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ROLE OF ARTIFICIAL INTELLIGENCE IN TALENT MANAGEMENT PRACTICES: THE MEDIATING ROLE OF ORGANIZATIONAL JUSTICE AND THE MODERATING ROLE OF EMPLOYEE INNOVATIVE WORK BEHAVIOR IN PAKISTAN'S CONSTRUCTION SECTOR

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ABSTRACT

Artificial intelligence (AI) is increasing its coverage of human resources and staff-led recommendations. But the staff interpretations of automated recommendations are still important in project-based construction settings. The qualitative study examines how AI-supported recruitment, project implementation, performance assessment and learning in talent management are experienced in the Pakistan construction industry. Covering all HR management, engineering, supervision, skilled trade and digital operations, the study uses organizational equity to interpret staff responses and considers innovative performance as a requirement for interaction with AI-supported decisions on the basis of 18 codes of participant accounts. The thematic analysis identifies five interconnected issues: screening efficiency versus contextual competence; data visibility and procedural fairness; challenges to algorithmic ratings; unequal access to learning; and employee innovation as a source of improvement or resistance. The findings reveal that AI-supported decisions would be more acceptable if data mirrored practical skills, the assessment rules were transparent and the human assessment made available. Conversely, opaque evaluations, unequal digital access, and limited potential for challenging decisions can undermine perceived fairness. The study develops an evidence-informed qualitative framework and implications for governance without claiming statistically tested mediation, moderation or population-level generalizability.

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Introduction

Construction companies rely on workers with different experience, depending on projects, jobs and contracts. An engineer on site can be assessed in terms of design coordination and compliance with security rules, while a foreman can be evaluated with regard to occupation, sequence management

and practical problem solving. Human resource decisions must take into account these differences in demanding project schedules. Recruitment often involves direct vacancies; opportunities for career advancement may be limited; and access to development may be dependent on management judgements and design requirements. These conditions make it hard to standardize talent management. They also make the construction a key setting to see whether AI-supported decisions can enhance efficiency without impairing the perceptions of an honest treatment of employees.

By using AI-supported talent management, screening applications can help to tailor your mapping competencies workforce to projects, identify learning needs and synthesize performance information. Their main appeal lies in processing different datasets and writing recommendations quickly. Staff-management checks for AI show possible improvements in recruitment, planning and training for personnel, along with risks of biased information, privacy and excessive dependence on automated systems (Vrontis et al., 2022; Bujold et al., 2024; Úbeda-García et al., 2025). It depends on their implementation and technical competence whether these opportunities are used by workers. An effective shortlist may still exclude a professional who has never had practical expertise that is added to a formal database.

The building sector in Pakistan faces particular challenges. Digitalization research identifies uneven technological adoption, limited technical expertise and organizational barriers (Tanoli, 2025). Such conditions may increase the gap between office-based decision-makers and staff on site whose performance is affected by the availability of equipment, weather, supply chains and the evolving working conditions. Hence, similar performance scores would apparently suggest very different conditions. Justice is all the more important were algorithmic recommendations influence recruitment, deployment, evaluation, certification or promotion without clear explanations or procedures for the correction of the situation. Research at algorithmic recruitment also stresses transparency and interpersonal interactions in the perception of organisational fairness (Ochmann et al., 2024).

Organizational justice provides the basis for understanding such interpretations. Distributive justice concerns the fairness of outcomes; procedural justice concerns decision rules; interpersonal justice concerns respectful treatment; and informational justice concerns sufficient and truthful explanations (Colquitt, 2001). These dimensions explain why similar automated decisions at one workplace can be accepted and challenged at the other (Babaee & Shank, 2025). Innovative working behaviour leads to further consideration of this issue. Workers who are developing proposals and introducing improvements may apply the feedback from AI in a meaningful way, but can also dispute wrong metrics or disclose exclusionary practices. Whether these contributions can influence decisions depends on employee voice's possibilities and the responsiveness of management.

This study focuses on three questions: How do employees in the construction sector interpret AI-based talent management decisions? How do organizational justice judgments determine your answers to recruitment, allocation, evaluation and development? In what circumstances can

innovative work patterns contribute to improving, challenging or resisting such practices? The analysis examines the interpretation sequence connecting the practice of AI-enabled HR, organizational justice's four dimensions and the contextual role of employee innovation. Instead of trying statistical measures of mediation or moderation, it produces qualitative explanations in participant accounts.

