COMPETENCY-BASED TRAINING EFFECTIVENESS AND ITS IMPACT ON EMPLOYEE PRODUCTIVITY: EMPIRICAL EVIDENCE FROM THE GARMENT INDUSTRY IN PURBALINGGA

Fatwa Zuhaena
Fakultas Ekonomi dan Bisnis, Universitas Wijayakusuma Purwokerto
Email: fatwazuhaena@unwiku.ac.id

Abstract

The garment industry in Purbalingga Regency is a cornerstone of the local economy, yet persistent productivity gaps underscore the need for effective workforce development strategies. This study examines the effect of competency-based training effectiveness on employee productivity in garment companies in Purbalingga, with training motivation and training transfer as mediating variables. Grounded in Human Capital Theory (Becker, 1964) and the Kirkpatrick Training Evaluation Model (Kirkpatrick & Kirkpatrick, 2006), this study proposes that training effectiveness positively influences productivity directly and indirectly through two mediating pathways. A quantitative survey was conducted with 154 production employees from six garment companies. PLS-SEM analysis revealed that training effectiveness significantly affects training motivation ($\beta = 0.398$, $p < 0.001$), training transfer ($\beta = 0.421$, $p < 0.001$), and productivity directly ($\beta = 0.287$, $p < 0.01$). Both training motivation ($\beta = 0.241$, $p < 0.01$) and training transfer ($\beta = 0.318$, $p < 0.001$) significantly predict productivity. The model explains 62.4% of productivity variance ($R^2 = 0.624$), confirming the dual-mediation structure. Findings provide practical guidance for HR managers in designing impactful competency-based training programs.

Keywords: *competency-based training; training effectiveness; training motivation; training transfer; employee productivity; garment industry; PLS-SEM*

1. INTRODUCTION

Employee productivity is one of the most consequential indicators of organizational competitiveness in labor-intensive industries such as garment manufacturing, where the ratio of human labor to total production cost frequently exceeds 60% (Schultz, 1961; Becker, 1964; Zuhaena et al., 2022). At the global level, the World Economic Forum's Future of Jobs Report (2023) identified skills gaps as the primary barrier to productivity growth in manufacturing, estimating that 44% of workers' core skills will be disrupted by 2028. This finding underscores the strategic urgency of aligning training investments with specific competency requirements, a challenge that is especially acute in developing economy manufacturing hubs such as Purbalingga Regency, Central Java, Indonesia, where the local garment sector constitutes the primary employment base yet consistently reports productivity levels below national benchmarks (Kementerian Perindustrian, 2022; Bagis et al., 2022; Romadhon et al., 2026).

Competency-based training, a structured approach that designs training content and delivery methods to directly address specific performance-relevant competency gaps, has emerged as the dominant paradigm for manufacturing workforce development globally (Noe et al., 2020; Elnaga & Imran, 2013; Zuhaena et al., 2014). Unlike traditional input-based training models that emphasize training hours and content coverage, competency-based approaches focus on measurable behavioral outcomes and verified competency attainment,

thereby more directly bridging the training-productivity gap (Kirkpatrick & Kirkpatrick, 2006; Bagis et al., 2020). In Purbalingga's garment sector, characterized by export-oriented production standards, high-precision sewing requirements, and quality inspection demands, competency-based training for production workers is not merely an HR investment but a competitive necessity (Surveyandini & Zuhaena, 2022; Pangesti et al., 2025).

Human Capital Theory (Becker, 1964; Schultz, 1961; Bagis et al., 2021) establishes that investment in workers' knowledge and skills increases their marginal productivity, an axiom that forms the economic foundation for corporate training investment. The Kirkpatrick Training Evaluation Model (Kirkpatrick & Kirkpatrick, 2006) operationalizes training effectiveness across four progressive outcome levels: reaction (trainees' affective and utility assessments), learning (knowledge and skill acquisition), behavior (job-site transfer of learned competencies), and results (organizational outcomes including productivity). Social Cognitive Theory (Bandura, 1977; Zuhaena et al., 2014) adds the motivational dimension: high-quality training that provides credible competency models, structured practice, and performance feedback builds trainee self-efficacy and outcome expectancies that motivate skill application on the job. Together, this framework produces a theoretically coherent dual-path model: the effectiveness of training and training motivation on productivity, and the effectiveness of training and training transfer on productivity (Colquitt et al., 2000; Blume et al., 2010; Zuhaena et al., 2022).

