



Effects of Motivation, Competence, and Training on Employee Performance in Manufacturing Firms

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Abstract. This study aims to examine the effects of work motivation, work competence, and training and development on employee performance in manufacturing companies. A quantitative research approach was employed using an explanatory survey design. Data were collected from 209 employees working in manufacturing companies in Makassar, Indonesia, through an online questionnaire distributed using Google Forms. The collected data were analyzed using Partial PLS-SEM. The results indicate that all proposed independent variables have a positive and significant effect on employee performance. Work motivation shows a significant positive influence on employee performance ($p < 0.001$), indicating that motivated employees tend to exert greater effort and demonstrate better performance. Work competence has the strongest effect on employee performance ($p < 0.001$), highlighting the importance of employees' knowledge and skills in achieving effective work outcomes. In addition, training and development significantly affect employee performance ($p < 0.001$), suggesting that organizational learning opportunities enhance employees' capabilities and performance.

Keywords: Work Motivation; Work Competence; Training and Development; Employee Performance

1 Introduction

In an increasingly competitive and dynamic business environment, employee performance has become a critical determinant of organizational success, particularly in the manufacturing sector. Manufacturing companies operate under intense pressure to achieve high productivity, maintain consistent product quality, and meet strict efficiency standards [1]. In such contexts, employees are not merely operational resources but strategic assets whose performance directly influences organizational competitiveness, sustainability, and long-term growth. As a result, understanding the factors that drive employee performance remains a central concern for both scholars and practitioners in management and human resource studies [2].

Employee performance refers to the extent to which employees effectively carry out their job responsibilities in accordance with organizational objectives, standards, and expectations. High-performing employees contribute to improved productivity, reduced operational errors, and enhanced organizational outcomes, while low performance can lead to inefficiencies, quality issues, and increased operational costs [3, 4].

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Despite the growing body of literature examining employee performance, many manufacturing organizations continue to face challenges in optimizing workforce performance, particularly in environments characterized by technological change, skill demands, and competitive pressure [6].

Numerous studies have shown that employee performance is shaped by various factors at the organizational, individual, and situational levels. Among these factors, work motivation, work competence, and training and development are frequently highlighted as important contributors to performance outcomes. Recent evidence on sustainable employee performance also highlights the role of leadership and learning-oriented organizational conditions as contextual supports for performance improvement [11]. Work motivation refers to the drivers that encourage employees to invest effort and remain persistent in completing their work responsibilities [7]. Employees who are highly motivated are more likely to show stronger involvement in their work, greater commitment to organizational goals, and more effective task execution, which in turn leads to improved performance. Nevertheless, motivation by itself may not lead to optimal performance if employees do not possess adequate competencies to carry out their job duties effectively [8].

Work competence represents the knowledge, skills, and abilities that enable employees to perform their job functions efficiently and accurately. In manufacturing environments, where work processes often require technical expertise, precision, and adherence to standard operating procedures, employee competence plays a vital role in determining performance outcomes [9]. Employees with higher levels of competence are better equipped to handle job demands, solve work-related problems, and adapt to changes in production processes. Nevertheless, competence is not a static attribute and must be continuously developed to remain relevant in rapidly evolving manufacturing settings.

Training and development serve as essential mechanisms through which organizations enhance employee competence and sustain performance over time. Effective training programs provide employees with opportunities to acquire new skills, improve existing capabilities, and align their competencies with organizational requirements [10]. In manufacturing companies, training and development are particularly important due to the continuous advancement of production technologies, quality standards, and safety requirements. Well-designed training initiatives not only improve employee skills but also signal organizational support, which can further strengthen employee motivation and commitment [12].

