

The Influence of Workforce Planning and Subcontractor Company's Labor Compensation on Subcontractor Company's Performance

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Abstract

Human Resource Management (HRM) serves a vital role as a structured and sustainable function not only in achieving organizational goals and enhancing performance but also in building a workforce system that adapts to evolving industry demands. In subcontractor companies, managing workforce planning and compensation presents notable challenges, especially given the prevalence of contract-based or freelance workers. This situation requires strategic HR practices to ensure business continuity and sustained performance. This study aims to examine the influence of Workforce Planning and Workforce Compensation on the performance of subcontractor companies in Jakarta, both individually and jointly. Using a quantitative approach with descriptive and causal analysis, data were collected from 78 subcontractor employees through a census method. Analysis was conducted using Structural Equation Modeling with Partial Least Squares (SEM-PLS) via SmartPLS version 4. The results show that: (1) Workforce Planning has a significant positive effect on company performance (T-statistic = 2.205; P-value = 0.0028); (2) Workforce Compensation also has a strong positive influence (T-statistic = 10.286; P-value = 0.000); and (3) both variables combined significantly impact performance (T-statistic = 8.587; P-value = 0.000). These findings emphasize the importance of well-planned staffing strategies and effective compensation systems in enhancing subcontractor firm performance.

Keywords: Workforce Planning, Workforce Compensation, Company Performance, Subcontractor, Structural Equation Modeling (SEM).

INTRODUCTION

The telecommunications sector stands as a strategic industry that supports global economic and technological advancement (ITU, 2024; GSMA Intelligence, 2024). Within this ecosystem, subcontractor firms play a pivotal role in executing essential project components, and rigorous evaluation of subcontractor performance is linked to better project outcomes (Mahmoudi & Javed, 2022; Chen, Zhu, & Crama, 2023). Sarpin and Ramesh (2024) describe subcontractors as entities engaged in performing delegated tasks under broader project frameworks, and their study shows that competent subcontractors contribute to project success by filling workforce gaps and providing specialized skills.

Several elements determine subcontractor performance, including human capital management, financial resilience, and the quality of collaboration with principal contractors (Romo et al., 2023). Momodu and Ayegba (2023) highlight that trust, effective communication, and structured human resource practices are central to improving subcontractor output. One crucial aspect is workforce planning, which involves a detailed projection of labor quantity, skill requirements, and allocation. In today's fast-shifting business environment, Human Resource (HR) departments are expected to go beyond administrative tasks by managing complex workforce data while ensuring clarity, adaptability, and employee engagement (Indiyati et al., 2024).

As noted by Micheli et al. (2023), strategic workforce planning in project-based enterprises enhances operational efficiency and project success. Sitompul and Dewi (2023) further revealed that weak planning structures in Indonesia's oil and gas sector led to inconsistent manpower levels, productivity decline, and unmet corporate targets.

Another key factor influencing subcontractor success is the compensation system. Compensation, both monetary and non-monetary, is a company's acknowledgment of employees' contributions. Research by Permatahati and Indiyati (2023) showed that effective compensation mechanisms significantly improve employee performance, while Anugrah and Putri (2020) found that direct financial incentives positively influence productivity in manufacturing environments.

Despite the importance of these practices, many subcontractors collaborating with Telkom Group continue to face serious challenges in aligning workforce planning and compensation strategies with dynamic business models. These models, such as performance-based, resource-based, project-based, and order-based contracts, require adaptability in human resource systems. Field observations and interviews with subcontractor members of Apjatelnas indicate that both labor planning and compensation structures are often suboptimal, leading to cost inefficiencies and declining financial performance. This issue became critical in 2023 when financial reports showed a disproportionate rise in labor costs despite increasing revenues, largely attributed to frequent changes in cooperation schemes with the Telkom Group.

Again, Micheli et al. (2023) stress that poor workforce planning results in delayed execution and cost inefficiencies in project-based companies, while Sitompul and Dewi (2023) demonstrated how inadequate planning undermines workforce stability and skills development. Moreover, subcontractor companies, often employing contract or freelance workers, must develop compensation systems that maintain motivation under flexible and short-term employment conditions. Lumanauw et al. (2023) also argue that KPI-integrated compensation frameworks offer more accurate performance insights and allow for timely adjustments.

