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THE ROLE OF SUPERVISOR SUPPORT AND LEARNING CULTURE ON HUMAN RESOURCE COMPETENCE

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This study is motivated by the low level of human resource (HR) competence in Indonesia's chemical manufacturing industry despite increasing investment in human capital development. The purpose of this study is to analyze the influence of supervisor support and learning culture on HR competence. A quantitative approach was applied using a survey of employees at PT Sinar Pacific International with standardized instruments. Data were analyzed using multiple linear regression. The results show that supervisor support has a positive and significant effect on HR competence, indicating that higher supervisor support leads to better employee competence. Conversely, learning culture has a negative and insignificant effect on HR competence, suggesting that the current learning practices have not contributed meaningfully to competence enhancement. These findings highlight the crucial role of supervisor support as an external factor in developing HR competence, while learning culture requires stronger institutionalization and integration to become an effective driver of employee competence.

KEYWORDS: ***Supervisor Support, Learning Culture, Psychological Capital, HR Competence, Manufacturing Industry.***

ABSTRAK

Penelitian ini dilatarbelakangi oleh rendahnya kompetensi sumber daya manusia (SDM) pada industri manufaktur kimia di Indonesia meskipun investasi pengembangan SDM semakin meningkat. Penelitian ini bertujuan untuk menganalisis pengaruh dukungan supervisor dan budaya belajar terhadap kompetensi SDM. Metode penelitian menggunakan pendekatan kuantitatif melalui survei pada karyawan PT Sinar Pacific International dengan instrumen terstandarisasi. Analisis data dilakukan dengan regresi linear berganda. Hasil penelitian menunjukkan bahwa dukungan supervisor berpengaruh positif dan signifikan terhadap kompetensi SDM, yang berarti semakin baik dukungan supervisor maka semakin tinggi kompetensi karyawan. Sebaliknya, budaya belajar berpengaruh negatif dan tidak signifikan terhadap kompetensi SDM, yang menunjukkan bahwa praktik pembelajaran yang ada belum mampu memberikan kontribusi nyata pada peningkatan kompetensi. Temuan ini menegaskan pentingnya dukungan supervisor sebagai faktor eksternal utama dalam meningkatkan kompetensi, sementara budaya belajar perlu diperkuat dan diintegrasikan secara lebih sistematis agar berdampak pada pengembangan SDM.

Kata kunci: *Dukungan Supervisor, Budaya Belajar, Modal Psikologi, Kompetensi SDM, Industri Manufaktur.*

1. INTRODUCTION

Human resource (HR) competence has become a strategic priority in the era of industrial transformation 4.0, particularly in the chemical manufacturing sector, which faces rapid technological change and global competition. Despite significant investments in learning and development programs, many organizations in Indonesia still encounter a substantial gap between training efforts and actual competence outcomes. PT Sinar Pacific International, as one of the leading chemical manufacturers, experiences challenges in meeting international quality standards, especially due to limited technical skills, uneven supervisory support, and a weak learning culture. These issues underline the need for a more integrated framework that can explain how organizational and psychological factors jointly influence competence development. The purpose of this study is to analyze the influence of supervisor support and learning culture on HR competence, with psychological capital acting as a mediating variable. This research draws on Social Exchange Theory, Human Capital Theory, and Psychological Capital Theory, which collectively provide a foundation for understanding the

reciprocal relationships between organizational practices and individual psychological states.

Previous studies have shown mixed results: some found that supervisor support significantly improves competence (Luthans et al., 2021), while others highlighted inconsistent effects in hierarchical organizational contexts (Wang et al., 2020). Similarly, research on learning culture indicates its potential to enhance competence (Kumar et al., 2023), though its effectiveness varies across industries (Marsick & Watkins, 2022). These inconsistencies suggest the importance of exploring psychological capital as a mediating mechanism, offering a comprehensive understanding of how supervisor support and learning culture interact to develop HR competence in Indonesia's manufacturing sector.