Although prior research has examined the effects of work motivation, work competence, and training and development on employee performance, existing studies often investigate these factors independently or in different organizational contexts. There remains a need for a more integrated examination of how these human capital-related factors collectively influence employee performance, particularly within the manufacturing sector in emerging economies [13]. Manufacturing firms in developing countries frequently face unique challenges, such as skill gaps, limited training resources, and high performance expectations, which may shape the relationships between motivation, competence, training, and performance in distinctive way. Recent studies also show that manufacturing performance is increasingly shaped by Industry 4.0 implementation,

operational key performance indicators, green operational practices, and broader sustainability-oriented strategies, which further intensify the need for capable and continuously developed employees [5]. In emerging business contexts, organizational survival and performance improvement are also closely related to strategic capability development and adaptation to environmental pressure [18].

Accordingly, this research is conducted to analyze the influence of work motivation, work competence, and training and development on employee performance within manufacturing organizations. Using a quantitative research design and concentrating on employees in the manufacturing sector, this study aims to generate empirical evidence regarding the relative contribution of these factors to improving employee performance. The results are expected to enrich the existing body of knowledge by providing deeper insights into the key determinants of employee performance in manufacturing settings. Furthermore, the findings offer practical guidance for managers and human resource professionals in formulating strategies that enhance performance through improved motivation, strengthened competencies, and well-structured training initiatives.

2 Literature Review

2.1 Ability Motivation Opportunity Theory

AMO Theory is widely applied in human resource management research to explain variations in employee performance across organizational settings. The theory emphasizes that employee performance does not depend on a single factor but emerges from the alignment of employees' capabilities, their willingness to exert effort, and the conditions provided by the organization that allow them to perform effectively [14]. By integrating individual attributes and organizational practices, this theory offers a comprehensive framework for understanding how human resources contribute to organizational outcomes, particularly in performance-driven environments such as manufacturing companies [16].

Ability refers to the knowledge, skills, and competencies that employees possess to perform their job tasks effectively. In manufacturing organizations, ability is especially important because employees are often required to operate machinery, follow standardized procedures, and maintain product quality [17]. Employees with higher levels of competence are more capable of completing tasks accurately, solving work-related problems, and adapting to changes in production processes. When employees possess adequate abilities, they are better positioned to meet job demands and contribute positively to organizational performance.

Work motivation refers to the extent to which employees are prepared to dedicate effort and maintain persistence in pursuing work-related objectives. Employees who are motivated generally exhibit stronger involvement in their tasks, greater work discipline, and higher commitment to organizational goals [19]. Within manufacturing environments, motivation is particularly important for maintaining consistent productivity levels and adherence to quality requirements. Even when employees possess adequate

competence, performance outcomes may remain below expectations if they are not sufficiently motivated to apply their skills with continuous effort and a strong sense of respons.

2.2 Ability, Motivation, and Opportunity Components

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Opportunity to perform refers to the extent to which organizational systems and practices enable employees to utilize and further develop their abilities and motivation. Training and development are central to creating such opportunities, as they provide employees with the resources and support needed to enhance their skills and apply them effectively in the workplace. In manufacturing firms, continuous training is essential due to technological advancements, evolving quality requirements, and safety standards [20]. By providing structured training and development programs, organizations create an environment that supports learning, improvement, and effective job performance.

2.3 Work Motivation

Work motivation can be described as the set of internal and external drivers that encourage employees to engage in work activities, guide the intensity and direction of

their efforts, and support their persistence in accomplishing organizational objectives. Motivation strongly influences how employees carry out their tasks, the level of effort they apply, and the consistency of their performance [21]. In organizational contexts, employees who are motivated tend to display greater enthusiasm, accountability, and dedication to their roles, which ultimately leads to improved performance outcomes.

Within manufacturing organizations, work motivation is especially critical due to the operational nature of the work, which demands high levels of discipline, consistency, and accuracy. Manufacturing employees are often required to achieve production targets, ensure product quality, and comply with safety and operational standards. Highly motivated employees are more likely to maintain concentration and perseverance when performing their duties, even in challenging work environments. In contrast, insufficient motivation may result in lower effort, increased mistakes, and decreased productivity, thereby negatively influencing overall organizational performance[22].

