

HUMAN RESOURCE ORCHESTRATION: SCALE DEVELOPMENT AND VALIDATION

HUIKUN CHANG

College of Business & Economics
Hanyang University ERICA Campus
55 Sangrok, Ansan, Gyeonggi 15588, Republic of Korea

JONGWOOK PAK

Business School
The University of Auckland

YAO LYU

School of Economics and Management
Xiamen University Malaysia

ANDREA KIM

SKK Business School
Sungkyunkwan University

ABSTRACT

This study introduces the concept of Human Resource Orchestration (HRO) to capture managers' strategic role in managing collective human resources. Grounded in resource orchestration and human capital resource theories, we develop and validate a multidimensional HRO scale encompassing building, developing, and utilizing team human resources. Using survey data from team managers and members, we demonstrate HRO's conceptual distinctiveness and its positive effects on team efficacy, cohesion, and performance. The findings underscore HRO as a critical managerial function for aligning team human resources with strategic objectives, offering insights into strategic human resource management and team effectiveness.

INTRODUCTION

Prior research on managerial human resource (HR) roles has primarily emphasized HR practice implementation (HRPI), focusing on either the consistent delivery of organizational policies or their local adaptation to fit situational needs (Vossaert et al., 2022). While this line of work has yielded important insights, it tends to reduce managers to passive executors of HR policies, overlooking their strategic agency. In practice, however, line managers play a critical role in aligning their teams with organizational goals—not merely by delivering HR practices, but by actively managing their team's collective human resources to execute strategy effectively at the team level.

To address this gap, we propose Human Resource Orchestration (HRO)—a construct that captures managers' strategic activities in building, developing, and utilizing team-level human resources. Grounded in resource orchestration (RO; Sirmon et al., 2011) and human capital resources (HCR; Ployhart et al., 2014) theories, this study reframes managers' HR roles as active, strategic efforts to align team human resources with organizational goals.

THEORETICAL FRAMEWORK

HRO as Manager's Strategic HR Roles

While previous research has primarily portrayed line managers as implementers of HR practices (e.g., Vossaert et al., 2022), this view underplays their strategic agency. In reality, managers actively bridge strategic intent and team-level execution, managing unit resources in ways that transcend mere HR compliance (Kehoe & Han, 2020). This broader perspective calls for a conceptualization that reflects their discretionary, strategy-driven activities.

To this end, we propose HRO—defined as managers' discretionary actions to build, develop, and utilize the team's collective human resources to achieve strategic goals. These collective resources include both human capital (e.g., knowledge, skills, abilities) and social capital (i.e., task-relevant relationships), which must be aligned with the team's objectives and local contingencies (Ployhart et al., 2014; Wolfson & Mathieu, 2021).

HRO emphasizes not only the alignment of team human resources with strategic goals but also the managerial discretion required to respond to dynamic team environments (Hambrick & Finkelstein, 1987). Drawing on RO theory (Sirmon et al., 2011), we highlight managers' role in structuring, bundling, and leveraging team resources. This approach is also aligned with HCR theory, which underscores the emergent value of unit-level human resources (Ployhart & Moliterno, 2011).

Content Validity of HRO

Three dimensions of HRO: building, developing, and utilizing. Drawing on HCR and RO theories, we conceptualize HRO as consisting of three interrelated managerial activities: building, developing, and utilizing collective human resources.

Building refers to managers' actions aimed at securing team-level human resources aligned with strategic objectives. This includes identifying required human capital and relationships, diagnosing existing human resource portfolios, and acquiring or divesting human resources accordingly (Ployhart et al., 2014; Sirmon et al., 2011).

Developing involves enhancing the team specificity of human resources. Managers refine existing capabilities, assign new roles, promote mutual understanding of team members' expertise, and equip teams to adapt to change through training and experiential learning (Eckardt & Jiang, 2019; Wolfson et al., 2018).

Utilizing entails organizing complementary human resource combinations and deploying them effectively for task execution. Managers coordinate human resource allocation, foster knowledge sharing, and optimize configurations based on team demands and environmental contingencies (Ployhart et al., 2014; Mathieu et al., 2019).

Together, these dimensions reflect a dynamic, team-level approach to HR management that extends beyond individual-level practices. They highlight the strategic discretion managers exercise in aligning human resources with team goals and adapting them over time.

Hypothesis 1. HRO consists of three dimensions: building, developing, and utilizing.

Two aspects of HRO: HCR and SCR orchestration. HRO involves managing both human

capital resources (HCR) and social capital resources (SCR) to align with team-level strategic goals. HCR refers to team-level capacities based on members' knowledge, skills, and abilities (Ployhart et al., 2014), while SCR reflects the value of task-relevant social relationships within and outside the team (Wolfson & Mathieu, 2021).

