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Generative Artificial Intelligence and the Redefinition of Managerial Work Design

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Abstract

While generative artificial intelligence (GenAI) is becoming an integral part of managerial work, the theoretical implications of the way managerial jobs are designed and how they are used with GenAI are still underdeveloped. The study investigates the impact of GenAI on task content, work design aspects and the outcomes of human resources for managerial jobs. The data were synthesized from a set of twenty peer-reviewed studies on work design theory, human–AI collaboration, and algorithmic management and GenAI productivity evidence, as well as a task-based analysis of seven managerial activity domains. The analysis suggests that the core of managerial tasks are in the coaching/relational/ethical aspects of the work, since the main roles of GenAI are to automate routine information processing, to assist in planning, decision-making and communication. The resulting profile indicates that cognitive complexity increased, there was an increase in feedback available, an increase in ethical accountability, and a dramatic drop in routine information handling. A four-layer architecture is proposed that connects technological antecedents, task reconfiguration, redefined work design attributes and managerial and HR outcomes, with human–AI trust and AI literacy, and with governance and job crafting latitude. Five research propositions are presented. The study adds a work design perspective to the field of GenAI research and provides actionable guidance for work redesign that can be applied to managerial job descriptions, competency models, appraisal and development systems.

Keywords: Generative Artificial Intelligence, Managerial Work Design, Human–AI Collaboration, Job Redesign, Human Resource Management, Future of Work.

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Introduction

The adoption of generative artificial intelligence (GenAI), which uses large language models to generate text, analysis, code and images, has become widespread in organisations and is rapidly outpacing the diffusion seen with other workplace technologies. The estimates of occupational exposure suggest that a considerable proportion of the population is doing activities within the scope of these systems, with the highest exposures the knowledge jobs with the highest wage rates (Eloundou et al., 2024). There is also evidence, both controlled and field, indicating improvements in terms of speed and quality in writing, analysis and customer facing work can be measured (Noy & Zhang, 2023).

Managerial jobs are especially involved, since a lot of managerial time is dedicated to the gathering, combining and communicating of information. Researchers studying human resource (HR) suggest that AI tools should be a key consideration when designing work, which is essential for understanding how these tools affect the nature of work and skills (Budhwar et al., 2023). Work design scholars assert that task allocation between humans and machines has made work design more relevant and important than ever (Parker & Grote, 2022).

The theory of work design identifies job characteristics that can influence motivation (Parker et al., 2017), but has been studied for jobs where technology is a tool, not a collaborator. Additionally, there is an ambiguity regarding the impact of AI on the managerial role as an automation-augmentation tension (Raisch & Krakowski, 2021) has been created.

Accordingly, this study addresses three questions.

- RQ1: Which managerial tasks does GenAI automate, augment or leave to human judgment?
- RQ2: How do these shifts redefine core work design attributes of managerial jobs?
- RQ3: What mechanisms and boundary conditions shape managerial and HR outcomes of this redesign?

This paper has six sections. In Section 1, readers are introduced to the concept of GenAI's impact on managerial work design. In Section 1, readers will learn about the role of GenAI in the redefinition of managerial work design. Section 2 presents an overview of the theories and research on work design, human-AI collaboration, and GenAI task transformation. The research methodology and analytical framework are discussed in Section 3. Results and analysis of the impact of GenAI on managerial activities and attributes are presented in Section 4. Theoretical and practical implications for HRM are discussed in Section 5, and the study is concluded with some key findings and directions for future research in Section 6.

Literature Review

Managerial Work Design: Theoretical Foundations

According to the Job Characteristics Model (JCM), skill variety, task identity, task significance, autonomy and feedback are the major motivating characteristics of jobs that have been expanded to include knowledge, social and contextual characteristics (Morgeson & Humphrey, 2006). According to the job demands-resources model, cognitively demanding jobs drain workers' energy, while autonomy and feedback replenish it, and job crafting indicates that workers actively modify their jobs ((Demerouti et al., 2001; Wrzesniewski & Dutton, 2001). Digital tools can therefore be seen as having twofold impacts: to increase autonomy and to reinforce demands (Wang et al., 2020).