These findings collectively suggest that workforce planning and compensation strategies are interdependent in driving subcontractor success. Accurate labor forecasting ensures resource availability, while fair compensation sustains motivation and performance. Bridging the gap between HR management theory and the actual operational context of subcontractors, especially under frequently changing business models, has become increasingly urgent. Therefore, this research seeks to explore the influence of workforce planning and workforce compensation on company performance, particularly within the telecommunications infrastructure sector, where adaptability and alignment with contractor demands are essential for organizational sustainability.

The telecommunications sector relies heavily on subcontractor firms to execute critical project components, yet their performance is often hindered by inadequate human resource management practices. Previous research by Sarpin and Ramesh (2024) highlights the pivotal role of subcontractors in project success, emphasizing that their competence directly impacts overall outcomes. Similarly, Momodu and Ayegba (2023) identify trust, communication, and structured HR practices as key determinants of subcontractor performance. However, while these studies underscore the importance of HRM in subcontractor settings, they often treat workforce planning and compensation as isolated factors rather than exploring their combined effects. This oversight is particularly evident in dynamic industries like telecommunications, where fluctuating project

demands and flexible employment models require a more integrated approach to HR strategies.

A significant research gap exists in understanding how workforce planning and compensation systems interact to influence subcontractor performance, especially in emerging markets like Indonesia. Micheli et al. (2023) demonstrate that poor workforce planning leads to cost inefficiencies and project delays, while Sitompul and Dewi (2023) reveal how inconsistent planning structures undermine workforce stability in Indonesia's oil and gas sector. On the other hand, Anugrah and Putri (2020) and Permatahati and Indiyati (2023) highlight the positive impact of compensation on employee performance, yet none of these studies examine the synergistic relationship between these two HR dimensions. This gap is critical, as subcontractors collaborating with major firms like Telkom Group face unique challenges, such as adapting to frequently changing business models and maintaining motivation among contract-based workers.

The urgency of this research is underscored by the operational and financial challenges faced by subcontractors in the telecommunications sector. Field observations and interviews with members of Apjatelnas reveal that suboptimal workforce planning and compensation structures have led to rising labor costs and declining financial performance despite increasing revenues. Lumanauw et al. (2023) argue that KPI-integrated compensation frameworks could address these issues, but their implementation remains understudied in subcontractor contexts. Furthermore, the rapid evolution of project-based and order-based contracts demands agile HR practices that align with dynamic business needs. Without empirical evidence on how to optimize workforce planning and compensation collectively, subcontractors risk inefficiencies, talent attrition, and diminished competitiveness in a highly strategic industry.

This study introduces novelty by examining the interplay between workforce planning and compensation as joint drivers of subcontractor performance, using a case study of firms collaborating with Telkom Group in Jakarta. Unlike prior research, which often focuses on large corporations or standalone HR practices, this study targets the unique challenges of subcontractors operating under flexible and short-term employment models. Methodologically, the research employs Structural Equation Modeling with Partial Least Squares (SEM-PLS), enabling a robust analysis of both direct and combined effects. By integrating validated frameworks for workforce planning and compensation, the study offers a comprehensive model tailored to the subcontractor context, bridging the gap between theoretical HRM principles and practical operational demands.

The purpose of this research is to analyze the individual and collective impact of workforce planning and compensation on subcontractor company performance, with a focus on the telecommunications infrastructure sector. Specifically, the study aims to: (1) evaluate the influence of workforce planning on performance, (2) assess the effect of compensation systems on performance, and (3) determine how these factors interact to enhance organizational outcomes. By addressing these objectives, the research seeks to provide actionable insights for subcontractors to align their HR strategies with the evolving demands of principal contractors and project-based work environments. The findings will also contribute to broader HRM literature by demonstrating the importance of integrating workforce planning and compensation in flexible employment settings.

The research offers significant theoretical and practical contributions. Theoretically, it advances the understanding of HRM in subcontractor firms by validating a model that combines workforce planning and compensation as synergistic performance drivers. Practically, the findings will help subcontractors optimize their HR practices to

reduce costs, improve workforce stability, and enhance project delivery. For principal contractors like Telkom Group, the study provides evidence-based recommendations to foster stronger collaborations with subcontractors through aligned HR strategies. Ultimately, this research supports the sustainability and competitiveness of subcontractor firms in the telecommunications sector, ensuring they can adapt to dynamic industry demands while maintaining high performance standards.