We define HCR orchestration (HCRO) as managerial actions to build, develop, and utilize human capital that meets the team's strategic needs—through selective staffing, capability development, and optimal deployment of KSAOs. Conversely, SCR orchestration (SCRO) refers to managerial efforts to shape, expand, and apply team members' task-relevant relationships—by fostering value fit, work-related networks, and collaboration with stakeholders.

Together, HCRO and SCRO comprise two integral aspects of HRO, emphasizing that effective management of team performance requires not only technical expertise but also social connectivity aligned with strategic objectives.

Hypothesis 2: HRO consists of two aspects: HCRO and SCRO.

Convergent and Discriminant Validity of HRO

As a strategic HR role, HRO must be conceptually positioned in relation to existing constructs—particularly HRPI and supportive leadership (SL). While all three reflect managerial efforts to manage people, they differ in focus and underlying assumptions.

HRPI emphasizes managers as deliverers of organizational HR practices, often in a top-down, compliance-oriented fashion (Pak & Kim, 2018). In contrast, SL captures employee-oriented behaviors that reflect individualized attention and emotional support (Rafferty & Griffin, 2004).

HRO shares task-oriented elements with HRPI and proactive features with SL, but it is distinct in its emphasis on discretionary, strategy-driven actions that align team human resources with strategic goals (Kehoe & Han, 2020). Rather than acting as passive transmitters or relational supporters, managers engaging in HRO proactively structure, coordinate, and deploy collective human resources to execute organizational strategy.

Hypothesis 3: HRO is positively related to HRPI and SL.

Hypothesis 4: HRO is distinct from HRPI and SL.

Criterion-Related Validity of HRO

To assess the strategic impact of HRO, we examined its relationship with team-level outcomes—team efficacy, team cohesion, and team performance—which represent cognitive, affective, and behavioral aspects of team effectiveness (Mathieu et al., 2008).

Team efficacy refers to a shared belief in collective capabilities (Kozlowski & Ilgen, 2006). HRO strengthens this belief by aligning team competencies and relationships with task demands, reinforcing members' confidence in achieving goals (DeRue et al., 2010).

Team cohesion, defined as the bonding and shared commitment among members (Zaccaro et al., 2001), is enhanced through HRO activities that foster complementary capabilities, trust, and shared understanding (Mathieu et al., 2015).

Team performance improves as managers strategically combine and deploy members'

KSAOs and relationships, enabling adaptive coordination, learning, and execution (Ployhart & Moliterno, 2011; Srivastava et al., 2006).

In sum, HRO is expected to directly contribute to team effectiveness by aligning collective human resources with strategic objectives.

Hypothesis 5. HRO is positively related to team efficacy, team cohesion, and team performance.

METHODS

To ensure content validity, we developed a multidimensional HRO scale grounded in Resource Orchestration and Human Capital Resource theories. The scale captures three core managerial activities—building, developing, and utilizing team human resources—across both human and social capital domains. Items were refined through feedback from academic scholars and HR professionals to ensure theoretical accuracy and practical relevance.

We collected paired survey data from managers and employees across diverse industries in Korea. Managers assessed their own HRO behaviors, while employees evaluated how their teams were managed. Responses were aggregated to the team level, and all measures were adapted from established sources using a standardized translation–back translation process.

RESULTS

Factor analyses confirmed that HRO consists of three distinct dimensions—building, developing, and utilizing—while human and social capital aspects were not empirically separable. This supported our proposed structure of HRO as a higher-order construct comprising team-focused managerial activities.

HRO was positively associated with both traditional HR roles (HR practice implementation and supportive leadership), yet remained conceptually distinct from them. Structural equation modeling demonstrated that HRO significantly contributes to key team outcomes, including team efficacy, cohesion, and performance, above and beyond traditional HR roles.

DISCUSSION

This study reframes managers' HR roles by introducing HRO, grounded in RO and HCR theories. Departing from the traditional focus on HRPI, HRO captures how managers actively build, develop, and utilize collective human resources to execute team-level strategies (Sirmon et al., 2011; Ployhart et al., 2014).

Theoretically, this work contributes to strategic human resource management (SHRM) research by positioning line managers as strategic agents, not passive implementers of HR practices. It extends RO and HCR literatures by specifying how resource orchestration occurs at the team level, linking managerial actions directly to team effectiveness (Becker & Huselid, 2006; Ployhart & Moliterno, 2011).

Methodologically, the study offers a validated, multidimensional HRO scale grounded in theory and tested through cross-source data. Unlike existing measures based on organizational HR systems, this scale captures manager-initiated activities tailored to team contexts.

