Evaluating the Impact of AI on Talent Management Case of Sohar International, Oman

Abdullah Al Khawaldi[1]

23f24844@mec.edu.om[1]

Department of Management Studies, Middle East College, Muscat, Oman [1]

Abstract. This study examines how Artificial Intelligence (AI) is transforming talent management at Sohar International, a leading bank in Oman. Using a mixed-methods explanatory case study, the research combines quantitative data from 70 employees with qualitative insights from interviews conducted with five HR managers involved in AI deployment. Descriptive and inferential statistical analyses, supported by triangulation, were used to evaluate the impact of AI on recruitment, employee engagement, performance management, and workforce planning. The findings show that AI improves recruitment efficiency through automated screening and enhanced job-fit prediction, supports personalized development initiatives that strengthen engagement, and enhances performance evaluation through real-time analytics and skill-gap identification. AI also contributes to strategic workforce planning by identifying high-potential employees and guiding career-path decisions. Overall, responsible AI integration can enhance organizational agility, productivity, and evidence-based HR decision-making, enabling Sohar International to improve the effectiveness of its talent management practices.

Keywords: Artificial intelligence, Employee Engagement, Human resources, Organizational performance, Performance management, Talent management.

1 Introduction

Artificial Intelligence (AI) and machine learning have become influential forces across multiple industries, reshaping operational processes and decision-making systems. Within the domain of human resources (HR), AI-driven tools are increasingly being incorporated into talent management functions such as recruitment, appraisal, workforce analytics, and career development. These technologies offer organisations the promise of greater efficiency, improved accuracy, and more informed decision-making. However, their broader implications for employee experiences, organisational culture, and long-term HR outcomes remain insufficiently understood. Concerns regarding job displacement, algorithmic bias, and reduced human judgment continue to raise important questions about responsible and ethical AI adoption. As the use of AI expands, organisations must critically evaluate both its advantages and limitations to ensure balanced and sustainable implementation. Recent developments show that AI and machine learning have enabled new and more sophisticated HR systems capable of automating candidate sourcing, screening, assessments, and interview processes [12].

MECSRC 2025, May 01, Muscat, Oman

DOI 10.4108/eai.1-5-2025.2361530

Sohar International, one of Oman's prominent financial institutions, has begun leveraging AI to modernize its talent management practices. AI-enabled recruitment systems—such as automated résumé-screening tools and virtual assistants—have enhanced the speed and consistency of candidate interactions. Beyond recruitment, AI applications at Sohar International are being used to support analytics-driven talent development, personalized employee experiences, and predictive insights for workforce planning. The bank's strategic investment in AI signals its intention to strengthen HR capabilities, improve operational efficiency, and position itself as a forward-thinking employer within a competitive financial services environment. As the organisation deepens its reliance on AI, it becomes essential to evaluate its impact on employees, processes, and overall talent management outcomes.

1.1 Background of the Study

Artificial Intelligence has become an important enabler in modern talent management, allowing organisations to evaluate skills more accurately, build advanced people-analytics dashboards, and recommend personalized learning and development pathways. Early studies indicate that AI can streamline HR operations and expand the scope of talent-related decision-making; however, its long-term organisational implications remain uncertain [8]. The introduction of AI into HR also raises concerns related to bias, employment disruption, explainability, and transparency. A systematic assessment is therefore necessary to understand how AI affects employees, organisational procedures, and performance outcomes. Such an assessment can help organisations adopt AI responsibly while maximising its strategic benefits.

Sohar International has been progressively integrating AI into its HR systems over recent years. The bank adopted AI-enabled tools for résumé screening, talent matching, and automated candidate evaluation to reduce manual workloads and accelerate hiring processes. With growing confidence in these technologies, the organisation expanded AI applications to include personalised employee experiences, predictive analytics, and targeted development initiatives. These systems have improved accuracy, operational efficiency, and overall employee engagement. In Oman's competitive financial sector, Sohar International's investment in AI-driven talent management has positioned the bank as a technologically advanced employer. Understanding the impact of these tools is essential for demonstrating how AI can support HR transformation and strengthen organisational competitiveness.

1.2 Problem Statement

Although Sohar International has incorporated AI into several aspects of its talent management system, the organisation lacks a clear understanding of how these technologies are influencing HR outcomes. Specifically, the bank has not fully assessed the effects of AI-driven tools—such as automated candidate tracking, digital skills assessments, personalised career-development recommendations, and people-analytics dashboards—on recruitment timelines, costs, employee retention, performance levels, and the identification of skills gaps. Without a structured evaluation, the organisation remains uncertain about both the advantages and the potential drawbacks of AI adoption, including risks related to algorithmic bias, reduced transparency, and concerns about job displacement [11].

