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Strategic Human Capital Deployment: Examining the Mechanisms Linking Managerial Talent, Work Experience Accumulation, and Supervisory Effectiveness to Job Rotation Outcomes

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Abstract

This study examines the influence of managerial talent, work experience accumulation, and supervisory effectiveness on job rotation outcomes among managers of PT Pos Indonesia Regional IV Jakarta. As a state-owned enterprise operating in an increasingly competitive logistics environment, PT Pos Indonesia requires evidence-based human capital strategies to enhance managerial adaptability and organizational agility. This research proposes an integrated structural model linking managerial talent, experiential learning, and supervisory practices, with a particular emphasis on their sequential interrelationships in explaining job rotation effectiveness. A quantitative approach was employed using a census of 160 managers. Data were analyzed through Confirmatory Factor Analysis (CFA) and Structural Equation Modeling (SEM) to test direct and indirect relationships among variables. The findings indicate that managerial talent, work experience accumulation, and supervisory effectiveness positively influence job rotation outcomes. In addition, managerial talent indirectly affects job rotation effectiveness through work experience and supervision, suggesting a sequential mediation mechanism. While the results provide empirical support for the proposed model, they should be interpreted with caution due to the study's cross-sectional design, reliance on self-reported data, and focus on a single regional context. This study contributes to the talent management literature by highlighting the importance of integrating managerial capability, experiential accumulation, and supervisory processes into a coherent mechanism influencing job rotation outcomes. Practically, the findings offer guidance for designing competency-based rotation systems to strengthen leadership pipelines and organizational resilience in state-owned enterprises.

KEYWORDS

managerial talent; work experience; supervision; job rotation.

Introduction

In the era of rapid globalization and digital transformation, organizations are compelled to adopt adaptive talent management strategies to remain competitive. For state-owned enterprises (SOEs) such as PT Pos Indonesia, a leading postal and logistics provider with over 3,800 branch offices and 25,000 service points nationwide, maintaining competitiveness is particularly challenging. Despite its extensive network and strategic role in Indonesia's logistics ecosystem, PT Pos Indonesia faces heightened competition from domestic and international courier and e-commerce logistics firms. This competitive pressure has intensified the need for agile human resource (HR) practices that strengthen managerial competencies and organizational adaptability

(Ahammad et al., 2020).

Regional IV Jakarta represents a critical strategic hub for PT Pos Indonesia and is widely recognized as one of the largest contributors to the company's overall revenue. However, over the last three years, the region has experienced stagnation in performance growth, despite industry-wide expansion in courier and logistics demand (PT Pos Indonesia, 2019). This stagnation underscores structural challenges, particularly at the managerial level, where decision-making, service quality, and operational execution directly influence organizational performance. Addressing these challenges requires deliberate investment in managerial development programs that enhance leadership capacity, cross-functional knowledge, and operational excellence (Žilka et al., 2025).

Job rotation has emerged as a strategic HR intervention designed to address managerial capability gaps, reduce work monotony, and build organizational resilience (Botti et al., 2017). Job rotation refers to the structured movement of employees between functions or divisions, functioning not merely as a developmental intervention but also as a strategic approach for cultivating adaptable leadership talent (Rao Pabolu & Shrivastava, 2021). Research consistently demonstrates that well-designed rotation programs enhance employee engagement, promote skill diversification, and create a stronger alignment between individual potential and organizational needs (Korpela et al., 2024). However, the success of such initiatives hinges on a nuanced understanding of individual competencies, prior experiences, and supervisory practices, which together form the foundation of effective rotational policies (Butkovič & Lewis, 2007).

Managerial talent represents one of the most critical drivers of organizational success. Talented managers possess the technical, conceptual, and interpersonal skills required to navigate complex organizational environments, drive innovation, and implement strategic objectives (Balrunaite et al., 2023). In emerging economies, where market dynamics are highly volatile, talent management is considered a key differentiator for long-term competitiveness (Delfgaauw & Dur, 2010). PT Pos Indonesia's managerial talent development initiatives have historically focused on training programs, but the role of structured job rotation as a talent development mechanism remains underexplored, particularly within public-sector logistics organizations.

Work experience also plays a pivotal role in shaping managerial effectiveness. Experiential learning, accumulated through diverse assignments and exposure to different operational contexts, equips managers with practical insights and decision-making capabilities (Poon et al., 2024). Experienced managers often demonstrate higher adaptability, problem-solving ability, and organizational awareness, which are essential for navigating complex networks like PT Pos Indonesia. Empirical studies further indicate that leveraging prior work experience enhances job satisfaction, employee retention, and organizational performance (Müller et al., 2025).

Supervision, as a managerial practice, complements talent and experience by providing structure, feedback, and guidance (Eissa & Lester, 2025). Effective supervision ensures alignment between organizational objectives and employee actions, promoting accountability and fostering professional growth (Liao, 2025). In rotational assignments, supervision acts as a critical mechanism to facilitate smooth transitions, reduce role ambiguity, and optimize learning outcomes (Knotts et al., 2025).