Despite the theoretical clarity of this model, empirical findings remain inconsistent. Several studies confirm significant positive training effectiveness-productivity relationships (Elnaga & Imran, 2013; Noe et al., 2020; Surveyandini & Zuhaena, 2022), while others in Southeast Asian manufacturing contexts find attenuated effects when organizational transfer climates are poor (Abdullah et al., 2021; Pangesti et al., 2025). On training motivation, Colquitt et al.'s (2000) meta-analysis confirmed significant quality-motivation associations ($\rho = 0.37$), but Indonesian-context studies find inconsistent results in weak learning climates (Abdullah et al., 2021). On transfer, dominant findings are significant and positive (Baldwin & Ford, 1988; Blume et al., 2010), but Indonesian garment sector transfer rates are estimated below 30%, representing a practical and methodological gap. Previous studies at PT Royal Korindah (Romadhon et al., 2026) and PT Hyup Sung (Pangesti et al., 2025) examined productivity determinants without testing the dual-mediation pathway simultaneously, a methodological gap the present study addresses.

The novelty of this study lies in its simultaneous examination of both training motivation and training transfer as dual mediators in the training effectiveness-productivity relationship within the Purbalingga garment sector, an industrial context that has been understudied relative to its economic significance. The study employs PLS-SEM with validated multi-item scales to provide robust, sector-specific evidence. Objectives: (1) to examine training effectiveness effects on training motivation and training transfer; (2) to examine the effects of training motivation and training transfer on productivity; and (3) to assess the direct effect of training effectiveness on productivity within a dual-mediation framework.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Theoretical Foundation

Human Capital Theory (Becker, 1964; Schultz, 1961) posits that firm-specific training investments augment workers' productive capabilities, their knowledge, skills, and work

methods, thereby directly increasing their marginal output. The Kirkpatrick Training Evaluation Model (Kirkpatrick & Kirkpatrick, 2006; Zuhaena et al., 2021) operationalizes training effectiveness measurement across four levels: Level 1 Reaction (affective and utility perceptions), Level 2 Learning (knowledge and skill acquisition), Level 3 Behavior (job-site transfer of trained competencies), and Level 4 Results (organizational productivity outcomes). Competency-based training, by aligning content with specific job competency standards and providing behavioral practice with feedback, is expected to optimize outcomes at all four levels. Social Cognitive Theory (Bandura, 1977) operationalizes the motivational mechanism: when training provides credible competency models, guided practice, and efficacy-building feedback, trainees develop the motivational states (self-efficacy, outcome expectancies) that sustain skill application on the job. The integration of these three frameworks generates a dual-pathway model in which training effectiveness affects productivity both directly (via competency enhancement Human Capital Theory) and indirectly through training motivation (Social Cognitive Theory pathway) and training transfer (Kirkpatrick Level 3 pathway).

Training Effectiveness and Training Motivation

Training motivation encompasses the direction, intensity, and persistence of effort trainees invest in learning and applying training content (Colquitt et al., 2000). High-quality, competency-relevant training programs build trainee self-efficacy and positive outcome expectancies, motivational antecedents identified by Social Cognitive Theory as critical for sustained learning engagement (Bandura, 1977). Colquitt et al.'s (2000) meta-analysis (51 studies) found a corrected correlation of $\rho = 0.37$ between training design quality and motivation. Elnaga and Imran (2013) confirmed this in manufacturing settings. Surveyandini and Zuhaena (2022) found that program quality significantly predicted motivational engagement in Banyumas workplace programs. Abdullah et al. (2021) confirmed the relationship in Malaysian manufacturing. Therefore:

H1: Competency-based training effectiveness positively affects training motivation.