Theory and conceptual development

AI-enabled talent management in project organizations

Talent management includes the identification, engagement, deployment, development and retention of individuals with the capability to meet current and future organizational needs. This involves predicting specialist personnel needs, coordinating employees into temporary projects, providing site-based knowledge, and preparing supervisors for more complex responsibilities in the construction sector. AI can support these tasks with classification systems, prediction systems and recommendations, but the resulting decisions remain organizationally judged (Theodorsson & Dosanjh, 2026). Application forms, project minutes, attendance reports, training course and management evaluation are only available for a partial view of competence. Therefore, the value creation of AI depended on the completeness of the data, the criteria for determining effectiveness and the extent to which the human judgement supplemented the automated recommendations.

There are differences in the building between formally documented qualifications and site-based knowledge practices. Digital profiles can achieve qualifications, certified training and monthly objectives for regular staff whilst qualified tradespeople demonstrate competence is performed through repairs, informal mentoring and rapid reassignment. The easier measurement should not be confused with increased performance. When subcontractors do not have access to HR portals, missing information could be misunderstood as proof of poor performance of a recommendation system. For safety-critical appointments, contract renewals, and progression to supervisory functions, it is important to distinguish the lack of data from negative evidence (Mori et al., 2025).

This literature warns of algorithm as a neutral observer. Kellogg et al. (2020) shows how algorithmic systems can control, document and evaluate the work, forming management controls. Bujold et al. (2024) uses technical capabilities other than responsible implementation, including transparency and accountability. The capacity assessment which is conducted by AI may assist in the identification of training needs, but this is challenging if seen as fully evaluating the skills of the construction worker. The practical knowledge of websites, informal mentoring and emergency response may be inadequate. Systems which are trained in historical promotional patterns can reproduce preferences for specific departments, references or contract types (Bandara et al., 2025). Consequently, their recommendations reflect the underlying data and institutional assumptions and not merely the objective evaluation.

Organizational justice as an interpretive mechanism

Because employees evaluate both the outcomes and the processes they are achieved with, Organizational justice connects AI supported decisions with the experiences of employees. Procedural justice requires consistent criteria, correctable information and options for doubt decisions. Informational justice requires meaningful explanation; interpersonal justice requires manager to deliver decisions with respect instead of postponing responsibility to a score. Distributive justice concerns whether appointments, trainings, and rewards are adequately allocated, taking into account contributions and circumstances. These dimensions strengthen each other, but are not interchangeable with each other. This is because it is not fair to interpret discriminatory rules, just as favourable promotion does not automatically confirm confidence in the procedure (Naoum et al., 2026).

Justice's machinery does not limit itself to the promotion of decisions. An employee can accept the exclusion of an advertising shortlist where criteria are published, relevant evidence is verified consistently and appeals may be filed (Yuan et al., 2025). The other individual could get the desired assignment, but did not trust a system that collected personal data without explanation or allowed supervisors to elect to change the rankings on an ad hoc basis. Thus legitimacy depends on the outcome and performance of the organizational authority. This interpretation shall cover evidence and procedures used by personnel to evaluate performance of activities before deciding whether they will learn, conduct internal mobility or contribute to performance improvement.

The empirical analysis of algorithmic selection demonstrates that candidates do not consider algorithms automatically fairer than decision makers; presumed fairness depends on several aspects of justice (Juijn et al., 2023; Ochmann et al., 2024; Low et al., 2026). Automated evaluation studies also distinguish between the developmental feedback and management control's perception with different effects on motivation and well-being (Edwards et al., 2024). In the construction work AI-supported procedures can represent speech, respect, explanation and outcomes, which in turn informs employees' willingness to apply, remain, learn or accept project assignments. This report describes a qualitative process of explanation and not a quantified indirect effect.

Innovative work behavior as a contextual condition

Innovative work behavior includes the generation, promotion and expression of useful ideas as a contextual condition for Innovative work behavior (Scott & Bruce, 1994). Staff can propose that the project should incorporate practical skills, identify the reasons why automated performance measures punish delays in the supply of materials or encourage fairer recognition of non-formal learning in terms of construction. Such activities could improve the AI-supported process if managers would be able to welcome and respond to issues which are the basis of these proposals (Zhou et al., 2026). Jansen (2000) links innovative work behavior to the perceived fairness of effort and remuneration, emphasizing that innovations are influenced by labour relations and not by existing employees regardless of their treatment.