RESEARCH METHODS

This research employed a quantitative strategy to examine the influence of workforce planning and compensation practices on subcontractor company performance (Creswell, 2018). The target group included 110 professionals—managers, supervisors, and senior-level leaders—working in subcontractor firms across the Jakarta region. Due to the relatively small population, a total population (census) sampling technique was used, involving all eligible respondents. Primary data were collected through structured interviews, questionnaires, and observations. Secondary data, such as internal company records and reports from subcontractor and main contractor entities, supplemented the data to enhance contextual understanding of organizational practices.

The study analyzed relationships among variables using Structural Equation Modeling with a Partial Least Squares (SEM-PLS) framework, implemented via SmartPLS version 4. According to Hair et al. (2020), this technique is suitable for predictive modeling and variance-based analysis, especially with smaller sample sizes. Following Sugiyono (2022), the measurement model (outer model) was assessed for validity and reliability. Convergent validity was confirmed by factor loadings exceeding 0.7 and Average Variance Extracted (AVE) values above 0.5. Discriminant validity was established when indicators correlated more strongly with their constructs than with others. Composite Reliability (CR) and Cronbach's Alpha values above 0.7 indicated acceptable internal consistency.

For the structural model (inner model), diagnostic indicators were evaluated. Path coefficients indicated the strength and direction of relationships between latent variables. Statistical significance was determined by t-values greater than 1.96 and p-values below 0.05. Predictive power was assessed using R^2 values, with values above 0.67 considered strong. Effect size was interpreted via f^2 values, while predictive relevance was confirmed through Q^2 values above zero. Additionally, indirect effects were calculated to assess mediation pathways between exogenous and endogenous constructs.

RESULT AND DISCUSSION

The study involved 110 respondents from various job positions, units, and employment statuses. Most held strategic or technical roles, such as Managers (20.9%), Directors (20.0%), and Technicians (18.2%). The majority were from the Project unit (32.7%), with 42.7% working as freelancers. Educationally, 76.3% held higher education degrees (Bachelor/Master), while 69.1% were male, reflecting the gender trend in technical fields. Most respondents were aged 31–50 (51.8%) and had over five years of experience (34.5%), indicating a productive and experienced workforce.

Outer Model

For Workforce Planning (X1), most indicators showed outer loadings >0.60 , with the highest at X1.5 (0.728). Indicators X1.8 (0.490) and X1.12 (0.489) had low loadings

and may be considered for removal. For Compensation (X2), all indicators had loadings >0.60 , indicating strong convergent validity, with X2.7 (0.845) as the highest. For Company Performance (Y), most loadings were >0.70 (e.g., Y.3 at 0.819), though Y.7 (0.474) and Y.5 (0.616) were lower but still acceptable. Overall, the constructs meet convergent validity criteria, with low-loading indicators considered for refinement.