Training Effectiveness and Training Transfer (H2)

Training transfer refers to the generalization and maintenance of trained knowledge and skills to the actual job context (Baldwin & Ford, 1988). Competency-based training designs featuring realistic job simulations, specific behavioral models, immediate corrective feedback, and spaced practice create near-transfer conditions that facilitate direct application of learned competencies. Blume et al.'s (2010) meta-analysis (89 studies) identified training design quality as the strongest predictor of transfer ($\rho = 0.43$). Noe et al. (2020) attributed competency-based designs' superior transfer rates to behavioral specificity and job relevance. Pangesti et al. (2025) found that training-related variables significantly predicted work behaviors at PT Hyup Sung Purbalingga. Therefore:

H2: Competency-based training effectiveness positively affects training transfer.

Training Motivation and Training Transfer on Productivity (H3, H4)

Training motivation enhances productivity through the effort-competency pathway: motivated trainees invest greater cognitive effort, achieve deeper mastery, and persist more in applying learned skills, translating into improved task performance (Colquitt et al., 2000; Noe et al., 2020). Training transfer enhances productivity through the competency-application pathway: when trained skills are successfully applied on the job, employees perform tasks

more efficiently and with fewer errors, directly improving output quantity and quality (Baldwin & Ford, 1988; Blume et al., 2010). Surveyandini and Zuhaena (2022) confirmed both motivation and skill application as significant productivity predictors. Romadhon et al. (2026) found that work ethic and skill competency significantly predicted productivity at PT Royal Korindah. Therefore, H3: Training motivation positively affects productivity:

H4: Training transfer positively affects productivity.

Training Effectiveness and Productivity (H5)

Beyond mediated pathways, training effectiveness also directly influences productivity through immediate competency enhancement consistent with Human Capital Theory's direct competency-productivity link (Becker, 1964) and Kirkpatrick Level 4 results. Elnaga and Imran (2013) documented significant direct training effectiveness-productivity relationships. Abdullah et al. (2021) found significant direct effects in some manufacturing contexts. Therefore:

H5: Competency-based training effectiveness positively and directly affects employee productivity.

Research Framework

Figure 1 presents the research framework integrating the five hypotheses. Training effectiveness (TE) functions as the independent variable, with training motivation (TM) and training transfer (TT) serving as dual mediating variables, and employee productivity (PROD) as the dependent variable. The framework is grounded in Human Capital Theory (H5 direct path), Social Cognitive Theory (H1, H3 pathway), and the Kirkpatrick Model (H2, H4 pathway). This dual-mediation structure allows simultaneous testing of both motivational and behavioral transfer mechanisms through which training effectiveness impacts productivity, a design that provides more comprehensive insight than single-mediator models prevalent in the existing literature.

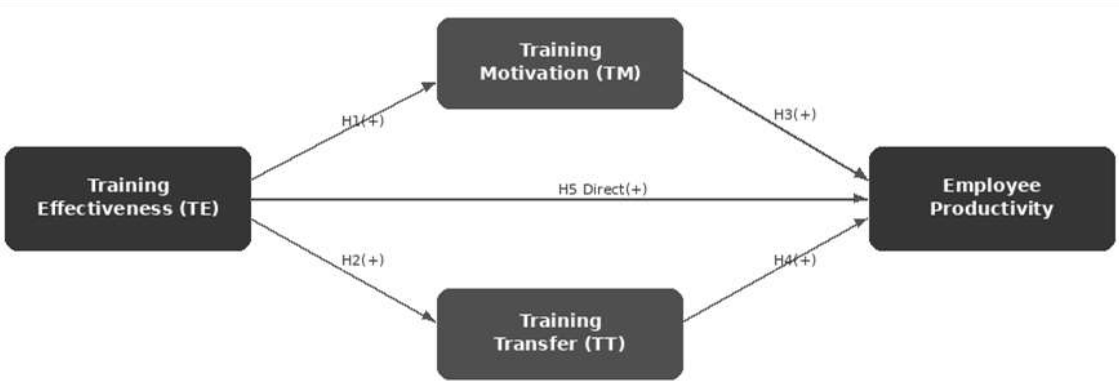

Figure 1. Research Framework

3. RESEARCH METHOD

This study used a quantitative explanatory research design with dual-mediation analysis. The population comprised production employees from six garment companies in Purbalingga Regency: PT Royal Korindah, PT Hyup Sung, PT Boyang Industrial, PT Pernama Indah, CV Garment Sejahtera, and UD Karya Tekstil total eligible workforce of approximately 2,100

