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AN EMPIRICAL STUDY OF TRAINING AND JOB SATISFACTION ON JOB PERFORMANCE: EVIDENCE FROM STRUCTURAL EQUATION MODELLING

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ABSTRACT

This empirical study explores the linkage between employee training, job satisfaction, and job performance using data from 170 employees. Structural Equation Modelling (SEM) through AMOS software validates the measurement model and examines hypothesized relationships. The model shows an excellent fit ($\chi^2/df = 1.314$, CFI = .987, TLI = .984, RMSEA = .043). Results reveal that training significantly influences job performance both directly and indirectly, with job satisfaction mediating the effect. All constructs demonstrate strong reliability, validity, consistency, reinforcing the theoretical framework that effective training and satisfaction improve performance. This study provides valuable insights for HR development, organization behaviour and performance management research.

KEYWORDS: Training, Job Satisfaction, Job Performance, Structural Equation Modelling, Human Resource Development.

INTRODUCTION

Employee performance is a vital determinant of organizational success. In today's competitive Environment, organizations emphasize effective training and employee satisfaction as major drivers of performance (Noe, 2017). Training enhances knowledge, skills, attitudes, while job satisfaction reflects emotional responses to work experiences (Spector, P.E.1985). Prior studies indicate that well-trained employees often exhibit higher Satisfaction and superior job performance (Alonso, P, 2001). Yet the pathway linking training to performance especially the mediating influence of satisfaction remains underexplored in developing contexts. Hence, this study investigates the direct and indirect



effects of training on performance through job satisfaction, employing Structural Equation Modelling (SEM) for empirical validation.

LITERATURE REVIEW

Training and Job Satisfaction(H1)

Training serves as strategic HRD intervention aimed at enhancing employee competencies and organizational effectiveness. Based on Human Capital Theory (Becker, G.S. 1993), training is considered an investment in people that foster skills, motivation, and performance. When employees perceive training as relevant, fair, and supportive, they develop stronger attachment and greater satisfaction towards the organization (Noe & Wilk,1993; Tai, 2006). Drawing from Social Exchange Theory (Blau, 1964), employees reciprocate such organizational investments through positive attitudes, including job satisfaction. Empirical evidence indicates that training opportunities improve intrinsic and extrinsic satisfaction by boosting self-efficacy, competence, and career growth (Bulut, C., (2010). Thus, consistent investment in skill development creates a valued workforce and a supportive environment, reinforcing the hypothesis that training positively influences job satisfaction.

The Role of Training in Enhancing Job Performance (H3)

Effective training programs are closely associated with enhanced job performance through the acquisition and application of job relevant skills. Rooted in Expectancy Theory (Vroom,1964; Noe,2017), **research** suggests that employees who believe training improves their task competence display greater performance motivation. Training promotes technical proficiency, adaptability, and innovation, all of which drive superior task performance (Aguinis, H., 2009). Empirical studies reveal a strong positive relationship between training and performance outcomes across manufacturing and services sectors (Tharenou, P., 2007). Furthermore, the transfer of training the application of learned skills to real work serves as a critical mechanism linking training quality to performance improvement (Burke, L.A., 2007). Therefore, this study posits that training exerts a significant and positive direct effect on job performance.

Job Satisfaction and Job Performance (H2)

Job satisfaction reflects an employee's overall emotional and attitudinal orientation toward their work and has long been established as a crucial predictor of job performance (Judge et al.,2001). The well-known happy-productive worker hypothesis, rooted in organizational behaviour research, posits that satisfied employees tend to be more motivated, engaged and productive (Wright, T.A., 2000). Empirical studies further indicate that job satisfaction not only improved in role task performance but also enhances extra-role behaviours, including organizational citizenship behaviour (Willey Williams,



L.J, 1991). In service-based industries, satisfied employees consistently deliver superior service quality and demonstrate stronger alignment with organizational goals (Ineson et al.,2013). Additionally, job satisfaction strengthens psychological well-being and lowers turnover intentions, both of which indirectly support improved job performance (Aziri, 2011). Therefore, this study hypothesizes that job satisfaction exerts a positive and significant influence on job performance.

