

Employee Competency as a Mediator Between Management Knowledge, Motivation, and Employee Performance in Labor-Intensive Manufacturing

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Employee performance is crucial to organizational productivity and competitiveness, particularly in labor-intensive manufacturing industries where workforce capabilities directly affect operational outcomes. This study examines the mediating role of employee competency in the relationships between management knowledge, motivation, and employee performance. Using a quantitative, cross-sectional design, data were collected from 342 employees of an Indonesian manufacturing company between January and March 2026 and analyzed using partial least squares structural equation modeling (PLS-SEM) with SmartPLS 4. The results indicate that management knowledge is positively associated with employee competency ($\beta = 1.186$, $p < 0.001$), whereas motivation shows a significant negative association ($\beta = -0.514$, $p < 0.001$). Employee competency is positively associated with employee performance ($\beta = 0.977$, $p < 0.001$). Furthermore, employee competency significantly mediates the effects of management knowledge ($\beta = 1.159$, $p < 0.001$) and motivation ($\beta = -0.502$, $p < 0.001$) on employee performance. These findings highlight the mediating role of competency within Human Capital Theory and suggest prioritizing knowledge development, competency-based training, and the evaluation of motivational practices to enhance workforce performance.

Keywords: Competency; Employee Performance; Human Capital Theory; Management Knowledge; Motivation

INTRODUCTION

Intensifying global competition has compelled labor-intensive manufacturing companies to continuously strengthen their competitiveness. In an increasingly dynamic business environment, companies are expected not only to produce high-quality products efficiently but also to maintain sustainable workforce productivity (Alexandro, 2025). The footwear industry, as a labor-intensive manufacturing sector, relies heavily on human resource capabilities because many production activities require employees' technical skills, experience, and individual competencies (Abdulkadir et al., 2020). Consequently, effective human resource management plays a crucial role in enhancing organizational performance and sustaining competitiveness in global markets.

Employee performance is a key indicator of organizational effectiveness and the achievement of business objectives (Mahrani et al., 2021). High-performing employees contribute to increased productivity, improved product quality, and greater operational efficiency. Conversely, inadequate employee performance may hinder organizational objectives and weaken competitiveness. Despite the implementation of various human resource development initiatives, improving employee performance remains a persistent challenge, particularly in labor-intensive manufacturing industries characterized by complex operational demands and the need for consistent productivity.

From the perspective of Human Capital Theory, employees represent strategic organizational assets capable of generating added value and sustainable competitive advantage (Indrawati et al., 2024). Employees' knowledge, skills, experience, and motivation constitute valuable human capital resources that can be developed to improve individual and organizational performance. Within this theoretical framework, employee competency may serve as a mechanism through which management knowledge and motivation are translated into improved performance outcomes. Understanding the factors that contribute to competency development is therefore essential for designing effective human resource management strategies.

Previous studies, summarized in Table 1, have highlighted the importance of knowledge and human resource management practices in improving individual and organizational performance (Chantabutr & Wanarat, 2024). However, existing research has examined these relationships across different organizational contexts and has produced findings that do not yet establish a comprehensive explanation of how management knowledge and motivation contribute to employee performance through competency development. Much of the literature has emphasized organizational outcomes, technological transformation, innovation, and sustainability rather than the mediating mechanisms operating at the individual employee level. Consequently, the role of employee competency as a mediator linking management knowledge and motivation to employee performance warrants further investigation, particularly in labor-intensive manufacturing environments.

Table 1. Summary of Previous Studies

No.	Author(s) and Year	Research Contributions	Research Limitations
1	Wahyono & Hutahayan (2021)	Highlighted the importance of knowledge competency and learning orientation in supporting innovation and performance in small and	Focused on organizational innovation in textile SMEs without examining employee competency as a mediator between management

		medium-sized textile enterprises.	knowledge, motivation, and individual performance.
2	Nicolás-Agustín et al. (2022)	Examined the mediating role of human resource management practices in organizational digital transformation and innovative work behavior.	Emphasized digital transformation and HRM practices rather than employee competency as a mediator of performance.
3	Hartono et al. (2023)	Investigated the contribution of knowledge management to production technology, supply chain integration, and manufacturing firm performance.	Concentrated on firm-level outcomes without explicitly examining individual employee competency as a mediating mechanism.
4	Rana & Arya (2024)	Investigated the relationship between green human resource management practices and environmental performance through green innovation.	Focused on environmental outcomes and green innovation rather than the mediating role of employee competency in individual performance.
5	Khawaja & Janjua (2025)	Highlighted the role of green knowledge sharing in connecting human resource practices with organizational sustainability in the Pakistani textile industry.	Focused on organizational sustainability and green knowledge sharing rather than employee competency and individual performance outcomes.