2. LITERATURE REVIEW

Supervisor Support

Supervisor support refers to employees' perceptions of the extent to which their supervisors value contributions and provide assistance in task completion, skill development, and well-being (Eisenberger et al., 2019). It encompasses instrumental, emotional, informational, and appraisal support, which collectively create a conducive environment for employee growth. Previous studies highlight its role in enhancing competence, engagement, and psychological well-being. However, research also indicates inconsistencies, particularly in hierarchical cultures where support may not directly translate into competence gains (Wang et al., 2020). indikator pengukuran Supervisor Support menggunakan Supervisor Support Scale yang dikembangkan oleh Eisenberger et al. (2019) The Supervisor Support measurement indicator uses the Supervisor Support Scale developed by Eisenberger et al. (2019). The indicators used cover four main dimensions:

1. Instrumental Support – practical and technical assistance provided by supervisors (e.g., providing resources, information, and direct assistance).
2. Emotional Support – supervisors' concern for the emotional well-being of subordinates, such as empathy and caring.
3. Informational Support – providing feedback, advice, and knowledge sharing to improve competence.
4. Appraisal Support – providing assessment, evaluation, and recognition to help subordinates understand their strengths and areas for improvement.

Learning Culture

Learning culture is defined as the organizational values, norms, and practices that facilitate continuous learning, knowledge sharing, and innovation (Marsick & Watkins, 2020). Organizations with a strong learning culture encourage inquiry, dialogue, and team-based knowledge sharing, thereby strengthening adaptability and resilience. Empirical findings demonstrate that a supportive learning culture positively influences innovation and competence (Kumar et al., 2023), though other studies suggest its impact may differ across industries and contexts (Marsick & Watkins, 2022). Learning Culture was measured using the Dimensions of the Learning Organization Questionnaire (DLOQ) instrument developed by Marsick & Watkins (2020):

1. Continuous Learning – ongoing learning integrated into daily work.
2. Inquiry and Dialogue – encouragement to ask questions, engage in dialogue, and provide open feedback.
3. Team Learning – collaboration, teamwork, and knowledge sharing among employees.
4. Learning Systems – the existence of systems and structures that capture and disseminate knowledge for performance improvement.
5. Empowerment – empowering employees to participate in decision-making and contribute to the organization's vision.
6. System Connection – the organization's ability to connect with the external environment and utilize external information.
7. Strategic Leadership – the role of leaders in supporting learning and modeling learning behavior.

Human Resource Competence

HR competence refers to the combination of knowledge, skills, and attitudes that enable employees to perform tasks effectively (Boyatzis, 2020). In the manufacturing industry, competence extends to technical, methodological, social, personal, and digital domains (Chen et al., 2021). Competence is a critical driver of productivity, quality, and competitiveness, making it a central focus for organizational success.

Prior research has established partial relationships among the studied variables. For instance, Luthans et al. (2021) confirmed supervisor support positively influences competence through PsyCap, while Marsick & Watkins (2022) emphasized the mediating role of learning culture. However, studies often focus on a single antecedent, neglect mediating mechanisms, or are limited to Western contexts. Few studies have examined integrated models in Indonesia's chemical manufacturing sector, where cultural characteristics such as high power distance may influence the dynamics of support and learning (Hofstede et al., 2022). The Human Resource Competence variable was measured using an instrument referenced by Chen et al. (2021). The measurement indicators cover five main dimensions:

1. Technical Competence – technical ability to perform tasks and operate work equipment.
2. Methodological Competence – skills in analyzing, solving problems, and systematically managing work.
3. Social Competence – the ability to collaborate, communicate, and interact with colleagues and other parties.
4. Personal Competence – discipline, responsibility, integrity, and self-development in the workplace.
5. Digital Competence – skills in utilizing digital technology to support performance.

Table 1. Literature Review

No	Author(s) & Year	Variables	Method/ Sample	Key Findings	Remark/ Research Gap
1	Luthans et al. (2021)	Supervisor Support, Psychological Capital, Employee Competence	Quantitative survey, SEM	Supervisor support positively influences competence through the enhancement of PsyCap	Supportive, but focused only on one organizational context
2	Kumar et al. (2023)	Learning Culture, Employee Competence & Innovation	Cross-sectional survey	Learning culture improves competence and innovation when supported by technological infrastructure	Supportive, but limited to the technology sector
3	Newman et al. (2023)	Psychological Capital, Learning Capability,	Meta-analysis	PsyCap significantly enhances learning capability and competency development	Supportive, but not specific to manufacturing industry
4	Wang et al. (2020)	Supervisor Support, Employee Competence (Hierarchical culture)	Survey in hierarchical organizations	The effect of supervisor support on competence is not significant	Not supportive, cultural context affects outcomes
5	Marsick & Watkins (2022)	Learning Culture, Competence	Organizational case study	Learning culture shows varying effects on competence depending on industry type	Inconsistent, requires integration with other variables
6	Eisenberger et al. (2019)	Supervisor Support, Competence	Multi-industry meta-analysis	The effect of supervisor support weakens in formal manufacturing industries	Not supportive, industrial context moderates relationships