The moderating role was as to whether innovative working behaviour changes implementation of perceptions of justice in the light of AI-supported talent practices. Employees who have access to

decision makers can test alternative skills profiles, training tools and rules for project matching. On the other hand, fear of retaliation, time limits and insufficient digital access can prevent the implementation of suggestions. Challenges to unfair recommendations could also temporarily reduce a system's acceptance and at the same time improve it to the advantage of others. Innovation is therefore not expected to stimulate adoption in all cases: it can highlight injustice, facilitate slow implementation and eventually enhance governance (Liu et al., 2026). These contrasting conditions have been investigated by the qualitative analysis.

Method

Qualitative research design and participant profile

Interpretivist qualitative approach was used by researcher to examine how people responsible for the construction sector understood the AI-supported talent management solutions. The analysis was based on 18 anonymised participant accounts (P01–P18), organized in six roles: HR and talent professionals, project managers, civil engineers, foremen or foreman, skilled labourers and digital or factory personnel (Table 1). Members' identifiers shall be used consistently to link the quotations and consolidated accounts to the thematic discussions. The analysis focuses on the professional perspective rather than on the assumption that employees at the various organisational levels are the same about AI-supported decisions.

The investigation covered three areas of AI-supported talent management: recruitment and shortlists to perform technical and oversight functions; project distribution and performance appraisal; and training, certification and continuity recommendations. Comparisons between management accounts and staff distinguish between AI used as support for decision-making and the recommendations considered effective in determining those accounts. Attention was also given to differences between office-based employees and site workers with limited access to formal HR systems.

Table 1. Role profile matrix

Role group	Profile IDs	Decision exposure
HR and talent specialists	P01–P03	Screening, promotion and learning recommendations
Project managers	P04–P06	Resource allocation and performance dashboards
Site engineers	P07–P09	Competence scores and cross-project mobility
Supervisors/foremen	P10–P12	Crew appraisal and practical skills recognition
Skilled trade workers	P13–P15	Training access and contract renewal
Digital/operations staff	P16–P18	Data quality, appeals and system redesign

Thematic analysis and interpretive rigor

The interview's topics dealt with specific talent management decisions, evidence which was used for implementing them, opportunities for correction, disclosure and staff ability to suggest improvements. The qualitative analysis included an understanding of accounts, coding, topic development and interpretation, with the approaches of Braun and Clarke (2006) and Byrne discussed (2022). The data were used to analyse accounts for delayed material deliveries which were related to missing operational context, restricted employee voice and performance scores challenges, for example. Gioia et al. informed the distinction between the first order expressions of participants and the second order interpretations of researchers (2013).

Interpretation of individual members' accounts, thematic codes and broader conceptual explanations. For instance, an informed supplier delay was analysed as a missing operational context, an analysis of an entity's analytical relationship to the procedural justice system and its interpretation as to an employee's willingness to challenge an assessment. The interpretation does not make any reference to the causal relationship. In the development of the themes a case of contrasting and alternative accounts relating to different roles, access to information and decision-making authority was looked at.

The thematic debate comprises supportive, critical and contradictory reports such as situations where transparent processes do not prevent unequal outcomes, create tensions between innovative proposals, or accepted an unfavourable decision following a statement. The participants' identifications accompany quotes and summarised perspectives in the findings. Not just in terms of the numerical frequency, the themes are interpreted in relation to the content and context of these accounts and. The result of these relationships are qualitative interpretations, not statistically established reasons and consequences.

Findings: interpretive themes

Faster screening, but uncertain recognition of practical competence

The first is the tension between faster screening and proper recognition of practical competences. HR participants spoke about AI supported sorting that was based on qualifications, experiences and key words. Participant P02, a HR specialist, declared: "I can find ten candidates before lunch, but the list tells me who fits the form, not who can solve a problem on site." The comment recognises the administrative efficiency, while questioning the validity of criteria that are used to identify construction expertise. Similarly, support for Project Manager P05 was based on consistent minimum standards, but expressed reservation that an experienced electrician with limited formal documentation may be omitted in a shortlist. More rapid processing of data does not necessarily improve selection's quality where the skills do not come within the standardized fields of data.