Table 1 summarizes previous studies relevant to the relationships among knowledge, human resource management practices, competency development, and performance. Collectively, these studies demonstrate the importance of organizational knowledge, human resource practices, innovation, and knowledge sharing in supporting organizational outcomes. Nevertheless, the studies reviewed primarily address organizational-level performance, technological transformation, and sustainability, leaving the individual-level mechanisms underlying employee performance less explicitly examined. In particular, the combined roles of management knowledge and motivation in shaping employee competency, and the subsequent implications for employee performance, remain insufficiently explored within the studies reviewed. This limitation highlights the need to investigate employee competency not merely as an outcome of human resource development but also as a potential mediating mechanism through which individual resources contribute to performance.

Accordingly, this study aims to examine the mediating role of employee competency in the relationships between management knowledge, motivation, and employee performance in Indonesia's labor-intensive footwear manufacturing industry. The study seeks to contribute theoretically to Human Capital Theory by examining competency as a mechanism linking knowledge- and motivation-related resources to employee performance ([Herdiyana et al., 2023](#); [Mahrani et al., 2021](#); [Yulianah & Kuswara, 2025](#)). Empirically, the study provides evidence from a labor-intensive manufacturing context in Indonesia. Practically, its findings are expected to inform human resource development strategies that integrate managerial knowledge development, employee motivation, and competency enhancement to support sustainable workforce performance.

LITERATURE REVIEW

Human Capital Theory

Human Capital Theory conceptualizes employees as valuable organizational assets whose knowledge, skills, competencies, and experience contribute to organizational performance (Meena & Lakshmi, 2025). The theory emphasizes that investments in human capital development can enhance individual capabilities and, consequently, improve organizational outcomes. Human capital extends beyond formal education to encompass accumulated knowledge, work-related experience, and competencies developed through continuous learning and professional development (Hutasoit et al., 2025). Motivation may further influence employees' willingness to acquire, develop, and apply these resources in their work.

In labor-intensive manufacturing industries, employee competency represents a particularly important dimension of human capital, as operational effectiveness depends heavily on employees' ability to perform production-related tasks efficiently and consistently. Knowledge and competency can therefore serve as strategic resources that support productivity, organizational performance, and competitiveness. Within this context, Human Capital Theory provides a theoretical foundation for examining how management knowledge and motivation are associated with employee competency and how competency, in turn, contributes to employee performance.

Management Knowledge, Motivation, and Employee Competency

Management knowledge refers to employees' understanding of management-related knowledge and their ability to acquire, share, adapt, and apply relevant knowledge in organizational activities. Knowledge represents a strategic resource that enables employees to strengthen their capabilities and respond effectively to changing workplace demands (Jia et al., 2023). Previous research has highlighted the importance of knowledge-related capabilities in supporting employee development and organizational outcomes. The creation, sharing, and application of relevant knowledge may facilitate competency development by enabling employees to improve their understanding of work processes and organizational requirements (Poonputta, 2023).

Motivation refers to the internal and external forces that stimulate employees to direct and sustain their efforts toward achieving individual and organizational objectives. Motivated employees are generally more inclined to participate in learning activities, develop work-related capabilities, and pursue effective task performance (Evans et al., 2024). From a human capital perspective, motivation may encourage employees to invest greater effort in acquiring knowledge, improving skills, and developing competencies. Consequently, motivation is expected to contribute positively to employee competency by supporting continuous learning and adaptation to workplace demands.

Employee competency encompasses the integration of knowledge, skills, and work-related abilities required to perform assigned responsibilities effectively (Sũtoová et al., 2025). Employees with greater access to relevant management knowledge may be better equipped to understand operational requirements and develop the competencies necessary for their roles. Similarly, motivated employees may demonstrate stronger engagement in learning and skill development, thereby strengthening their competencies. Based on these theoretical arguments, the following hypotheses are proposed:

H1: Management knowledge has a positive effect on employee competency.

H2: Motivation has a positive effect on employee competency.

Employee Competency and Employee Performance

Employee performance refers to the extent to which employees effectively accomplish assigned tasks, achieve work-related objectives, and contribute to organizational goals. In labor-intensive manufacturing industries, employee performance is commonly reflected in work quality, productivity, responsibility, and task completion effectiveness (Huda et al., 2024). From the perspective of Human Capital Theory, employees' knowledge, skills, and competencies represent important resources that may enhance their capacity to achieve performance expectations.

