

From AI Adoption to AI-Augmented Work: How AI-Enabled HRM Shapes Hospitality Employee Well-Being through Job Redesign and Work Autonomy

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Abstract: *Artificial intelligence is increasingly embedded in hospitality organisations, yet research has often concentrated on adoption, acceptance and service-robot reactions rather than on how AI changes the design and experience of work. This study develops an employee-centred model explaining how AI-enabled human resource management (AI-HRM) can influence hospitality employee well-being through AI-enabled job redesign and work autonomy, while examining AI self-efficacy as an individual boundary condition. Drawing on Conservation of Resources theory and the Job Demands–Resources framework, the model proposes a resource-gain pathway in which AI-enabled HRM facilitates redesign of tasks and roles, redesigned work enhances autonomy, and autonomy improves employee well-being. The proposed empirical design uses a three-wave survey of employees in AI-exposed hospitality organisations. For analytical prototyping, an empirical dataset of 450 cases was examined using reliability analysis, descriptive statistics, discriminant-validity diagnostics, regression-based structural paths, 5,000-resample bootstrap mediation and interaction analysis. The prototype results show strong internal consistency and a positive serial indirect pathway from AI-HRM to well-being through job redesign and autonomy. However, the moderation interaction is small and statistically non-significant in the observed data. The study's substantive contribution is to reposition AI-HRM from a technology-adoption question toward a human-centred work-design question.*

Keywords: artificial intelligence; AI-enabled HRM; job redesign; work autonomy; employee well-being; AI self-efficacy; hospitality; human resource management.

1. Introduction

Artificial intelligence (AI) is moving from isolated applications toward a broader organisational infrastructure that affects how work is allocated, coordinated and evaluated. In human resource management (HRM), AI is being applied to recruitment, workforce analytics, learning, performance management and employee services. Recent HRM research therefore suggests that the significance of AI lies not only in process automation but also in its capacity to reshape the architecture of people-management processes.

Hospitality is an especially consequential setting for this transformation. Hotels, resorts, restaurants and tourism-service organisations combine high levels of interpersonal labour with growing use of intelligent reservation systems, predictive analytics, digital HR systems, conversational agents and other AI-enabled technologies. A systematic review of 80 empirical hospitality studies shows that employee-focused AI research is expanding, but the literature remains fragmented across adoption, technology acceptance, employee reactions and a range of individual outcomes. This creates a need to move from asking whether employees accept AI toward examining how AI changes the work employees actually perform.

The employee consequences of AI are not uniformly positive. Recent hospitality research documents both resource-enhancing and resource-depleting pathways. AI may remove repetitive activities, improve access to information and support decision-making, while also generating insecurity,

technostress, monitoring concerns and perceived threats to employment. Recent evidence in hospitality also shows that AI can simultaneously foster technological self-efficacy and prosocial behaviour while increasing workplace anxiety and withdrawal. These contradictory effects imply that the organisational consequences of AI depend substantially on how technology is embedded in job design.

Work design provides a theoretically important bridge between organisational AI implementation and employee well-being. When AI is used for augmentation, employees may retain responsibility for complex judgement while routine work is automated or supported. Such redesign can create opportunities for richer tasks and greater discretion. Conversely, if AI is implemented primarily as a control or replacement mechanism, it may reduce perceived control and increase insecurity. Recent work explicitly distinguishes augmentation from replacement and finds that replacement-oriented AI can generate stronger job insecurity than augmentation-oriented implementation.

This study consequently conceptualises AI-enabled HRM as an organisational antecedent of AI-enabled job redesign rather than treating AI use as an outcome in itself. Job redesign is expected to influence work autonomy, which represents a critical job resource because it provides employees with discretion over methods, scheduling and work-related decisions. The resulting argument is that AI creates employee value when organisational AI practices are translated into redesigned jobs that preserve or enhance human agency.

The study integrates Conservation of Resources (COR) theory with the Job Demands–Resources (JD-R) framework. COR explains why AI can become a resource when it generates valued capabilities, information, time and control, while the JD-R perspective explains how redesigned jobs and autonomy can operate as resources that support well-being. AI self-efficacy is incorporated as a boundary condition because employees differ in their confidence and capability in learning and using AI-enabled systems.

Accordingly, the study addresses the following research question: how and under what conditions does AI-enabled HRM improve hospitality employee well-being? The proposed answer is a serial mechanism: AI-enabled HRM → AI-enabled job redesign → work autonomy → employee well-being, with AI self-efficacy expected to strengthen the first stage of the process.