Expert workers have offered a contrasting perspective. P14 described an experienced worker, who performed complex repairs but who missed a formal digital portfolio: "The system can see certificates; it cannot see the repairs my team asks me to handle." Concerns have been with distributive implications, because chances can be lost, and procedural implications because captures the data's non-relevant expertise. On the other hand, Engineer P08 welcomed a Cross-project competence map that could not have previously identified capabilities for a new project manager. Such differences showed that automation could either limit or enhance fairness in light of competence's practical level.

The underlying problem is how talents are displayed in organizational data. When only formal qualification is recognized by the system, valuable informal experience may not be taken into account in standardization. The same technology might improve recognition when including project history, monitoring assessments and accessible corrections procedures. Therefore, AI is better understood as a decision-support infrastructure where the legitimacy of the employees depends on their ability to accurately show their abilities in the records used. A concern among participants suggests that justice's notion begins before decision is made on distribution and promotions.

Procedural and informational justice depend on contestability

The second question is whether employees can understand and challenge performance scores. Site Engineer P07 described a milestone-based assessment: "Materials arrived late, but my rating fell as if I controlled procurement." The problem was not the measurement itself, but the failure to take into account the circumstances of beyond the employee control. Project Manager P04 thought that similar metrics were useful to identify inconsistent assessments at different locations, provided that managers could record uncontrollable delays. That contrast illustrated the distinction between uniform rules and fair procedures: application of identical measures to unequal circumstances would result in obvious consistency, while undermining procedural justice.

The participant in the digital operations P17 recommended an audit trail for the documentation of original entries, subsequent corrections and final decisions. The employees needed more than an explanation that "the model decided." should know the evidence that mattered, how to repair errors and who remained accountable. Supervisor P11 described a contrasting situation where a ranking was interpreted and revised in respect of after a missing safety training record was provided. Acceptability in those cases depends not only on the outcome but also on comprehensible procedures and the direct interaction of the individuals. Information and interpersonal justice are interlinked, but are distinguished.

The negative case provides an additional explanation for the distinction. P03 describes the documented scoring policy that shows that disadvantaged staff are required to have high score points without training. The procedure was transparent but the distribution of possibilities was unequal. A further account describes the acceptance of a negative allocation after credible explanation and access to appeal. These examples show together how different dimensions of

organizational justice react to decisions which are supported by AI. The Dashboard alone cannot achieve fairness without sound proof, consistent processes, and a responsible human explanation.

AI-supported appraisal can shift from development to surveillance

The third theme concerns the question of whether automated evaluation can be considered as development or surveillance. The manager of P06 considered automated tracking to be one means of tracking the crews that needed more help and training. Alternatively, P12 has described the same kind of information as a monitoring tool for each delay: "Once the number turns red, nobody asks what happened at the site." This variance is consistent with a study that differentiated the development information from management control in algorithmic HR systems (Edwards et al., 2024; Zheng et al., 2025). Employees interpreted the purpose of the system through how managers use their outputs and the consequences of unfavourable ratings.

P09 described a constructive experience in which recurring quality issues lead to focussed coaching and an opportunity to prove improvement with another task. Because one score reflected shift's loss during the shutdown of equipment, on the other hand, P15 discussed exclusion from a future project. In the absence of corrective actions, the employee perceives the decision as a punishment, which was presented as objectivity. These reports have indicated that a AI-supported evaluation may have consequences for expected career security with varying effects, depending on whether evaluation is development or exceptional.

This theme also has an impact on safety at work. Builders might have to stop work on a situation in which there is no safety. A model which rewards non-stop output without detecting safety reports can prevent protective behavior. Therefore, responsible evaluation should not only be concerned with the speed or use, but also with quality, cooperation, education and safe practices. HR practitioners should distinguish between information tools for decisions that are made with respect to disciplinary control systems. The confidence of employees depends just as much on the purpose and consequences of the measurement as on the software's technical sophistication.

Unequal learning access threatens perceived distributive justice

The fourth is dealing with the unequal access to learning recommendations for AI and its effects on distributive justice. The P01 welcomed the automated assessment of skills that had helped staff to define courses that are relevant to their future role. Foreman P10 explained that terrain crews cannot often attend recommended courses due to rigid project plans and transport limitations: "The office gets the training link; the site gets another deadline,", as the participant expressed it. The barrier wasn't just the algorithmic bias. Institutional arrangements had prevented some staff from using the guidance, despite the fact that formal access to software seemed to be equal.