Employee competency is expected to contribute positively to performance because it enables individuals to apply relevant knowledge and skills in completing work-related activities. Employees with higher competency levels may be better prepared to address operational challenges, adapt to workplace requirements, and accomplish organizational targets (Sri Mertiningsih et al., 2024). Accordingly, competency provides a theoretical link between the development of individual capabilities and their application in achieving work-related outcomes. Based on these arguments, the following hypothesis is proposed:

H3: Employee competency has a positive effect on employee performance.

The Mediating Role of Employee Competency

The relationship between individual resources and employee performance may involve mechanisms through which knowledge and motivation are translated into work-related capabilities. From a human capital perspective, the development and application of employee competencies can help explain how individual resources contribute to performance outcomes. Accordingly, employee competency is proposed as a mediating variable linking management knowledge and motivation to employee performance.

Management knowledge may provide employees with the understanding and information required to perform their responsibilities effectively, while motivation may encourage them to engage in learning and capability development (Sklyar & Kharchenko, 2020). However, possessing relevant knowledge or demonstrating motivation does not necessarily translate directly into higher performance. These resources may contribute to performance by strengthening employees' competencies and enabling them to apply their capabilities effectively in workplace activities. Thus, employee competency may serve as an explanatory mechanism through which management knowledge and motivation are associated with employee performance.

Building on this reasoning, the proposed mediation relationships suggest that management knowledge and motivation contribute to employee competency, which subsequently enhances employee performance. This perspective is consistent with the broader argument that the development and application of human capital resources are important for achieving individual performance outcomes. Therefore, the following hypotheses are proposed:

H4: Employee competency mediates the relationship between management knowledge and employee performance.

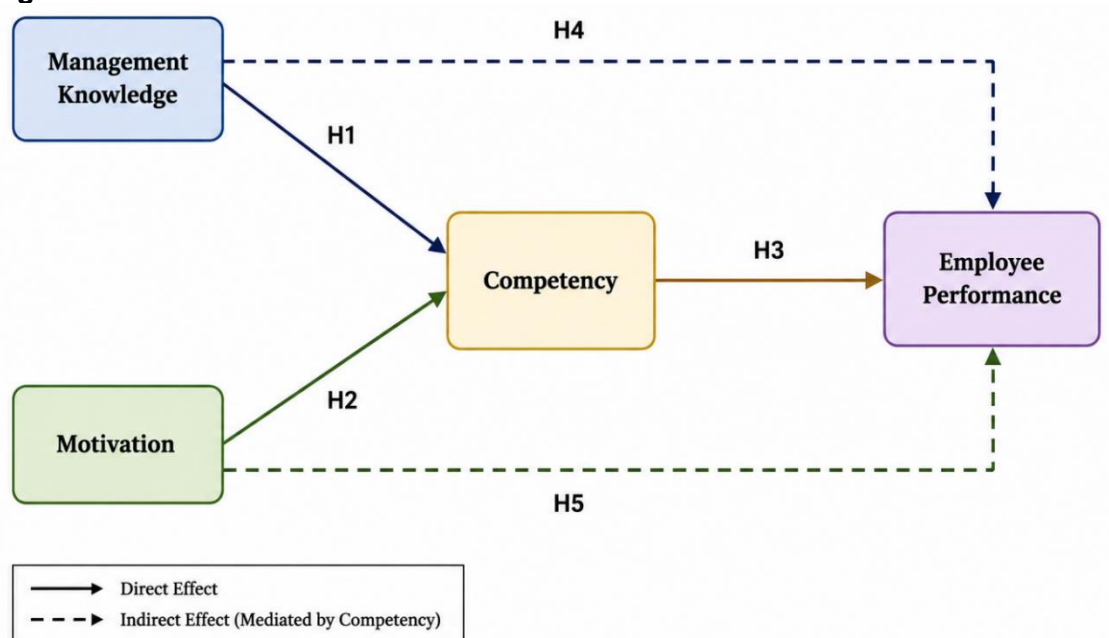
H5: Employee competency mediates the relationship between motivation and employee performance.

Conceptual Framework

Drawing on Human Capital Theory and the theoretical arguments developed in the preceding sections, this study proposes a conceptual framework examining the relationships among management knowledge, motivation, employee competency, and employee performance. Management knowledge and motivation are conceptualized as antecedents of employee competency, while employee competency is expected to positively influence employee performance. Furthermore, employee competency is proposed to mediate the relationships between management knowledge and employee performance and between motivation and employee performance.