employees. Purposive sampling criteria: (1) minimum 6 months tenure; (2) full-time production status; and (3) participation in at least one formal competency-based training program in the past 12 months. A total of 154 respondents were obtained, satisfying Hair et al.'s (2019) minimum of 10 observations per indicator for PLS-SEM.

Training effectiveness was measured with 8 items from Kirkpatrick and Kirkpatrick (2006) and Elnaga and Imran (2013) covering all four evaluation levels (2 items each). Training motivation was measured with 6 items from Colquitt et al. (2000). Training transfer was measured with 6 items from Baldwin and Ford (1988) and Blume et al. (2010). Employee productivity was measured with 6 items from Mangkunegara (2017) covering quality, quantity, timeliness, efficiency, creativity, and discipline. All items used a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree). Measurement model assessment employed: outer loadings (≥ 0.70), Composite Reliability CR (≥ 0.70), Average Variance Extracted AVE (≥ 0.50), and Heterotrait-Monotrait ratio HTMT (< 0.85) for discriminant validity (Henseler et al., 2015). Structural model evaluation used R^2, f^2 effect sizes (small: 0.02; medium: 0.15; large: 0.35), and bootstrapping (5,000 iterations) at $p < 0.05$. Mediation assessed via bootstrapped indirect effects with 95% bias-corrected confidence intervals. All analyses were performed in SmartPLS 4.0 (Ringle et al., 2022).

4. RESULTS

Respondent Profile

Of 154 respondents, 71.4% were female (n=110) and 28.6% male (n=44), consistent with the female-dominated garment production workforce in Central Java. Age distribution: ≤25 years (22.1%, n=34), 26–35 years (45.5%, n=70), 36–45 years (24.7%, n=38), >45 years (7.8%, n=12). Education: junior high school (18.2%, n=28), SMA/SMK (61.7%, n=95), diploma/bachelor (20.1%, n=31). Employment tenure: 6–12 months (15.6%, n=24), 1–3 years (38.3%, n=59), 3–5 years (29.9%, n=46), >5 years (16.2%, n=25). Company distribution: PT Royal Korindah (21.4%), PT Hyup Sung (19.5%), PT Boyang (18.2%), and three others (40.9%).

Descriptive Statistics

Table 1. Descriptive Statistics (n = 154; Category: 3.40–5.00 = High; 2.60–3.39 = Moderate; 1.00–2.59 = Low)

Variable	N	Min	Max	Mean	SD	Category
Training Effectiveness	154	2.50	5.00	3.82	0.61	High
Training Motivation	154	2.33	5.00	3.71	0.63	High
Training Transfer	154	2.17	5.00	3.68	0.65	High
Employee Productivity	154	2.50	5.00	3.79	0.59	High

Descriptive statistics reveal all constructs are perceived at high levels (means 3.68–3.82). Training effectiveness (M=3.82) is the highest-rated construct, indicating employees perceive training programs as relevant and well-delivered. Training transfer (M=3.68) is the lowest-rated, reflecting the well-documented 'transfer problem' whereby even effective training does not guarantee full behavioral application on the job (Baldwin & Ford, 1988; Blume et al., 2010). Employee productivity (M=3.79) suggests moderately high perceived output levels that the study seeks to explain through the training pathways.