Practically, the HRO scale provides organizations with a diagnostic tool for evaluating and developing managers' strategic HR capabilities. It also emphasizes the importance of managerial

communication and team-level alignment for strategy execution.

Limitations include the cross-sectional design and single-country sample. Future research should validate the HRO construct across cultures and use longitudinal designs to examine its causal impact. Moreover, exploring HRO's mediating role in team processes and its interaction with organizational HR systems offers promising directions.

ENDNOTES

1. This work was supported by the Ministry of Education of the Republic of Korea and the National Research Foundation of Korea (NRF-2024S1A5B5A17036336).

2. Corresponding author: Andrea Kim, SKK Business School, Sungkyunkwan University, 25-2 Sungkyunkwan, Jongno, Seoul 03063, Republic of Korea. E-mail: akim@skku.edu

REFERENCES

- Becker, B. E., & Huselid, M. A. 2006. Strategic human resources management: Where do we go from here? *Journal of Management*, 32(6): 898–925.
- DeRue, D. S., Hollenbeck, J., Ilgen, D. A. N., & Feltz, D. 2010. Efficacy dispersion in teams: Moving beyond agreement and aggregation. *Personnel Psychology*, 63(1): 1–40.
- Eckardt, R., & Jiang, K. 2019. Human capital resource emergence: Theoretical and methodological clarifications and a path forward. In A. J. Nyberg, & T. P. Moliterno (Eds.), *Handbook of research on strategic human capital resources*: 77–112. Northampton, MA: Edward Elgar Publishing.
- Hambrick, D. C., & Finkelstein, S. 1987. Managerial discretion: A bridge between polar views of organizational outcomes. *Research in Organizational Behavior*, 9: 369–406.
- Kehoe, R. R., & Han, J. H. 2020. An expanded conceptualization of line managers' involvement in human resource management. *Journal of Applied Psychology*, 105(2): 111–129.
- Kozlowski, S. W., & Ilgen, D. R. 2006. Enhancing the effectiveness of work groups and teams. *Psychological Science in the Public Interest*, 7(3): 77–124.
- Mathieu, J., Maynard, M. T., Rapp, T., & Gilson, L. 2008. Team effectiveness 1997–2007: A review of recent advancements and a glimpse into the future. *Journal of Management*, 34(3): 410–476.
- Mathieu, J. E., Kukenberger, M. R., D'innocenzo, L., & Reilly, G. 2015. Modeling reciprocal team cohesion–performance relationships, as impacted by shared leadership and members' competence. *Journal of Applied Psychology*, 100(3): 713–734.
- Mathieu, J. E., Gallagher, P. T., Domingo, M. A., & Klock, E. A. 2019. Embracing complexity: Reviewing the past decade of team effectiveness research. *Annual Review of Organizational*

Psychology and Organizational Behavior, 6: 17–46.

- Pak, J., & Kim, S. 2018. Team manager's implementation, high performance work systems intensity, and performance: A multilevel investigation. *Journal of Management*, 44(7): 2690–2715.
- Ployhart, R. E., & Moliterno, T. P. 2011. Emergence of the human capital resource: A multilevel model. *Academy of Management Review*, 36(1): 127–150.
- Ployhart, R. E., Nyberg, A. J., Reilly, G., & Maltarich, M. A. 2014. Human capital is dead; Long live human capital resources! *Journal of Management*, 40(2): 371–398.
- Rafferty, A. E., & Griffin, M. A. 2004. Dimensions of transformational leadership: Conceptual and empirical extensions. *The Leadership Quarterly*, 15(3): 329–354.
- Sirmon, D. G., Hitt, M. A., Ireland, R. D., & Gilbert, B. A. 2011. Resource orchestration to create competitive advantage: Breadth, depth, and life cycle effects. *Journal of Management*, 37(5): 1390–1412.
- Vossaert, L., Anseel, F., Collewaert, V., & Foss, N. J. 2022. There's many a slip "twixt the cup and the lip": HR management practices and firm performance. *Journal of Management Studies*, 59(3): 660–694.
- Wolfson, M. A., & Mathieu, J. E. 2021. Deploying human capital resources: Accentuating effects of situational alignment and social capital resources. *Academy of Management Journal*, 64(2): 435–457.
- Wolfson, M. A., Tannenbaum, S. I., Mathieu, J. E., & Maynard, M. T. 2018. A cross-level investigation of informal field-based learning and performance improvements. *Journal of Applied Psychology*, 103(1): 14–36.
- Zaccaro, S. J., Rittman, A. L., & Marks, M. A. 2001. Team leadership. *The Leadership Quarterly*, 12(4): 451–483.