence as well as the Fourth Industrial Revolution Strategy introduced by the government are creating an environment conducive to the adoption of AI (MTCIT, 2022).

Notwithstanding such a positive policy orientation, the practical adoption, effect, and impediments of AI for accounting and finance professionals in Oman are still lacking in both industry- and scholarly-based studies. The current study aims to fill such a research gap by investigating the view and experience of professionals in accountancy and the finance sector regarding AI technology in the workplace.

Objectives of the Study

The objective of this research is to identify the role of AI in the daily work of accounting and financial professionals in Oman.

- To evaluate the effects, benefits, and limitations of AI from the perspective of industry experts, such as accountants, auditors, and banking professionals.
- To examine the accruing advantages that can be realised by accounting and finance sectors as they adopt AI.
- To understand the challenges and prospects, which may confront the accounting and finance sectors as they integrate AI.
- To improve the way AI is adopted in accounting and finance professions.

Problem Statement and Research Questions

In the wake of the increasing role of AI in the global financial system, contextual research in Oman regarding how AI is understood, used, and integrated in the accounting and finance fields is still lacking. As the nation progresses toward digitalisation, the importance of knowing the readiness, challenges, and expectations

of professionals in the sector comes into focus. In the absence of empirical research, stakeholders may end up applying AI in a fashion that does not cater to the actual needs and capabilities of the industry.

As such, the objective of the study is to understand the practical application of AI adoption in the accounting and finance sector in Oman from the practitioners' point of view. The research questions emerging from the above are:

- What is the attitude of accounting and finance practitioners towards the integration of AI in the practice in Oman?
- What can AI provide in a capacity to the segments of accounting and finance?
- What are the issues that accountancy and the whole finance sector encounter when facing the implementation of AI?
- What should be done to augment the early adoption of AI in accounting and finance?

Research Hypotheses

- H1: Oman's accounting and finance professionals believe that AI has a significantly positive impact on their operations.
- H2: The accounting and finance sectors in Oman anticipate significant advantages from AI in terms of decision-making, accuracy, and efficiency.
- H3: The implementation of AI faces notable challenges such as a lack of skilled personnel, ethical concerns, and data security risks.
- H4: Well-structured national initiatives and professional development programmes can significantly enhance the adoption of AI in the financial industry.

Significance, Scope and Limitations

The study is of importance for a number of reasons. In the first instance, it presents empirical data regarding the state of AI adoption in the accounting and finance sectors in Oman, supporting both regional as well as national professional and academic debate. Secondly, it highlights important information for policymakers,

training providers, and corporate leaders who are keen to see digital transformation is highlighted. Finally, the study points to the loopholes and the fields in need of training, investment, or policy formulation to fully realise the potential of AI. Thus, the research targeted accounting and finance practitioners in the Sultanate of Oman, including banks, audit firms, and the finance units of private sector companies. The possible limitations of the study are self-reported data bias and the inability to achieve a fully representational sample because of time and budget limitations. The scope of the paper is organised into five sections including introduction followed by literature review, results, discussions, and conclusion.

Literature Review

Adoption of AI in Accounting and Finance Sector

Artificial Intelligence (AI) is a collection of advanced computational methods, e.g., Machine Learning (ML), Natural Language Processing (NLP), and data analysis intended to support better decision-making and automated tasks conventionally done by human beings. AI has revolutionised the way accounting and finance professionals deal with routine tasks, generate reliable reports, and extract usable informative insights from voluminous data sets (Borimnejad & Borimnejad, 2025). These applications reinforce conventional bookkeeping by facilitating predictive analysis, anomaly discovery, and the processing of massive financial records in real-time. Globally, the change marks a paradigm from manual or mechanistic processes to advanced systems that are able to recognise patterns, assist in decision-making, and manage data autonomously. This change is most applicable in the case of Oman, as AI development is increasingly picking up traction in accordance with national digital transformational ambitions (Zhang et al., 2020). While AI uptake in the accounting and finance industry in Oman is in its nascent stages, initiatives by the government such as the Fourth Industrial Revolution Strategy as well as the National Program for Artificial Intelligence and Advanced Technologies, have established a strategic platform (Ministry of Technology and Communications, 2022). The main methods of adoption of AI are better decision making, reduced costs, and increased operational

effectiveness. Nonetheless, a shortage of professionals with AI capabilities, an ageing infrastructure, and digital unreadiness hinder the adoption, particularly for small and medium-sized businesses (SMEs) (Shakhnoza Shamsuddinova et al., 2024). These challenges are widespread in most developing economies and point to the importance of supportive policies and capacity-building programmes.