A comprehensive assessment is therefore required to determine the organisational implications of integrating AI into Sohar International's talent management framework. Such an evaluation will enable the bank to maximise the benefits of AI while mitigating associated risks, ensuring that the technology strengthens decision-making, enhances performance, and supports ethical and responsible workforce management.

1.3 Research Aim and Objectives

Aim. This study seeks to examine the risks associated with AI adoption at Sohar International and propose mitigation strategies that support more responsible and effective talent management. It also aims to explore the advantages AI offers in enhancing decision-making processes within HR functions and to assess the overall influence of AI technologies on the bank's talent management practices. Through this evaluation, the study contributes to the broader discussion on AI-driven HR transformation and offers practical insights for organisations adopting similar technologies.

Research Objectives.

1. To identify the risks of AI adoption to the organization and suggest mitigation measures to help Sohar International improve.
2. To evaluate Sohar International's benefits resulting from the implementation of AI technologies for decision-making in talent management.
3. To assess the impact of AI technologies at Sohar International in managing talent within the organization.

1.4 Research Questions

1. What available measures can Sohar International put in place to prevent risks by focusing on a responsible AI integration at the organization?
2. How has Sohar International benefit in decision making regarding talent management under the use of AI?
3. What is the impact of the use of AI in talent management at Sohar International?

1.5 Scope and Limitations of the Study

This study examines how Artificial Intelligence influences talent management practices at Sohar International Bank in Oman. The assessment focuses on AI adoption, integration, and its effects on HR processes. Specifically, the study explores risks and challenges linked to AI usage in people management, including data privacy, algorithmic bias, potential job displacement, employee morale, and satisfaction. It also identifies mitigation strategies needed for the ethical and responsible use of AI in HR activities.

The research evaluates how AI supports decision-making accuracy, operational efficiency, employee experience, and data-driven insights within Sohar International. Both tangible and intangible benefits of AI-enabled talent management are considered.

The study further investigates AI's influence on key HR functions such as recruitment, performance management, employee development, and workforce planning.

It examines how AI has contributed to reshaping HR operations and enhancing talent practices within the organisation.

Data for the study is limited to Sohar International's Oman operations, with a focus on its HR department and its use of AI-driven tools for recruitment, skills assessments, career development, and people analytics.

Surveys and interviews with HR professionals and line managers provide the basis for understanding AI's impact on talent management. As the research is restricted to one organisation and its recent three-year period of AI adoption, the findings may not be generalizable to other industries or institutions. Nevertheless, the study offers valuable insights into AI-driven HR transformation within a major financial organisation.

1.6 Limitations

This study focuses exclusively on examining how Artificial Intelligence affects talent management within Sohar International Bank's operations in Oman. The analysis is limited to the AI tools implemented by the HR department, particularly those used for recruitment, skills evaluation, performance management, learning and development, career planning, and workforce analytics. The research includes perspectives from HR personnel and line managers responsible for employee recruitment, development, and oversight.

The study employs surveys and interviews conducted before and after AI adoption to collect both quantitative and qualitative data. However, the research is confined to a single organisation, which restricts the diversity of viewpoints and limits the generalisability of the findings. Insights drawn from this case study may not fully apply to other banks, industries, or geographic contexts.

Additionally, only AI solutions introduced within the bank over the past three years are examined, narrowing the historical scope of the analysis. The research timeline is relatively short, and the study population is small, which may reduce the breadth of responses and constrain the depth of certain observations. Despite these limitations, the study provides meaningful insights into AI-enabled HR transformation within a major financial institution.

1.7 Mitigating Measures

To strengthen the rigour of the study and reduce its methodological limitations, several mitigation strategies were applied. First, documenting Sohar International's AI-related initiatives allows for meaningful comparison with similar implementations in other organisations, supporting external benchmarking and broader interpretation. Second, the research incorporates both quantitative and qualitative data to validate findings through triangulation, reducing the influence of individual biases and enhancing result reliability.

Multiple internal and external data sources were used to gain a more comprehensive understanding of Sohar International's progress in AI-enabled talent management. Confidentiality concerns were addressed by aggregating and anonymizing sensitive data, encouraging participants to provide open and honest responses without fear of identification.