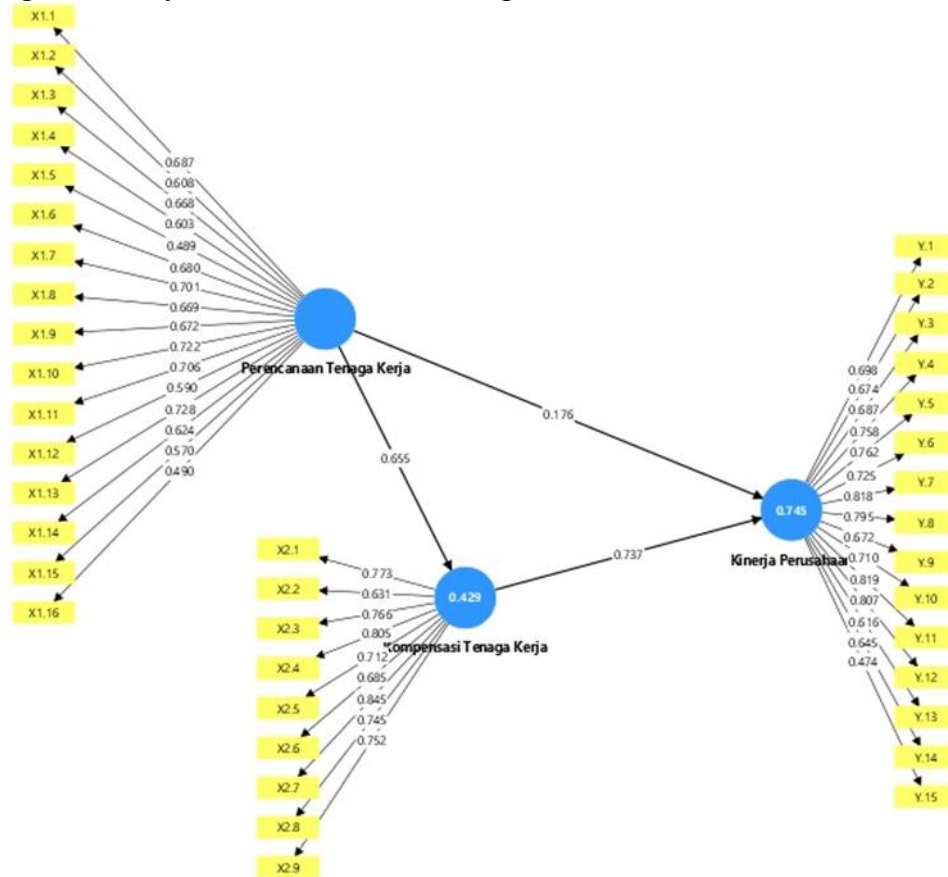


Figure 1. Outer Model

Discriminant Validity

Discriminant validity reflects the extent to which a construct possesses distinctiveness and does not overlap conceptually or statistically with other constructs in the model. It ensures that each latent variable captures a unique dimension and can be clearly differentiated from the others.

Table 1. DV

Variables	Company Performance	Workforce Compensation	Workforce Planning
Company Performance	0.716		
Workforce Compensation	0.853	0.748	
Workforce Planning	0.659	0.655	0.642

Company Performance showed correlations of 0.853 with Compensation and 0.659 with Workforce Planning, all below the 0.90 threshold indicating sufficient distinction between constructs. Additionally, the square roots of AVE for each variable exceeded their inter-construct correlations, confirming that each construct remains conceptually and statistically distinct.

Construct Reliability and Validity

Construct reliability and validity assess the internal consistency and precision of indicators in capturing the essence of a latent construct within a research model. These measures ensure that the observed variables reliably reflect the underlying concept they are intended to represent.

Table 2. CRV

Variables	Cronbach's Alpha	Composite Reliability (rho_a)	Composite Reliability (rho_c)
Workforce Planning	0.904	0.906	0.917
Workforce Compensation	0.901	0.904	0.919
Company Performance	0.930	0.937	0.940

The assessment of measurement consistency was carried out using Cronbach's Alpha, rho_a, and rho_c. All constructs surpassed the accepted reliability benchmark of 0.70. Workforce Planning yielded values of 0.904 (Alpha), 0.906 (rho_a), and 0.917 (rho_c), while Compensation showed 0.901, 0.904, and 0.919, respectively. Company Performance achieved the highest scores at 0.930, 0.937, and 0.940. These outcomes indicate that each construct demonstrates excellent internal coherence and dependable indicator performance.

Inner Model

The inner model illustrates the structural connections among latent constructs and serves as the basis for evaluating both direct and indirect effects between variables within the research framework.

R Square

R Square reflects the extent to which the independent variables account for the variance observed in the dependent variable, serving as an indicator of the model's explanatory power.

Table 3. R Square

	R-Square	R-Square adjusted
Company Performance	0.745	0.740
Workforce Compensation	0.429	0.423

The Company Performance construct recorded an R² of 0.745 and an adjusted R² of 0.740, indicating that 74.5% of its variance is accounted for by the independent variables in the model demonstrating strong explanatory power. Meanwhile, Compensation showed an R² of 0.429 and adjusted R² of 0.423, suggesting that 42.9% of its variation is explained within the model, with the remainder influenced by external factors. This reflects a moderate level of predictive strength.

F Square

F-Square represents the magnitude of influence or contribution that an independent variable exerts on a dependent variable within the structural model.