While prior studies on job rotation have predominantly focused on employee-level outcomes such as skill acquisition, engagement, and job satisfaction, limited attention has been given to the underlying mechanisms that explain job rotation effectiveness at the managerial level. In particular, existing research tends to examine managerial talent, work

experience, and supervisory practices in isolation, without sufficiently explaining how these factors interact within an integrated framework to influence rotation outcomes. Job rotation is widely recognized as a strategic HR tool, scholarly attention has predominantly focused on employee-level outcomes, such as skill acquisition, engagement, and job satisfaction (Mishra, 2023). Limited studies have examined rotation effectiveness at the managerial level, especially within SOEs operating in competitive sectors in developing economies (Baishya et al., 2025). This research addresses this gap by integrating managerial talent, work experience accumulation, and supervisory effectiveness into a unified analytical framework to explain job rotation outcomes. While these constructs have been widely examined in prior HRD literature, this study offers an integrative perspective and extends their application to the relatively underexplored context of managerial-level job rotation within a state-owned enterprise.

This study holds significance for three primary reasons. First, it extends the literature on job rotation by integrating managerial talent, work experience, and supervisory practices into a single analytical model. Second, it highlights the unique dynamics of talent management within SOEs in Indonesia's logistics sector, providing context-specific evidence to support HR decision-making. Finally, this study addresses a critical organizational challenge—stagnating managerial performance—by identifying key levers for designing competency-based job rotation programs. The findings will guide HR leaders and policymakers in implementing rotation strategies that enhance managerial readiness, strengthen leadership pipelines, and improve organizational agility in the face of market disruption.

Literature Review

Job rotation

Job rotation is a human resource development strategy involving the structured movement of employees across various roles, functions, or departments within an organization to expand competencies, strengthen motivation, and improve overall performance (Battini et al., 2022). It is rooted in the principle that exposure to diverse work environments allows employees to acquire a holistic understanding of organizational operations and prepares them for leadership roles (Rinaldi et al., 2021). Unlike job enlargement or job enrichment, which focus on expanding responsibilities within a single role, job rotation emphasizes lateral movement and experiential learning, enabling employees to develop adaptability, resilience, and cross-functional expertise (Boenzi et al., 2013). Historically, job rotation emerged as part of scientific management and industrial engineering practices, which recognized that repetitive work could cause employee fatigue and demotivation (Rao Pabolu & Shrivastava, 2021). Contemporary human capital theory extends this concept by framing job rotation as an investment in employee development that increases both individual and organizational productivity (Finco et al., 2020).

Job rotation serves multiple organizational objectives, including talent development, succession planning, and knowledge transfer (Moussavi et al., 2018). For managers, rotation programs provide a comprehensive understanding of company processes, enabling them to make better decisions and lead effectively (Fichadiya et al., 2025). From a strategic HR perspective, job rotation enhances organizational agility by building a workforce that can quickly respond to changing market demands (Assunção et al., 2022). Research also highlights its role in reducing turnover intentions, improving employee engagement, and mitigating the risks of skill obsolescence (Füchtenhans et al., 2025). In the context of state-owned enterprises (SOEs) such as PT Pos Indonesia, job rotation not only serves as a developmental tool but also acts as a governance mechanism, ensuring transparency and

accountability by preventing overfamiliarity with a single post. While job rotation is widely implemented in multinational corporations and high-tech industries, its application in SOEs and developing economies remains underexplored. In Indonesia, job rotation is often used for bureaucratic purposes rather than strategic HRD, limiting its effectiveness. This study seeks to address this gap by examining the key determinants of job rotation effectiveness within a state-owned logistics enterprise operating in an increasingly competitive and digitalized environment.

Managerial talent

Managerial talent refers to the set of competencies, leadership potential, and behavioral attributes that enable managers to deliver superior organizational results (Gao & Dong, 2025). It encompasses a combination of technical expertise, conceptual thinking, problem-solving ability, and interpersonal skills (Delfgaauw & Dur, 2010). Organizations that systematically identify and nurture managerial talent gain a sustained competitive advantage (Baltrunaite et al., 2023). Talent management theory emphasizes the identification of high-potential individuals (HIPOs) and their placement in critical roles to achieve strategic goals (Wali Ullah et al., 2024).

Managerial talent is thus a central variable in leadership pipelines, succession planning, and employee retention strategies (Gaganis et al., 2023). Many studies consistently link managerial talent to financial and non-financial performance outcomes (Baishya et al., 2025). Mishra (2023) demonstrated that managerial competencies influence multiple dimensions of organizational performance as reflected in the Balanced Scorecard framework, including customer satisfaction, process efficiency, and innovation. Similarly, Belloc et al. (2025) showed that leadership talent is a significant predictor of organizational agility and adaptability, particularly in volatile business environments.