Given that a single-case research design may limit generalisability, the study acknowledges this constraint and carefully interprets findings within the organisational context.

These mitigation measures collectively enhance credibility, improve data interpretation, and support more accurate conclusions about the bank's AI-driven HR transformation.

2 Literature Review

Artificial Intelligence (AI) has become increasingly embedded in organisational functions, particularly within talent management, where companies including those in the banking sector are adopting AI-driven systems to strengthen competitiveness and improve decision-making. This literature review examines the application of AI in Sohar International's talent management processes and outlines the theoretical foundations relevant to its adoption. The section integrates empirical studies and theoretical models to understand how AI influences HR operations and organisational performance [4].

The review begins by exploring AI's role in recruitment automation, data-driven decision-making, and personalised employee development. Several studies highlight how these technologies can optimise HR processes, improve selection accuracy, and enhance employee satisfaction. AI's contributions to workforce planning, employee retention, and the development of people-management capabilities are then reviewed, illustrating how advanced analytics can support long-term talent strategies [6].

This chapter frames AI as a strategic organisational asset using the Resource-Based View (RBV) theory, which positions AI systems as tools that can boost productivity, increase competitiveness, and strengthen HR capabilities. The literature also identifies gaps, including limited research on AI's long-term effects on employee morale, organisational culture, algorithmic fairness, and risk mitigation strategies. Addressing these gaps, the current study contributes to the growing conversation about ethical AI use in HR and explores how AI adoption affects people-management practices at Sohar International.

The review concludes by highlighting AI's transformative potential in talent management and establishes the foundation for analysing Sohar International's current practices and outcomes.

2.1 Artificial Intelligence (AI) Applications

Syahrin and Akmal (2024) provide an overview of key AI technologies such as machine learning, natural language processing (NLP), human–machine interaction, and AI ethics that form the foundation for understanding how AI can be applied across organisational functions. Their study highlights the potential of these technologies to reshape talent management at Sohar International. For example, machine learning algorithms can automate critical HR processes, including résumé screening, skills assessments, and virtual interviews, thereby improving recruitment speed and accuracy [12].

NLP-driven chatbots and virtual assistants can handle initial applicant inquiries and assist employees in accessing HR services. This reduces administrative workload and enhances user experience through quick, personalised responses [12]. AI-enabled platforms can also transform onboarding and training by incorporating virtual and augmented reality tools, enabling immersive, interactive learning environments that improve knowledge retention and employee readiness.

Ethical considerations are essential when deploying AI in people management. Ensuring fairness in algorithm design and avoiding discriminatory outcomes are key responsibilities for organisations adopting these technologies. The literature also shows that AI can support adaptive learning and personalised education, helping organisations strengthen talent pipelines by fostering more skilled and agile workforces.

Overall, the reviewed studies confirm that AI has the potential to improve recruitment, selection, onboarding, training, and development at Sohar International. These insights form the basis for examining how AI integration is influencing the bank's talent management outcomes.

2.2 An Integration of AI into People Management

Rožman, Oreški, and Tominc (2022) argue that integrating AI into people management functions can significantly improve employee engagement and overall organisational performance. Their framework is highly relevant to this study, as it outlines how AI influences core HR activities such as talent acquisition, employee retention, training, development, and organisational culture [11]. Using a structured conceptual model, the authors demonstrate how AI can enhance five major dimensions of talent management, offering a clear theoretical foundation for evaluating its impact at Sohar International.

The literature suggests that AI-driven people management practices can lead to better decision-making, improved workforce insights, and more personalised employee experience. These capabilities make AI a strategic asset for organisations seeking to strengthen performance and competitiveness. The model presented by Rožman et al. aligns closely with the needs of Sohar International, which is currently exploring how AI-enabled HR systems affect business outcomes and employee engagement.

Their methodology based on collecting data from managers and organisational leaders provides a replicable approach for the present study. Applying this model enables Sohar International to validate theoretical linkages, assess the effectiveness of AI-driven HR tools, and gain a practical understanding of how AI integration influences workforce performance. By building on these conceptual foundations, this research examines how AI is transforming talent management practices within the bank.

2.3 Theoretical Framework

Resource-Based View (RBV) Theory. The Resource-Based View (RBV) emphasizes that an organisation's competitive advantage depends on how effectively it acquires and utilizes valuable, rare, inimitable, and non-substitutable (VRIN) resources. From this perspective, the adoption of advanced AI systems at Sohar International represents a strategic investment capable of strengthening recruitment, performance management, and employee development. The bank's use of AI-driven tools for screening candidates, identifying skill gaps, and supporting personalised growth pathways can be viewed as VRIN capabilities that enhance both operational performance and human capital.