Impact of AI in Accounting and Financial Processes

In Oman, artificial intelligence has helped accountancy firms be more productive and precise by streamlining tedious tasks including data entry, classification of transactions, and compliance verification. Chatbots, for instance, are employed to prepare fiscal reports in real-time and verify compliance with regulations (Ministry of Technology and Communications, 2022). Whereas, in the case of more substantial organisations, intelligent accounting solutions are successfully being adopted, SME's do not possess the human and financial resources to adopt them (BankoleFalaye, 2024). However, wherever AI is used, it has allowed accountants to be focus on more value-creating tasks such as strategic planning, financial analysis, and advisory services. These improvements prove that AI can considerably improve the capabilities of accounting systems, although on its application is restricted to chosen industries or organisation sizes (O'Leary, 2020).

AI also serves a crucial role in transforming financial operations, including banking. It makes forecasting, fraud detection, and real-time risk evaluation possible by spotting trends in vast amounts of data that conventional means might not capture (Der, 2020). Some of the Omani financial entities have started incorporating AI technology into customer services, credit evaluation, and transaction surveillance. For example, chatbots based on AI are now widely employed to provide 24/7 customer services, while credit risk analysis and the optimisation of operational costs are undertaken by algorithms (Al-Shammari & Alzghoul, 2025). Despite these advancements, AI adoption in Omani banks remains uneven due to data privacy concerns, cybersecurity risks, and high implementation costs (Abdelfattah et al., 2024).

These issues need to be addressed through regulatory frameworks and public-private partnerships to support broader AI integration.

Perceptions About AI

Attitudes toward AI among accountants and accountancy professionals across the globe are contradictory. While most see the potential to improve productivity and accuracy, a concern still prevails about the potential to replace jobs as well as ethical issues (Wolska, 2025). Interestingly, younger professionals are more open to AI, perceiving that they can utilise the technology to grow their careers. However, older professionals perceive technology as a disruptor (Beck et al., 2005). The division between generations implies that special training and sensitisation programmes would address the gap and ease transitions. Encouraging employee engagement in AI implementation and education can aid in the development of trust as well as minimising resistance (Hsu & Lin, 2023). Active engagement of staff in the implementation process can help establish a culture of innovation and change (Bélanger & Crossler, 2011).

By 2023, banks were expected to save \$447 billion through the adoption of AI technologies. A significant 80% of US banks identified the possible advantages of AI. Improving customer experience is now achievable through the understanding and observation of their behaviour in various aspects. Presently, there is a discernible behaviour by banks making aggressive investments in AI to understand and analyse customer behavioural patterns (Digalaki, 2022). Reducing reliance on traditional assistance in lending, regulatory compliance decisions, and customer service is a strategy adopted in the banking sector. Banks tailor solutions to customer needs and AI tools play an important role in spontaneously adjusting these facilities (Al Harrasi & Suresh, 2025). Lee and Chen (2012) emphasise the reason to adopt M-banking apps is remarkably influenced by assumed risk. The positive mental attitude toward any system, particularly AI, adopts a pivotal way in handling M-banking usage or AI services within the banking sector. Additionally, empirical studies suggest that perceived usefulness and ease of use behave as strong indicators influencing the purpose to use mobile banking or electronic payment services (Suresh & Maity, 2022).