This framework highlights the potential role of employee competency in translating knowledge-related and motivational resources into work-related performance outcomes within labor-intensive manufacturing industries. The proposed research framework and corresponding hypotheses are illustrated in Figure 1.

Figure 1. Research Framework



RESEARCH METHOD

Research Design

This study employed a quantitative approach with an explanatory research design to examine the relationships among management knowledge, motivation, employee competency, and employee performance (Aggarwal & Kapoor, 2021). The research was grounded in Human Capital Theory, which emphasizes the contributions of employee knowledge (Bag, 2024), motivation (Djasda & Faeni, 2025), and competency (Aggarwal & Kapoor, 2021) to organizational outcomes (García del Castillo-López & Pérez Domínguez, 2024). A cross-sectional survey was conducted among employees of a labor-intensive manufacturing company in Indonesia. The proposed relationships and mediating effects were examined using partial least squares structural equation modeling (PLS-SEM) (Al Shawabkeh, 2024).

Population and Sample

The study population comprised employees of a labor-intensive manufacturing company in Indonesia. The company was selected because its operational activities depend

heavily on employee competencies and workforce productivity. Data were collected between January and March 2026 using purposive sampling. Respondents were selected based on their work experience and involvement in organizational activities related to knowledge utilization, competency development, and performance achievement. A total of 342 valid questionnaires were obtained and included in the analysis. The respondents represented different organizational levels, including managerial, supervisory, and operational positions, allowing the study to capture employee perceptions across various roles within the organization.

Data Collection Procedure

Data were collected through a structured questionnaire administered directly to employees during the study period. The questionnaire comprised two sections. The first section collected respondents' demographic information, while the second measured the study constructs. Responses were recorded using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Before data collection, the questionnaire was reviewed for clarity and relevance to the research context. The completed questionnaires were subsequently screened for completeness and suitability for analysis.

Measurement of Variables

The study examined four constructs: management knowledge, motivation, employee competency, and employee performance, as presented in [Table 2](#). Measurement indicators were adapted from previous studies and contextualized for the labor-intensive manufacturing environment. Management knowledge was operationalized through knowledge sharing, knowledge modification, knowledge creation, and knowledge application. Motivation was measured through physical needs, social needs, goal achievement, and recognition. Employee competency was assessed through knowledge, skills, and role-related capabilities, while employee performance was measured through work quantity, timeliness, and responsibility.

Table 2. Measurement Items and Sources

Variable	Indicators	Sources
Management Knowledge	Knowledge sharing, knowledge modification, knowledge creation, knowledge application	Hartono et al. (2023)
Motivation	Physical needs, social needs, goal achievement, recognition	Nicolás-Agustín et al. (2022)
Employee Competency	Knowledge, skills, role-related capabilities	Szczepańska-Woszczyzna (2020)
Employee Performance	Work quantity, timeliness, responsibility	Rana & Arya (2024)

Data Analysis Technique

Data were analyzed using SmartPLS 4 and partial least squares structural equation modeling (PLS-SEM). This analytical approach was selected because it enables the simultaneous examination of multiple relationships among latent constructs, including indirect effects in mediation models. The analysis consisted of two main stages.

First, the measurement model was assessed to evaluate construct reliability and validity. Convergent validity was examined using outer loadings and average variance extracted (AVE) ([Dash & Paul, 2021](#)), while internal consistency reliability was evaluated using Cronbach's alpha and composite reliability (CR) ([Melkamu Asaye et al., 2022](#)). Discriminant validity was assessed using the Fornell–Larcker criterion ([Dam & Dam, 2021](#)) and the heterotrait–monotrait ratio (HTMT) ([Ringle et al., 2022](#)).

Second, the structural model was evaluated by examining the variance inflation factor (VIF), coefficient of determination (R^2), effect size (f^2), and the statistical significance of the hypothesized relationships. Bootstrapping was employed to estimate the significance of direct and indirect effects among the constructs (Al Shawabkeh, 2024). Hypotheses were considered statistically supported when the p-value was below 0.05 and the absolute t-statistic exceeded 1.96, assuming a two-tailed test at the 5% significance level.

RESULTS

Respondent Characteristics

Table 3 presents the demographic characteristics of the respondents included in this study.