RBV also highlights the importance of organisational competencies in supporting new technologies. At Sohar International, the effective use of AI requires skilled HR professionals and robust workflow processes that complement technological capabilities.

Although AI presents challenges such as concerns over bias and job displacement the RBV perspective suggests that proactively managing these risks ensures that AI remains a sustainable strategic resource. Overall, RBV demonstrates how AI integration can elevate talent management effectiveness and reinforce long-term organisational resilience.

Technology Acceptance Model (TAM). The Technology Acceptance Model (TAM) provides insight into how employees perceive and engage with AI systems in talent management. According to TAM, two factors perceived usefulness and perceived ease of use shape an individual's willingness to adopt new technology [3]. In the context of Sohar International, perceived usefulness relates to how AI improves recruitment workflows, enhances HR analytics, and supports better decision-making. When employees recognize these advantages, acceptance and adoption increase.

Perceived ease of use focuses on how intuitive and user-friendly the AI applications are. If HR staff and employees find the systems accessible and simple to navigate, adoption becomes more likely. TAM therefore provides a useful lens for identifying barriers and enablers to AI acceptance within the bank, helping HR teams design implementation strategies that encourage positive user experiences.

Contingency Theory. Contingency Theory argues that organisational strategies and tools must align with contextual factors such as structure, culture, and environmental demands. This theory is particularly relevant to Sohar International's efforts to integrate AI into talent management [2]. The success of AI implementation depends on how well it fits with the bank's work culture, technological readiness, and strategic priorities. For instance, organisations with innovative cultures and strong digital infrastructures are more likely to adopt and benefit from AI-driven HR solutions.

Talent management needs also play a critical role. AI adoption is more impactful when an organisation faces challenges such as skills shortages or the need for improved employee engagement. External pressures including increasing competition in the financial sector further motivate Sohar International to invest in strategic technologies. Contingency Theory therefore helps explain how contextual factors influence the effectiveness of AI in talent management.

Socio-Technical Systems Theory. Socio-Technical Systems (STS) Theory highlights the interdependence between technological tools and social dynamics within an organisation. This theory is essential for understanding how AI adoption interacts with human behaviour, workplace culture, and organisational processes at Sohar International [13]. While AI tools can support predictive analytics, automate routine HR tasks, and enhance decision quality, their success ultimately depends on employee trust, transparency in decision-making, and alignment with organisational values.

STS emphasizes that technology should complement rather than replace human capabilities. Employees are more likely to embrace AI when it is presented as a supportive tool that enhances their work rather than a threat to their roles. By applying STS principles, Sohar International can ensure that AI-driven talent management is both technologically efficient and socially sustainable, contributing to improved HR performance and employee engagement.

2.4 Conceptual Framework

Although AI adoption in talent management has become increasingly common, existing research still lacks clarity on several critical areas—especially its long-term effects on employee morale, job satisfaction, organisational culture, and ethical concerns. Earlier studies tend to focus on the functional benefits of AI but give limited attention to how continuous AI usage shapes employee experiences and workplace dynamics over time. This gap highlights the need for further examination of how AI influences employee well-being and organisational behaviour within real operational settings.

The literature also acknowledges major challenges associated with AI integration, such as algorithmic bias, ambiguity in decision-making, job displacement, and privacy concerns. However, many studies stop short of offering concrete mitigation strategies. This research addresses that gap by exploring how Sohar International manages these risks through practical, evidence-based measures that support responsible and transparent AI deployment.

Furthermore, there is limited empirical work assessing how AI influences measurable HR outcomes—such as hiring timelines, retention rates, cost efficiency, and performance improvements. By analysing quantitative and qualitative data from Sohar International, this study provides insight into how AI-driven tools affect organisational performance and employee engagement.

Given the scarcity of AI-focused research in the banking sector, the Sohar International case offers a valuable opportunity to examine AI's real-world applications in a highly regulated and competitive industry. The resulting conceptual framework illustrates the interconnected effects of AI on talent acquisition, employee development, performance management, and workforce planning, while also identifying the ethical and operational considerations that must be addressed to ensure sustainable AI adoption.