Implementation Challenges and Roadmap for Successful AI Integration

The integration of AI in accounting and bookkeeping is hindered by several factors. High implementation costs, as well as a lack of advanced technology, make it difficult for smaller companies unable to enjoy the benefits of AI technologies. Additionally, the scarcity of experts in AI acts as a major impediment to extensive integration (Nandru et al., 2021, pp. 3–25). Cultural resistance among conventionally trained financial professionals also makes efforts toward implementation even more complex. Many professionals view AI as a potential source of job loss, so they hesitate or resist AI projects. Moral challenges about data privacy, transparency in algorithmic decision-making, and adherence to local regulatory environments also represent a serious concern (Puspita Sari & Imronudin, 2022). To begin with, investment in AI training and education needs to be prioritised through the inclusion of AI modules in universities' curricula and continuing professional development programmes, bridging the existing gap in skills (Zawya, 2022). The culture of innovation in the workplace is equally important; encouraging a spirit of experimentation and digital preparedness allows employees to adopt AI-driven change. Firms are encouraged to start with small-scale pilots to test performance and risks before upscaling, thereby potentially avoiding failures and increasing flexibility (Peek et al., 2020).

To address such challenges, the public and private sectors need to work together to advance AI literacy, implement upskilling programmes, and establish strong regulatory frameworks that guarantee the proper application of AI. To facilitate the integration of AI in the accounting and finance sectors in Oman in a successful and sustainable manner, a multi-pronged, strategic plan is necessary (Al-Zahrani & Alasmari, 2025). Furthermore, stakeholder engagement has to be increased, coinciding with, among other stakeholders, regulators, clients, and employees, to secure transparency and ethicality in the deployment of AI. The formulation of supportive and responsive national policies is also necessary these should be geared toward constructing regulatory frameworks that uphold the privacy of data as well as ensuring ethical AI behaviour (Wan & Jiang, 2025). Public-private partnerships can also be catalysts to the advancement of the sector through the

fostering of digital breakthrough and investment. Finally, continuous evaluation mechanisms must be put in place continuously to monitor the social, fiscal, and regulatory effects of AI implementation and to enable real-time policy adjustments. These proposals establish an end-to-end roadmap to propel the adoption of AI in a manner that is both feasible and sustainable in the financial sector of Oman (Nawaz et al., 2024).

Research Methodology

Research Design

The quantitative research design is adopted here to rigorously analyse the utilisation of artificial intelligence (AI) in the accounting and financial fields in Oman. A quantitative approach to research is helpful in the gathering of numerical data and in performing statistical analysis to identify patterns, trends, and correlations. Quantitative research is particularly suitable when the research aims to generalise from the population to objective data. Employing a quantitative design enables the gathering of systematic responses without complexity, reducing ambiguity and subjectivity. The design also enables the making of evidence-based inferences in accordance with the research objectives and hypotheses about the adoption of AI. A survey method was used, chosen for its convenience in collecting a high amount of data in a short period of time. The survey instrument that had been used was self-complied and controlled, to permit uniformity of all the responses. Using this method, the research is able to access a variety of perspectives from professionals, permitting comparative analysis as well as hypothesis testing of the use of AI and its effectiveness.

On the qualitative side, a non-probability purposive sampling method was also used to select individuals who have direct experience or knowledge of AI technology and tools. These in-depth interviews were conducted for better inferences. The target population of the study are professionals employed in the financial and accountancy sectors in Oman, ranging from accountants, auditors, and financial analysts to compliance experts and IT professionals in the financial industry. The sample consisted of 51 participants, which is a sufficient number for exploratory analysis and the identification of emerging trends. The participants were selected based

on availability and applicability to the topic of the study. While they may not be statistically representative of the entire population, the study provides valuable insight into the uptake of AI in Oman at present.

Moral Issues

The study adheres to a strict set of ethical principles throughout the research process. Participants were presented with an informed consent form that outlined the objective of the study, voluntariness, right to data privacy, and right to withdraw from the study at any point. All the responses were collected anonymously in an effort to keep the levels of privacy as high as possible and keep potential biases to a low level. No personal details to identify the participants were collected, and the data was kept secure with restricted access. The study also avoided any form of coercion or undue persuasion in participant enrollment. The study received ethical approval from the respective academic supervisor to ensure that the methodology conformed to the institution's and academy's research ethics guidelines.