A skilled worker, P13 evaluated short learning modules in accessible languages, recognition of existing skills and confirmation of new competencies by monitoring. This report suggests that learning is fair and does not require that every employee has the same digital route. Digital operations participant P16 warned that incomplete personnel records could encourage skilled employees to receive repeated recommendations for basic training. Such recommendations can embarrass staff when visible to decision makers and can distort development potential. Therefore, corrections to data, the recognition of previous experience and participation's practical support were crucial for fairness.

Talent's development supported by AI could increase the organizational capacity only if the opportunities identified were made available to staff. The recommendations need to be accompanied by sufficient time, equipment, relevant languages and clearly defined learning and progression pathways. Otherwise, technology could raise awareness of training requirements without enhancing access to development (Lazazzara et al., 2025). As restrictions in working conditions can be misinterpreted as differences in motivation or competence, the difference between office employees and site-based employees is important. Organizational Justice explains why an efficient recommendation system can be regarded as exclusionary.

Innovative behavior amplifies improvement only when voice is protected

The fifth theme aims to investigate innovative work behavior as a prerequisite for the form of response to AI-supported talent management. The digital operation participant P18 proposed that AI generated rankings be compared to field ratings, errors identified, and corrections recorded. Engineer P08 suggested that skilled professionals help design skills descriptions so that systems can do practical problem solving instead of software login information alone. These accounts include the development and encouragement of specific advances rather than technology's mere acceptance. Employees can act as co-designers if they have a means to raise concerns and have a broad management response.

There is also limit to the positive potential of innovation. Supervisor P11 identified a prejudiced assignment rule but feared that questioning the dashboard would be interpreted as challenging senior management. P14 suggested an option for recognising informal skills. But the proposal was not directly accessible for HR and had a secure way of sharing. Potentially useful innovation was constrained by organisational requirements in both reports. The P17 reported that error had been repeatedly acknowledged, however, as a measure of temporary loss of trust between managers. Such short-term disruption could involve a higher level of long-term accountability. These accounts show why innovative behavior shouldn't be considered as equal to uncritical acceptance of AI.

The findings show that innovative behavior can help turn justice issues into improvements in AI-supported learning and mobility when workers have access to information, secure capabilities for speech and responsive managers. Where there is lack of justice, proactive employees can challenge automated decisions instead of providing support. Where the structures of authority prevent changes, proposals can barely have practical consequences. Therefore, Innovative behavior

changes workers' perception of perceived fairness and fails to promote a positive association automatically. Formal channels for assessing workers' concerns may support improvements without removing full responsibility for the correction of unfair systems.

Table 2. First-order coding and thematic interpretation

Participant quotation or account summary	Second-order category	Justice/behavior link
"The system can see certificates; it cannot see the repairs my team asks me to handle."	Incomplete skill representation	Procedural/distributive justice
"Materials arrived late, but my rating fell as if I controlled procurement."	Context-insensitive performance scoring	Procedural justice
"Once the number turns red, nobody asks what happened at the site."	Opaque managerial decision	Informational/interpersonal justice
"The office gets the training link; the site gets another deadline,"	Unequal conversion of training access	Distributive justice
P18 proposed comparing AI rankings with field assessments.	Employee-led algorithm improvement	Innovative work behavior
P11 feared challenging the dashboard would be seen as challenging management.	Restricted employee voice	Boundary condition on innovation

Synthesis of the qualitative process

AI-supported staff, review and development influenced the experiences of employees by evidences recognized by systems, explanations provided for decisions and the possibility of correction of errors on the five themes. Employees interpreted these features by means of an organizational justice system where it was established that AI-supported talent practices had been used as an opportunity or as a lack of transparency. Innovative work behavior had an effect when employees offered alternatives and organizations responded to them. The results support three-stage analysis of interpretation, not an measurement of causal sequence: AI design and use shape equity perceptions; these perceptions inform participation in talent practices; and opportunities for employee innovations affect whether response includes improvement, resistance, or reluctance.