Work experience

Work experience represents the accumulated knowledge, skills, and insights gained from performing various tasks over time (Vincent et al., 2024). Work experience provides employees with a repertoire of tacit knowledge that formal training often cannot deliver (Poon et al., 2024). Work experience has both quantitative aspects, such as tenure and number of roles held, and qualitative dimensions, such as complexity of assignments and exposure to diverse organizational contexts (Müller et al., 2025).

In leadership development literature, experience is considered a primary determinant of managerial effectiveness (Groves et al., 2025). The results reported by Lai (2025) indicate that challenging job assignments, not formal education, are the most influential factor in shaping leadership capacity (Lai et al., 2025). Research has established strong links between experience and decision-making quality, adaptability, and innovation. Liu and Hayton showed that employees with higher work experience

contribute significantly to creative problem-solving and operational excellence (Liu & Hayton, 2025). Layek and Koodamara (2024) highlighted that extensive career experiences accelerate decision-making speed and improve managerial confidence. In the context of job rotation, work experience is a key enabler, as managers with broad exposure can adapt more easily to new roles, reducing the transition period and associated performance dips (Layek & Koodamara, 2024).

Supervision

Supervision in a managerial context refers to the systematic process of directing, overseeing, and assessing employee performance to ensure the achievement of organizational goals (Liao, 2025). It goes beyond control functions to include coaching, mentoring, and developmental feedback (Knotts et al., 2025). Effective supervision fosters employee engagement, improves work quality, and supports organizational learning (Lourenço & Rodrigues, 2025). In Indonesian SOEs, supervision plays a critical role in maintaining service standards, particularly in geographically dispersed operations like PT Pos Indonesia.

The supervisory skills of managers thus directly impact customer satisfaction, operational reliability, and compliance with regulations. Supervision is increasingly framed as a developmental practice rather than a purely evaluative one (Social Work Supervision - Carolyn Noble, Jude Irwin, 2009, n.d.). Supervisors are expected to act as role models and facilitators of continuous improvement, aligning with modern talent development frameworks that emphasize coaching cultures (Eissa & Lester, 2025). Strong supervisory capacity complements job rotation by ensuring that managers are equipped to handle diverse teams and tasks

Conceptual Framework

The interplay between managerial talent, work experience, and supervision provides a holistic explanation of job rotation effectiveness. While prior studies have examined these relationships in isolation or through single mediation paths, this study advances the literature by proposing a sequential and multi-layered mediation mechanism. Specifically, managerial talent is theorized to influence job rotation outcomes not only directly but also indirectly through the accumulation of work experience and the development of supervisory effectiveness.

By integrating these relationships within a unified Structural Equation Modeling (SEM) framework, the study offers a more comprehensive and process-oriented perspective on how managerial capabilities are translated into effective job rotation outcomes. This integrative approach enables the simultaneous examination of direct and indirect effects, thereby extending prior mediation models that typically focus on limited or linear relationships.

Based on the synthesized literature, the study develops a structural framework positing that Managerial Talent (X1), Work Experience (X2), and Supervision (X3) influence Job Rotation Effectiveness (Y) both independently and through

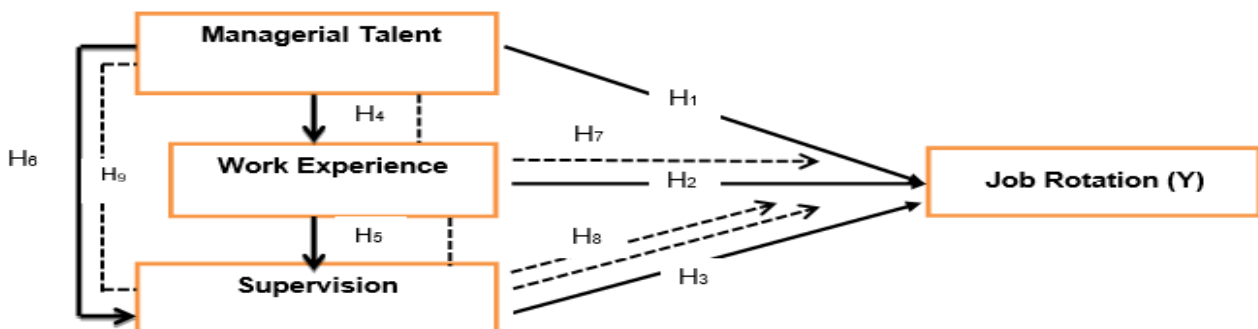


Figure 1. Conceptual Framework

intermediary effects.

Hypotheses Development

Employees with high managerial skills are able to motivate teams and optimise work processes, thereby increasing the chances of successful job rotation (Gao & Dong, 2025). Previous studies have shown that managerial skills contribute significantly to the effectiveness of adaptation to new positions and career advancement (Delfgaauw & Dur, 2010) (Baltrunaite et al., 2023). Therefore, the stronger an employee's managerial skills, the greater the success of the job rotation.