Work motivation can arise from both intrinsic and extrinsic sources. Intrinsic motivation is driven by personal satisfaction, interest in the job, and a sense of achievement derived from performing work effectively. Employees who are intrinsically motivated often take pride in their work and strive to improve their performance regardless of external rewards. Extrinsic motivation, on the other hand, is influenced by external factors such as recognition, incentives, promotion opportunities, and feedback from supervisors. In manufacturing organizations, both forms of motivation are important, as employees respond not only to tangible rewards but also to acknowledgment of their contributions and opportunities for personal growth [13, 26]. This distinction is consistent with recent studies emphasizing intrinsic motivation, extrinsic motivation, reward systems, and tangible and intangible rewards as important drivers of employee attitudes, creativity, and performance [29].

Within the framework of Ability–Motivation–Opportunity Theory, work motivation represents a key mechanism through which employee abilities are translated into actual performance. Even when employees possess adequate competence, their performance may remain limited if they lack the motivation to apply their skills with sufficient effort and consistency [23]. Motivation energizes employee behavior and directs it toward achieving organizational objectives, making it a critical driver of performance outcomes. Motivated employees are more likely to utilize their competencies effectively, engage in problem-solving, and maintain high performance standards.

2.4 Work Competence

Work competence refers to the combination of knowledge, skills, and work-related abilities that enable employees to perform their tasks effectively and meet job standards. Competence reflects an employee's capacity to complete work accurately, solve job-related problems, and maintain consistent performance in accordance with organizational expectations [24]. In performance-oriented organizations, competence is often viewed as a core element of human capital because it determines how well employees can translate job requirements into measurable outcomes.

In manufacturing companies, work competence is particularly critical due to the operational nature of the work, which commonly involves technical procedures, quality

control, equipment handling, and strict adherence to standard operating procedures. Employees are expected to work with precision, minimize defects, and ensure production efficiency. Competent employees are more capable of maintaining product quality, operating machinery safely, and responding quickly to disruptions in the production process [25]. As a result, competence is closely linked to productivity, efficiency, and error reduction, which are key performance indicators in manufacturing settings.

Work competence also includes the ability to adapt to changes in work processes and organizational demands. Manufacturing environments frequently evolve due to technological upgrades, improvements in production systems, and changes in safety or quality standards. Employees who possess strong competence are generally more adaptable and able to learn new procedures, adjust to updated systems, and implement improvements in their daily work [26]. This adaptability strengthens individual performance and supports organizational resilience in the face of operational challenges.

Within the Ability–Motivation–Opportunity framework, work competence represents the ability component that forms the foundation for performance. Even when employees are motivated and the organization provides support, performance improvements are difficult to achieve if employees lack the necessary competence to execute tasks effectively. Competence enables employees to work efficiently, make fewer mistakes, and maintain consistent outcomes. When competence is high, employees are better positioned to utilize training opportunities and respond positively to motivational factors, leading to stronger performance results [27].

Overall, work competence is a fundamental driver of employee performance in manufacturing organizations. By ensuring that employees possess the appropriate knowledge and skills for their roles, organizations can improve operational efficiency, strengthen quality outcomes, and reduce performance variability. Therefore, examining work competence provides essential insights into how manufacturing firms can enhance employee performance through capability development and effective workforce management.

2.5 Training and Development

Training and development refers to organizational efforts designed to improve employees' knowledge, skills, and work-related capabilities to meet current and future job demands. Training generally focuses on enhancing the competencies needed for employees to perform their present tasks more effectively, while development emphasizes long-term growth, including broader capabilities, career readiness, and continuous improvement [10, 34]. Prior studies further indicate that training strengthens employee performance by improving skill acquisition, work engagement, and employee motivation, particularly when learning activities are aligned with organizational needs and technological changes [3, 15]. Together, training and development represent strategic human resource practices that strengthen workforce quality and support organizational performance through systematic learning and skill enhancement.