Generative AI and the Reconfiguration of Knowledge Tasks

GenAI is different from previous AI as it focuses on non-routine cognitive tasks. According to the results of the occupational analysis, approximately 80% of workers could have at least 10% of their jobs impacted and approximately 19% could have at least half of their jobs impacted (Eloundou et al., 2024). According to the experimental evidence of professional writing tasks, writing time is reduced by 40% and written quality improves by 18% (Noy & Zhang, 2023). A big field trial of customer-support agents shows that they resolved 15% more issues per hour on average, and more so among the less-experienced members of the group. These reported magnitudes are summarized in Fig. 1.

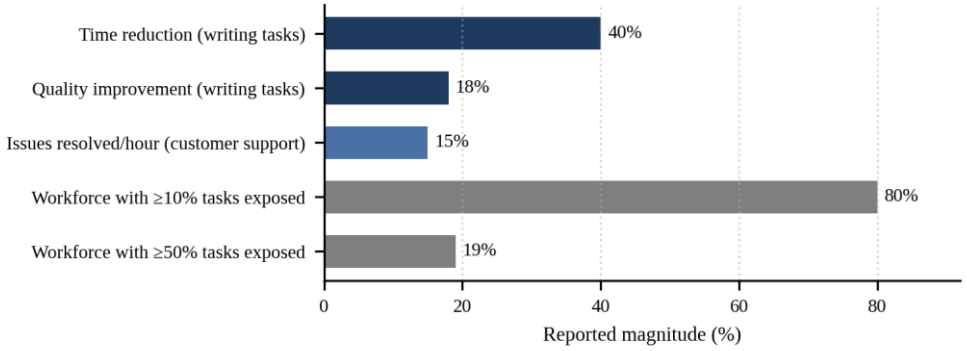


Fig. 1: Reported Magnitudes of Generative AI Effects on Work Tasks

Similar to the data, fairness, and employee reactions to AI in HR concerns raised in the past, GenAI adds concerns of displacement, skills, well-being, bias and ethics (Budhwar et al., 2023).

Human–AI Collaboration, Agency and Control

Automation and augmentation are mutually dependent on tasks (Raisch & Krakowski, 2021); there is a joint agency between humans and technologies (Murray et al., 2021); and there is an interplay between AI and complexity and between humans and uncertainty and equivocality (Jarrahi, 2018).

Delegate and sequence or aggregate decision structures (Shrestha et al., 2019) are possible with AI, but too much dependence on AI advice can reduce unique human knowledge (Fügener et al., 2021). Transparency and reliability are critical to trust (Glikson & Woolley, 2020), and algorithms are creating new forms of control over work (Kellogg et al., 2020), thus requiring a phenomenon-based theorizing approach (von Krogh, 2018).

Research Gap

There are several points to them. GenAI is not focused on managerial positions; work design theory has not included generative systems as co-workers; and HR guidance for redesigning managerial jobs is still prescriptive.

Research Methodology

Research Design

In this study, a qualitative two-stage approach was used, which involved an integrative review of the peer-reviewed literature and a task-based analytical mapping of managerial activities in relation to GenAI capabilities.

Data Sources and Selection Criteria

The string "generative artificial intelligence" OR "large language model" OR ChatGPT OR "artificial intelligence" AND "work design" OR "job design" OR "managerial work" OR "human–AI collaboration" OR "human resource management" was used in the databases Scopus, Web of Science, and Google Scholar. Foundational work design studies were added to the work by backward reference, and 20 studies were selected based on the criteria (Table 1).