H1: Managerial talent positively influences job rotation effectiveness.

Work experience represents the progressive accumulation of competencies and knowledge that facilitates individuals' adjustment to new assignments (Dabney et al., 2023). Previous studies confirm that work experience has a significant impact on performance and readiness to accept job rotation (Sayin et al., 2025) (Duan et al., 2025). Accordingly, greater work experience is associated with a stronger contribution to the effectiveness of job rotation.

H2: Work experience positively influences job rotation effectiveness.

Effective supervision ensures that tasks are executed in alignment with organizational standards, thereby enabling the rotation process to proceed smoothly with minimal adaptation challenges (Siddiqi et al., 2024). Research proves that supervisory control is positively related to performance and position transition effectiveness (Hartner-Tiefenthaler, 2021). With good supervision, job rotation more easily supports the achievement of organisational goals.

H3: Supervision positively influences job rotation effectiveness.

Strong managerial skills enable individuals to gain more learning opportunities and experience in a variety of tasks (Baltrunaite et al., 2023). Empirical findings show that managerial talent enriches the accumulation of work experience through involvement in strategic assignments (Delfgaauw & Dur, 2010). This means that the better an employee's managerial skills, the more extensive their work experience will be.

H4: Managerial talent positively influences work experience.

Employees with extensive experience tend to be more effective in performing supervisory functions because they are familiar with work procedures and standards (Allan et al., 2025). Research finds that work experience is positively related to the quality of control and monitoring performed (Vincent et al., 2024). Accordingly, greater work experience is associated with stronger supervisory capabilities.

H5: Work experience positively influences supervision.

Managerial talent represents a critical capability in directing, coordinating, and evaluating employee performance. Managers with higher levels of talent are more likely to demonstrate effective supervisory behaviors, including providing guidance, monitoring performance, and ensuring alignment with organizational objectives (Wali Ullah et al., 2024). Therefore, the better a person's managerial skills, the greater their potential to strengthen supervisory functions.

H6: Managerial talent positively influences supervision.

Managerial talent encourages the formation of broader work experience through cross-functional assignments and strategic responsibilities. The findings indicate that managerial talent, when mediated by work experience, exerts a significant influence on job rotation effectiveness (Belloc et al., 2025). Thus, work experience becomes an important mediator between managerial skills and the effectiveness of job rotation.

H7: Managerial talent indirectly influences job rotation

through work experience.

Extensive work experience strengthens an individual's capacity to deliver effective supervision (Liu & Hayton, 2025). Research finds that supervision influenced by work experience has a positive impact on the success of job rotation (Layek & Koodamara, 2024). This shows that supervision is a mediating mechanism between work experience and the effectiveness of job rotation.

H8: Work experience indirectly influences job rotation through supervision.

Managerial talent strengthens the effectiveness of supervision, which in turn increases the success of job rotation programmes (Gaganis et al., 2023). Empirical evidence supports the indirect influence of managerial talent on job rotation through the quality of supervision (Mishra, 2023). Accordingly, supervision may be conceptualized as a critical mediating variable linking managerial skills to job rotation effectiveness.

H9: Managerial talent indirectly influences job rotation through supervision.

Method

Research Type

This study employed a quantitative research design using a survey method to examine the relationships among managerial talent, work experience accumulation, supervisory effectiveness, and job rotation outcomes. A cross-sectional approach was adopted, allowing the assessment of theoretically grounded relationships among variables at a single point in time. While Structural Equation Modeling (SEM) enables the simultaneous estimation of direct and indirect relationships, the cross-sectional nature of the data limits the ability to establish temporal precedence; therefore, the findings should be interpreted as associative rather than strictly causal.

Population and Sampling

The population consisted of all managerial personnel working at post offices within Regional IV Jakarta of PT Pos Indonesia, totaling 160 managers. Given the relatively small and well-defined population, a census (saturated sampling) approach was employed, ensuring full representation of the managerial cohort in the region.

Data Collection Instrument

Data were gathered through a structured self-administered questionnaire. The measurement instrument was developed based on a comprehensive literature review and designed to operationalize each construct included in the research model.

Job Rotation Effectiveness (Y): Measured using indicators such as perceived improvement in skills, adaptability to new roles, career development satisfaction, and overall contribution to organizational objectives following rotation.

Managerial Talent (X1): Assessed through dimensions including leadership ability, strategic thinking, decision-making capability, interpersonal skills, and innovation in problem-solving.

Work Experience (X2): Evaluated based on the duration of service, diversity of roles held, depth of expertise, and the number of different departments or functions the manager had worked in.

Supervision (X3): Measured by items related to the quality of guidance, feedback frequency and constructiveness, mentoring support, and the clarity of performance expectations provided by supervisors.