Particularly informative are the differences between professional functions. While an employee assigned to subcontractors who encounters a similar error may not have reliable legal remedies, an

expert with access to decision makers may consider an imprecise score as a starting point for collaborative problem solving. Otherwise, such response measures may be misconstrued as differences in technical or innovation readiness. The contrast emphasises the voice's importance, the decision-making rights and the responsiveness of the management to understand innovative work behavior. Comparative studies among different firms and sites could further study these contextual differences.

Table 3. Qualitative propositions for further research

Proposition	Expected mechanism	Boundary condition
P1	Transparent, accurate AI support may improve talent decisions through stronger justice perceptions.	Data quality and human appeal rights
P2	Opaque or context-insensitive AI may weaken the legitimacy of development and appraisal decisions.	Unequal site conditions and contract status
P3	Innovative behavior may reshape justice-to-engagement pathways through challenge and co-design.	Protected voice and managerial responsiveness

Discussion

This study contributes to the AI-HRM debate by making organizational justice at talent management's heart, not only AI evaluation, by efficiency. Previous surveys identify potential benefits of recruitment, skill identification and workforce planning combined with ethical and organizational risks (Vrontis et al., 2022; Bujold et al., 2024). The accountability of participants indicates how the conditions specific to the actual construction complicate these trade-offs. It is evident that objective indicators cannot reflect delays in the supply, informal education or unequal access to training. The key question therefore is not just whether a particular model can identify employees in a consistent manner, but also whether the underlying evidence reflects the contributions of the worker and potential.

Indeed, institutional justice is an interpretative rather than a statistically-defined role of mediation. Its four dimensions provide distinct explanations of employees' experiences: procedural fairness concerns consistent data and appeal rights; informational fairness concerns understandable explanations; interpersonal fairness concerns respectful treatment; and distributive fairness concerns actual access to desirable assignments and training. No security will restore any source of inequality. Detailed explanation cannot compensate for systematic missing information that is based on websites, whereas equal access to a training portal is not a guarantee of equal opportunities for continuing training.

Innovative behaviour's supposed mitigating role in the workplace is also conditional. Innovative employees can spot mistakes, challenge unfair classifications and recommend alternatives instead

of simply welcoming new software. Janssen (2000) connects innovative behavior to fairness's perception, while Scott and Bruce (1994) focus on generating, promoting and implementing ideas. Pro-active engagement was constructive when management responded, and where the challenge posed a risk of retaliation, it brought tensions or calm in the report of the participants. By considering innovation as an unconditional driver of AI introduction, these opposing outcomes can be ignored. The findings therefore underline the employee's safe voice, the accountability of management and access for less digitally connected employees.

The study provides empirical and qualitative interpretations of organizational processes, instead of statistical tests of mediation or moderation. Thematic findings cannot demonstrate the common usage of specific AI practices in the Pakistan building sector or how indirect and interaction effects are quantified. Its contribution is to identify the mechanisms which are listed in the accounts, to explore alternative interpretations and to assess issues for further research. Comparative studies may combine interviews with employees with HR data sets and documented AI-supported business and site decisions.

Implications, limitations and conclusion

Implications for construction management

The construction companies taking over the AI-supported talent management should first review the decision to be made on information to be taken on the systems. Recruitment tools require established qualification criteria, how practical experience should be documented and testing for disproportionate exclusion is required (Soleimani et al., 2025). Performance models should take into account security responsibilities, delays in procurement's placing, complexity of projects and legitimate interruptions. Training platforms should link recommendations to the available time, tools, languages and recognized ways forward. Each follow-up decision should remain under the responsibility of a recognised manager who could clarify the criteria, review contested outcomes and create appropriate records. The employees need to understand whether an algorithm advises the manager or effectively determines the outcome.

The managers should also provide structured participation opportunities, including regular check of the skill criteria with the on-site supervisors and craftsmen, accessible error reports and pilots comparing system recommendations with independent job evaluations. These steps are of particular relevance in cases where access to digital technology and formal certification differ with respect to the types of contract and professional types. Governance should address both procedural protection and the actual distribution of possibilities rather than rely on the dashboard's completion rates. Workers proposing corrections should respond on a timely basis and should be protected from retaliation measures. Innovative working behaviour can indicate both system limitations and opportunities for improvement.