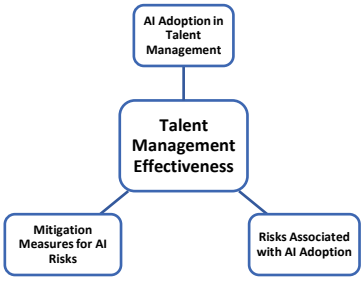

Fig. 1. Conceptual Framework.

3 Research Methodology

This study adopts both descriptive and exploratory research approaches to analyse how Artificial Intelligence influences talent management practices and outcomes at Sohar International. The combination of these methods enables the researchers to identify observable trends while also investigating deeper organisational dynamics associated with AI adoption.

The descriptive component provides a structured overview of how AI-enabled systems are currently being used in talent acquisition, workforce planning, employee satisfaction, and HR decision-making [14]. Quantitative data were collected through questionnaires distributed to employees and managers, allowing the study to measure perceptions, usage patterns, and performance indicators linked to AI tools. Complementing this, qualitative data were obtained through structured interviews with HR managers to capture detailed insights into the organisation's experience with AI, including challenges, ethical concerns, and implementation complexities.

Exploratory research was used to examine areas where limited prior knowledge exists—such as the effects of AI on transparency, algorithmic fairness, and job security [1]. This approach is particularly useful for unpacking employee perceptions, identifying hidden issues, and exploring the contextual factors influencing AI adoption. The interviews provided open-ended input that helped clarify how employees and HR leaders interpret the risks and opportunities presented by AI technologies.

The use of both descriptive and exploratory methods allows the research to present evidence-based findings while also addressing qualitative aspects that are vital for understanding AI's broader organisational impact. Through this integrated methodology, the study evaluates risks, benefits, and strategic considerations, ultimately offering comprehensive recommendations for enhancing the application of AI in talent management at Sohar International.

3.1 Research Approach

This study employs a mixed-methods research approach, combining both quantitative and qualitative techniques to examine how Artificial Intelligence influences talent management processes at Sohar International. Using this approach allows research to explore the topic from multiple perspectives, strengthening the depth and reliability of the findings.

Quantitative data offers measurable insights into employee perceptions, AI usage patterns, and changes in talent management outcomes, while qualitative data help explain the reasons behind these patterns. By integrating both forms of evidence, the study is able to capture not only what changes occur due to AI adoption but also how and why these changes take place [13].

The mixed methods approach therefore enhances the richness of the analysis, enables triangulation across data sources, and provides a more comprehensive understanding of the relationship between AI technologies and talent management practices within the organisation.

3.2 Research Instruments

This study employed two primary data collection instruments: questionnaires and interviews. The questionnaire was administered to Sohar International employees using a Google Forms link, allowing for efficient distribution and systematic collection of quantitative data. The survey captured participants' perceptions, experiences, and observations regarding the bank's use of AI in talent management.

To complement the survey results, structured interviews were conducted with a selected group of HR managers. These interviews provided deeper qualitative insights into how AI has influenced HR functions, including recruitment, skills assessment, employee development, and workforce planning [9]. The combination of questionnaires and interviews ensured that both broad organisational trends and detailed managerial perspectives were captured, strengthening the comprehensiveness and validity of the study's findings.

3.3 Population and Sample Size

The total workforce at Sohar International consists of 1,474 employees. Based on this population, a statistically appropriate sample size of 70 respondents was determined using a 95% confidence level and a 5% margin of error, applying finite population correction to ensure representativeness. The first 70 completed responses collected through the distributed Google Forms link were included in the sample. In addition, five HR managers were purposively selected for qualitative interviews, given their direct involvement in AI implementation and talent management processes. This combined sample provides a reliable foundation for analysing organisational perceptions of AI adoption.

3.4 Sampling Technique

A simple random sampling technique was used to select participants for the quantitative survey. All employees at Sohar International had an equal opportunity to participate, and the first 70 individuals who submitted their responses through the Google Forms link were included in the final sample. This approach ensured fairness, reduced selection bias, and provided a representative cross-section of staff views.

For the qualitative component, a purposive sampling method was applied to select five HR managers. These individuals were chosen based on their direct involvement in recruitment, employee development, performance management, and AI-enabled HR systems. Their insights were essential for understanding the practical implications of AI adoption within the organisation.

Together, these sampling techniques provided a balanced dataset that reflects both broad employee perspectives and expert managerial insights on AI's role in talent management.