All measurement items were assessed using a five-point Likert scale, with response options ranging from 1 (Strongly Disagree) to 5 (Strongly Agree), to reflect the respondents'

degree of agreement with each statement.

Data Collection Procedure

Data collection was conducted over a nine-month period (September 2024 – July 2025). Formal approval was obtained from organizational management prior to survey distribution. Questionnaires were administered to all 160 managers, and follow-up reminders were used to ensure participation.

A 100% response rate was achieved, which can be attributed to the census approach and strong organizational support. Respondents were assured of anonymity and confidentiality to reduce evaluation apprehension and encourage honest responses.

Data Analysis Technique

The data were analyzed using a two-stage approach commonly recommended in Structural Equation Modeling (SEM) research.

Measurement Model Evaluation (Confirmatory Factor Analysis – CFA):

In the first stage, the measurement model was assessed to establish construct validity, encompassing both convergent and discriminant validity. Convergent validity was examined through factor loadings, Average Variance Extracted (AVE), and Composite Reliability (CR). Discriminant validity was evaluated using the Fornell–Larcker criterion to ensure adequate differentiation among constructs.

Structural Model Evaluation (Path Analysis):

The second stage involved testing the hypothesized relationships among the latent variables. The statistical significance of path coefficients—including direct, indirect, and total effects—was analyzed to evaluate the nine proposed hypotheses. Overall model adequacy was determined using established goodness-of-fit indices, including Chi-Square divided by degrees of freedom (CMIN/DF), Comparative Fit Index (CFI), Tucker–Lewis Index (TLI), and Root Mean Square Error of Approximation (RMSEA).

Assessment of Potential Bias

Given the use of self-reported data, potential common method bias (CMB) was considered. Procedural remedies were implemented, including ensuring respondent anonymity, reducing ambiguity in item wording, and separating constructs conceptually within the questionnaire. Additionally, statistical checks (e.g., Harman's single-factor test) were conducted to assess the presence of common method variance. The results indicated that no single factor accounted for the majority of variance, suggesting that CMB is unlikely to significantly bias the findings.

Research Limitations

Given the cross-sectional design, temporal ordering among variables cannot be definitively established, and the possibility of reverse relationships cannot be entirely ruled out. Therefore, the findings should be interpreted as evidence of theoretically grounded associations rather than definitive causal relationships.

Result and Discussion

This study obtained data from 160 managers representing 12 major post offices within PT Pos Indonesia Regional IV Jakarta. The respondents' demographic characteristics, presented in Table 1, offer contextual insight into the composition of the sample. The gender distribution was 60% male and 40% female, suggesting a relatively balanced representation. Critically, the data reveals a highly

experienced and mature workforce: a combined 71.9% of managers were aged 46 years or older, and a striking 81.9% had over 15 years of work experience, with 50.6% having served for more than 25 years. This indicates a sample rich in organizational tenure and practical knowledge. Educationally, 78.1% of respondents held a diploma or higher, confirming that the managerial cohort is predominantly composed of professionally educated personnel.

This profile underscores that the findings of this study are derived from a stable, highly experienced, and well-educated managerial group within a large public sector organization, which is crucial for interpreting the results on job rotation, a process often tied to seniority and deep institutional knowledge.

Measurement Model Evaluation (Confirmatory Factor Analysis)

Before evaluating the structural model, the measurement model's reliability and validity were examined through Confirmatory Factor Analysis (CFA). The four latent constructs were assessed in terms of internal consistency, convergent validity, and discriminant validity.

Reliability and Convergent Validity

As presented in Table 2, all constructs exhibited strong internal consistency, with both Cronbach's Alpha (α) and Composite Reliability (CR) values surpassing the recommended threshold of 0.70 (Hair et al., 2019). Convergent validity was also satisfactorily achieved, indicating that the indicators associated with each construct consistently measured the same underlying concept. Furthermore, the Average Variance Extracted (AVE) values exceeded the benchmark of 0.50

Table 1. Demographic Profile of Respondents (n=160)

Category	Classification	Frequency	Percentage
Gender	Male	96	60.0%
	Female	64	40.0%
Age	Below 30 years	20	12.5%
	31 - 35 years	13	8.1%
	36 - 40 years	13	8.1%
	41 - 45 years	17	10.6%
	46 - 50 years	52	32.5%
	Above 50 years	45	28.1%
Tenure	Below 6 years	7	4.4%
	6 - 10 years	20	12.5%
	11 - 15 years	18	11.3%
	16 - 20 years	15	9.4%
	21 - 25 years	19	11.9%
	Above 25 years	81	50.6%
Education	High School	35	21.9%
	Diploma	73	45.6%
	Bachelor's (S1)	35	21.9%
	Master's (S2)	17	10.6%

Table 2. Reliability and Convergent Validity of Constructs

Construct	Cronbach's Alpha (α)	Composite Reliability (CR)	Average Variance Extracted (AVE)
Managerial Talent (MT)	0.956	0.957	0.647
Work Experience (WE)	0.926	0.926	0.557
Supervision (S)	0.904	0.905	0.625
Job Rotation (JR)	0.934	0.934	0.543

(Fornell & Larcker, 1981), demonstrating that each latent construct accounted for more than half of the variance of its respective indicators on average.

