



Turning Diversity into Performance: The Roles of Work Environment and Organisational Communication in Emerging-Economy Manufacturing

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ABSTRACT

The rapid growth of the manufacturing industry in West Java has positioned the region as a strategic hub for international investment. In the context of globalization, workforce diversity across nationality, ethnicity, generation, and cultural background, has become a critical factor influencing organizational sustainability. Such diversity shapes the work environment, organisational communication, and ultimately employee performance, which are central to sustaining competitiveness in industrial regions. This study develops a conceptual model to examine the effects of workforce diversity, work environment, and organisational communication on employee performance in West Java's manufacturing sector. A quantitative approach was applied using Structural Equation Modeling (SEM-PLS) with 385 respondents from various manufacturing companies. The findings reveal that workforce diversity significantly enhances employee performance ($\beta = 0.585$; $P < 0.001$), as do the work environment ($\beta = 0.124$; $P = 0.020$) and organisational communication ($\beta = 0.150$; $P < 0.001$). The model's R^2 value of 0.538 indicates that the independent variables explain 53.8% of the variance in employee performance. These results underscore the importance of inclusive diversity management, supportive workplace environments, and effective cross-cultural communication for advancing sustainable industrial development. From a practical perspective, companies are encouraged to adopt inclusive policies, improve workplace quality, and strengthen technology-enabled communication to foster long-term sustainability and enhance the global competitiveness of manufacturing industries in emerging regions.

Keywords: Employee Diversity, Employee Performance, Manufacturing Industry, Organisational Communication, Work Environment

JEL Classifications: J24, M14, M54, O15L

1. INTRODUCTION

The manufacturing industry in Indonesia, particularly in West Java, plays a vital role in supporting national economic growth. West Java is the largest manufacturing hub, employing more than 4.7 million workers in 2023 and contributing over 33% to the province's Gross Regional Domestic Product (GRDP) (Badan Pusat Statistik Provinsi Jawa Barat, 2023; Winardi et al., 2017). Similar to other major industrial regions around the world, the manufacturing sector in West Java shares common characteristics in terms of labor

intensity, global market orientation, and the growing complexity of workforce diversity. Globalization and regional economic integration, such as the ASEAN Free Trade Area (AFTA) and the ASEAN Economic Community (AEC), have stimulated foreign investment inflows, resulting in a more diverse workforce in terms of nationality, ethnicity, religion, gender, and generational cohorts.

These changes present both opportunities and challenges for manufacturing companies in managing a diverse workforce to ensure optimal contributions to organizational performance.

Workforce diversity has long been recognised as a strategic driver of creativity and organizational performance. However, its outcomes are not always linear. The effectiveness of diversity in improving performance largely depends on contextual and moderating variables, including human resource practices, leadership approaches, work unit structure, and the prevailing organizational climate. Previous meta-analytical and conceptual reviews have demonstrated that organisations can actively manage such moderators, particularly through inclusive policies and the cultivation of a positive diversity climate to transform diversity into a source of competitive advantage (Guillaume et al., 2017), (Shore et al., 2018), (Roberson, 2019).

In the context of high-intensity manufacturing operations, a positive diversity climate is associated with innovative employee work behaviour, both directly and through psychosocial mechanisms such as job crafting (Bogilović et al., 2021), (Guo et al., 2023). These findings highlight that effective diversity management extends beyond demographic composition; it should focus on shaping employees' everyday experiences, perceptions, and social interactions within teams and production settings. By embedding inclusion-oriented practices and trust-based climates, manufacturing organisations can leverage diversity as a productive and sustainable performance resource. In addition to social factors, physical conditions in the work environment, such as temperature or thermal comfort, noise, and lighting, have been shown to affect the health and productivity of factory workers. Empirical studies in manufacturing facilities have found that high temperatures and noise levels, as well as inadequate lighting, correlate with lower productivity and health complaints (Meegahapola & Prabodanie, 2018).

The work environment has also been proven to significantly influence employee satisfaction, productivity, and performance. A supportive work environment encompasses aspects such as safety, cleanliness, lighting, noise levels, and comfortable room temperature to enhance work quality. Proper management of the work environment is a prerequisite for workforce diversity to generate added value for organizations (Gross-Gołacka et al., 2022). In West Java, a survey conducted by the Indonesian Employers Association (APINDO) in 2023 revealed that 57% of companies face challenges in creating an inclusive multicultural work environment.