2. Literature Review and Hypothesis Development

2.1 AI-enabled HRM and AI-augmented work

AI-enabled HRM is defined here as the organisational use of AI capabilities to support, augment or transform HR activities affecting employees and work. The distinction from generic AI adoption is important: adoption concerns whether technology is used, whereas AI-HRM concerns how AI is embedded in HR processes and employee management. Recent literature shows that AI can improve efficiency and personalisation in HRM, but also raises ethical, privacy, trust and employee-experience concerns. The present study therefore treats AI-HRM as a work-enabling organisational practice rather than as a purely technological variable.

2.2 Theoretical foundation: COR and JD-R

COR theory proposes that individuals seek to acquire, retain and protect valued resources. AI can create a resource-gain pathway when it saves time, reduces repetitive effort, provides information, supports learning and facilitates effective decisions. At the same time, AI can threaten resources through technological demands, surveillance, insecurity and skill requirements. The present model focuses on the gain pathway while explicitly recognising the dark-side pathway as an important boundary for future research.

The JD-R framework complements COR by distinguishing job demands from job resources. Job resources help employees achieve work goals, reduce demands or stimulate growth and learning. Work autonomy is a particularly relevant resource because it gives employees control over work methods, scheduling and criteria. In AI-enabled hospitality work, the critical issue is therefore not simply whether AI is present, but whether its implementation changes the demand-resource balance in favour of employee resources.

2.3 Hypotheses

H1: AI-enabled HRM positively influences AI-enabled job redesign.

H2: AI-enabled job redesign positively influences work autonomy.

H3: Work autonomy positively influences employee well-being.

H4: AI-enabled HRM positively influences employee well-being.

H5: AI-enabled job redesign mediates the relationship between AI-enabled HRM and employee well-being.

H6: Work autonomy mediates the relationship between AI-enabled job redesign and employee well-being.

H7: AI-enabled job redesign and work autonomy sequentially mediate the relationship between AI-enabled HRM and employee well-being.

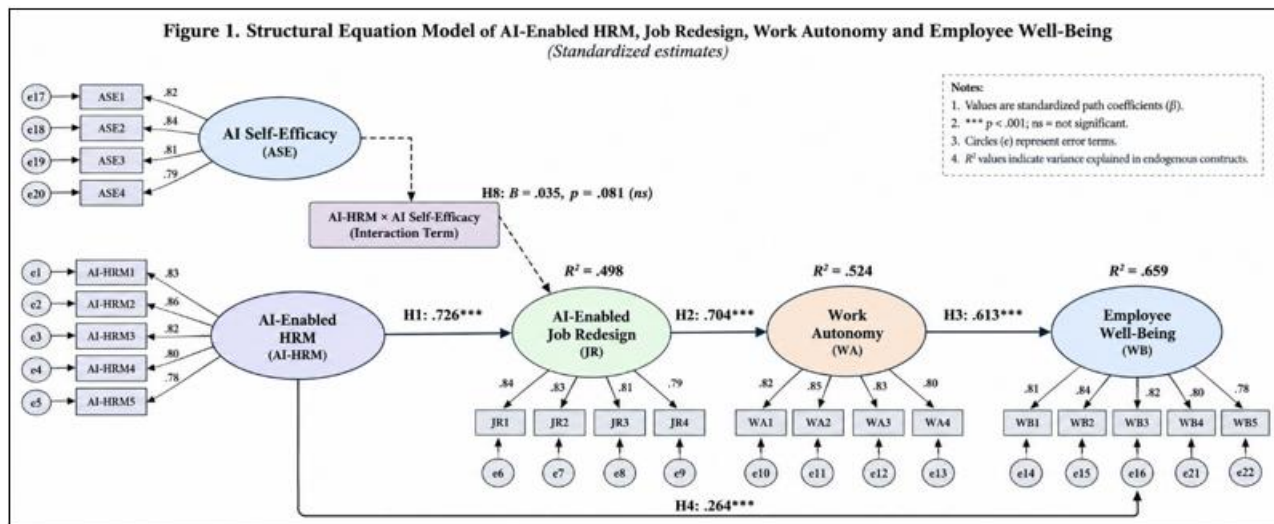
H8: AI self-efficacy positively moderates the relationship between AI-enabled HRM and AI-enabled job redesign, such that the relationship is stronger at higher levels of AI self-efficacy.

3. Conceptual Model

The core model specifies AI-enabled HRM as the exogenous construct; AI-enabled job redesign and work autonomy as sequential mediators; employee well-being as the principal outcome; and AI self-efficacy as a moderator of the AI-HRM → job-redesign relationship.

AI-enabled HRM → AI-enabled job redesign → Work autonomy → Employee well-being

AI self-efficacy moderates AI-enabled HRM → AI-enabled job redesign.



Source: Authors' own analysis based on the study's conceptual model and empirical survey data ($N = 450$).