3.5 Data Collection Techniques

Data for this study were collected through multiple complementary methods to ensure a comprehensive understanding of how AI influences talent management at Sohar International. Primary quantitative data were gathered using structured questionnaires distributed to HR staff, line managers, and employees through Google Forms. This method allowed responses to be collected efficiently and in a consistent format, supporting statistical analysis of key trends and perceptions.

To supplement the survey findings, face-to-face semi-structured interviews were conducted with selected HR managers. These interviews provided deeper insight into the organisation's experience with AI tools, capturing detailed perspectives on recruitment, skills assessment, performance management, and employee development [5].
By combining online surveys with direct interviews, the study was able to analyse both measurable trends and nuanced qualitative insights, providing a well-rounded understanding of AI's impact on HR processes and decision-making.

3.6 Data Analysis Techniques

The quantitative data collected through the questionnaire were analysed using descriptive statistical methods to identify patterns, trends, and distributions across participant responses. A paired t-test was applied to compare pre-AI and post-AI implementation results, enabling the study to assess whether observed differences were statistically significant.
To strengthen the findings, qualitative insights from interviews with HR managers were incorporated and triangulated with the quantitative outcomes. This triangulation approach ensured that conclusions were supported by multiple evidence sources and reduced the likelihood of bias [5].
Overall, the analysis combined statistical testing, descriptive evaluation, and cross-validation of qualitative and quantitative data. This integrated technique provided a robust understanding of how AI adoption has influenced talent management practices at Sohar International. All organisational data were analysed using appropriate statistical tools to ensure accuracy and reliability.

4 Data Analysis and Results

4.1 Demographic Analysis

The survey captured responses from employees working across different departments within Sohar International. As shown in Table 1 and Figure 1, 42.9% of the participants were line managers, 28.6% were HR managers, and 28.6% were staff members. This distribution ensured that perspectives were gathered from individuals occupying a range of responsibilities within the organisation.

Table 1. Role of Participants.

Item	Frequency	Descriptive
HR Managers	20	28.57%
Line Managers	30	42.86%
Staff members	20	28.57%
		100.00%

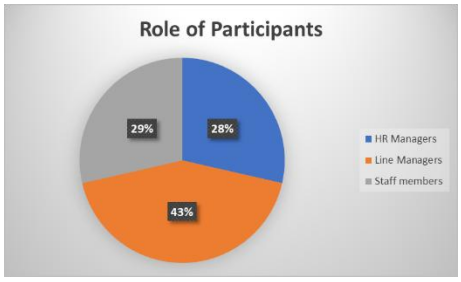

Fig. 1. Role of Participants.

Employee tenure varied notably among respondents. As reflected in Figure 2, the largest group (35.7%) had worked at Sohar International for four to six years, indicating a strong representation of mid-career employees who have experienced both pre- and post-AI work environments. Meanwhile, 28.6% reported one to three years of experience, 14.3% had less than one year, and 21.4% had over six years of service, providing a balanced mix of perspectives from newer and more seasoned staff.

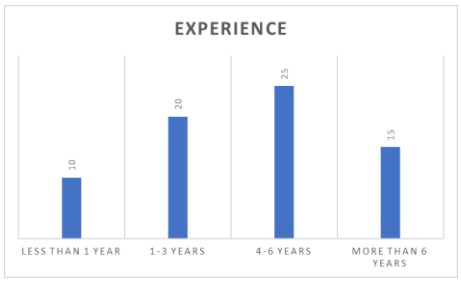

Fig. 2. Experience in years of participants.

When asked about their interaction with AI tools, 42.9% of respondents indicated that they frequently used AI systems in their daily work. Approximately 28.6% reported rare or no use of AI, suggesting variability in exposure depending on job role or department [10]. These findings also highlight potential areas for targeted training to improve adoption.

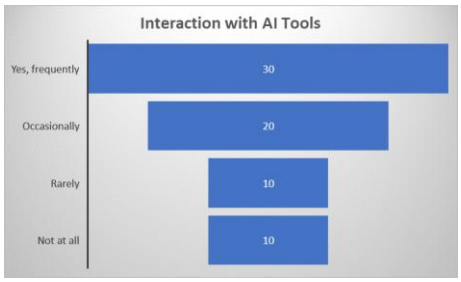

Fig. 3. Participants interaction with AI Tools.

Regarding perceived risks of AI in talent management, 35.7% of participants identified algorithmic bias as the primary concern, followed by job displacement (28.6%) and lack of transparency in automated decisions (21.4%). Other risks accounted for 14.3% of responses. These concerns mirror trends identified in recent literature on AI ethics and adoption challenges [7].