Organisational communication plays a critical role in facilitating employee engagement and performance by enhancing clarity, reducing conflict, and improving alignment with organizational goals. Effective internal communication has been shown to help employees address workplace conflict and motivation challenges, thereby strengthening their involvement and productivity within diverse work environments. (Motsamai & Onyenankaya, 2025). Furthermore, organisational communication can mediate the positive effects of the work environment on job satisfaction and employee performance, suggesting it serves as a key mechanism through which organizational conditions influence outcomes (Wardana et al., 2025). Internal communication systems that are adaptive to diversity have been shown to increase employee engagement by up to 22% (S. Mishra et al., 2023). Strong

communication further reinforces the relationship between team diversity and team performance (Bui et al., 2019)

Recent research shows that symmetrical internal communication and the use of "motivating language" by leaders build a positive emotional culture (joy, pride, gratitude) which in turn increases organisational identification and supportive behaviour (Men & Yue, 2019), (Yue & Walden, 2023). Recent literature also highlights that channel transparency and an open communication climate strengthen commitment to change and employee engagement (Neill et al., 2020), (Men et al., 2022)

Nevertheless, previous studies have reported mixed results. Some research highlights the positive effects of diversity and communication on performance, while others find negative impacts when diversity is not accompanied by inclusive communication strategies and supportive work environments (Liu et al., 2023). This underscores the need for a conceptual framework that can explain the interrelationship among these three variables in an integrative manner.

Based on the above developments, this research positions workforce diversity, work environment (physical and psychosocial), and organisational communication as interrelated factors that shape employee performance in the manufacturing industry. The main contribution of this paper is to synthesise empirical findings from 2015 to 2025 and propose a conceptual framework that emphasises the role of diversity climate, work environment quality, and symmetrical internal communication as levers of employee performance in a heterogeneous manufacturing context.

The urgency of this study is further heightened by the fact that West Java is the region with the largest number of foreign workers in Indonesia, reaching 9,500 in 2023 (Ministry of Manpower of the Republic of Indonesia, 2023). The presence of expatriate workers reinforces the need for a management model of diversity, work environment, and organisational communication that is contextualised to local realities.

Without a strong empirical basis and conceptual framework, companies risk declining productivity, internal conflicts, and the failure of sustainable human resource management strategies.

However, a significant research gap remains. Most international studies on workforce diversity have focused on developed countries (Kundu and Mor, 2017; Guillaume et al., 2017), while empirical investigations in West Java's manufacturing sector that integrate these three variables into a single conceptual model are still very limited. Moreover, previous analytical approaches have largely relied on simple regression techniques, which do not provide a comprehensive understanding of the causal relationships among the variables.

Therefore, this study offers novelty through the application of Structural Equation Modeling (SEM) to develop a more comprehensive conceptual model. The research aims to construct a conceptual framework that explains the influence of workforce diversity, work environment, and organisational communication

on employee performance in the manufacturing industry of West Java, with specific objectives to: (1) assess the effect of diversity on employee performance; (2) identify the role of the work environment as a supporting factor; (3) analyse the contribution of organisational communication in managing diversity; and (4) propose an integrative conceptual model as the basis for human resource management strategies in Indonesia's manufacturing sector.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1. Employee Diversity (ED)

Employee diversity is defined not only in terms of demographic attributes, but also includes diversity of experience, personality, and perspective. Recent literature confirms that diversity can be categorised into demographic, functional, and cognitive dimensions, each of which contributes differently to team dynamics and innovation (Shore et al., 2018; Guillaume et al., 2017). A recent meta-analysis highlights that the effects of diversity are significantly influenced by the inclusion climate, leadership, and team norms (Roberson, 2019; Traylor et al., 2024). Furthermore, a positive diversity climate has been shown to foster innovative work behaviour through job crafting mechanisms (Bogilović et al., 2021). Personality represents the core of each individual and plays a crucial role in work behaviour, team collaboration, and decision-making. Diversity in personality can enhance creativity and team performance when managed effectively (Herbert et al., 2023).

The internal dimension refers to characteristics that are inherent and generally unchangeable, such as gender, race, ethnicity, age, sexual orientation, and physical abilities. Organizations that manage internal diversity inclusively tend to be more innovative and responsive to the global market (Chaudhry et al., 2021).

The external dimension encompasses individual characteristics that are subject to change and are often shaped by environment or life experiences. This dimension includes education, marital status, geographic location, work experience, religious background, and lifestyle (Fitri and Jing, 2025). External diversity adds value to organizations by providing richer perspectives and enhancing problem-solving, as it broadens viewpoints in strategic decision-making (Fisher et al., 2024).