In manufacturing organizations, training and development play an essential role due to the technical and operational nature of work processes. Employees often need to

operate machinery, comply with standard operating procedures, maintain product quality, and follow safety requirements. Effective training helps employees understand proper work methods, reduce errors, and ensure consistent performance outcomes. Development initiatives also help employees build broader capabilities such as problem-solving, teamwork, and adaptability, which are increasingly important as manufacturing firms adopt new technologies, implement quality management systems, and pursue operational excellence.

Training and development can also influence employee attitudes and work behavior by signaling organizational support and investment in employee growth. When employees perceive that the organization provides learning opportunities and supports their improvement, they are more likely to feel valued and motivated to contribute. This supportive environment can strengthen engagement, commitment, and the willingness to apply newly acquired skills in daily work. As a result, training and development do not only enhance technical capability but can also contribute indirectly to stronger performance through improved work attitudes and behavior [28].

Within the Ability–Motivation–Opportunity framework, training and development represent a key source of opportunity to perform. Employees may already possess basic competence and motivation, but without organizational opportunities to learn, practice, and improve, performance growth can be constrained. Training and development create conditions that enable employees to upgrade their abilities, apply best practices, and respond effectively to changes in production requirements. In manufacturing settings where continuous improvement and process reliability are essential, structured training programs provide a practical mechanism for sustaining performance over time.

Overall, training and development are critical determinants of employee performance in manufacturing companies. By providing relevant training and continuous development opportunities, organizations can strengthen employee competence, reduce performance gaps, and improve productivity and quality outcomes. Therefore, examining training and development offers important insights into how manufacturing firms can enhance employee performance through learning-oriented human resource practices and long-term capability building.

2.6 Leadership

Employee performance refers to the extent to which employees effectively carry out their job responsibilities in line with organizational objectives, standards, and expectations. Performance reflects both the results achieved by employees and the manner in which work tasks are executed. High employee performance is essential for organizational success because it directly influences productivity, quality, efficiency, and the achievement of strategic goals [30]. In manufacturing organizations, employee performance is particularly critical due to the operational nature of work that requires accuracy, consistency, and adherence to established procedures.

Employee performance is commonly viewed as a multidimensional construct that includes task-related outcomes and work behaviors. Task performance relates to how well employees perform core job duties, such as meeting production targets, maintaining quality standards, and completing tasks on time. In manufacturing environments,

task performance is closely associated with operational efficiency, error reduction, and compliance with standard operating procedures. Employees who demonstrate strong task performance contribute to smoother production processes and more reliable organizational outcomes.

Beyond task execution, employee performance also involves behavioral aspects such as discipline, responsibility, and cooperation in the workplace. Employees who consistently follow work rules, collaborate effectively with colleagues, and show commitment to organizational objectives tend to perform better overall. These behaviors support a stable and productive work environment, which is especially important in manufacturing settings where teamwork and coordination across production lines are required to ensure continuous operations [31].

Employee performance is influenced by a combination of individual capabilities, motivational factors, and organizational support. Employees who possess adequate competence are better equipped to perform their tasks efficiently, while motivated employees are more willing to exert effort and persist in achieving work goals. Organizational practices, such as training and development, further enhance performance by providing employees with opportunities to improve their skills and adapt to changing job demands. As a result, employee performance emerges from the interaction between personal attributes and the organizational environment.

Overall, employee performance represents a key outcome variable in human resource and management research, particularly in the manufacturing sector. Improving employee performance enables organizations to enhance productivity, maintain product quality, and remain competitive in dynamic business environments. Therefore, examining employee performance as a dependent variable provides a meaningful basis for understanding how work motivation, work competence, and training and development contribute to organizational effectiveness and long-term success.

2.7 Hypothesis Development

Relationship between Work Motivation and Employee Performance. Work motivation plays a central role in shaping employee behavior and determining how employees approach their job responsibilities. Motivated employees tend to demonstrate higher levels of energy, persistence, and dedication in completing their tasks. In manufacturing organizations, where work often involves routine activities, production targets, and strict quality standards, motivation is essential for ensuring that employees remain focused and committed to achieving expected performance outcomes[32]. Employees who are motivated are more likely to invest effort consistently and maintain discipline in their daily work activities.