Limitations and future research

As an interpretation of the qualitative study, this analysis does not confirm allegations of superiority, causality or statistically assessed consequences of mediation and moderation. Variation between professional roles, contractual arrangements, project conditions and organisational AI maturity can also limit the transferability to other institutions. The attendee accounts provide perspectives on experienced practices and perceptions; they do not independently determine the technical performance of the underlying AI systems or the organisation-wide incidence of certain decisions. Future research can triangulate interview accounts with HR records, system documentation and observed decisions in order to see if employee challenges lead to measurable improvements. Longitudinal studies and surveys could enable studies of proposed relationships within the larger range of organizations.

Conclusion

AI-based systems can boost talent management in the construction sector of Pakistan®. But their contribution depends on what is measured, on how practical experience is presented, and whether employees can challenge automated recommendations. The qualitative results indicate that organisational justice contributes to explaining responses to decisions about recruitment, deployment, evaluation and development. Innovative working behaviour can support improvements if the employee voice is protected, despite limited access and fear of repressive actions that can steer innovation towards resistance or silence. The resulting interpretative framework underlines the quality of the data, understandable explanations, human accountability and fair access to opportunities. Additional research may test their transferability and evaluate the prevalence and causal strength of the identified associations.

References

Babaee, A., & Shank, D. B. (2025). Trust and procedural justice mediate the effects of AI hiring on organizational attraction and intent to apply. Discover Artificial Intelligence, 5, Article 375. https://doi.org/10.1007/s44163-025-00633-x

Bandara, R. J., Biswas, K., Akter, S., Shafique, S., & Rahman, M. (2025). Addressing algorithmic bias in AI-driven HRM systems: Implications for strategic HRM effectiveness. Human Resource Management Journal, 35(4), 1047–1063. https://doi.org/10.1111/1748-8583.12609

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative Research in Psychology, 3(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Bujold, A., Roberge-Maltais, I., Parent-Rocheleau, X., Boasen, J., Sénécal, S., & Léger, P.-M. (2024). Responsible artificial intelligence in human resources management: A review of the empirical literature. AI and Ethics, 4, 1185–1200. https://doi.org/10.1007/s43681-023-00325-1

Byrne, D. (2022). A worked example of Braun and Clarke's approach to reflexive thematic analysis. Quality & Quantity, 56, 1391–1412. https://doi.org/10.1007/s11135-021-01182-y

Cai, F., Zhang, J., & Zhang, L. (2024). The impact of artificial intelligence replacing humans in making human resource management decisions on fairness: A case of resume screening. Sustainability, 16(9), 3840. https://doi.org/10.3390/su16093840

Colquitt, J. A. (2001). On the dimensionality of organizational justice: A construct validation of a measure. Journal of Applied Psychology, 86(3), 386–400. https://doi.org/10.1037/0021-9010.86.3.386

Edwards, M. R., Zubielevitch, E., Okimoto, T., Parker, S., & Anseel, F. (2024). Managerial control or feedback provision: How perceptions of algorithmic HR systems shape employee motivation, behavior, and well-being. Human Resource Management, 63(4), 691–710. https://doi.org/10.1002/hrm.22218

Gioia, D. A., Corley, K. G., & Hamilton, A. L. (2013). Seeking qualitative rigor in inductive research: Notes on the Gioia methodology. Organizational Research Methods, 16(1), 15–31. https://doi.org/10.1177/1094428112452151

Janssen, O. (2000). Job demands, perceptions of effort–reward fairness and innovative work behaviour. Journal of Occupational and Organizational Psychology, 73(3), 287–302. https://doi.org/10.1348/096317900167038

Juijn, G., Stoimenova, N., Reis, J., & Nguyen, D. (2023). Perceived algorithmic fairness using organizational justice theory: An empirical case study on algorithmic hiring. In Proceedings of the 2023 AAAI/ACM Conference on AI, Ethics, and Society (pp. 775–785). https://doi.org/10.1145/3600211.3604677

Kellogg, K. C., Valentine, M. A., & Christin, A. (2020). Algorithms at work: The new contested terrain of control. Academy of Management Annals, 14(1), 366–410. https://doi.org/10.5465/annals.2018.0174

Lazazzara, A., Za, S., & Georgiadou, A. (2025). A taxonomy framework and process model to explore AI-enabled workplace inclusion. Journal of Business Research, 201, Article 115697. https://doi.org/10.1016/j.jbusres.2025.115697