2.2. Work Environment (WE)

The work environment is one of the key factors influencing employee comfort, productivity, performance, and health. According to Robbins and Judge (2017), the quality of the physical work environment directly affects employee behaviour and well-being (Robbins and Judge, 2017). A conducive work environment fosters a sense of safety, comfort, and supports work efficiency. Empirical studies in the manufacturing sector have found that factors such as temperature, noise, humidity, lighting, and safety standards are significantly related to performance and job satisfaction (Meegahapola and Prabodanie, 2018; Bai et al., 2020).

A recent systematic review confirms that physical and psychosocial work environment management is a prerequisite for workforce diversity to generate organisational added value (Gross-Golacka et al., 2022; (Sultana & Johari, 2022)).

These changes present both opportunities and challenges for manufacturing companies in managing a diverse workforce to ensure optimal contributions to organizational performance. In this context, four crucial physical dimensions of the work environment are lighting, temperature, noise, and occupational safety and cleanliness (Anugerah et al., 2025).

Adequate and standardized lighting is a crucial factor in creating a productive and healthy work environment. Natural lighting has a more positive impact on employee mood and productivity compared to artificial lighting (Ríos-Rodríguez et al., 2023). Workplace temperature also plays a major role in thermal comfort and employee productivity. In industrial work environments, extreme temperatures can pose serious health risks and lead to heat stress or cold stress (International Labour Organization, 2016).

Noise is one of the most frequently overlooked environmental factors, yet it significantly affects health and work efficiency. The World Health Organization (WHO) states that the safe noise threshold in the workplace is 85 dB for an 8-h exposure (World Health Organization, 2018). Workplace safety involves efforts to protect employees from the risk of accidents, injuries, and occupational diseases.

2.3. Organisational Communication (OC)

Organisational communication acts as an integrative mechanism that connects diversity and the work environment with performance. Recent literature highlights the role of symmetrical internal communication, the selection of appropriate channels, and the use of motivational language by leaders in building a positive emotional culture (Men and Yue, 2019). Transparency and clarity of messages strengthen commitment to change and employee engagement (Men et al., 2022).

The selection of appropriate media can enhance the clarity and speed of message delivery. Communication media refer to the channels or tools used to convey messages within an organization (Strauss et al., 2024).

Media richness is directly related to the effectiveness of communication within an organisation in the context of internal communication (Chidiac and Bowden, 2023).

Vertical communication refers to the flow of information between superiors and subordinates within the organizational structure. Its functions include work coordination, managerial control, and employee motivation. However, this form of communication often faces barriers such as message distortion, power imbalances, and organizational cultures that do not support openness (Zara et al., 2023). Vertical communication, when characterized by openness between superiors and subordinates, fosters a positive and collaborative organisational climate.

Horizontal communication is the exchange of information among individuals or units at the same hierarchical level within an organization. It plays a vital role in matrix organizations and cross-functional teams, where work success largely depends on synergy across units. According to Mintzberg (Gomes et al., 2023) organizational structures that support horizontal communication tend to be more flexible and adaptive to environmental changes. As a form of cross-unit collaboration, horizontal communication strengthens coordination and innovation within the organization.

2.4. Employee Performance (EP)

Employee performance is a key variable that reflects individual effectiveness within an organization. It refers to the quality and quantity of work achieved by an individual in carrying out assigned tasks in accordance with their responsibilities (Mangkunegara, 2015). Employee performance is defined as an individual's contribution to the achievement of organisational goals. In the last decade, research has emphasised that performance is influenced by a combination of individual characteristics, contextual factors, and performance management systems. Empirical findings show that an inclusive climate, a healthy work environment, and effective communication simultaneously contribute to improved performance (Umrani et al., 2020).

Other factors that may influence employee performance include individual characteristics, organizational factors, and the existing performance management system. Employee performance is a complex variable shaped by individual, contextual, and systemic factors. Organizations need to develop management strategies that not only focus on achieving targets but also on employee well-being and development. A comprehensive understanding of the dimensions, measurement, and drivers of performance is essential in building a sustainable and competitive organization.

3. RESEARCH METHODS

3.1. Participant

This study employed a quantitative method with 385 employee respondents drawn from 378 manufacturing companies in West Java, Indonesia. Of the total sample, approximately 40% of the companies originated from Asia, 12% from the United States, and the remainder consisted of companies from Europe, Australia, as well as domestic firms.