Limitations

While the study provides important insights, it is also constrained in a number of ways. The 51 participants may not constitute a representative sample of the broader accountancy and financial community as a whole in the country of Oman. Additionally, the use of a non-probability sampling technique may give rise to potential for a 'selection bias'. Furthermore, the use of self-report measures may be biased by respondents' personal interpretation or motives, which may affect the validity of the data. Finally, restricting the analysis to the setting in Oman restricts the generalisability of the findings to other locations. Despite such weaknesses, the study provides a sound platform for subsequent, broader studies of the adoption of AI.

Results and Discussion

This section presents and interprets the findings derived from a primary data collected from professionals in the accounting and finance sector in Oman. The purpose is to understand the current state of AI integration, to

explore perceived benefits and challenges, and to evaluate readiness and stakeholder engagement. The results are discussed in relation to existing literature to highlight consistencies and emerging insights.

Table 1: Role in the Accounting and Finance Sector

<i>Respondents' Expertise</i>	<i>Frequency</i>
Accountant	18
Financial analyst	10
Financial director	6
IT specialist	1
Other finance profession	16
Total	51

The survey found that 35.3% of the respondents were accountants, followed by 19.6% who were financial analysts, as shown in Table 1. The range of professionals indicate wide professional representation, making the resulting insights regarding the use of AI in diverse jobs within the industry reliable. Table 2 reveals the interesting finding that the largest percentage of respondents 51% had less than one year of experience in the accounting and finance sector, implying most respondents are early-career professionals. Second in rank, 23.5% of respondents had more than seven years of experience, thereby providing rich qualitative responses from long-time experts. A total of 15.7% of the respondents had 1 to 3 years of experience, and 9.8% had 4 to 6 years of experience. The combination of novice and experienced professionals offers a balanced insight into the adoption of AI, although the prevalence of the less experienced may relate to the increasing number of new professionals joining the profession amidst the digital revolution drive in Oman.

Table 2: Number of Years of Experience in the Field of Accounting and Finance

<i>Experience</i>	<i>Years</i>
1-3 years	8
4-6 years	5
7+ years	12
Less than 1 year	26
Total	51

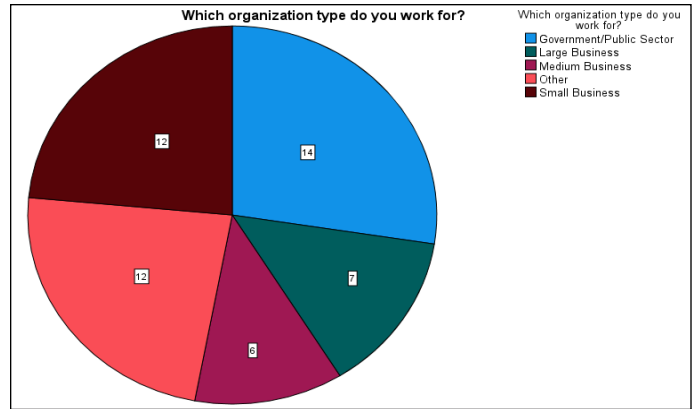


Fig. 1: Type of Organisation of Respondents

The survey results from Fig.1 reveal a diverse representation across various organisation types in Oman’s accounting and finance sector. The largest group of respondents 27.5% work in the government or public sector, indicating the state’s significant role in shaping financial practices. The ‘other’ and small organisations both represent 23.5%, showing high representation from non-traditional or smaller-scale entities. A total of 13.7% work in large companies, and 11.8% of the respondents work in medium-sized companies. The split indicates that the insight from AI adoption is sampled from a wide cross-section of organisational environments so that more can be understood about how various sizes of companies’ view and utilise AI. The majority of the respondents, 72.5%, possess experience of working with AI in their current or previous positions in the accounting and finance profession. The high prevalence of exposure reflects the increasing applicability and adoption of AI technology in the practice of professionals in the Sultanate of Oman. Only 27.5% of the respondents had no experience of using AI, indicating that AI technology and applications are becoming an integral part of the work environment. This prevalence of use may also signal a systemic change in the approach of firms toward digitalisation. The findings give a robust platform for examining the perception, advantages, and disadvantages of the implementation of AI.