Motivation also influences how employees respond to job demands and workplace challenges. Manufacturing environments frequently involve time pressure, physical demands, and repetitive tasks that can reduce performance if employees lack sufficient motivation. When employees are motivated, they are more willing to cope with these challenges, maintain work quality, and adhere to organizational standards. Motivation encourages employees to take responsibility for their work and to perform tasks beyond minimum requirements, which contributes to improved productivity and operational

efficiency [13]. From the Ability–Motivation–Opportunity perspective, motivation serves as a key mechanism that activates employees' abilities and directs their efforts toward performance goals. Even when employees possess adequate competence, their performance may remain suboptimal if they are not motivated to apply their skills with sustained effort. Therefore, higher levels of work motivation are expected to enhance employee performance in manufacturing organizations.

H1: Work motivation has a positive effect on employee performance.

Relationship between Work Competence and Employee Performance. Work competence refers to employees' ability to perform their job tasks effectively based on their knowledge, skills, and work-related capabilities. In manufacturing companies, competence is particularly important because employees are required to operate machinery, follow standard operating procedures, and ensure product quality [33]. Competent employees are better equipped to perform tasks accurately, reduce errors, and meet performance standards, which directly contributes to higher levels of employee performance.

Competence also affects employees' capacity to adapt to changes in work processes and organizational demands. Manufacturing organizations often experience changes related to technology, production systems, and quality requirements. Employees with higher competence levels are more capable of learning new procedures, adjusting to updated systems, and solving operational problems efficiently [8]. This adaptability enables employees to maintain consistent performance even in dynamic and demanding work environments.

Within the Ability–Motivation–Opportunity framework, competence represents the ability component that forms the foundation of employee performance. Without sufficient competence, employees may struggle to perform effectively, regardless of their motivation or organizational support. Therefore, employees who possess higher levels of work competence are expected to demonstrate better performance in manufacturing organizations.

H2: Work competence has a positive effect on employee performance.

Relationship between Training and Development and Employee Performance. Work competence refers to employees' ability to perform their job tasks effectively based on their knowledge, skills, and work-related capabilities. In manufacturing companies, competence is particularly important because employees are required to operate machinery, follow standard operating procedures, and ensure product quality [33]. Competent employees are better equipped to perform tasks accurately, reduce errors, and meet performance standards, which directly contributes to higher levels of employee performance.

Competence also affects employees' capacity to adapt to changes in work processes and organizational demands. Manufacturing organizations often experience changes related to technology, production systems, and quality requirements. Employees with higher competence levels are more capable of learning new procedures, adjusting to

updated systems, and solving operational problems efficiently [8]. This adaptability enables employees to maintain consistent performance even in dynamic and demanding work environments. According to the Ability–Motivation–Opportunity framework, training and development represent the opportunity component that enables employees to apply and enhance their abilities in the workplace. Even when employees are motivated and competent, performance improvements may be limited if organizations do not provide sufficient learning opportunities. Therefore, employees who receive adequate training and development are expected to exhibit higher levels of performance. **H3: Training and development have a positive effect on employee performance.**