Table 3. Respondent Profile

Characteristics	Category	Frequency	Percentage (%)
Gender	Male	174	50.9
	Female	168	49.1
Age	Under 25 years	71	20.8
	25–34 years	131	38.3
	35–44 years	75	21.9
	45–54 years	38	11.1
	55 years and above	27	7.9
Education Level	Senior high school/vocational school	104	30.4
	Diploma	67	19.6
	Bachelor's degree	136	39.8
	Master's degree	21	6.1
	Doctoral degree	14	4.1
Work Experience	Less than 1 year	62	18.1
	1–3 years	93	27.2
	4–6 years	76	22.2
	7–10 years	60	17.5
	More than 10 years	51	14.9
Position	Head of Division	34	9.9
	Manager	60	17.5
	Supervisor	65	19.0
	Staff/Operational	126	36.8
	Other positions	57	16.7

As presented in Table 3, the study included 342 employees from a labor-intensive manufacturing company in Indonesia. The gender distribution was relatively balanced, comprising 174 male respondents (50.9%) and 168 female respondents (49.1%). The largest age group consisted of employees aged 25–34 years (38.3%), followed by those aged 35–44 years (21.9%). Regarding educational attainment, respondents with bachelor's degrees accounted for the largest proportion (39.8%), followed by senior high school or vocational school graduates (30.4%) and diploma holders (19.6%).

In terms of work experience, employees with 1–3 years of experience represented the largest group (27.2%), followed by those with 4–6 years of experience (22.2%). Regarding organizational position, staff and operational employees constituted the largest proportion (36.8%), followed by supervisors (19.0%) and managers (17.5%). Overall, the respondent profile indicates variation in demographic characteristics,

educational backgrounds, professional experience, and organizational positions within the participating company.

Measurement Model Assessment

The measurement model was evaluated to assess indicator reliability, internal consistency reliability, convergent validity, and discriminant validity. Indicator reliability and convergent validity were examined using outer loadings and average variance extracted (AVE), respectively. Internal consistency reliability was assessed using Cronbach's alpha and composite reliability (CR). Discriminant validity was evaluated using the Fornell–Larcker criterion and the heterotrait–monotrait ratio (HTMT).

Convergent Validity and Reliability

Table 4. Convergent Validity and Reliability Assessment

Construct	Indicator	Outer Loading	AVE	Cronbach's Alpha	CR
Management Knowledge	Knowledge Creation	0.915	0.854	0.943	0.959
	Knowledge Modification	0.920			
	Knowledge Application	0.930			
	Knowledge Sharing	0.931			
Motivation	Physiological Needs	0.759	0.830	0.929	0.951
	Social Needs	0.961			
	Goal Achievement	0.964			
	Recognition	0.940			
Employee Competency	Knowledge	0.984	0.971	0.985	0.990
	Skills	0.988			
	Role	0.983			
Employee Performance	Timeliness	0.983	0.957	0.977	0.985
	Work Quantity	0.972			
	Responsibility	0.981			

As presented in Table 4, all measurement indicators exhibited outer loading values exceeding 0.70, suggesting satisfactory indicator reliability. The AVE values ranged from 0.830 to 0.971, exceeding the commonly recommended threshold of 0.50 and supporting convergent validity. Cronbach's alpha values ranged from 0.929 to 0.985, while composite reliability values ranged from 0.951 to 0.990, indicating high internal consistency. However, the exceptionally high reliability coefficients for employee competency and employee performance warrant further examination for potential item redundancy and conceptual overlap.

Discriminant Validity

Discriminant validity was assessed using the Fornell–Larcker criterion and HTMT. The results are presented in Tables 5 and Table 6.

Table 5. Fornell–Larcker Criterion

Construct	Employee Performance	Motivation	Management Knowledge	Employee Competency
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Employee Performance	0.978			
Motivation	-0.434	0.911		
Management Knowledge	0.759	-0.135	0.924	
Employee Competency	0.977	-0.457	0.798	0.985

Table 5 presents the discriminant validity results based on the Fornell–Larcker criterion. The square root of AVE for each construct exceeded its correlations with the other constructs. In particular, the correlation between employee competency and employee performance was 0.977, approaching their respective square roots of AVE (0.985 and 0.978). Although the Fornell–Larcker criterion was technically satisfied, the extremely high correlation suggests substantial conceptual or empirical overlap between these constructs and warrants further assessment using HTMT.