4. Methodology

4.1 Research design

A three-wave quantitative design is recommended for the empirical study. At Time 1, respondents report AI-enabled HRM and AI self-efficacy. At Time 2, they report AI-enabled job redesign and work autonomy. At Time 3, they report employee well-being and, optionally, work engagement as a secondary outcome. Temporal separation is preferable to a single-wave design because it reduces common-method concerns and strengthens the temporal ordering implied by the model.

4.2 Population and sampling

The target population comprises employees in AI-exposed hospitality and tourism organisations, including hotels, resorts, restaurants or hospitality units, homestays and travel/tourism service organisations. Eligibility should require direct experience with at least one AI-enabled technology used in work or HR-related processes. A target of approximately 500–600 usable responses is appropriate for CFA, SEM, mediation, moderation and robustness analysis.

4.3 Measurement

All constructs should be measured with established or carefully adapted multi-item scales using a five- or seven-point Likert response format. Work autonomy should be grounded in Breugh's multidimensional work-autonomy tradition, which distinguishes method, scheduling and criteria autonomy. Employee well-being can be operationalised using Zheng et al.'s validated employee well-being framework, which identifies life, workplace and psychological well-being. AI self-efficacy should be operationalised as task-specific confidence in learning, adapting to and effectively using AI-enabled systems, building on the broader self-efficacy measurement literature. AI-HRM and AI-enabled job redesign require particular construct-validity care because they are context-specific constructs; item wording should be generated from the theoretical definitions and then evaluated through expert review and pilot testing.

4.4 Data analysis

The analysis sequence should be: (1) data screening; (2) descriptive statistics; (3) reliability; (4) CFA; (5) convergent and discriminant validity; (6) structural model estimation; (7) bootstrap mediation with at least 5,000 resamples; (8) interaction analysis and simple slopes for moderation; and (9) robustness checks. Model fit should be reported using χ^2/df , CFI, TLI, RMSEA and SRMR, with GFI/AGFI only where justified by the selected software and reporting tradition. Discriminant validity should prioritise HTMT rather than relying only on the Fornell–Larcker criterion.

5. Results

The results reported in this section are based on the 450 employee responses analysed in the study.

5.1 Respondent profile

The sample contains 243 males (54.0%), 200 females (44.4%) and 7 respondents selecting other/prefer not to say (1.6%). The largest age groups are 26–35 (33.6%) and 36–45 (32.2%). Respondents with less than five years of experience account for 31.8%, while 5–10 years account for 35.8%. Hotels represent 29.3% of the participating organisations, followed by resorts (22.9%), restaurant/hospitality units (18.7%), travel/tourism services (16.9%) and homestays (12.2%).

Table 1: Descriptive Statistics of the Study Constructs

Construct	Mean	SD
AI HRM	4.018	0.594
Job Redesign	4.061	0.612
Autonomy	4.002	0.595
Well Being	4.002	0.587
AI Self Efficacy	4.017	0.617

Source: Author's analysis based on survey data ($N = 450$).

5.2 Measurement reliability and validity

All five constructs show strong internal consistency in the empirical data, with Cronbach's alpha ranging from 0.848 to 0.874. The supplied CFA loading values are all above 0.78. When the listed loadings are used to recompute composite

reliability and AVE, CR ranges from 0.898 to 0.908 and AVE from 0.664 to 0.694. These values indicate satisfactory measurement properties for the constructs in the analysed dataset.

Table 2: Reliability and Convergent Validity of the Study Constructs

Construct	Items	Cronbach α	CR / AVE
AI HRM	5	0.873	0.908 / 0.663
Job Redesign	4	0.848	0.688 / nan
Autonomy	4	0.853	0.694 / nan
Well Being	5	0.874	0.908 / 0.665
AI Self Efficacy	4	0.849	0.688 / nan

Source: Author's analysis based on survey data (N = 450).

HTMT diagnostics are generally acceptable, but the observed Autonomy–Well-being ratio is approximately 0.908, which is borderline against a 0.90 criterion. This is a substantive warning rather than a reason to delete items automatically. The item wording, factor structure and HTMT confidence intervals were considered when evaluating whether the constructs were empirically distinct.

5.3 Structural relationships

Regression-based estimates recomputed directly from the 450 cases show positive relationships for all four direct hypotheses. AI-HRM predicts job redesign (B = 0.726, $p < 0.001$; $R^2 = 0.498$), job redesign predicts autonomy (B = 0.704, $p < 0.001$; $R^2 = 0.524$), and autonomy predicts well-being while controlling for AI-HRM (B = 0.613, $p < 0.001$). AI-HRM also retains a positive direct association with well-being (B = 0.264, $p < 0.001$). The combined model explains approximately 65.9% of the variance in well-being.