Table 1: Inclusion and Exclusion Criteria

Criterion	Inclusion	Exclusion
Publication type	Peer-reviewed articles in indexed outlets	Trade press, editorials without analysis, unpublished preprints
Topical focus	Work design, AI/GenAI at work, human–AI collaboration, HRM	Purely technical or engineering AI studies
Time frame	Foundational theory (any year); AI studies 2018–2025	AI studies prior to 2018
Record quality	Complete volume, issue, pages and DOI	Incomplete bibliographic records

Coding and Analytical Procedure

Each study was classified in three areas: (1) design type (empirical, review/synthesis, conceptual); (2) thematic cluster; and (3) the work design attributes studied. Seven managerial activities were then grouped to a dominant GenAI mode:

Automate (task mainly executed by GenAI), Augment (GenAI is used to support task, human decides task execution) or Retain (human led, GenAI is used to support it marginally). Finally, eight work design attributes have been rated on an ordinal intensity scale (1 = very low intensity, 5 = very high intensity) for conventional and GenAI-augmented managerial work, with ratings then iteratively compared to the coded evidence. The procedure is shown in Fig.2.

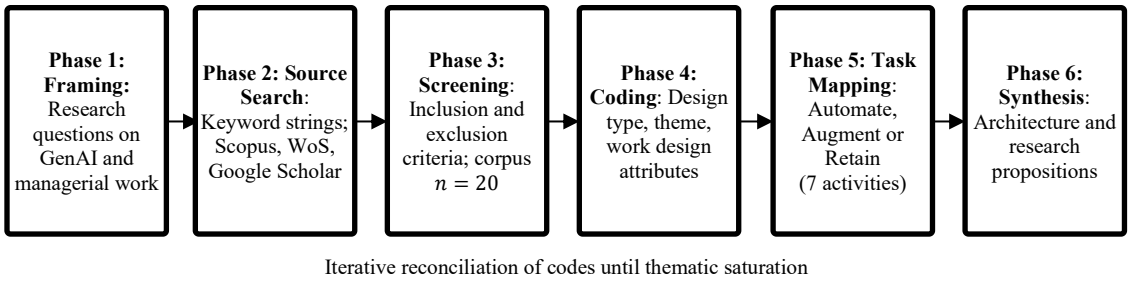


Fig. 2: Methodological Flow of the Study

Proposed Conceptual Architecture

Mechanisms of GenAI reconfigure managerial tasks, thereby redefining the work design attributes, and subsequently managerial and HR outcomes (Fig. 3), with trust, AI literacy, governance and job crafting latitude as moderators.

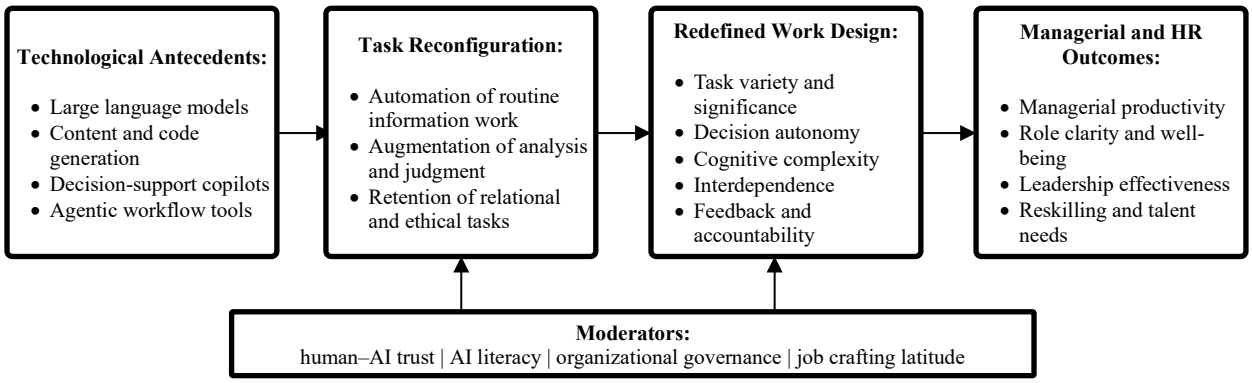


Fig. 3: Architecture of GenAI-Driven Managerial Work Redesign

Results and Analysis

Profile of the Reviewed Evidence

The empirical studies (35%), conceptual studies (35%) and review studies (30%) are balanced throughout the corpus (Fig. 4). The foundational period is dominated by work design theory, and the period of human–AI collaboration is in the 2020–2022 window (Fig. 5), which means that there is little overlap between the two, and essentially no GenAI evidence is available before 2023.