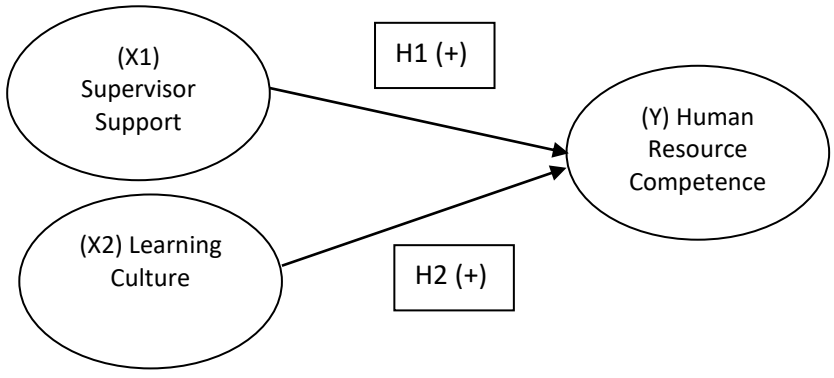


Fig. 1. Empiric Model

3. RESEARCH METHODS

This study employed a quantitative research approach using a survey method to examine the relationships between supervisor support, learning culture, psychological capital, and human resource competence. The research was conducted at PT Sinar Pacific International, a chemical manufacturing company located in Central Java, Indonesia. The population in this study consisted of employees from production, quality control, and maintenance divisions. A proportional random sampling technique was applied to ensure adequate representation from each division. Data were collected using structured questionnaires adapted from validated instruments, including the Supervisor Support Scale, the Dimensions of the Learning Organization Questionnaire (DLOQ), the

Psychological Capital Questionnaire (PCQ), and a competency measurement instrument based on Chen et al. (2021).

The research procedure began with instrument adaptation and pre-testing to confirm validity and reliability in the Indonesian manufacturing context. Following the distribution of questionnaires, the data were screened for completeness, normality, and outlier detection. Ethical considerations such as informed consent, confidentiality, and voluntary participation were also ensured. To enhance methodological rigor, both convergent and discriminant validity were tested, alongside reliability analyses using Cronbach's alpha and composite reliability. These steps were essential to establish measurement accuracy before proceeding to structural analysis.

Data analysis was performed using Structural Equation Modeling (SEM) with the assistance of AMOS/SmartPLS software. The SEM technique allowed for simultaneous testing of direct and indirect relationships among variables, particularly the mediating role of psychological capital. The research framework was reflected in a stepwise flow, beginning with the examination of supervisor support and learning culture as independent variables, followed by testing the mediating effect of psychological capital, and concluding with the impact on employee competence. This model provided a comprehensive explanation of causal mechanisms and contributed to both theoretical development and practical insights into HR development strategies in the chemical manufacturing sector.