Factor Loadings and Indicator Reliability

The CFA model exhibited a good fit with the data ($\chi^2/df = 1.071$, CFI = 0.984, TLI = 0.983, RMSEA = 0.021). Table 3 presents the standardized factor loadings for all indicators, which were all statistically significant ($p < 0.001$) and exceeded the recommended value of 0.55 (Hair et al., 2019), thus confirming indicator reliability. The results highlight the most dominant indicators for each construct, providing insight into which aspects are most representative of the latent variables in this public sector context. For instance, items related to strategic decision-making and team leadership were paramount for Managerial Talent, while long-term, multifaceted project experience was central to Work Experience.

Structural Model and Hypothesis Testing

The structural model was evaluated to test the hypothesized relationships. The model demonstrated an excellent fit ($\chi^2/df = 1.071$, $p = 0.056$; CFI = 0.984; TLI = 0.983; RMSEA = 0.021), indicating that the proposed theoretical structure is a valid representation of the empirical data.

Direct Effects

The results of the direct path analysis are summarized in Table 4. The analysis reveals that Supervision ($\beta = 0.339$, $p = 0.002$), Work Experience ($\beta = 0.327$, $p = 0.005$), and Managerial Talent ($\beta = 0.250$, $p = 0.006$) all exert statistically significant and positive direct influences on Job Rotation. This supports H1, H2, and H3, confirming that all three constructs are critical direct antecedents of successful job rotation in this public sector context.

Furthermore, a strong, significant direct effect was found from Managerial Talent to Work Experience ($\beta = 0.556$, $p < 0.001$), supporting H4. This suggests that inherent managerial abilities are a powerful driver for accumulating rich and diverse work experience. Work Experience also significantly predicted Supervision ($\beta = 0.271$, $p = 0.009$), supporting H5, indicating that seasoned managers are perceived as more competent in supervisory roles. Conversely, the direct path from Managerial Talent to Supervision was not significant ($\beta = 0.095$, $p = 0.222$), leading to the rejection of H6.

Mediating (Indirect) Effects

The bootstrapping procedure was used to test the significance of the indirect effects, providing a robust test for mediation (Preacher & Hayes, 2008). The results, also detailed in Table 4, reveal a complex mediation structure.

H7 proposed that Work Experience mediates the relationship between Managerial Talent and Job Rotation. The

Table 3. Standardized Factor Loadings from Confirmatory Factor Analysis

Construct	Indicator	Loading	Construct	Indicator	Loading	
Managerial Talent (MT)	MT1	0.775	Work Experience (WE)	WE1	0.657	
	MT2	0.814		WE2	0.699	
	MT3	0.755		WE3	0.702	
	MT4	0.781		WE4	0.750	
	MT5	0.811		WE5	0.721	
	MT6	0.834		WE6	0.794	
	MT7	0.821		WE7	0.816	
	MT8	0.815		WE8	0.765	
	MT9	0.839		WE9	0.799	
	MT10	0.846		WE10	0.744	
	Job Rotation (JR)	MT11	0.774	Supervision (S)	S1	0.625
		MT12	0.781		S2	0.773
JR1		0.741	S3	0.668		
JR2		0.782	S4	0.571		
JR3		0.724	S5	0.702		
JR4		0.794	S6	0.676		
JR5		0.763	S7	0.635		
JR6		0.746	S8	0.617		
JR7		0.794	S9	0.550		
JR8		0.650	S10	0.612		
JR9		0.713	S11	0.696		
JR10		0.715	S12	0.581		
JR11	0.715	S13	0.728			
JR12	0.688					

Table 4. Direct, Indirect, and Total Effects (Standardized Estimates)

Path	Direct Effect	Indirect Effect	Total Effect	p-value	Hypothesis
Managerial Talent → Job Rotation	0.250	0.265	0.515	0.006	H1: Supported
Work Experience → Job Rotation	0.327	0.092	0.419	0.005	H2: Supported
Supervision → Job Rotation	0.339	-	0.339	0.002	H3: Supported
Managerial Talent → Work Experience	0.556	-	0.556	<0.001	H4: Supported
Work Experience → Supervision	0.271	-	0.271	0.009	H5: Supported
Managerial Talent → Supervision	0.095	0.151	0.246	0.222	H6: Not Supported
Managerial Talent → Work Experience → Job Rotation	-	0.182	-	0.036	H7: Supported
Work Experience → Supervision → Job Rotation	-	0.092	-	0.009	H8: Supported
Managerial Talent → Supervision → Job Rotation	-	0.032	-	0.015	H9: Supported

specific indirect effect was significant ($\beta = 0.182, p = 0.036$) supporting H7. This is the strongest mediation pathway, indicating that a substantial portion of the influence of managerial talent on job rotation operates through its capacity to foster extensive work experience.