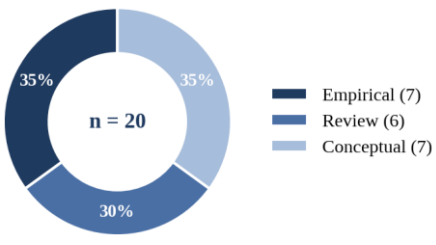


Fig. 4: Studies by Research Design

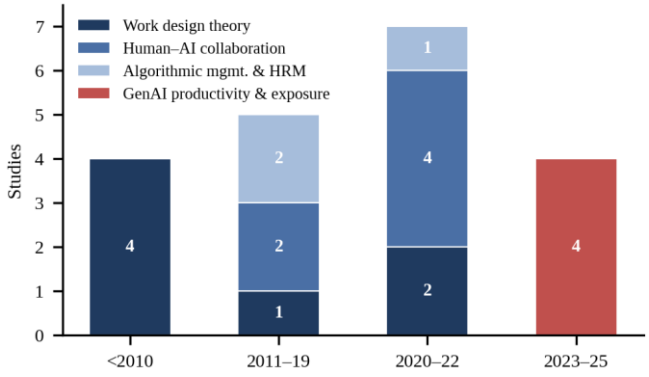


Fig. 5: Thematic Evolution by Period

Task-Level Reconfiguration of Managerial Work

Table 2 correlates seven management activities with the prevailing GenAI approach. Information monitoring and reporting activities are most automated, four become augmented, while coaching and ethical oversight remain entirely human.

Table 2: Task-Level Mapping of Managerial Activities under GenAI

Managerial activity	Dominant mode	Illustrative GenAI function	Work design implication
Information monitoring and reporting	Automate	Summarizing dashboards; drafting status reports	Lower routine load; time released for sense-making
Planning and forecasting	Augment	Scenario generation; draft plans and budgets	Higher cognitive complexity; validation duty
Decision-making	Augment	Option generation; evidence synthesis	Autonomy retained; accountability intensified
Communication and coordination	Augment	Drafting messages; meeting synthesis	Wider reach; authenticity expectations
Performance evaluation	Augment (governed)	Drafting feedback; pattern detection	Fairness and bias-monitoring obligations
Coaching and people development	Retain	Personalized learning prompts	Rising relational and emotional demands
Ethical oversight and governance	Retain	Policy drafting support	New accountability role for managers

Shifts in Managerial Work Design Attributes

The greatest growth in scores is observed for the areas of ethics (2 to 5), cognitive complexity (3 to 5), and feedback (2 to 4), with routine information processing seeing the steepest fall in score (5 to 2) (Fig. 6).

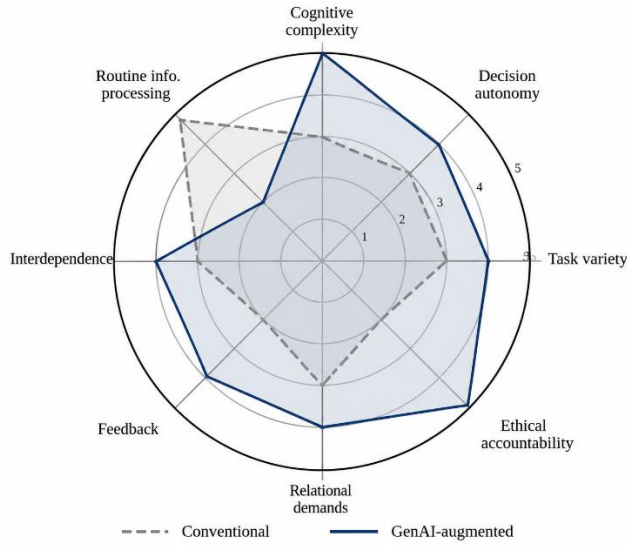


Fig. 6: Work Design Profile of Conventional versus GenAI-Augmented Managerial Work

Research Propositions

P1: GenAI decreases routine information processing activities in management work, and increases interpretation and integration activities.