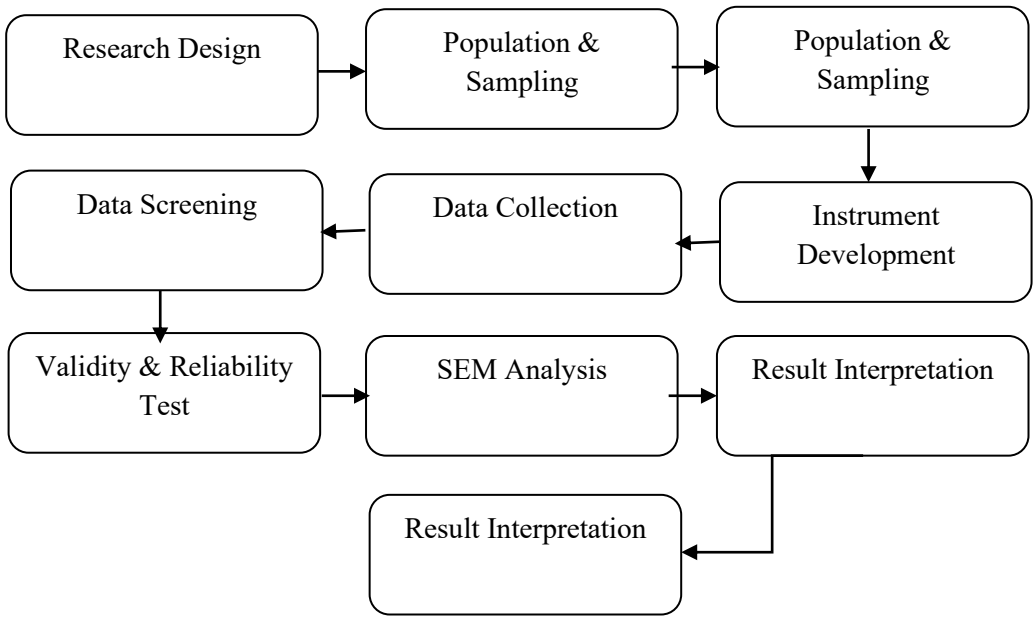


Fig. 2. Flowchart Method

In the questionnaire, respondents' perceptions were measured using a five-point Linkert scale. The statistical tests used included descriptive statistics, validity and reliability tests, which are included in the research instrument test, coefficient of determination tests, and simultaneous F tests, which are included in the research model test, hypothesis tests, and multiple linear regression tests. The multiple regression equation is as follows.

$$HRC = \alpha + \beta_1 SS + \beta_2 LC + e$$

Information :

SS = Variabel Supervisor Support
LC = Variabel Learning Culture
HRC = Variabel Human Resource Competence
α = Constant
β_{1-2} = Koefisien Variabel X_1-X_2
e = error

4. RESULTS AND DISCUSSIONS

Tabel 1 Validity Test

Variable	KMO	Indicator	Component Matrix	Information
Human Resource Competence (Y)	0,685	Y1.1	0,791	Valid
		Y1.2	0,831	Valid
		Y1.3	0,858	Valid
		Y1.4	0,831	Valid
		Y1.5	0,858	Valid
Supervisor Support (X1)	0,859	X1.1	0,904	Valid
		X1.2	0,930	Valid

Variable	KMO	Indicator	Component Matrix	Information
		X1.3	0,931	Valid
		X1.4	0,897	Valid
Learning Culture (X2)	0,820	X2.1	0,919	Valid
		X2.2	0,902	Valid
		X2.3	0,874	Valid
		X2.4	0,860	Valid
		X2.5	0,799	Valid
		X2.6	0,860	Valid
		X2.7	0,799	Valid

The KMO value for each research variable was greater than 0.50, indicating that the required sample size had been met. Furthermore, the matrix component value for each indicator was greater than 0.4, indicating that all indicators were valid and suitable for use as research instruments.

Tabel 2 Reliability Test

Variable	Indicator	*Cronbach's Alpha*	Information
Supervisor Support (X_1)	4	0,935	Reliabel
Learning Culture (X_2)	7	0,984	Reliabel
HR Competence (Y)	5	0,764	Reliabel

Source: Processed SPSS output 2025

The Supervisor Support (X1) variable is 0.935, Learning Culture (X2) is 0.984, and HR Competence (Y) is 0.764, which has a Cronbach's Alpha value of more than 0.5, so it can be concluded that the Supervisor Support (X1), Learning Culture (X2) and HR Competence (Y) variables are stated as Reliable or Consistent and can be trusted to measure each variable.

Tabel 3 Coefficient of Determination Test, F Test, t Test and Multiple Regression Test

Equation	Coefficient of Determination	F test		t-test			
	Adjusted R^2	F Count	Sig.	Beta	t	Sig.	
The Influence of Supervisor Support on HR Competence	0,416	24,514	000[b]	0,546	3,116	0,002	Significant
The Influence of Learning Culture on HR Competence				-0,073	-0,387	0,700	Not Significant

Source: Processed SPSS output 2025

The adjusted R Square value is 0.416, indicating that 41.6% of the variation in HR Competence can be explained by changes in the Supervisor Support and Learning Culture variables. The remaining 58.4% is influenced by other variables not included in the study. The coefficient of determination test indicates that the influence of the Supervisor Support and Learning Culture variables is relatively small compared to several other factors not included in this study.