Data were collected through a questionnaire survey using a sampling technique. Descriptive results indicate that the majority of respondents were male, totalling 209 individuals (54.3%), with the largest age group being 31–40 years old, comprising 131 individuals (34.0%).

3.2. Measures

3.2.1. Employee diversity (ED)

Employee diversity was measured using 36 items adopted from Zahro (2023), covering the personality, internal, and external dimensions, such as “I am open to new things”.

3.2.2. Work environment (WE)

The work environment was measured using four dimensions—lighting, air temperature, noise, and cleanliness and safety—through 12 items adopted from Saefullah et al., such as “The supervision and inspection of the work environment have been properly conducted” (Saefullah et al., 2022).

An unsuitable working environment affects employee performance both directly and indirectly. Hot working temperatures, noise and lack of light will affect workers' behaviour and condition.

3.2.3. Organizational communication (OC)

Organizational communication was measured using three dimensions—communication media, vertical communication, and horizontal communication—through 9 items adopted from Brennan, Daft, and Lengel, such as “Supervisors communicate information regarding tasks and organizational policies” (Santalla-Banderali and Alvarado, 2022; Lee et al., 2023).

Effective organisational communication is increasingly linked with the adoption of digital transformation strategies that enhance agility and adaptability in institutions (Kürşad et al., 2025).

3.2.4. Employee performance (EP)

Employee performance was measured using a single dimension of performance through 6 items, such as “My work results meet the targets set by my supervisor or the company” (Mangkunegara, 2015).

All items used for measurement employed a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree) (Platania, 2023).

3.3. Data Analysis Technique

This study applied Structural Equation Modeling (SEM) with the Partial Least Squares (PLS) approach, using SmartPLS version 4.0 software to analyze the data. The SEM-PLS method was chosen because it is capable of testing both the measurement model and the structural model simultaneously, as well as managing complex latent constructs and accounting for measurement error. Unlike traditional regression analysis, which generally examines only direct relationships among observed variables, SEM-PLS also enables the testing of mediation, moderation, and indirect effects among latent variables.

SmartPLS 4.0 is particularly suitable for this study due to several advantages: first, its tolerance for data that may not strictly meet the assumption of normal distribution; second, its ability to handle medium to relatively small sample sizes while still producing reliable parameter estimates; third, its flexibility in testing complex models in social and management research (Hair et al., 2019), as well as its growing adoption in empirical studies in the fields of human resources and organizational research (Sarstedt et al., 2017). By employing this approach, the study is expected to obtain a more comprehensive, valid, and robust depiction of the relationships among variables compared to relying solely on conventional regression.

Table 1: Outer loadings

Items	ED	WE	OC	EP
ED1	0.866			
ED2	0.837			
ED3	0.858			
ED4	0.886			
ED5	0.879			
ED6	0.907			
ED7	0.789			
ED8	0.790			
ED9	0.863			
ED10	0.872			
ED11	0.739			
ED12	0.885			
ED13	0.850			
ED14	0.828			
ED15	0.867			
ED16	0.889			
ED17	0.844			
ED18	0.834			
ED19	0.808			
ED20	0.797			
ED21	0.819			
ED22	0.865			
ED23	0.807			
ED24	0.744			
ED25	0.786			
ED26	0.842			
ED27	0.838			
ED28	0.847			
ED29	0.842			
ED30	0.853			
ED31	0.829			
ED32	0.812			
ED33	0.814			
ED34	0.832			
ED35	0.796			
ED36	0.826			
WE1		1.000		
WE2		1.000		
WE3		0.920		
WE4		0.930		
WE5		0.847		
WE6		0.867		
WE7		0.856		
WE8		0.803		
WE9		0.867		
WE10		0.818		
WE11		0.869		
WE12		0.838		
OC1			0.913	
OC2			0.864	
OC3			0.883	
OC4			0.839	
OC5			0.938	
OC6			0.941	
OC7			0.940	
OC8			0.891	
OC9			0.917	
EP1				0.795
EP2				0.825
EP3				0.783
EP4				0.861
EP5				0.828
EP6				0.786

4. RESULTS AND DISCUSSION

4.1. Measurement Model (Outer Model)

The measurement model was first evaluated to ensure the quality of indicators and latent constructs before interpreting the causal relationships in the structural model (Hair et al., 2019; Sarstedt et al., 2017). The outer loadings in Table 1 indicate that all indicators exceeded the 0.50 threshold, confirming convergent validity. Specifically, the range of factor loadings was as follows: EP: 0.783-0.861, ED: 0.739-0.907, WE: 0.818-1.000, and OC: 0.839-0.941. The lowest value was recorded for ED11 = 0.739 and the highest for ED6 = 0.907, both of which remain within the recommended thresholds for indicator retention in PLS-SEM analysis.