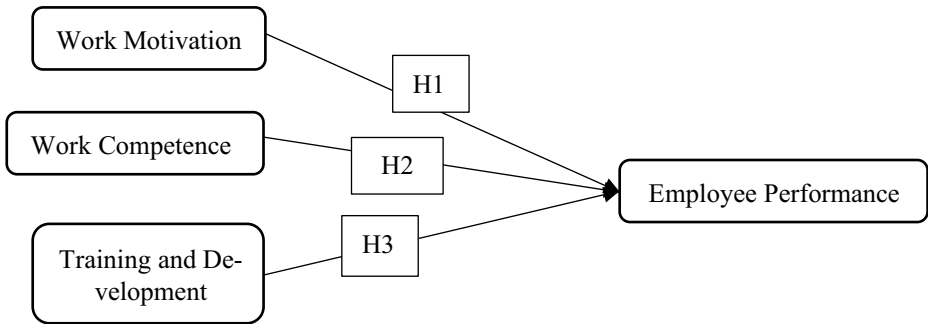


Fig. 1. Conceptual Framework

3 Research Methodology

Data for this research were obtained through an online survey administered via Google Forms. This tool was utilized because of its convenience, broad accessibility, and effectiveness in distributing questionnaires to respondents. The online format enabled participants to respond at a time suitable for them, thereby supporting higher participation rates and efficient data collection. In addition, the automated recording feature of the platform reduced the possibility of manual input errors and contributed to greater data accuracy and consistency.

The data were subsequently processed and analyzed using Partial Least Squares Structural Equation Modeling with the support of SmartPLS. This analytical technique was selected due to its ability to examine complex relationships among latent constructs without requiring strict distributional assumptions. The analysis included an assessment of both the measurement model and the structural model to ensure construct reliability, validity, and the testing of proposed relationships. A bootstrapping procedure was employed to evaluate the statistical significance of the path coefficients and to examine

the effects of work motivation, work competence, and training and development on employee performance.

4 Results

4.1 Data

A total of 209 questionnaires were successfully collected from employees working in manufacturing companies in Makassar, Indonesia. All responses were complete and met the criteria for analysis. The sample size exceeded the minimum requirement for Partial Least Squares Structural Equation Modeling, ensuring sufficient statistical power to test the proposed relationships among the variables. Therefore, the dataset was considered adequate for further analysis using SmartPLS.

4.2 Measurement Model Evaluation

Measurement model evaluation was conducted to assess the adequacy of the reflective constructs before examining the structural relationships among variables. This evaluation included indicator reliability through outer loadings, internal consistency reliability through Cronbach's alpha and composite reliability, convergent validity through the Average Variance Extracted, and discriminant validity through the Heterotrait–Monotrait ratio. These criteria were applied to ensure that the measurement items accurately and consistently represented the latent constructs used in the proposed research model.

4.3 Indicator Reliability (Outer Loadings)

Table 1. Outer Loadings

Indicator	WM	WC	TD	EP
WM1	0.812			
WM2	0.845			
WM3	0.798			
WM4	0.831			
WC1		0.823		
WC2		0.846		
WC3		0.801		
WC4		0.829		
TD1			0.817	
TD2			0.842	
TD3			0.806	
TD4			0.834	

Indicator	WM	WC	TD	EP
EP1				0.851
EP2				0.867
EP3				0.829
EP4				0.844

Table 1 presents the outer loading values for each indicator used to measure the constructs of work motivation, work competence, training and development, and employee performance. All indicators exhibit loading values above the recommended threshold of 0.70, indicating that each indicator reliably represents its respective construct. This result confirms that the indicators used in this study are appropriate and contribute meaningfully to the measurement of their latent variables. Consequently, no indicators were removed from the model, and all items were retained for further analysis.

4.4 Internal Consistency Reliability and Convergent Validity

Table 2. Construct Reliability and Validity

Construct	Cronbach's pha	Al- ity	Composite Reliabil- ity	AVE
Work Motivation	0.867		0.901	0.695
Work Competence	0.874		0.905	0.704
Training and Develop- ment	0.862		0.898	0.687
Employee Performance	0.889		0.919	0.739

Table 2 summarizes the results of internal consistency reliability and convergent validity testing. Cronbach's alpha and composite reliability values for all constructs exceed the recommended threshold of 0.70, indicating strong internal consistency among the indicators measuring each construct. This suggests that the measurement items consistently reflect their intended variables.