Table 2. Identified Risks.

Item	Frequency	Descriptive
Algorithmic bias	25	35.71%
Lack of transparency	15	21.43%
Job displacement	20	28.57%
Other risks	10	14.29%
		100.00%

Responses on the effectiveness of current mitigation measures varied. While 21.4% viewed the measures as "very effective," most rated them as "somewhat effective" or "neutral." This indicates a need for stronger frameworks to address AI-related risks and ensure transparent implementation strategies.

Table 3. Effectiveness of Mitigation Measures.

Item	Frequency	Descriptive
Very effective	15	21.43%
Somewhat effective	20	28.57%
Neutral	20	28.57%
Ineffective	10	14.29%
Very ineffective	5	7.14%
		100.00%

Survey data also highlighted AI's benefits. Enhanced employee satisfaction was the most frequently cited advantage (35.7%), followed by improved recruitment efficiency (28.6%). Better workforce planning (21.4%) and cost savings (14.3%) were also noted as positive outcomes of AI adoption.

Table 4. Benefits of AI.

Item	Frequency	Descriptive
Improved recruitment efficiency	20	28.57%
Enhanced employee satisfaction	25	35.71%
Better workforce planning	15	21.43%
Cost savings	10	14.29%
		100.00%

AI's role in enhancing decision-making was also assessed. A majority (35.7%) indicated that decision-making had "significantly improved," while 28.6% reported moderate improvement. A smaller group observed "no change" (21.4%) or negative impacts (14.3%), highlighting areas that require refinement in AI integration.

Table 5. Influence of AI in Decision-making.

Item	Frequency	Descriptive
Significantly improved	25	35.71%
Moderately improved	20	28.57%
No noticeable change	15	21.43%
Negatively impacted	10	14.29%
		100.00%

4.2 Overall Improvement and Employee Perception

Survey results indicate that AI has produced notable improvements in talent management at Sohar International. As shown in Table 6, 42.9% of respondents stated that AI had "greatly improved" HR processes, while 28.6% reported "slight improvement." However, 14.29% observed "no change," and another 14.29% experienced "negative impacts," suggesting that although AI adoption is generally viewed positively, certain areas still require refinement to maximise its effectiveness.

Table 6. Overall Improvement by AI.

Item	Frequency	Descriptive
Greatly improved	30	42.86%
Slightly improved	20	28.57%
No change	10	14.29%
Negatively impacted	10	14.29%
		100.00%

Employee perceptions of AI's role in the organisation were also assessed. As presented in Table 7, 71.4% of participants viewed AI either "very positively" or "positively," indicating strong confidence in AI's ability to enhance HR effectiveness. Meanwhile, 14.29% expressed negative views, and another 14.29% held a neutral stance. These mixed perceptions highlight the importance of transparent communication, ongoing training, and continuous improvement to sustain employee trust and engagement.

Table 7. Employee preception of AI.

Item	Frequency	Descriptive
Very positive	20	28.57%
Positive	30	35.71%
Neutral	10	14.29%
Negative	5	7.14%
Very negative	5	7.14%
		100.00%

5 Conclusions and Recommendations

5.1 Conclusions

Objective 1: Identify the Risks of AI Adoption and Suggest Mitigation Measures

The findings reveal several risks associated with integrating AI into Sohar International's talent management system, including algorithmic bias, lack of transparency, and concerns about job displacement. While AI offers substantial advantages, these risks require robust mitigation strategies to ensure fair and ethical implementation [8]. Measures such as conducting regular audits of AI algorithms, increasing transparency in automated decision-making, and preparing employees for new roles through targeted reskilling initiatives can significantly reduce these risks. Overall, the study highlights the importance of balancing AI's benefits with responsible governance.

Objective 2: Evaluate the Benefits of AI in Decision-Making for Talent Management

The analysis shows that AI has contributed meaningfully to HR decision-making at Sohar International. Key improvements include faster and more accurate recruitment processes, enhanced employee satisfaction, and better workforce planning capabilities. AI's ability to automate resume screening and generate predictive insights allows HR managers to make more informed and data-driven hiring decisions [4]. Additionally, personalised learning recommendations enabled by AI have positively influenced employee engagement and development. Despite these advantages, varying levels of adoption across departments indicate the need for stronger integration efforts.