To assess discriminant validity, as shown in Table 2, all values for each variable exceeded 0.50, in line with the Fornell-Larcker criterion, which is also presented in Table 3. Internal consistency was evaluated using Cronbach's Alpha (CA), Composite Reliability (CR), and Average Variance Extracted (AVE), yielding satisfactory results: ED (CA = 0.981; CR = 0.982; AVE = 0.599), WE (CA = 0.956; CR = 0.962; AVE = 0.677), OC (CA = 0.950; CR = 0.957; AVE = 0.714), and EP (CA = 0.898; CR = 0.921; AVE = 0.662). Therefore, the research instruments demonstrate good reliability and validity in accordance with established standards (Robbins and Judge, 2017).

Discriminant validity was assessed using the Fornell-Larcker criterion (Tables 2 and 3): the square root of the AVE for each construct was greater than its correlations with other constructs, indicating that each construct explains its indicators more strongly than other constructs. This practice aligns with contemporary PLS-SEM guidelines, which recommend the Fornell-Larcker criterion as an additional test (Sarstedt et al., 2017).

4.2. Structural Model (Inner Model)

4.2.1. Goodness of fit (GoF) and explained variance

The structural model was subsequently evaluated using the coefficient of determination (R^2), path coefficients (β) and their significance (t-values), along with substantive interpretation of the observed effects. The model demonstrated a moderate to substantial explanatory power for the dependent variable, employee performance, with R^2 EP = 0.538, indicating that 53.8% of the variation in EP can be simultaneously explained by ED, WE, and OC. This level of R^2 is generally considered adequate for organizational behaviour and HRM research involving multiple latent constructs (Roberson, 2019).

4.2.2. Path coefficient estimation results

The bootstrapping results (Figure 1 and Table 4) show that Employee Diversity (ED) has a positive and significant effect on Employee Performance (EP) ($\beta = 0.585$; $t = 11.509$), Work Environment (WE) ($\beta = 0.124$; $t = 2.328$), and Organizational Communication (OC) ($\beta = 0.150$; $t = 3.969$). According to (Chew, 2025), the interpretation of path coefficients in PLS-SEM should not only focus on statistical significance but also consider the