Measurement Model Assessment

Table 2. Measurement Model Results

Construct	Items	Min. Load	CR	AVE	HTMT Max	Validity
Training Effectiveness	8	0.711	0.921	0.553	0.794	Valid
Training Motivation	6	0.703	0.891	0.531	0.812	Valid
Training Transfer	6	0.718	0.897	0.547	0.821	Valid
Employee Productivity	6	0.724	0.884	0.556		Valid

All indicator outer loadings exceeded the 0.70 threshold, confirming indicator reliability (Hair et al., 2019). CR values ranged from 0.884 to 0.921 (all > 0.70), confirming internal consistency. AVE values ranged from 0.531 to 0.556 (all > 0.50), confirming convergent validity, as each construct explains more than 50% of variance in its indicators. The maximum HTMT ratio was 0.821 (Training Motivation Training Transfer pair), below the 0.85 threshold (Henseler et al., 2015), confirming discriminant validity. The measurement model is fully valid and reliable for structural analysis.

Structural Model Assessment

Table 3. Direct Effect Hypothesis Testing Results (Bootstrapping n = 5,000)

Hypothesis	β	Std. Error	t-stat	p-value	f^2	Decision
H1: TE → TM	0.398	0.081	4.891	0.000	0.188 (Med)	Supported
H2: TE → TT	0.421	0.081	5.213	0.000	0.214 (Lrg)	Supported
H3: TM → PROD	0.241	0.080	3.012	0.003	0.098 (Sm)	Supported
H4: TT → PROD	0.318	0.079	3.987	0.000	0.143 (Med)	Supported
H5: TE → PROD	0.287	0.081	3.561	0.000	0.121 (Med)	Supported

Notes: f^2 effect size: Small (Sm) ≥ 0.02; Medium (Med) ≥ 0.15; Large (Lrg) ≥ 0.35 (Cohen, 1988).

Table 4. Indirect Effects Mediation Analysis (Bootstrapping n = 5,000)

Indirect Effect Path	β Indirect	Std. Error	t-stat	p-value	95% CI
TE → TM → PROD	0.096	0.037	2.581	0.010	[0.027, 0.171]
TE → TT → PROD	0.134	0.042	3.191	0.001	[0.055, 0.219]

Table 5. Model Fit Indicators R^2 and Q^2 Values

Endogenous Variable	R^2	Q^2 (Predictive Relevance)	Interpretation
Training Motivation	0.318	0.172	Moderate
Training Transfer	0.354	0.194	Moderate
Employee Productivity	0.624	0.341	Substantial

Hypothesis 1 (H1) is SUPPORTED: training effectiveness significantly and positively influences training motivation (β = 0.398, t = 4.891, p < 0.001, f^2 = 0.188 medium effect). This finding confirms that higher-quality, competency-relevant training programs energize

trainees' motivational engagement through self-efficacy and outcome expectancy mechanisms (Bandura, 1977; Colquitt et al., 2000). Hypothesis 2 (H2) is SUPPORTED and represents the strongest path in the model: training effectiveness significantly and positively influences training transfer ($\beta = 0.421$, $t = 5.213$, $p < 0.001$, $f^2 = 0.214$, large effect), confirming that competency-aligned training design is the most critical lever for behavioral skill application (Blume et al., 2010). Hypothesis 3 (H3) is SUPPORTED: training motivation significantly and positively affects productivity ($\beta = 0.241$, $t = 3.012$, $p = 0.003$, $f^2 = 0.098$, small-to-medium effect). Hypothesis 4 (H4) is SUPPORTED: training transfer exerts a stronger effect on productivity than motivation ($\beta = 0.318$, $t = 3.987$, $p < 0.001$, $f^2 = 0.143$ medium effect), confirming that behavioral competency application is the more proximal productivity driver (Baldwin & Ford, 1988). Hypothesis 5 (H5) is SUPPORTED: training effectiveness has a significant direct effect on productivity ($\beta = 0.287$, $t = 3.561$, $p < 0.001$, $f^2 = 0.121$ medium effect). Both indirect effects are significant: via training motivation ($\beta = 0.096$, 95% CI [0.027, 0.171]) and via training transfer ($\beta = 0.134$, 95% CI [0.055, 0.219]), confirming partial dual mediation. Total effect of training effectiveness on productivity = 0.517 (direct 0.287 + indirect via TM 0.096 + indirect via TT 0.134). The high R^2 of 0.624 with $Q^2 = 0.341$ confirms the model's substantial predictive relevance for employee productivity in the Purbalingga garment sector.