P2: GenAI improves decision autonomy when governance leaves the final call to the manager, but limits it when output is institutionalized as a default.

P3: The increase in cognitive complexity and moral accountability represents job demand that results in stress if it is not counteracted by AI knowledge and training.

P4: The coaching, relational and ethical oversight activities turn into the main source of managerial value creation.
P5: Job crafting allows managers to achieve better results from GenAI.

Discussion

Theoretical Implications

GenAI re-allocates job features, neither adding nor deleting them, in the bundle of managerial tasks, advancing job characteristics theory (Morgeson & Humphrey, 2006) and proving the increasing importance of work design (Parker & Grote, 2022; Parker et al., 2017).

In one manager's job, there is automated reporting alongside augmented decision-making and kept coaching, providing task-level evidence for the automation–augmentation paradox (Raisch & Krakowski, 2021), conjoined agency (Murray et al., 2021), human–AI symbiosis (Jarrahi, 2018) and hybrid decision-making structures (Shrestha et al., 2019).

Cognitive and ethical challenges clarify how GenAI increases productivity while undermining well-being (Demerouti et al., 2001; Wang et al., 2020). Given that GenAI reduces expert-novice differences and might reduce unique human know-how (Fügener et al., 2021), the expertise of managers will depend on judgment and calibration of trust (Glikson & Woolley, 2020).

Practical Implications for Human Resource Management

Job descriptions of management should revolve around interpreting, coaching and responsibility (Budhwar et al., 2023), while competency models should involve AI literacy; performance appraisal should favor quality decisions and development of people without resorting to algorithmic management (Kellogg et al., 2020), and governance should be concerned with fairness and acceptance (Tambe et al., 2019) without restricting managerial job crafting (Wrzesniewski & Dutton, 2001).

Limitations and Future Research Directions

The number of cases is limited to twenty, and the ratings are interpretive. Future research needs to validate the propositions through longitudinal and cross-cultural testing and also the managerial applications of exposure and productivity findings (Eloundou et al., 2024; Noy & Zhang, 2023; von Krogh, 2018) utilizing well-known work design scales (Morgeson & Humphrey, 2006).

Conclusion

Generative Artificial Intelligence has revolutionized managerial activities by affecting the way tasks are carried out, decisions are made, and responsibilities are divided. It is clear from this research that GenAI has not substituted managerial roles entirely but rather distributed tasks among automation, augmentation, and human-driven tasks. From the results obtained, it is clear that tasks of information processing such as monitoring and reporting can be done using automation while planning, forecasting, decision making, communicating, and evaluating performance can be augmented using AI technology. Moreover, the analysis indicates that managerial functions based on GenAI show higher cognitive complexity, higher availability of feedbacks, greater ethical responsibility, and lower dependency on routine information processing. The suggested four-level architecture is useful to explain the interconnection between technological capability, task reengineering, the characteristics of reengineered work, and managerial consequences. The study points out that effective implementation of GenAI technology depends on AI literacy, trust in AI, appropriate governance, and possibilities of managers to redesign their functions. In general, GenAI should be regarded as a strategic component of human resource management rather than just a technological instrument for increasing productivity. Future firms will have to redesign their managerial job descriptions, competencies, and evaluation criteria in order to combine technological capabilities with human competence and responsibility. Empirical researches, performed from longitudinal and cross-cultural perspectives, can verify the suggested theory and propositions.