Figure 1: SEM-PLS structural model result

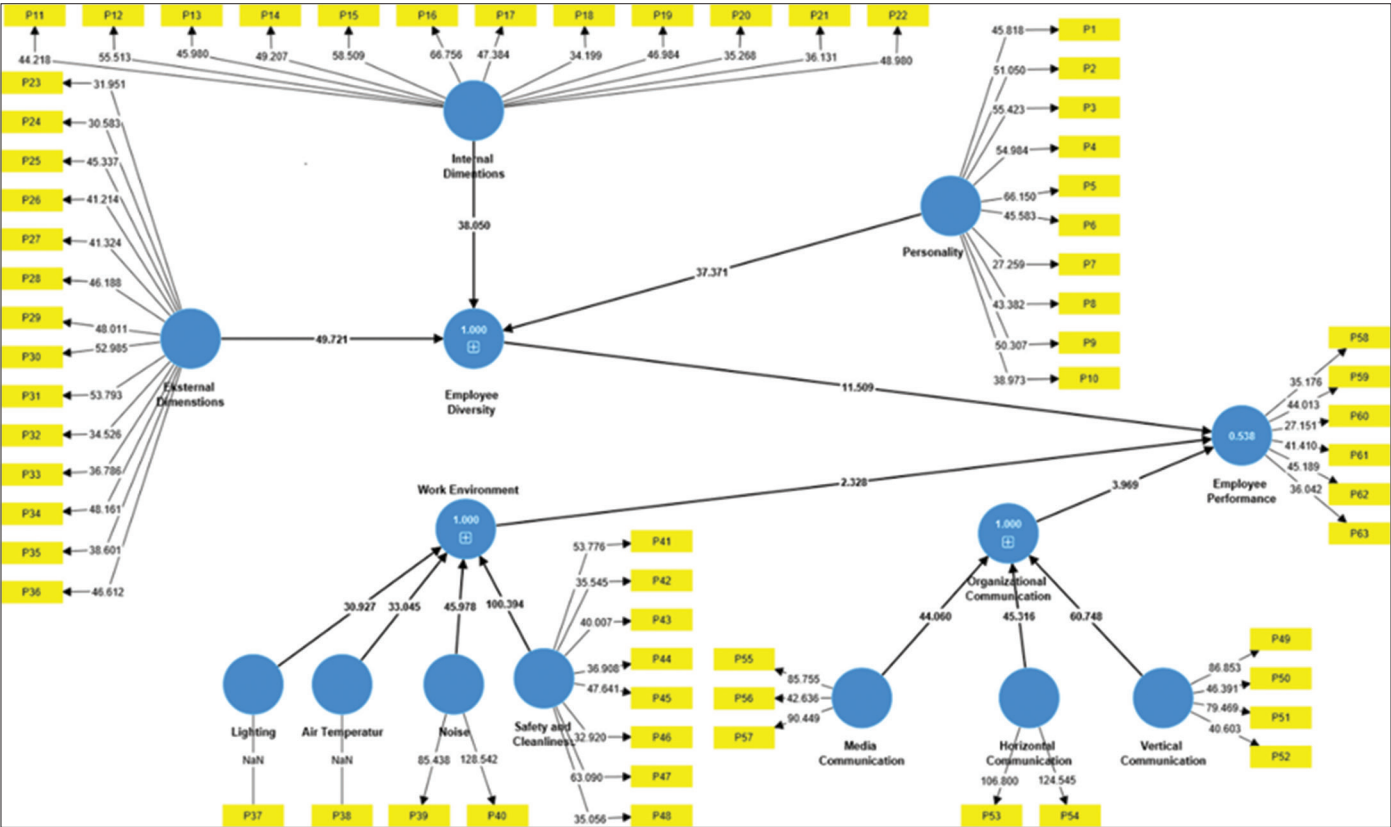


Table 2: Fornell-Larcker criterion

Variable	Employee diversity	Employee performance	Organizational communication	Work environment
Employee Diversity (ED)	0.774			
Employee Performance (EP)	0.710	0.813		
Organizational Communication (OC)	0.373	0.405	0.845	
Work Environment (WE)	0.555	0.494	0.298	0.823

Table 3: Construct reliability and validity

Variables	CA	CR	AVE
Employee Diversity	0.981	0.982	0.599
Work Environment	0.956	0.962	0.677
Organizational Communication	0.950	0.957	0.714
Employee Performance	0.898	0.921	0.662

Table 4: Coefficient path

Hypothesis	Relation	Original sample	T-statistics	P-values
H ₁	Employee Diversity → Employee Performance	0.585	11.509	0.000
H ₂	Work Environment → Employee Performance	0.124	2.328	0.020
H ₃	Organizational Communication → Employee Performance	0.150	3.969	0.000

magnitude of effects and their practical relevance, particularly in applied organizational research. Reporting standardized path coefficients alongside explained variance (R²) enhances the substantive interpretation of model outcomes. Thus, the hypothesis regarding the contribution of ED to performance, as well as its

role in fostering a conducive work environment and effective organizational communication, is supported. Methodologically, the interpretation of these path coefficients can be further enriched by reporting the effect size (f²) for each path, with thresholds of 0.02 (small), 0.15 (medium), and 0.35 (large) to provide a measure of the relative contribution of each predictor construct (Hair et al., 2019). These findings confirm the positive and significant relationships among employee diversity, a conducive work environment, and effective organizational communication with employee performance (Badan Pusat Statistik Provinsi Jawa Barat, 2023; Kementerian Ketenagakerjaan Republik Indonesia, 2023).

This study is consistent with previous literature emphasizing the importance of workforce diversity in enhancing individual and organizational performance (Roberson, 2019; Choi, 2017; Kementerian Ketenagakerjaan Republik Indonesia, 2023). A supportive work environment significantly contributes to increased productivity and job satisfaction, as evidenced by prior research (Deng et al., 2022). Effective organizational communication also plays a crucial role in enhancing team engagement and coordination, positively impacting performance (Guillaume et al., 2017). Overall, these results underscore that developing human resource management strategies that consider

diversity, a healthy work environment, and effective organizational communication is essential for driving employee performance and the competitiveness of manufacturing companies (Mangkunegara, 2015).