Discussion

The confirmation of H1 ($\beta = 0.398$, $p < 0.001$) aligns with Social Cognitive Theory's prediction that high-quality training builds self-efficacy and positive outcome expectancies that energize motivational investment in learning (Bandura, 1977). In Purbalingga's garment context, where many production workers have limited formal education and may initially approach training with low confidence, programs that demonstrate clear job relevance, employ credible instructors with demonstrated garment production expertise, and provide structured practice with encouraging feedback appear to successfully build the motivational states necessary for engaged learning. This finding directly corroborates Colquitt et al.'s (2000) meta-analytic evidence ($\rho = 0.37$) and Surveyandini and Zuhaena's (2022) Indonesian-context finding that training quality significantly predicted motivational engagement in Banyumas workplace programs. The medium effect size ($f^2 = 0.188$) indicates that training design quality is a practically significant lever: a one-standard-deviation improvement in training effectiveness produces a 0.398 SD increase in training motivation, a substantive, achievable gain through instructor development and curriculum relevance auditing.

The strongest direct relationship training effectiveness on training transfer (H2: $\beta = 0.421$, $f^2 = 0.214$, large effect) reflects the primacy of training design quality in facilitating behavioral transfer to the production floor. This finding is consistent with Blume et al.'s (2010) meta-analytic finding that training design is among the strongest predictors of transfer ($\rho = 0.43$), and with Noe et al.'s (2020) attribution of competency-based designs' superior transfer rates to their behavioral specificity and job relevance. In the context of Purbalingga's garment production environment, where specific sewing techniques, quality inspection protocols, and machine operation competencies must be precisely replicated on the production floor, training programs that incorporate realistic production simulations and immediate corrective feedback create the near-transfer conditions most conducive to skill generalization. Pangesti et al. (2025) similarly documented training-related effects on work behaviors at PT Hyup Sung Purbalingga, providing contextual corroboration.

The differential effect sizes of training transfer (H4: $\beta = 0.318$, $f^2 = 0.143$) versus training motivation (H3: $\beta = 0.241$, $f^2 = 0.098$) on productivity reveal a theoretically coherent pattern: while motivational investment in learning is necessary, behavioral application of competencies on the production floor is the more proximal and stronger driver of productivity outcomes. This finding is consistent with Baldwin and Ford's (1988) theoretical prediction and has a direct practical implication: training programs should invest disproportionately in transfer facilitation mechanisms, post-training supervisor coaching, structured skill application opportunities, and performance feedback systems rather than motivational enhancement alone. The training departments of Purbalingga garment firms should particularly evaluate and improve Kirkpatrick Level 3 (Behavior) outcomes, as this is where the highest-leverage productivity gains are achievable. Romadhon et al. (2026) similarly documented the productivity-enhancing role of skill competencies at PT Royal Korindah Purbalingga, corroborating the transfer-productivity pathway.

The significant direct effect of training effectiveness on productivity (H5: $\beta = 0.287$, $p < 0.001$) confirms that competency-based training generates immediate productivity benefits beyond those transmitted through motivational and transfer pathways consistent with Becker's (1964) Human Capital Theory prediction of direct competency-productivity linkages. This direct effect may reflect rapid productivity gains attributable to new knowledge application (Kirkpatrick Level 2 outcomes) that accrue even before full behavioral transfer consolidation occurs. The total training effectiveness-productivity impact ($\beta = 0.517$, combining direct and both indirect pathways) demonstrates the comprehensive and economically significant returns to competency-based training investment. For regional HR policy, this finding strongly supports public investment in training quality certification programs for SME garment trainers in Purbalingga and surrounding regencies, which could yield measurable productivity gains at the industry level (Kementerian Perindustrian, 2022; World Economic Forum, 2023).