Table 6. Heterotrait–Monotrait Ratio (HTMT)

Construct	Employee Performance	Motivation	Management Knowledge	Employee Competency
Employee Performance	—			
Motivation	0.442	—		
Management Knowledge	0.785	0.138	—	
Employee Competency	0.996	0.458	0.798	—

As shown in **Table 6**, most HTMT values were below the commonly applied threshold of 0.90, supporting discriminant validity for the corresponding construct pairs. However, the HTMT value between employee competency and employee performance was 0.996, exceeding this threshold. This finding indicates that discriminant validity between these two constructs was not established based on the HTMT criterion. Although employee competency and employee performance represent theoretically distinct concepts, their substantial empirical overlap raises concerns about their measurement distinctiveness. Consequently, the structural relationships involving these constructs should be interpreted cautiously, and further examination of their measurement indicators is necessary.

Structural Model Evaluation

The structural model was evaluated using collinearity diagnostics, the coefficient of determination (R^2), and effect size (f^2). These assessments were conducted to examine potential collinearity among predictor constructs and the explanatory contributions of the hypothesized relationships.

Collinearity Assessment

Table 7. Collinearity Assessment (Inner VIF)

Relationship	VIF
Motivation → Employee Competency	2.868
Management Knowledge → Employee Competency	2.868
Employee Competency → Employee Performance	1.000

Table 7 presents the variance inflation factor (VIF) values for the structural model. The reported values ranged from 1.000 to 2.868, remaining below the commonly applied

threshold of 5.0. Based on these values, no substantial collinearity concerns were identified among the predictors included in the structural model.

Coefficient of Determination (R^2)

Table 8. Coefficient of Determination (R^2)

Endogenous Construct	R^2
Employee Competency	0.686
Employee Performance	0.955

Table 8 presents the coefficient of determination for the endogenous constructs. Management knowledge and motivation jointly explained 68.6% of the variance in employee competency ($R^2 = 0.686$), indicating substantial explanatory power within the estimated model. Employee competency explained 95.5% of the variance in employee performance ($R^2 = 0.955$). Although this value indicates exceptionally high in-sample explanatory power, it should be interpreted cautiously because of the substantial empirical overlap between employee competency and employee performance identified in the discriminant validity assessment.

Effect Size (f^2)

Table 9. Effect Size (f^2)

Relationship	f^2	Effect Size
Motivation → Employee Competency	0.294	Medium
Management Knowledge → Employee Competency	1.563	Large
Employee Competency → Employee Performance	21.143	Large

Table 9 presents the effect sizes of the hypothesized relationships. Management knowledge demonstrated a large effect on employee competency ($f^2 = 1.563$), indicating a substantial contribution to the explained variance of the competency construct. Motivation exhibited a medium effect size ($f^2 = 0.294$), suggesting a meaningful contribution to employee competency within the estimated model. Employee competency demonstrated an exceptionally large effect size on employee performance ($f^2 = 21.143$). However, this result should be considered alongside the unusually high correlation and HTMT value between the two constructs, which may influence the interpretation of their structural relationship.

Hypothesis Testing and Mediation Analysis

Hypothesis testing was conducted using the bootstrapping procedure in SmartPLS 4. The statistical significance of the hypothesized relationships was evaluated using path coefficients (β), t-statistics, and p-values. Direct and indirect effects were examined to assess the proposed relationships and the mediating role of employee competency.

Direct Effects Analysis

Table 10. Direct Effects and Hypothesis Testing Results

Hypothesis	Relationship	β	t-Statistic	p-Value	Decision
H1	Management Knowledge → Employee Competency	1.186	18.498	< 0.001	Supported
H2	Motivation → Employee Competency	-0.514	8.314	< 0.001	Significant, negative
H3	Employee Competency → Employee Performance	0.977	384.142	< 0.001	Supported

Table 10 presents the direct effects estimated using PLS-SEM. Management knowledge had a statistically significant positive relationship with employee competency ($\beta = 1.186$, $t = 18.498$, $p < 0.001$), supporting H1. Motivation exhibited a statistically significant negative relationship with employee competency ($\beta = -0.514$, $t = 8.314$, $p < 0.001$). Although this relationship was statistically significant, its negative direction contradicted the positive relationship proposed in H2. Therefore, H2 was not supported in its hypothesized direction.

Furthermore, employee competency demonstrated a statistically significant positive relationship with employee performance ($\beta = 0.977$, $t = 384.142$, $p < 0.001$), supporting H3. Nevertheless, the magnitude of this relationship should be interpreted with caution given the unresolved discriminant validity concern between employee competency and employee performance.