4.2.3. Thematic discussion of findings

a. Employee Diversity → Employee Performance

The largest coefficient ($\beta = 0.585$; $t = 11.509$) indicates that Employee Diversity (ED) is the primary driver of Employee Performance (EP) in the context of multinational manufacturing in West Java. Theoretically, this finding aligns with the literature suggesting that diversity—when managed inclusively—promotes innovation, team learning, and the adoption of perspectives that enrich problem-solving, thereby enhancing individual and organizational outcomes (Roberson, 2019). Empirical evidence across sectors also shows a positive association between diversity and task collaboration and performance, particularly when work norms and team identities are properly managed (Choi et al., 2017; Kundu and Mor, 2017); Guillaume et al., 2017). On the other hand, the literature warns of potential conflicts and misunderstandings if diversity is not supported by inclusive organizational design and HR practices (Liu et al., 2023; Eshete and Birbirssa, 2024). Thus, these results emphasize that diversity management policies should be implemented alongside communication and work environment interventions to fully maximize the benefits of diversity (Roberson, 2019; Gagnon et al., 2020).

b. Work Environment → Employee Performance

The positive coefficient ($\beta = 0.124$; $t = 2.328$) indicates that the Work Environment (WE) has a significant effect on Employee Performance (EP), albeit with a lower magnitude compared to employee diversity. Theoretically, this finding is consistent with the literature, which emphasizes that the quality of the physical work environment—including lighting, temperature, cleanliness, noise, and safety—plays a crucial role in determining motivation, productivity, and job satisfaction (Gross-Golacka et al., 2022). Empirical studies demonstrate that employees' perceptions of a safe, hygienic, and comfortable work environment correlate with increased engagement and performance (Humphries and Wilderman, 2021; International Labour Organization, 2016); World Health Organization, 2018). In the context of manufacturing in West Java, this finding is particularly relevant due to physical conditions such as machine noise, production temperature variations, and high occupational safety risks. Previous research shows that extreme temperatures can reduce productivity by up to 12% (Sharma and Chandwani, 2016). However, the literature also emphasizes that the positive impact of the work environment may be diminished if not complemented by supportive communication and leadership (Gross-Golacka et al., 2022). Therefore, these results underscore the importance of work environment interventions integrated with diversity management and organizational communication policies (Badan Pusat Statistik Provinsi Jawa Barat, 2023; Humphries and Wilderman, 2021; Gross-Golacka et al., 2022). Recent evidence also shows that psychosocial aspects of the work environment, including stress management, job satisfaction, and commitment,

significantly influence performance outcomes and reduce burnout risk (Malik, 2025).

- c. Organizational Communication → Employee Performance
The positive coefficient ($\beta = 0.150$; $t = 3.969$) indicates that Organizational Communication (OC) has a significant effect on Employee Performance (EP). This finding aligns with the literature, which emphasizes that effective internal communication serves as the foundation for work coordination, conflict resolution, and team cohesion (Shockley et al., 2021). Clear and open communication strengthens role clarity, reduces task ambiguity, and enhances employee engagement (Mishra et al., 2023). Empirical evidence also confirms that communication quality—both vertical (supervisor–subordinate) and horizontal (cross-functional)—is closely associated with improved team collaboration and productivity (Bui et al., 2019). In the context of multinational manufacturing, the selection of rich communication media is crucial for addressing information ambiguity and supporting effective cross-cultural coordination. Recent studies further highlight that adapting communication strategies to workforce diversity contributes to higher employee engagement (Mishra et al., 2023).

Conversely, poor communication risks generating conflicts and undermining team trust (Tucker et al., 2023). Thus, these findings underscore the importance of an inclusive, transparent communication architecture that balances formal and informal as well as vertical and horizontal communication to maximize its contribution to employee performance (Yue and Walden, 2023).

4.3. Theoretical and Practical Implications

4.3.1. Theoretical implications

The findings of this study reinforce the human resource management and organizational behaviour literature by confirming that Employee Diversity (ED), Work Environment (WE), and Organizational Communication (OC) constitute interrelated conceptual constructs in explaining variations in Employee Performance (EP). Theoretically, these results support an integrative model that views employee performance as being influenced not only by individual factors but also by contextual and systemic factors that interact with each other (Cao et al., 2025; Robbins and Judge, 2017).

First, the significant relationship between ED → EP adds empirical support to work group diversity theory, which posits that diversity enhances creativity, innovation, and team outcomes when managed inclusively (Roberson, 2019; Guillaume et al., 2017). This finding also extends the validity of the literature, which has largely been based in developed countries, by providing empirical evidence in the context of a developing country, specifically the multinational manufacturing industry in West Java (Badan Pusat Statistik Provinsi Jawa Barat, 2023; Winardi et al., 2017).