Table 3 provides detailed descriptive statistics on perception about AI from respondents on different variables. The statistics reveal that a total of 84.3% of

respondents agree 51% or strongly agree 33.3% that AI has positively transformed decision-making in the accounting and finance industry. The vast majority supports the survey is a testament to the effectiveness of AI in streamlining data analysis, forecasting, and strategic planning. A mere 15.7% were neutral, and there were no disagreements, indicating a general positive perception of the role of AI. These observations concur with the previous sections literature study that contend that AI boosts the speed and accuracy of financial decision-making by curbing human imperfection and enhancing instantaneous insight. In the eyes of many, AI stands as

a strong instrument of enlightened and swift decision-making. A total of 66.6% of the respondents either agree 43.1% or strongly agree 23.5% that AI has increased the accuracy of financial statements in their firms. This reflects confidence in the potential of AI to reduce human error, automate processing, and increase the accuracy of fiscal reports. Although 25.5% of the respondents were neutral, only 7.9% expressed a negative view. Acceptance of the value of AI in streamlining routine tasks such as data entry, payroll, invoice processing, and reconciliations is revealed.

Table 3: Closed-End Responses Statistics on Perception About AI Implementation

<i>Sr. No.</i>	<i>Variables</i>	<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Neither Agree Nor Disagree</i>	<i>Agree</i>	<i>Strongly Agree</i>	<i>Total</i>
1	AI has improved decision-making processes	NR	NR	15.70	51.00	33.30	100.00
2	The use of AI has enhanced the accuracy of financial reporting in my organisation	2.00	5.90	25.50	43.10	23.50	100.00
3	AI has improved efficiency in routine accounting and financial tasks in my organisation	2.00	2.00	15.70	56.90	23.50	100.10
4	The integration of AI in accounting and finance has led to better risk management practices in my organisation	NR	3.90	25.50	51.00	19.60	100.00
5	AI has contributed to more timely financial decision-making in my organisation	NR	5.90	23.50	47.10	23.50	100.00
6	Lack of qualified personnel is a major challenge in implementing AI in the accounting/finance sector	NR	7.80	21.60	49.00	21.60	100.00
7	Data security concerns are a significant barrier to AI adoption in the accounting/finance sector.	NR	NR	15.70	58.80	25.50	100.00
8	The high cost of AI implementation is a key issue for the accounting/finance sector in Oman	NR	2.00	25.50	45.10	27.50	100.10
9	Resistance to change from employees in the accounting/finance sector is slowing AI adoption	NR	9.80	15.70	51.00	23.50	100.00
10	The absence of a comprehensive AI regulatory framework in Oman is a challenge to successful AI integration in the accounting/finance sector	2.00	5.90	17.60	39.20	35.30	100.00
11	Training programmes for accounting/finance professionals are essential for successful AI adoption	2.00	NR	13.70	39.20	45.10	100.00
12	Increased collaboration between the private and public sectors is necessary for effective AI implementation in Oman	NR	3.90	23.50	43.10	29.40	99.90
13	There should be more government incentives to encourage the adoption of AI in accounting and finance	NR	NR	21.60	41.20	37.30	100.10

Sr. No.	Variables	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree	Total
14	AI adoption in accounting and finance would be enhanced by clearer legal and ethical guidelines	NR	2.00	15.70	45.10	37.30	100.10
15	The accounting and finance sectors should start with small-scale AI projects before expanding to larger ones	NR	2.00	19.60	51.00	27.50	100.10

Note: NR refers to no response.

The survey responses show that 70.6% of the respondents (51% agreed and 19.6% strongly agreed) that AI integration has contributed to better management of risk in their organisations. The high perception that AI capabilities, including predictive analytics, anomaly detection, and automated monitoring, better enable fraud discovery, financial forecasting of potential risks, and maintaining compliance, underscores the strong sentiment in the industry. Respondents emphasised the capability of AI in facilitating data-driven risk mitigation measures in the financial sector through instant analysis and intelligent automation. AI adoption in accounting increases operational efficiency by saving time, reducing costs, and minimising manual efforts in routine tasks.