Indirect Effects (Mediation) Analysis

Table 11. Indirect Effects and Mediation Analysis Results

Hypothesis	Indirect Relationship	β	t-Statistic	p-Value	Decision
H4	Management Knowledge → Employee Competency → Employee Performance	1.159	18.395	< 0.001	Supported
H5	Motivation → Employee Competency → Employee Performance	-0.502	8.298	< 0.001	Significant, negative

Table 11 presents the results of the indirect effects analysis. Employee competency exhibited a statistically significant positive mediating effect in the relationship between management knowledge and employee performance ($\beta = 1.159$, $t = 18.395$, $p < 0.001$), supporting H4.

In contrast, the indirect effect of motivation on employee performance through employee competency was statistically significant but negative ($\beta = -0.502$, $t = 8.298$, $p < 0.001$). This result indicates a significant negative indirect association, contrary to the positive relationship anticipated in the theoretical framework. Therefore, H5 was not supported if the hypothesis was intended to predict a positive mediating effect. If H5 was formulated as a nondirectional mediation hypothesis, the finding provides statistical support for mediation, although its negative direction requires further theoretical explanation.

Overall, the results indicate statistically significant direct and indirect relationships within the proposed model. However, the negative effects associated with motivation and the insufficient discriminant validity between employee competency and employee performance require careful consideration before drawing substantive conclusions about the proposed theoretical mechanisms.

DISCUSSION

The Role of Management Knowledge in Enhancing Employee Competency and Performance

The findings indicate that management knowledge has a significant positive relationship with employee competency ($\beta = 1.186$, $p < 0.001$). This result is consistent with Human Capital Theory, which emphasizes the importance of knowledge as a strategic resource for developing individual capabilities and supporting organizational performance (Hartono et al., 2023; Wahyono & Hutahayan, 2021). Employees with greater

management-related knowledge may be better equipped to understand work procedures, address operational challenges, and respond to organizational requirements. These capabilities can support competency development, particularly in labor-intensive manufacturing environments where operational effectiveness depends on employees' ability to apply relevant knowledge and skills. This interpretation is consistent with previous studies emphasizing the contributions of knowledge and learning capabilities to individual and organizational outcomes (Mollah et al., 2023).

The results further indicate that employee competency significantly mediates the relationship between management knowledge and employee performance ($\beta = 1.159$, $p < 0.001$). This finding suggests that competency may serve as an important pathway through which management knowledge is associated with employee performance. Employees who possess relevant management knowledge may develop the practical skills and work-related capabilities necessary to perform their responsibilities effectively. In labor-intensive manufacturing industries, the application of knowledge through employee competency may contribute to work quality, operational efficiency, and task accomplishment. Thus, the findings provide empirical support for the proposed mediating role of employee competency, although the cross-sectional design does not establish a causal sequence between these constructs.

The Role of Motivation in Shaping Employee Competency and Performance

The findings reveal a statistically significant negative relationship between motivation and employee competency ($\beta = -0.514$, $p < 0.001$). This result differs from the positive association anticipated in the theoretical framework and commonly discussed in the literature on employee motivation and capability development (Manurung et al., 2023; Yulianah & Kuswara, 2025). Although motivation is generally considered important for encouraging learning, adaptation, and work-related effort, the present findings suggest that higher reported motivation was associated with lower employee competency after accounting for management knowledge. This unexpected result highlights the importance of examining the specific organizational conditions and measurement characteristics underlying the relationship between motivation and competency (Wirana et al., 2024).

One possible explanation is that motivation in labor-intensive manufacturing environments may be directed primarily toward meeting immediate production targets rather than developing longer-term competencies. Employees may prioritize task completion and operational demands over participation in learning and skill-development activities. However, this explanation remains tentative because the study did not directly examine the allocation of motivational effort between production-related activities and competency development. Alternative explanations, including measurement characteristics, variable coding, and relationships among the predictor constructs, should also be considered before drawing substantive conclusions.

The mediation analysis further demonstrates a statistically significant negative indirect relationship between motivation and employee performance through employee competency ($\beta = -0.502$, $p < 0.001$). This finding indicates that employee competency functions as a statistically significant mediating pathway, although the direction of the indirect effect is contrary to the positive relationship initially expected. Accordingly, the findings should not be interpreted as evidence that motivation necessarily enhances competency or performance. Instead, they suggest that the relationship between motivation and employee performance through competency may be more complex than initially proposed. Further research is needed to determine whether this negative

association reflects organizational conditions, differences in motivational orientation, or characteristics of the measurement model.