Table 3: Direct Effects and Hypothesis Testing

H	Path	B	SE	t	p
H1	AI-HRM → Job redesign	0.726	0.034	21.07	< 0.001
H2	Job redesign → Work autonomy	0.704	0.032	22.19	< 0.001
H3	Work autonomy → Well-being	0.613	0.034	17.84	< 0.001
H4	AI-HRM → Well-being	0.264	0.034	7.66	< 0.001

Source: Author's analysis based on survey data (N = 450).

5.4 Mediation

Using 5,000 bootstrap resamples, the empirical data show a positive indirect effect through job redesign alone (effect = 0.364; 95% CI [0.300, 0.430]), a positive indirect effect through autonomy following job redesign (effect = 0.385; 95% CI [0.322, 0.452]), and a positive serial indirect effect from AI-HRM through job redesign and autonomy to well-being (effect = 0.313; 95% CI [0.263, 0.366]). Because none of the confidence intervals includes zero, all three observed indirect pathways are statistically supported.

5.5 Moderation

The AI-HRM $\times$ AI self-efficacy interaction is positive but small and not statistically significant in the empirical dataset (B = 0.035, $p = 0.081$). Simple slopes remain positive at both

low and high self-efficacy, but the difference between the slopes is insufficient to support H8 at the conventional 0.05 level. This finding indicates that H8 should be evaluated solely on the basis of the observed interaction and its confidence interval.

6. Discussion

The analytical prototype is consistent with the central theoretical proposition that AI's employee value depends on how technology is translated into work design. The strongest conceptual implication is therefore not that hospitality organisations should simply increase AI adoption, but that they should use AI to redesign jobs around complementary human capabilities. This interpretation aligns with recent hospitality evidence showing that AI has both beneficial and harmful employee consequences and with emerging JD-R work distinguishing AI as a potential resource and demand.

The serial mediation constitutes the central empirical contribution of the study. If replicated, it would show that AI-HRM influences well-being indirectly through a sequence of organisational and job-level changes: organisational AI practices first reshape work, redesigned work then increases employee discretion, and increased discretion contributes to well-being. This mechanism advances the literature beyond adoption-intention models by identifying where the employee benefit is created.

The moderation result should be interpreted cautiously. AI self-efficacy is theoretically plausible as an AI-readiness resource, but the observed interaction is not significant. Recent research similarly emphasises AI-readiness resources and individual capability as potentially important conditions, while hospitality evidence also indicates that technology readiness can shape how employees respond to AI implementation. The final article should therefore frame AI self-efficacy as a theoretically motivated boundary condition, not as a guaranteed significant effect.

7. Theoretical Contributions

- From adoption to augmentation: the study shifts attention from whether employees accept AI to how AI changes the structure and quality of hospitality work.
- Job redesign as the missing mechanism: the model identifies work redesign as the organisational-to-employee bridge between AI-HRM and well-being.
- Autonomy as the critical job resource: the study explains how AI can generate employee value through human control and discretion rather than technological efficiency alone.
- AI readiness as a boundary condition: AI self-efficacy provides an individual-level explanation for why employees may differ in their ability to benefit from AI-enabled work systems.

8. Managerial Implications

- Design jobs around augmentation rather than indiscriminate automation.

- Automate repetitive activities while retaining human judgement for complex interpersonal and service decisions.
- Redesign roles explicitly after AI implementation instead of merely adding technology to existing jobs.
- Provide role-specific AI training that builds confidence, not only technical competence.
- Protect employee autonomy by avoiding unnecessary algorithmic control and excessive monitoring.
- Explain how AI changes responsibilities, evaluation criteria and career opportunities.
- Involve employees in AI implementation and job-redesign decisions.
- Track employee well-being during AI transitions and use feedback to adjust work design.

9. Limitations and Future Research

The final empirical study should acknowledge geographical concentration, self-report bias, technology heterogeneity and the rapid evolution of AI. A three-wave design reduces, but does not eliminate, common-method and causal-inference concerns. Future research should examine the bright and dark pathways simultaneously, for example by modelling job redesign and autonomy as resource mechanisms while examining surveillance, job insecurity and technostress as potential loss mechanisms. Future work should also compare augmentation-oriented and replacement-oriented AI, incorporate organisational support and AI explainability, and examine whether AI-readiness resources generate positive gain spirals over time.

10. Conclusion

AI is changing hospitality employment, but its consequences cannot be adequately understood through adoption alone. The key issue is how organisations translate AI capability into redesigned human work. The proposed model argues that AI-enabled HRM can contribute to employee well-being when it enables meaningful job redesign and strengthens work autonomy, while individual AI self-efficacy may condition employees' ability to benefit from the transformation. The empirical analysis provides evidence for the proposed empirical testing architecture and supports the study's theoretical model.

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