Table 4. F Square

Variables	Company Performance	Workforce Compensation	Workforce Planning
Company Performance			
Workforce Compensation	1.218		
Workforce Planning	0.069	0.750	

Compensation showed a substantial effect on Company Performance with an f^2 value of 1.218, far exceeding the 0.35 threshold, highlighting it as a key driver of performance improvement. Workforce Planning yielded mixed results, with f^2 values of 0.069 (small effect) and 0.750 (large effect) depending on the model pathway, indicating its influence varies by context. Overall, compensation exerts a stronger impact, though both variables contribute positively to the model.

Q^2 assesses the model's predictive relevance by evaluating how well it can forecast the outcomes of the dependent variables.

Table 5. Q^2

Variables	Q^2
Company Performance	0.404
Workforce Compensation	0.404

Both Company Performance and Compensation recorded Q^2 values of 0.404, indicating strong predictive relevance. Since the values exceed zero, the model demonstrates a solid capacity to predict endogenous variables, reinforcing its overall validity.

Hypothesis

In PLS-SEM, hypothesis testing is conducted to evaluate the influence and directional relationships among latent variables within the model.

Table 6. Hypothesis

Variables	T Statistic	P Value	Explanation
Workforce Planning on Company Performance	2.205	0.0028	H1 Accepted
Employee Compensation on Company Performance	10.286	0.000	H2 Accepted
Workforce Planning and Workforce Compensation on Company Performance	8.587	0.000	H3 Accepted

The findings indicate that Workforce Planning exerts a statistically meaningful effect on Company Performance, reflected by a T-value of 2.205 and a P-value of 0.0028. Thus, H1 is empirically validated. In addition, Compensation shows a highly significant contribution, with a T-value of 10.286 and a P-value of 0.000, providing strong support for H2. The joint influence of Workforce Planning and Compensation yields a T-statistic of 8.587 and P-value of 0.000, confirming H3 as statistically significant and reinforcing the strength of the model's structural pathways.

DISCUSSION

The findings reveal that Workforce Planning significantly enhances Company Performance ($T = 2.205$; $P = 0.0028$), suggesting that structured workforce strategies can strengthen operational outcomes in subcontractor firms. This aligns with Micheli (2023), who emphasized the foundational stages, actors, tools, and data central to effective workforce planning. Similarly, Alghafri et al. (2023) highlighted Vodafone-Oman's use of contingent labor as a successful approach to bridge skill gaps and improve performance.

Furthermore, Compensation showed a highly significant and positive impact on performance ($T = 10.286$; $P = 0.000$), affirming H2. As noted by Anugrah et al. (2020), direct compensation and promotion significantly drive employee performance, supported by their simultaneous hypothesis testing. Consistently, Damayanti and Wulansari (2024) found that compensation influences turnover intention by 73.9%, positioning it as a critical factor in retaining talent and boosting organizational performance.

Simultaneously, SmartPLS analysis confirmed that Workforce Planning and Compensation jointly affect performance ($T = 8.587$; $P = 0.000$), validating H3. Permatahati and Indiyati (2024) also reported that compensation (0.225) and work discipline (0.470) collectively contribute to HR performance, with discipline having a stronger effect. Notably, this study differs by positioning Workforce Planning (X1) as the main independent variable. Lastly, Momodu and Ayegba (2023) emphasized that subcontractor performance is shaped by experience, skill, communication, financial capacity, project management, and contract structure—reinforcing the significance of internal planning in dynamic project environments.

CONCLUSION

This study demonstrates that effective human resource strategies, especially in *workforce planning* and *compensation*, are crucial drivers of subcontractor company performance. Empirical evidence supports that meticulous, proactive *workforce planning* significantly improves performance by ensuring talent aligns with operational needs ($T = 2.205$; $P = 0.0028$), while robust *compensation* practices markedly enhance motivation, productivity, and business growth ($T = 10.286$; $P = 0.000$). Importantly, the combined application of both strategies produces a synergistic effect that further elevates organizational outcomes ($T = 8.587$; $P = 0.000$), highlighting the need for integrated HR frameworks. Future research could explore how these integrated human resource practices adapt across different industries and varying contractual models to provide deeper insights into optimizing workforce management under diverse operational conditions.

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