Employee Competency as a Mechanism Linking Individual Resources and Performance

Employee competency demonstrated a statistically significant positive relationship with employee performance ($\beta = 0.977$, $p < 0.001$). This finding is consistent with the central premise of Human Capital Theory that employees' knowledge, skills, and capabilities constitute valuable resources associated with work-related outcomes (Reynolds et al., 2023; Sabila et al., 2025). Competency encompasses the integration of knowledge, technical skills, and role-related abilities that enable employees to perform assigned responsibilities. In labor-intensive manufacturing settings, these capabilities are particularly relevant because production activities require consistent task execution, operational accuracy, and adherence to work procedures.

The findings also indicate that employee competency serves as a statistically significant mediating variable in the relationships between management knowledge, motivation, and employee performance (Ahmad et al., 2023; Budiarti & Burhanuddin, 2023; Kong et al., 2023). However, the directions of these indirect relationships differ. Management knowledge exhibited a positive indirect association with employee performance through competency, whereas motivation demonstrated a negative indirect association. These results suggest that employee competency may represent an important explanatory pathway linking individual resources to performance outcomes, while also emphasizing that different antecedent variables may operate through distinct relationships. This interpretation contributes to the discussion of competency as a potential mediating mechanism rather than solely an outcome of human resource development (Sahoo et al., 2023).

Nevertheless, the exceptionally strong association between employee competency and employee performance requires careful interpretation. Although the Fornell–Larcker criterion was satisfied, the heterotrait–monotrait ratio (HTMT = 0.996) exceeded the commonly recommended threshold of 0.90, indicating insufficient discriminant validity between these constructs. This result raises concerns regarding their empirical distinctiveness and suggests that the estimated relationship may partly reflect overlapping measurement content. Consequently, the substantial path coefficient and explanatory power associated with employee competency should not be interpreted as definitive evidence of its dominance over other determinants of employee performance.

From a managerial perspective, the findings suggest that organizations may benefit from strengthening knowledge development and competency-building initiatives. Training programs, structured knowledge-sharing activities, and opportunities for practical skill development may help employees apply relevant knowledge in their daily responsibilities. However, the negative association between motivation and competency indicates that motivation-related interventions should be evaluated carefully rather than assumed to produce uniformly positive outcomes. Organizations may need to examine how motivational practices align with employee learning opportunities, competency requirements, and operational expectations.

CONCLUSION

This study examined the relationships among management knowledge, motivation, employee competency, and employee performance in a labor-intensive manufacturing company in Indonesia. The findings revealed that management knowledge was

positively and significantly associated with employee competency, whereas motivation exhibited a significant negative relationship with employee competency. Furthermore, employee competency demonstrated a significant positive association with employee performance. The mediation analysis indicated that employee competency significantly mediated both relationships, with a positive indirect effect for management knowledge and a negative indirect effect for motivation. These findings suggest that employee competency may serve as an important pathway linking knowledge-related and motivational resources to employee performance, although the direction of these relationships differs across the antecedent variables.

The study contributes to Human Capital Theory by examining employee competency as a potential mediating mechanism rather than solely as an outcome of human resource development. From a managerial perspective, the findings suggest that organizations should strengthen knowledge development, competency-based training, and continuous learning opportunities while critically evaluating how employee motivation initiatives align with competency development objectives. Nevertheless, the substantial empirical overlap between employee competency and employee performance requires cautious interpretation of the proposed mediation model. Future research should further examine these relationships using refined measurement instruments and broader organizational settings.

LIMITATION

This study has several limitations. First, its cross-sectional design restricts the ability to establish causal relationships among management knowledge, motivation, employee competency, and employee performance. Second, the study was conducted in a single labor-intensive manufacturing company in Indonesia using purposive sampling and self-reported questionnaires, which may limit the generalizability of the findings and introduce potential response bias. Third, the high heterotrait–monotrait ratio (HTMT = 0.996) between employee competency and employee performance indicates insufficient discriminant validity, requiring cautious interpretation of the structural relationships.

Additionally, the unexpected negative relationship between motivation and employee competency warrants further investigation. Future research should employ longitudinal designs, include multiple organizations and industrial sectors, refine measurement instruments, and incorporate additional organizational and behavioral factors to strengthen the validity and generalizability of the findings.

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DECLARATION OF CONFLICTING INTERESTS

The authors have declared no potential conflicts of interest concerning the study, authorship, and/or publication of this article.

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