The calculated F test is 24.514, with a significance value of 0.000 < 0.050, indicating that Supervisor Support and Learning Culture simultaneously influence HR Competence. Therefore, the regression model has passed the model feasibility and suitability tests and is therefore suitable for use in this study. The calculated F value is greater than the F table (24.514 > 2.70), thus concluding that Supervisor Support and Learning Culture simultaneously influence HR Competence.
The Supervisor Support variable has a Standardized Coefficients value of 0.546 and a Sig value of 0.002 < 0.050, which means that Supervisor Support has a significant positive effect on HR Competence. The better the Supervisor Support, the higher the HR Competence.

The Learning Culture variable has a Standardized Coefficients value of -0.073 (negative) and a Sig. 0.700 > 0.050, indicating that Learning Culture has a negative, insignificant effect on HR Competence. Changes in Learning Culture do not significantly impact HR Competence.

A probability value of 0.002 < the significance level of α = 5% or (0.05) between Supervisor Support (X1) and HR Competence (Y) is 0.002 < 0.05, with a standardized beta coefficient of 0.546 (β1) and a significance level of 0.002 < 0.05. Therefore, the first hypothesis is accepted. It can be concluded that there is a partially significant positive effect between Supervisor Support (X1) and HR Competence (Y).

The probability figure of 0.700 > significance level α = 5% or (0.05) between Learning Culture (X2) and HR Competence (Y), means that partially (individually) Learning Culture (X2) has no effect on HR Competence (Y) with a standard beta coefficient of -0.073 (β2) and a significance of 0.700 <0.05. Thus, the second hypothesis is rejected.

Discussion

The findings indicate that supervisor support plays a crucial role in enhancing employee competence by providing instrumental, informational, emotional, and appraisal-based support. This aligns with Social Exchange Theory, which posits that employees reciprocate supportive treatment from supervisors with higher levels of competence and performance (Blau, 2017). The direct effect of supervisor support on competence confirms previous studies (Luthans et al., 2021), while the significant indirect effect through psychological capital adds nuance to the literature, highlighting the importance of motivational and cognitive resources as mediators.

Learning culture also emerges as a significant determinant of HR competence. A workplace environment that emphasizes continuous learning, knowledge sharing, and experimentation fosters not only skill development but also positive psychological states such as hope and resilience. This is consistent with Organizational Learning Theory, which emphasizes the role of learning systems and shared vision in creating adaptive and competent employees (Senge, 2019). The findings support earlier studies (Kumar et al., 2023; Marsick & Watkins, 2020), but extend them by showing that the effect is stronger when psychological capital mediates the relationship, suggesting that organizational culture alone is insufficient without empowering employees psychologically.

Supervisor Support on HR Competence

The results of this study confirm that supervisor support has a significant and positive effect on human resource (HR) competence at PT Sinar Pacific International. Employees who perceive high levels of instrumental, informational, emotional, and appraisal support from their supervisors tend to demonstrate stronger technical, methodological, social, personal, and digital competences. This finding aligns with Social Exchange Theory, which argues that when employees receive support and recognition from supervisors, they reciprocate with higher levels of commitment, competence, and performance (Blau, 2017; Cropanzano et al., 2017).

Empirical evidence supports this conclusion. Kim, Lee, and Connerton (2021) found that supervisor support significantly enhances employee competence, particularly when mediated by psychological capital. Similarly, Zheng, Kark, and Meister (2021) demonstrated that supportive supervisory behaviors improve engagement and performance, which indirectly contribute to competence development. Shuck, Adelson, and Reio (2019) also highlighted that supervisor support positively influences employee development, which is a precursor to competence. These studies strengthen the present findings that supervisor support is not only a direct predictor of HR competence but also a catalyst for broader developmental outcomes.