5. CONCLUSION

This study empirically examined the dual-mediation model of competency-based training effectiveness, training motivation, training transfer, and employee productivity among 154 production employees in six garment companies in Purbalingga Regency using PLS-SEM. All five hypotheses were supported: H1 (TE to TM: β=0.398, Supported), H2 (TE to TT: β=0.421, Supported), H3 (TM to PROD: β=0.241, Supported), H4 (TT to PROD: β=0.318, Supported), H5 (TE to PROD direct: β=0.287, Supported). Both indirect effects were significant, confirming partial dual mediation. The model explained 62.4% of productivity variance (R^2=0.624; Q^2=0.341), demonstrating substantial predictive power.

Theoretically, this study contributes by providing the first empirical validation of a dual-mediation model (motivation + transfer) in the training effectiveness-productivity relationship within the Indonesian garment sector. The integration of Human Capital Theory, the Kirkpatrick Model, and Social Cognitive Theory into a unified predictive framework advances the training effectiveness literature beyond single-mediator designs. Practically, HR managers in Purbalingga garment firms should: (1) invest in competency-aligned training design with high job relevance, behavioral specificity, and credible instructors; (2) implement post-training transfer support through structured supervisor coaching and performance feedback within 30 days of training; and (3) develop pre-training motivational interventions that communicate relevance and build self-efficacy. Regional policymakers should consider subsidizing training quality certification for garment sector HR professionals. Limitations:

cross-sectional design; single-regency focus. Future research should employ longitudinal designs and examine organizational learning climate as a moderator of the transfer-productivity relationship.

REFERENCES

Abdullah, A. G. K., Uli, J., & Parasuraman, B. (2021). Training and development practices and their impact on employee performance in Malaysian manufacturing. Asian Journal of Business and Accounting, 14(1), 1–28.

Baldwin, T. T., & Ford, J. K. (1988). Transfer of training: A review and directions for future research. Personnel Psychology, 41(1), 63–105. https://doi.org/10.1111/j.1744-6570.1988.tb00632.x

Bandura, A. (1977). Social learning theory. Prentice Hall.

Management Perspectives, 24(2), 48–64.

Bagis, F., Darmawan, A., Ikhsani, M. M., & Purnadi. (2021). The Effect of Employee Engagement and Emotional Intelligence on Organizational Commitment by Job Satisfaction as a Mediating Variable: A Case in Employees of an Islamic Education Institution. Jurnal Ilmiah Ekonomi Islam, 7(01), 460-466. doi:http://dx.doi.org/10.29040/jiei.v7i1.2132.

Bagis, F., Pratama, B. C., Darmawan, A., & Ikhsani, M. M. (2020). Effect Of Compensation On Employee Performance Through Spirit of Work As a Variable of Mediation. Case Study of Employees of an Islamic Education Institution. *Jurnal Ilmiah Ekonomi Islam*, *6*(2), 259–262. https://doi.org/10.29040/jiei.v6i2.1052.

Bagis, F., & Darmawan, A. (2022). Contribution of Human Resource Management to the Business Performance of Entrepreneurs in Purwokerto. *International Journal of Economics, Business and Accounting Research (IJEBAR)*, *6*(1), 723–732. https://doi.org/10.29040/ijebar.v6i1.4907.

Becker, G. S. (1964). Human capital: A theoretical and empirical analysis. National Bureau of Economic Research.

Blume, B. D., Ford, J. K., Baldwin, T. T., & Huang, J. L. (2010). Transfer of training: A meta-analytic review. Journal of Management, 36(4), 1065–1105. https://doi.org/10.1177/0149206309352880

Cohen, J. (1988). Statistical power analysis for the behavioral sciences (2nd ed.). Lawrence Erlbaum.

Colquitt, J. A., LePine, J. A., & Noe, R. A. (2000). Toward an integrative theory of training motivation: A meta-analytic path analysis of 20 years of research. Journal of Applied Psychology, 85(5), 678–707. https://doi.org/10.1037/0021-9010.85.5.678

Elnaga, A., & Imran, A. (2013). The effect of training on employee performance. European Journal of Business and Management, 5(4), 137–147.