H8 proposed that Supervision mediates the relationship between Work Experience and Job Rotation. The specific indirect effect was significant ($\beta = 0.092, p = 0.009$), supporting H8. This suggests that experienced managers are often selected for rotation because their experience makes them effective supervisors.

H9 proposed that Supervision mediates the relationship between Managerial Talent and Job Rotation. Although the direct effect (H6) was non-significant, the specific indirect effect was statistically significant ($\beta = 0.032, p = 0.015$). This pattern of results is consistent with an indirect-only mediation (Zhao et al., 2010) suggesting that Managerial Talent is associated with Job Rotation primarily through its relationship with Supervision. However, the magnitude of the indirect effect is relatively small ($\beta = 0.032$), suggesting that while the mediation is statistically significant, its practical impact may be limited. This finding highlights that supervision plays a mediating role in linking managerial talent to job rotation outcomes, although the strength of this mechanism appears modest within the studied context.

The total effects in Table 4 provide a holistic view. Managerial Talent has the highest total effect on Job Rotation ($\beta = 0.515$), but this is largely channeled indirectly through Experience and Supervision. Work Experience also shows a strong total effect ($\beta = 0.419$), underscoring its paramount importance in this context.

Goodness-of-Fit and Model Diagnostics

The model fit in Table 5 generally indicates an acceptable level of fit between the proposed model and the observed data. Although key indices such as CFI, TLI, and RMSEA meet the recommended thresholds, several other indices, including GFI, AGFI, and NFI, fall within a marginal range. Therefore, model fit can be considered adequate, though not optimal, for hypothesis testing.

This study examines the relationships among managerial talent, work experience accumulation, supervisory effectiveness, and job rotation outcomes within a public sector context. The findings provide support for most of the hypothesized relationships and reveal important insights into the mechanisms through which human capital factors are associated with job rotation effectiveness. In particular, the results highlight the role of sequential relationships among managerial capabilities, accumulated experience, and supervisory effectiveness, offering a more integrative perspective on talent deployment.

Discussion on the Direct Effects on Job Rotation

The analysis strongly confirms that Managerial Talent (H1) exerts a significant positive influence on Job Rotation. This finding aligns with the upper echelons theory, which posits that the attributes and skills of managers profoundly impact organizational outcomes (Delfgaauw & Dur, 2010). Managers with high conceptual, human, and technical skills are perceived as more adaptable and capable of handling diverse responsibilities. Consequently, they are prime candidates for rotational assignments designed to broaden their organizational perspective and prepare them for senior roles. This result corroborates previous studies (Balrunaite et al., 2023) (Belloc et al., 2025) that identify managerial competence as a key predictor of career advancement and mobility.

Similarly, Work Experience (H2) was found to be a significant positive antecedent to Job Rotation. This is consistent with human capital theory, which views experience

as an accumulation of valuable, firm-specific knowledge and skills (Layek & Koodamara, 2024). Employees with extensive tenure are presumed to have a deeper understanding of organizational processes, culture, and tacit knowledge, making them less risky and more effective when moved to new positions (Lai et al., 2025). Their deployment through rotation serves to disseminate this valuable knowledge across different units, thereby enhancing organizational learning and resilience.

Furthermore, the significant positive effect of Supervisory Effectiveness (H3) on Job Rotation underscores the critical role of monitoring and control mechanisms in human resource development. Effective supervision ensures that employees adhere to standards and achieve targets, which acts as a reliable signal of their competence and readiness for greater challenges (Siddiqi et al., 2024). In the context of job rotation, a strong track record of supervisory performance provides tangible evidence of an employee's reliability and leadership potential, making them suitable candidates for strategic rotational posts.

Discussion on the Antecedents of Mediating Variables

The path analysis indicates that Managerial Talent is positively associated with Work Experience (H4). This finding suggests that managers with higher levels of talent reflected in capabilities such as strategic thinking, decision-making, and interpersonal effectiveness may be better positioned to engage in diverse roles and assignments, thereby contributing to broader experiential exposure. Rather than merely accumulating tenure, these individuals may be more actively involved in varied organizational functions, which enhances the breadth of their work experience.

Moreover, Work Experience was found to significantly enhance Supervisory Effectiveness (H5). This relationship is intuitively sound and supported by organizational learning theory. Seasoned employees, through repeated exposure to various operational scenarios, develop refined heuristics and a comprehensive mental model of the organization. This deep-seated knowledge enables them to supervise more effectively, as they can anticipate problems, understand nuanced contexts, and guide their subordinates with wisdom that transcends formal procedures.