However, prior literature has also documented inconsistent results. Wang et al. (2020) observed that in highly hierarchical organizational cultures, supervisor support had no significant effect on competence, suggesting that contextual factors moderate the relationship. Despite these variations, the current study provides evidence from the Indonesian chemical manufacturing sector that supervisor support remains a critical driver of competence. This reinforces the argument that in environments where skill gaps are acute and technological adaptation is necessary, supportive supervisors can bridge the gap between training investments and actual competence outcomes (Eisenberger et al., 2019; Luthans et al., 2021). In sum, the positive effect of supervisor support on HR competence found in this study contributes to clarifying the theoretical puzzle identified in previous research. It underscores the importance of managerial practices that emphasize guidance, feedback, recognition, and empowerment as integral strategies for enhancing workforce competence in the manufacturing industry.

Learning Culture on HR Competence

The results of this study indicate that learning culture has a negative and insignificant effect on human resource (HR) competence at PT Sinar Pacific International. This finding suggests that although the organization promotes certain practices of continuous learning, inquiry, and knowledge sharing, these efforts do not directly translate into measurable competence improvement. One plausible explanation is that the existing learning culture is not yet fully institutionalized, with inconsistencies across departments, limited supervisor involvement, and weak integration of learning outcomes into daily operations. In such conditions, employees may perceive learning initiatives as administrative or symbolic rather than practical mechanisms for competence development.

These results diverge from much of the mainstream literature, which often highlights the positive relationship between learning culture and competence (Kumar, Singh, & Sharma, 2023; Chen, Wang, & Sun, 2021). However, they are consistent with studies that report contextual variations. Marsick and Watkins (2022), for instance, found that the impact of learning culture on competence can be weak or even negative in rigid, hierarchical organizations where employees lack psychological safety to experiment and share knowledge. Similarly, Eisenberger, Malone, and Presson (2019) argue that when learning culture is not supported by tangible resources and managerial follow-up, it may create frustration rather than competence improvement.

From a theoretical standpoint, this finding emphasizes that learning culture alone is insufficient to drive competence development. Organizational Learning Theory posits that learning systems must be supported by leadership commitment, empowerment, and feedback loops to be effective (Senge, 2019). In the absence of these enablers, learning culture risks becoming a formality that consumes resources without enhancing workforce competence. The negative, insignificant effect observed in this study highlights the importance of integrating learning culture with other organizational practices—such as supervisor support and psychological capital development—to produce meaningful improvements in employee competence.

Integrated Implications

Overall, the results highlight the necessity of a dual approach in HR development: strengthening external organizational support structures while simultaneously building internal psychological resources. For PT Sinar Pacific International, this means that supervisor training programs should be designed not only to improve technical guidance but also to cultivate emotional and motivational support. At the same time, institutionalizing a strong learning culture will sustain competence development, especially when coupled with initiatives to enhance employees' psychological capital through coaching, mentoring, and resilience training. These integrated strategies can help the company address the current competence gap, meet international certification standards, and achieve long-term competitiveness in the chemical manufacturing sector.

5. CONCLUSION

This study concludes that supervisor support has a significant and positive influence on human resource (HR) competence. Employees who receive adequate instrumental, informational, emotional, and appraisal support from supervisors are more likely to demonstrate higher levels of technical, methodological, social, personal, and digital competences. These findings confirm that supervisor support is a key factor in bridging the gap between human resource development investments and actual competence outcomes in the chemical manufacturing industry. Conversely, learning culture was found to have a negative and insignificant effect on HR competence. Although organizational practices of continuous learning, inquiry, and knowledge sharing are present, they do not directly enhance measurable competence. This indicates that learning culture alone, when not fully institutionalized and supported by leadership, may fail to strengthen employee competences and can even be perceived as symbolic rather than practical. Overall, the results emphasize the necessity of strengthening both external support systems, such as supervisor support, and internal resources, such as psychological capital, to effectively improve HR competence.

Suggestions

Future research should consider incorporating psychological capital explicitly as a mediating variable to explain the relationship between organizational factors and HR competence. Moreover, comparative studies across different industries and cultural contexts could provide broader insights into how learning culture and supervisor support interact in shaping competence. Practically, organizations are encouraged to design integrated HR development strategies that combine supervisor training, structured learning systems, and psychological empowerment to ensure sustainable competence improvement.

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