Second, the relationship WE → EP underscores the importance of contextual work design theory, which emphasizes the influence of physical and psychosocial work environment conditions on job satisfaction and performance (Humphries and Wilderman,

2021). This finding aligns with studies demonstrating that lighting, temperature, noise, and safety play a significant role in determining productivity (Herdzianzah et al., 2023). Accordingly, this study enriches the literature by that work environment interventions are a crucial prerequisite for diversity to add value to the organization (Gross-Golacka et al., 2022).

Third, the consistent relationship $OC \rightarrow EP$ supports the perspectives of media richness theory and organizational communication theory, which posit that appropriate communication media selection, a balance of vertical and horizontal communication, and an open communication climate can enhance employee engagement and collaboration (Shockley et al., 2021; Bui et al., 2019). These findings underscore the relevance of organizational communication as a critical mechanism linking diversity and the work environment to performance.

Methodologically, the use of the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach constitutes an additional contribution. PLS-SEM has been shown to capture complex relationships, including direct, indirect, and mediating effects among latent constructs, thus providing a more comprehensive understanding compared to traditional linear regression (Hair et al., 2019; Sarstedt et al., 2017). This strengthens the methodological legitimacy of SEM-PLS in human resource research in developing countries, particularly in the context of multinational manufacturing with heterogeneous data.

4.3.2. Practical implications

The findings of this study offer important implications for the management of manufacturing companies in West Java, particularly those operating within a multinational ecosystem.

1. **Diversity Management (Diversity and Inclusion Program)**
Companies need to develop Diversity and Inclusion (D&I) programs that emphasize an inclusive climate, equality, and cross-cultural training. Such programs are essential to minimize the risk of conflict and enhance synergy within diverse teams (Roberson, 2019; Gagnon et al., 2020; Guillaume et al., 2017). In practice, this can include cross-cultural training, the establishment of Employee Resource Groups (ERGs), and fair recruitment and promotion policies.
2. **Strengthening the Work Environment**
Standardizing the quality of the physical work environment—including lighting, temperature, noise, cleanliness, and safety—should be a priority in company policies. ILO (2016) and WHO (2018) guidelines emphasize that controlling heat stress, noise, and implementing a strong safety culture are prerequisites for productivity improvement (Amoadu et al., 2023). By addressing these factors, companies not only protect employee health but also enhance morale and performance. (Gross-Golacka et al., 2022).
3. **Organizational Communication Architecture**
The findings highlight the importance of developing an internal communication system that is adaptive to workforce diversity. Companies need to balance vertical (supervisor–subordinate) and horizontal (cross-functional) communication, utilize rich communication media to address ambiguous messages, and provide consistent feedback mechanisms (Shockley

et al., 2021; Bui et al., 2019). An inclusive communication strategy reduces potential conflicts, strengthens team cohesion, and enhances employee engagement (Mishra et al., 2023). This combination of interventions aligns with evidence that well-managed diversity, a supportive work environment, and effective organizational communication collectively drive improvements in individual performance and the competitiveness of manufacturing companies in the globalization era (Badan Pusat Statistik Provinsi Jawa Barat, 2023; Shockley et al., 2021; Guillaume et al., 2017). Therefore, management in West Java's industrial regions should prioritize these three aspects as strategic elements in long-term HRM policies.

5. CONCLUSION

This study confirms that employee diversity, work environment, and organizational communication have positive and significant effects on employee performance in multinational manufacturing industries in West Java. Employee diversity emerges as the dominant factor driving performance, while a conducive work environment and effective organizational communication further reinforce this contribution.

The results indicate that more than half of the variation in employee performance can be explained by the combination of these three variables. This underscores the importance of a holistic human resource management strategy: diversity should be managed inclusively, the work environment must meet comfort and safety standards, and organizational communication should be open, adaptive, and consistent.

Theoretically, this study enriches the human resource management literature by providing empirical evidence that the interaction among workforce diversity, work environment quality, and organizational communication is a key factor in explaining variations in employee performance within the manufacturing sector in developing countries.

In terms of practical implications, manufacturing companies in multinational regions such as West Java need to prioritize these three aspects in their management policies to sustainably enhance both individual performance and organizational competitiveness.

Nevertheless, this study has some limitations, namely the research scope being confined to West Java and not accounting for variations in company size. For future research, it is recommended to expand the sample to a national or even international scale, examine the roles of mediating variables (WE, OC) and moderating variables (e.g., inclusive climate or leadership style), and include objective performance indicators to obtain more comprehensive and globally generalizable results.

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