The report indicates 70.6% of respondents have facilitated timelier financial decision-making within their firms. A mere 5.9% of respondents disagreed, while 23.5% showed no opinion. The positive response is due to AI's ability to process large amounts of data in a short time, offering real-time insights, and enabling quick strategic planning. AI-driven dashboards and forecast engines assist in minimising the time spent deciding and increasing financial responsiveness. Similarly, 70.6% of respondents perceive the shortage of skilled professionals as a major issue in the application of AI in the accounting and finance industry. This reflects a fundamental talent deficit in AI skill areas such as data analytics, machine learning, and integration of AI tools. The scarcity of experienced specialists is a chief impediment to the adoption of AI by the finance industry, constraining the ability of firms to utilise intelligent systems to their potential.

The survey findings identify that an overwhelming 84.3% agree or strongly agree that data security problems are a key barrier to the implementation of AI in the financial and accounting sector. Of these, 58.8% agree and 25.5% strongly agree that confidentiality, integrity, and availability of financial data are a concern. These

are compounded by the complexity of the compliance requisite such as the GDPR. Data security in AI must be guaranteed as data breaches can lead to huge financial as well as reputational loss. Respondents also identified the high implementation cost of AI is a big issue for the accounting and finance sector in Oman. There are global observations that the upfront expenses of financial investment in AI technology, infrastructure, software, and training can be high. Spending can be a huge impediment to adoption for smaller firms, even in the face of the long-term benefits of efficiency and accuracy. The equilibrium of the cost and the innovation is necessary to implement AI adoption successfully in the industry. The study shows that 74.5% of the population of respondents strongly agrees or agrees that opposition from employees to change is leading to opposition to the adoption of AI in the accounting and finance industry. This is typical as employees may be threatened by automation or are new to new technology. As a counterstrategy, comprehensive change management in the form of open public relations, training, and mechanisms of support is necessary to assist employees to grasp the advantages of AI. Elimination of the barrier is feasible to facilitate the smooth and proper adoption of AI in firms.

The survey findings reveal that 74.5% of respondents agree or strongly agree that the absence of an overall regulatory framework for AI in the Sultanate of Oman is the greatest barrier to the adoption of AI in the bookkeeping and accounting industry. The lack of proper regulation can be a deterrent for the adoption of AI by encouraging vagueness in the application of ethical principles, data privacy, and compliance standards. A framework of regulation is essential in curbing the dangers and allowing suitable application of AI technology. Regulatory bodies in the Sultanate of Oman need to collaborate with industry experts to develop and implement rigorous AI policies. Furthermore 84.3% of participants agree or strongly agree that training

programmes in accountancy and financial professionals are a prerequisite for the proper utilisation of AI. These training programmes are necessary to close the skills gap, providing the professionals with the right kind of knowledge that can be used to optimise the application of AI tools. Proper training can lead to better decision-making, better data analysis, and the establishment of an innovative culture in companies. As technology evolves, professional development is necessary to achieve a competitive edge and a seamless shift to AI-based working.

The outcomes of the survey illustrate that 72.5% of respondents agree or strongly agree that public and private sector coordination is most vital to the success of the application of AI in Oman. Public and private sectors can collaborate to face challenges of regulatory issues, sharing of data, as well as the provision of resources that are vital in facilitating the process of technology and the ethical use of AI. Sector coordination can drive policymaking development, aid in industry-specific solutions to AI, as well as the exchange of best practices, ending up in a supportive business environment that is overall for the use of AI in the accounting and financial sectors. Additionally, 78.5% of participants agree or strongly agree that incentives by the government are necessary to drive the adoption of AI in the accounting and financial fields. Government incentives, including subsidies, rebates, and grants, can dampen the high up-front adoption costs of AI, and make AI even more accessible to firms. The incentives can drive innovation, facilitate industry partnerships, and ease the economic pressure from small- and mid-size firms, enabling the integration of AI to reach more firms. Such a method can drive the adoption of AI and drive the competitiveness of the sectors. Majority of respondents concur or strongly concur that more definitive ethical and legal guidelines would help improve the use of AI in the accounting and financial industries. Stronger regulation can reduce the potential risks of using AI, including data privacy incidents and ethical decision-making problems. Clarity of regulations can facilitate compliance, generate trust, and drive the appropriate utilisation of AI technology. Clear regulation can drive innovation as companies are given necessary legal clarity to confidently fund the progress of AI solutions. Respondents agreed on using small-scale AI projects as a practical plan of