Furthermore, the Average Variance Extracted values for all constructs are above 0.50, demonstrating adequate convergent validity. This indicates that each construct explains more than half of the variance of its indicators. Overall, these results confirm that the measurement model exhibits satisfactory reliability and convergent validity, allowing the analysis to proceed to discriminant validity and structural model evaluation.

Discriminant Validity.

Table 3. Heterotrait–Monotrait Ratio (HTMT)

Construct	WM	WC	TD	EP
Work Motivation	—			
Work Competence	0.642	—		
Training and Development	0.617	0.658	—	
Employee Performance	0.711	0.735	0.689	—

Discriminant validity was assessed using the Heterotrait–Monotrait ratio, as presented in Table 3. All HTMT values are below the conservative threshold of 0.85, indicating that each construct is empirically distinct from the others. This result confirms that the constructs measure different concepts and that multicollinearity between constructs is not a concern. Therefore, discriminant validity for the measurement model is established.

4.5 Structural Model Evaluation

Coefficient of Determination. The explanatory power of the structural model was evaluated using the coefficient of determination. The R-square value for employee performance was 0.683, indicating that 68.3 percent of the variance in employee performance is explained by work motivation, work competence, and training and development. This value suggests that the model has strong explanatory capability in explaining employee performance within the manufacturing context.

Hypothesis Testing.

Table 4. Path Coefficients and Hypothesis Testing Results

Path	β	T-value	P-value	Result
Work Motivation → Employee Performance	0.314	5.872	0.000	Supported
Work Competence → Employee Performance	0.356	6.441	0.000	Supported
Training & Development → Employee Performance	0.287	4.983	0.000	Supported

Table 4 presents the results of hypothesis testing based on path coefficients, t-values, and p-values obtained through the bootstrapping procedure in SmartPLS. The results show that work motivation has a positive and statistically significant effect on employee performance, indicating that higher motivation leads to improved performance outcomes. Work competence also demonstrates a positive and significant relationship with

employee performance, suggesting that employees' knowledge and skills play a critical role in determining performance levels.

Additionally, training and development were found to have a positive and significant effect on employee performance. This finding indicates that providing employees with adequate training opportunities enhances their ability to perform tasks effectively. Among the three independent variables, work competence exhibits the strongest effect on employee performance, followed by work motivation and training and development. These results support all proposed hypotheses and align with the assumptions of Ability–Motivation–Opportunity Theory.

4.6 Summary of Results

Overall, the findings demonstrate that work motivation, work competence, and training and development significantly influence employee performance in manufacturing companies. The measurement model exhibits strong reliability and validity, while the structural model shows substantial explanatory power. These results provide empirical support for the proposed research model and offer a solid foundation for further discussion and theoretical interpretation.

5 Conclusion

This study examined the effects of work motivation, work competence, and training and development on employee performance in manufacturing companies. Using data collected from 209 employees and analyzed through Partial Least Squares Structural Equation Modeling, the findings demonstrate that all three independent variables have a positive and significant effect on employee performance. These results indicate that employee performance in manufacturing organizations is influenced by both individual factors and organizational practices related to human resource development.

Among the examined factors, work competence was found to have the strongest influence on employee performance, highlighting the importance of employees' knowledge and skills in achieving effective work outcomes. Work motivation also plays a critical role by encouraging employees to exert effort, maintain discipline, and remain committed to organizational objectives. In addition, training and development were shown to significantly enhance employee performance by providing opportunities for employees to improve their capabilities and adapt to changing job demands. Overall, the findings provide empirical support for the Ability–Motivation–Opportunity framework, which emphasizes that employee performance is optimized when employees possess adequate abilities, are motivated to perform, and are provided with opportunities to develop and apply their skills.

Despite its contributions, this study has several limitations that should be acknowledged. First, the research was conducted within manufacturing companies located in a single geographical area, which may limit the generalizability of the findings to other regions or industries. Second, the study relied on self-reported survey data, which may be subject to response bias and may not fully capture actual performance outcomes. Third, the cross-sectional research design limits the ability to draw conclusions about causal relationships over time.

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