Conversely, the hypothesized direct influence of Managerial Talent on Supervisory Effectiveness (H6) was not supported. The non-significant relationship between managerial talent and supervisory effectiveness suggests that, within the studied organizational context, supervisory outcomes may be more strongly shaped by formalized procedures and structured performance systems than by individual managerial capability alone. Given that supervision in this study was measured through indicators such as guidance clarity, feedback, and performance monitoring, these functions may be highly standardized, thereby reducing the observable influence of individual talent differences.

Discussion on the Mediated (Indirect) Effects on Job Rotation

The analysis of indirect effects provides a more nuanced understanding of the pathways to job rotation outcomes. The significant mediation of Managerial Talent on Job Rotation

Table 5. Goodness-of-Fit Indices for the Structural Model

Fit Index	Recommended Value	Model Value	Interpretation
χ^2/df	< 3.0	1.071	Excellent
P-value	≥ 0.05	0.056	Acceptable
CFI	≥ 0.95	0.984	Excellent
TLI	≥ 0.95	0.983	Excellent
RMSEA	≤ 0.08	0.021	Excellent
GFI	≥ 0.90	0.783	Marginal
AGFI	≥ 0.85	0.762	Marginal
NFI	≥ 0.90	0.791	Marginal

through Work Experience (H7) suggests that managerial capability is associated with broader experiential exposure, which in turn relates to rotation opportunities. Similarly, the pathway from Work Experience to Job Rotation through Supervisory Effectiveness (H8) indicates that accumulated experience is linked to improved supervisory outcomes, which are associated with greater readiness for rotation.

Finally, the mediation of Managerial Talent on Job Rotation through Supervisory Effectiveness (H9), despite the non-significant direct effect (H6), suggests an indirect-only pathway in which managerial talent is associated with job rotation outcomes through its relationship with supervision. This finding highlights that the role of managerial talent may be more evident when considered as part of a broader capability chain rather than as a direct predictor.

Beyond confirming individual indirect relationships, these findings indicate that job rotation outcomes are associated with a sequential and interdependent process of capability development. This study extends prior HRD research by demonstrating that managerial talent, work experience accumulation, and supervisory effectiveness operate as an integrated mechanism, offering a more process-oriented understanding of talent deployment in organizational contexts.

Theoretical and Practical Implications

From a theoretical standpoint, this study advances the literature by clarifying the distinct mechanisms through which core human capital variables shape job rotation outcomes in a public sector context. The findings validate the direct effects of talent, experience, and supervision, while also identifying the essential mediating processes that link these constructs.

The non-significant relationship between managerial talent and supervisory effectiveness suggests that, within the studied organizational context, supervisory outcomes may be more strongly shaped by formalized procedures and structured performance systems than by individual managerial capability alone. Given that supervision in this study was measured through indicators such as guidance clarity, feedback, and performance monitoring, these functions may be highly standardized, thereby reducing the observable influence of individual talent differences.

Conclusion

This study examines the relationships among managerial talent, work experience accumulation, supervisory effectiveness, and job rotation outcomes within a public sector context. The findings indicate that these human capital factors are positively associated with job rotation effectiveness, both directly and through interrelated pathways. The results highlight that job rotation outcomes are not driven by isolated variables but are linked to a sequence of interconnected capabilities involving talent, experience, and supervisory effectiveness.

From an empirical perspective, this study provides evidence from a managerial-level context within a state-owned enterprise, which remains relatively underexplored in the job rotation literature. From a theoretical perspective, the study contributes by proposing an integrative, mechanism-based framework that explains how managerial talent is associated with job rotation outcomes through sequential relationships involving work experience accumulation and supervisory effectiveness.

Practically, the findings suggest that organizations should adopt competency-based criteria in selecting candidates for job rotation, considering not only managerial talent but also accumulated work experience and supervisory effectiveness. Job rotation programs should incorporate structured cross-functional exposure and performance evaluation mechanisms. In addition, targeted development initiatives, such as supervisory training and mentoring programs, can strengthen the pathways linking managerial capabilities to effective rotation outcomes.

This study has several limitations. The use of a single regional sample may limit generalizability, and the cross-sectional design restricts the ability to establish temporal relationships among variables. Furthermore, reliance on self-reported data may introduce response bias. Future research could examine moderating variables such as organizational culture or leadership style and employ longitudinal designs to better capture the dynamic nature of talent development and job rotation.

Author contributions

Agung Surya Dwianto was responsible for conceptualizing the study, formulating the theoretical framework, designing the research model, overseeing the data collection process, and leading the preparation and revision of the manuscript. Sitta Kusuma contributed to the development of the research instrument, conducted data collection, performed statistical analysis using Structural Equation Modeling (SEM), and supported the drafting and refinement of the manuscript. Both authors collaboratively interpreted the findings, engaged in discussions of the results, and approved the final version of the manuscript.

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Conflict of interest

The authors affirm that no conflicts of interest exist in relation to the publication of this article. The study was conducted independently and without any commercial or financial affiliations that could be interpreted as potential conflicts.

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