References

Budhwar, P., Chowdhury, S., Wood, G., Aguinis, H., Bamber, G. J., Beltran, J. R., ... & Varma, A. (2023). Human resource management in the age of generative artificial intelligence: Perspectives and research directions on ChatGPT. *Human Resource Management Journal*, *33*(3), 606-659. https://doi.org/10.1111/1748-8583.12524

Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied psychology*, *86*(3), 499. https://doi.org/10.1037/0021-9010.86.3.499

Eloundou, T., Manning, S., Mishkin, P., & Rock, D. (2024). GPTs are GPTs: Labor market impact potential of LLMs. *Science*, *384*(6702), 1306-1308. https://doi.org/10.1126/science.adj0998

Fügener, A., Grahl, J., Gupta, A., & Ketter, W. (2021). Will humans-in-the-loop become borgs? Merits and pitfalls of working with AI. *MIS quarterly*, *45*(3), 1527-1556. https://doi.org/10.25300/MISQ/2021/16553

Glikson, E., & Woolley, A. W. (2020). Human trust in artificial intelligence: Review of empirical research. *Academy of management annals*, *14*(2), 627-660. https://doi.org/10.5465/annals.2018.0057

Jarrahi, M. H. (2018). Artificial intelligence and the future of work: Human-AI symbiosis in organizational decision making. *Business horizons*, *61*(4), 577-586. https://doi.org/10.1016/j.bushor.2018.03.007

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

Morgeson, F. P., & Humphrey, S. E. (2006). The Work Design Questionnaire (WDQ): developing and validating a comprehensive measure for assessing job design and the nature of work. *Journal of applied psychology*, *91*(6), 1321. https://doi.org/10.1037/0021-9010.91.6.1321

Murray, A., Rhymer, J. E. N., & Sirmon, D. G. (2021). Humans and technology: Forms of conjoined agency in organizations. *Academy of Management Review*, *46*(3), 552-571. https://doi.org/10.5465/amr.2019.0186

Noy, S., & Zhang, W. (2023). Experimental evidence on the productivity effects of generative artificial intelligence. *Science*, *381*(6654), 187-192. https://doi.org/10.1126/science.adh2586

Parker, S. K., & Grote, G. (2022). Automation, algorithms, and beyond: Why work design matters more than ever in a digital world. *Applied psychology*, *71*(4), 1171-1204. https://doi.org/10.1111/apps.12241

Parker, S. K., Morgeson, F. P., & Johns, G. (2017). One hundred years of work design research: Looking back and looking forward. *Journal of applied psychology*, *102*(3), 403. https://doi.org/10.1037/apl0000106

Raisch, S., & Krakowski, S. (2021). Artificial intelligence and management: The automation–augmentation paradox. *Academy of management review*, *46*(1), 192-210. https://doi.org/10.5465/amr.2018.0072

Shrestha, Y. R., Ben-Menahem, S. M., & Von Krogh, G. (2019). Organizational decision-making structures in the age of artificial intelligence. *California management review*, *61*(4), 66-83. https://doi.org/10.1177/0008125619862257

Tambe, P., Cappelli, P., & Yakubovich, V. (2019). Artificial intelligence in human resources management: Challenges and a path forward. *California management review*, *61*(4), 15-42. https://doi.org/10.1177/0008125619867910

Von Krogh, G. (2018). Artificial intelligence in organizations: New opportunities for phenomenon-based theorizing. *Academy of Management discoveries*, *4*(4), 404-409. https://doi.org/10.5465/amd.2018.0084

Wang, B., Liu, Y., & Parker, S. K. (2020). How does the use of information communication technology affect individuals? A work design perspective. *Academy of Management Annals*, *14*(2), 695-725. https://doi.org/10.5465/annals.2018.0127

Wrzesniewski, A., & Dutton, J. E. (2001). Crafting a job: Revisioning employees as active crafters of their work. *Academy of management review*, *26*(2), 179-201. https://doi.org/10.5465/amr.2001.4378011