Objective 3: Assess the Overall Impact of AI Technologies on Talent Management

Overall, AI has reshaped talent management practices at Sohar International, resulting in improved efficiency, reduced operational costs, and increased employee engagement. Most HR professionals and employees view AI adoption positively, attributing benefits to quicker recruitment cycles, enhanced performance evaluations, and clearer workforce planning insights [13]. However, a minority expressed concerns related to ethics, transparency, and job security, underscoring the need for ongoing monitoring and continuous improvement. The study concludes that while AI has significantly transformed HR processes, responsible implementation and careful oversight are essential to sustaining long-term success.

5.2 Recommendations

Enhance Mitigation Strategies for AI Risks

- Establish clear organisational policies that address algorithmic bias and promote transparent decision-making.
- Conduct regular ethical reviews of AI systems to ensure alignment with industry standards and internal values.
- Offer structured training and reskilling programmes to reassure employees and support their transition into AI-enabled work environments.

Invest in Comprehensive AI Integration

- Encourage consistent AI adoption across all departments to maximise system-wide benefits.
- Provide customised AI training to employees to improve digital literacy and foster a culture of innovation.
- Strengthen system compatibility and integration to ensure seamless use of AI tools in daily HR operations.

Monitor and Evaluate AI Effectiveness

- Implement continuous feedback mechanisms to evaluate AI's impact on recruitment, retention, performance, and workforce planning.
- Use data analytics to monitor trends and adjust AI-driven solutions to meet evolving organisational needs.

Promote Transparency and Communication

- Clearly communicate how AI-supported decisions are made to build employee trust and foster acceptance.
- Address employee concerns proactively and incorporate their feedback into future AI enhancements.

References

[1] Aithal, P. S., & Aithal, S. (2024). Redefining Experimental, Empirical, and Exploratory Research in AI Era. Poornaprajna International Journal of Emerging Technologies (PIJET), 1(1), 90-136.

[2] Chatterjee, S., Mikalef, P., Khorana, S., & Kizgin, H. (2024). Assessing the implementation of AI integrated CRM system for B2C relationship management: integrating contingency theory and dynamic capability view theory. Information systems frontiers, 26(3), 967-985.

[3] Davis, F. D., Granić, A., & Marangunić, N. (2024). The technology acceptance model: 30 years of TAM. Springer International Publishing AG.

[4] Dawson, J. Y., & Agbozo, E. (2024). AI in talent management in the digital era–an overview. Journal of Science and Technology Policy Management.

[5] Karunarathna, I., Gunasena, P., Hapuarachchi, T., & Gunathilake, S. (2024). The crucial role of data collection in research: Techniques, challenges, and best practices.

[6] Khang, A. (Ed.). (2024). AI-Oriented Competency Framework for Talent Management in the Digital Economy: Models, Technologies, Applications, and Implementation. CRC Press.

[7] Liu, S., Li, G., & Xia, H. (2021). Analysis of talent management in the artificial intelligence era. In 5th Asia-Pacific Conference on Economic Research and Management Innovation (ERMI 2021) (pp. 38-42). Atlantis Press.

[8] Pillai, R., Ghanghorkar, Y., Sivathanu, B., Algharabat, R., & Rana, N. P. (2024). Adoption of artificial intelligence (AI) based employee experience (EEX) chatbots. Information Technology & People, 37(1), 449-478.

[9] Pitura, J. (2023). Using the e-questionnaire in qualitative applied linguistics research. Research Methods in Applied Linguistics, 2(1), 100034.

[10] Rocket Reach, (n.d). Sohar International Management, Oman. https://rocketreach.co/sohar-international-management_b5c346c7f42e0f57#:~:text=Sohar%20International%20employs%201%2C474%20employees,Counsel%20%2D%20Head%20of%20Legal).

[11] Rožman, M., Oreški, D., & Tominc, P. (2022). Integrating artificial intelligence into a talent management model to increase the work engagement and performance of enterprises. Frontiers in psychology, 13, 1014434.

[12] Syahrin, S., & Akmal, N. (2024). Navigating the Artificial Intelligence Frontier: Perceptions of Instructors, Students, and Administrative Staff on the Role of Artificial Intelligence in Education in the Sultanate of Oman. Arab World English Journal (AWEJ) Special Issue on ChatGPT.

[13] Thomas, A. (2024). Digitally transforming the organization through knowledge management: a socio-technical system (STS) perspective. European Journal of Innovation Management, 27(9), 437-460.

[14] Villari, B. (2023). Action research approach in design research. In The Routledge Companion to Design Research (pp. 269-284). Routledge.