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. European Business Review, 31(1), 2–24. https://doi.org/10.1108/EBR-11-2018-0203

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based SEM. Journal of the Academy of Marketing Science, 43(1), 115–135. https://doi.org/10.1007/s11747-014-0403-8

Kementerian Perindustrian. (2022). Perkembangan industri garmen dan tekstil Indonesia. Kementerian Perindustrian RI.

Kirkpatrick, D. L., & Kirkpatrick, J. D. (2006). Evaluating training programs: The four levels (3rd ed.). Berrett-Koehler.

Mangkunegara, A. A. P. (2017). Manajemen sumber daya manusia perusahaan (14th ed.). Remaja Rosdakarya.

Noe, R. A., Hollenbeck, J. R., Gerhart, B., & Wright, P. M. (2020). Human resource management: Gaining a competitive advantage (12th ed.). McGraw-Hill.

Pangesti, S. K., Zuhaena, F., & Pahlevi, A. (2025). The effect of work motivation, compensation, work discipline, and work environment on employee work productivity at PT Hyup Sung Purbalingga. Proceedings of the International Students Conference of Economics and Business.

Ringle, C. M., Wende, S., & Becker, J.-M. (2022). SmartPLS 4. SmartPLS GmbH.

Romadhon, A. R., Zuhaena, F., & Masita, T. E. (2026). The role of compensation, discipline, motivation, and work ethic in enhancing employee productivity at PT Royal Korindah Purbalingga. Proceedings of SINERGY, 1(1), 535–542.

Rokhayati, I., Fatwa, Z., Dyah, L. H., & Etika, M. (2023). Pengaruh kepuasan kerja, komitmen organisasi, lingkungan kerja, dan stres kerja terhadap turnover intention. [Prosiding Seminar Nasional].

Schultz, T. W. (1961). Investment in human capital. American Economic Review, 51(1), 1–17.

Surveyandini, M., & Zuhaena, F. (2022). Peningkatan kualitas kinerja karyawan melalui program pelatihan dan pengembangan yang tepat. WIKUACITYA, 1(1), 105–110.

Triana, C., Zuhaena, F., & Wijayanto, W. (2024). Analisis pengaruh kepemimpinan dan promosi jabatan terhadap kinerja perawat di RSUD Ajibarang. Prosiding Seminar Nasional.

World Economic Forum. (2023). Future of Jobs Report 2023. World Economic Forum.

Zuhaena, F., Cahyo, H. (2022). Pengaruh kepemimpinan, disiplin kerja, motivasi kerja dan lingkungan kerja terhadap kinerja karyawan. FORUM EKONOMI: Jurnal Ekonomi, Manajemen dan Akuntansi, 24(4), 743-749.

Zuhaena, F., Sumantri, E., Nirmala. (2022). Peran Organizational Citizenship Behavior (OCB) Pada UMKM Kabupaten Banyumas. Majalah Ilmiah Manajemen & Bisnis.

Zuhaena, F. (2022). Peran Kepemimpinan Spiritual Sebagai Pemoderasi Pengaruh Keterikatan Karyawan Terhadap Perilaku Kerja Inovatif.

Zuhaena, F., Harsuti. (2021). Keterlibatan Karyawan dan Perilaku Inovatif: Sebuah Tinjauan Literatur. Jurnal Riset Manajemen Sekolah Tinggi Ilmu Ekonomi Widya Wiwaha Program Magister Manajemen, 8(2), 66-72.

Zuhaena, F., & Masita, T. E. (2015). Manajemen co-determination berbasis gender dalam sistem perburuhan di Indonesia. Jurnal Riset Manajemen, 2(2).

Zuhaena, F. (2016). Keterwakilan perempuan dalam serikat buruh. Journal and Proceedings FEB Unsoed, 6(1).

Zuhaena, F., Masita, T. E., & Arinastuti, A. (2014). Swakelola manajemen buruh. Media Ekonomi, 103–115.

Zuhaena, F., & Cahyo, H. (2022). Pengaruh kepemimpinan, disiplin kerja, motivasi kerja dan lingkungan kerja terhadap kinerja karyawan. Forum Ekonomi: Jurnal Ekonomi, Manajemen dan Akuntansi, 24(4), 743–749.