Liu, P., Yuan, L., & Tan, Z. (2026). Proactive or defensive? How AI awareness influences employees' innovative behavior and knowledge hiding. Asia Pacific Journal of Human Resources, 64(2), e70072. https://doi.org/10.1111/1744-7941.70072

Low, M. P., Wut, T. M., & Pok, W. F. (2026). Algorithmic versus human screener: An experimental investigation of applicants' perception on organizational justice, trust, and intentions in AI-supported selection process. Human Systems Management. Advance online publication. https://doi.org/10.1177/01672533261451847

Mori, M., Sassetti, S., Cavaliere, V., & Bonti, M. (2025). A systematic literature review on artificial intelligence in recruiting and selection: A matter of ethics. Personnel Review, 54(3), 854–878. https://doi.org/10.1108/PR-03-2023-0257

Naoum, R. F., Szakadáti, T., & Balogh, G. (2026). Artificial intelligence (AI) in human resource management (HRM): A systematic review of its dual impact on diversity, equity, and inclusion (DEI). Management Review Quarterly. Advance online publication. https://doi.org/10.1007/s11301-025-00580-y

Ochmann, J., Michels, L., Tiefenbeck, V., Maier, C., & Laumer, S. (2024). Perceived algorithmic fairness: An empirical study of transparency and anthropomorphism in algorithmic

recruiting. Information Systems Journal, 34(2), 384–414. https://doi.org/10.1111/isj.12482

Pereira, V., Hadjielias, E., Christofi, M., & Vrontis, D. (2023). A systematic literature review on the impact of artificial intelligence on workplace outcomes: A multi-process perspective. Human Resource Management Review, 33(1), 100857. https://doi.org/10.1016/j.hrmr.2021.100857

Scott, S. G., & Bruce, R. A. (1994). Determinants of innovative behavior: A path model of individual innovation in the workplace. Academy of Management Journal, 37(3), 580–607. https://doi.org/10.5465/256701

Soleimani, M., Intezari, A., Arrowsmith, J., Pauleen, D. J., & Taskin, N. (2025). Reducing AI bias in recruitment and selection: An integrative grounded approach. The International Journal of Human Resource Management, 36(14), 2480–2515. https://doi.org/10.1080/09585192.2025.2480617

Tanoli, W. A. (2025). Assessing drivers, barriers and policy interventions for implementing digitalization in the construction industry of Pakistan. Buildings, 15(15), 2798. https://doi.org/10.3390/buildings15152798

Theodorsson, U., & Dosanjh, K. S. (2026). Augmentative or autonomous? Reframing artificial intelligence in talent management through a systematic review. Organization Management Journal, 23(2), 183–197. https://doi.org/10.1108/OMJ-09-2025-2716

Úbeda-García, M., Marco-Lajara, B., Zaragoza-Sáez, P. C., & Poveda-Pareja, E. (2025). Artificial intelligence, knowledge and human resource management: A systematic literature review of theoretical tensions and strategic implications. Journal of Innovation & Knowledge, 10(6), Article 100809. https://doi.org/10.1016/j.jik.2025.100809

Vrontis, D., Christofi, M., Pereira, V., Tarba, S., Makrides, A., & Trichina, E. (2022). Artificial intelligence, robotics, advanced technologies and human resource management: A systematic review. The International Journal of Human Resource Management, 33(6), 1237–1266. https://doi.org/10.1080/09585192.2020.1871398

Yuan, S., Xing, L., & Zhao, D. (2025). A multi-stage HR-in-the-loop approach to enhance fairness perceptions of AI selection systems. The International Journal of Human Resource Management, 36(14), 2623–2658. https://doi.org/10.1080/09585192.2025.2564235

Zheng, J., Zhang, J. Z., Kamal, M. M., Liang, X., & Alzeiby, E. A. (2025). Unpacking human-AI interaction: Exploring unintended consequences on employee well-being in entrepreneurial firms through an in-depth analysis. Journal of Business Research, 196, Article 115406. https://doi.org/10.1016/j.jbusres.2025.115406

Zhou, Y., Yusof, R., Thurasamy, R., Li, X., Zhang, P., & Ling, S. (2026). How organizational justice shapes innovative work behavior: Work engagement as mediator and authentic leadership as moderator in China's ICT sector. Acta Psychologica, 262, Article 106167. https://doi.org/10.1016/j.actpsy.2025.106167