action for the adoption of AI in accounting and financial functions is a good approach. Companies are able to trial the effects of AI in operations, detect potential problems, and avert threats before scaling advanced applications. Incremental integration of AI enables companies to implement rollouts to increased complexity and refined planning for resources, developing capabilities along the way. Incremental integration helps generate a spirit of experimentation and learning, increasing the probabilities of the successful application of AI in broader functions.

Regarding respondent's suggestions on additional measures or strategies to enhance the adoption and effective implementation of AI in the accounting and finance sectors in Oman, it was opined that government should play the frontline role of creating unambiguous AI-friendly policies and formulate an environment supportive of the adoption of AI. The measures can range from granting fiscal incentives, subsidies, and grants to companies that implement AI technology, to insisting on AI-specific regulations to achieve secure and ethical utilisation of AI. Regulatory sandboxes under the watchful eye of the regulator can permit companies to try out AI technology without subjecting them to the possible risks. These measures can work to lessen the doubts regarding AI and instill confidence in the industry stakeholders. Second, workforce development was found to be a must. Equipping accountants and financial professionals with training in AI and data analysis to make them ready to deal with new technology is a necessity. Industry actors can also collaborate with universities to create curricula that offer training in the use of AI in accounting and finance so that new graduates possess the latest technology know-how. Also, professional development through training and certification can stimulate the growth of AI literacy in the industry. Data infrastructure was also highlighted as an area of urgent concern. Creating secure, standardised data-sharing environments and encouraging usage of the cloud can facilitate the analysis of AI in real-time as well as the safeguarding of data security and privacy. In the end, public-private partnerships should be promoted in a bid to stimulate innovation. Government-sponsored pilot projects can demonstrate the applicability of AI in situations of auditing, predicting taxes, as well as fraud controls. Public-private partnerships can induce innovation, reduce the implementation cost, as well as improve the uptake of AI.

Conclusion

With the inclusion of regulatory support, capacity building, infrastructure development, and public private partnerships, the Sultanate of Oman can create a sustainable platform for the adoption of AI in the accounting and financial sectors. Public-private partnerships should be encouraged to support AI pilot projects and initiatives. Investments should be made in improving the workforce and enhancing digital infrastructure. Blockchain technology and enhanced data security measures should be implemented. Accounting professionals should receive targeted training and development in AI tools. Localised AI solutions should be encouraged through government incentives and grants. Respondents were very concerned about important barriers including the unavailability of skilled workers, the expense of implementation, security of data, change resistance, and the lack of regulations. These elements represent threats to the ease of adoption of AI and need to be strategically overcome in order to realise the full potential of AI. In general, the study fulfilled its aims by providing an insight into the status of AI adoption, its value, as well as the challenges that need to be met for its proper implementation.

Recommendations

- **Capacity Building:** Institutions should invest in training and upskilling employees to reduce skill gaps and prepare the workforce for AI-based roles.
- **Gradual Integration:** Start with pilot projects to test AI tools and build internal confidence before scaling up across departments.
- **Cost-Effective Strategies:** Collaborate with tech vendors for affordable AI solutions and seek government incentives for digital innovation.
- **Data Security Measures:** Establish strong data governance frameworks to address privacy and cybersecurity concerns.
- **Regulatory Development:** Encourage regulatory bodies in Oman to create AI-specific standards and ethical guidelines to support safe implementation.

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