The review of existing literature provides strong empirical evidence supporting the positive relationships among training, job satisfaction and job performance. Training enhances satisfaction by conveying organizational support, improving employee skills and creating opportunities for growth. In turn, job satisfaction strengthens performance by increasing employee engagement, motivation and commitment to organizational objectives. Based on these theoretical and empirical insights, the following hypotheses are proposed:

- H1: Training has a positive and significant effect on job satisfaction.
- H2: Job satisfaction has a positive and significant effect on job performance.
- H3: Training has a positive and significant direct effect on job performance.

METHODOLOGY

A quantitative, cross-sectional research design was employed for this study. Data were collected from 170 employees across various service-sector organizations. Standardized and widely validated measurement instruments were used: training was assessed using developed by Tai (2006) and Noe & Wilk (1993); job satisfaction was measured using Spector, P. E. (1985) Job Satisfaction Survey (JSS) and job performance was evaluated using the scale proposed by Koopmans et al. (2013). Reliability and validity assessments were conducted using Confirmatory Factor Analysis (CFA). All factor loadings exceeded 0.70 and Cronbach's alpha values ranged from 0.93 to 0.95 indicating strong internal consistency. Composite Reliability (CR) values were above 0.90 and Average Variance Extracted (AVE) values exceeded 0.70 confirming convergent validity. Discriminant validity was established as the square roots of each construct's AVE were greater than the corresponding inter-construct correlations.

5. ANALYSIS AND RESULTS

Prior to testing the hypothesized relationship, measurement validation was conducted using Confirmatory Factor Analysis (CFA) in AMOS 28 to ensure the reliability and validity of the constructs. All three constructs Training (Tr), Job Satisfaction (JS) and Job Performance (JP) were treated as latent variables each measured through five observed indicators. A Structural Equation Model (SEM) was then developed to examine both the direct and indirect effects of Training on Job Performance with Job Satisfaction serving as the mediating variable. The analysis was carried out following the two-step approach recommended by Hair et al. (2021). (1) Validating the measurement model through CFA and (2) Evaluating the hypothesized structural model. Model estimation employed Maximum Likelihood Estimation (MLE), which is widely recognized for its robustness in

SEM-based analysis.

Measurement Model (confirmatory Factor Analysis)

The CFA results demonstrated a good model fit with the following indices : $\chi^2 = 114.317$, $df = 87$, $p = .026$, $\chi^2/df = 1.314$, $GFI = .987$, $TLI = .984$ and $RMSEA = .043$. All measurement items exhibited standardized factor loadings above 0.70, indicating strong convergent validity. Additionally, both Cronbach’s alpha and Composite Reliability (CR) values exceeded 0.90 across all constructs while Average Variance Extracted (AVE) values were above 0.70 further confirming convergent validity. Discriminant validity was verified using Fornell and Larcker’s (1981) criterion, as shown in Table 1, with the square roots of AVE surpassing inter-construct correlations.

Table 1. Confirmatory Factor Analysis Results

Construct	Item	Standardized Loading (β)	Cronbach’s α	CR	AVE
Training (Tr)	T1	0.883	0.953	0.94	0.76
	T2	0.862			
	T3	0.825			
	T4	0.858			
	T5	0.821			
Job Satisfaction (JS)	JS1	0.879	0.956	0.93	0.72
	JS2	0.860			
	JS3	0.852			
	JS4	0.825			
	JS5	0.721			
Job Performance (JP)	JP1	0.873	0.957	0.94	0.75
	JP2	0.859			
	JP3	0.861			
	JP4	0.824			
	JP5	0.857			

Note: All loadings significant at $p < .001$.

These results confirm that the measurement model has adequate reliability, convergent validity, and discriminant validity.

Structural Model Evaluation

The structural model was assessed to test the hypothesized causal relationships among the three latent

constructs. The model demonstrated an excellent overall fit, as reflected in the fit indices : $\chi^2/df = 1.314$, CFI = .987. TLI = .984 and RMSEA = .043. All hypothesized paths Training to Job Satisfaction (H1) , Job Satisfaction to Job Performance (H2), and Training to Job Performance (H3) were statistically significant, providing full support for the proposed relationships.

Table 2. Standardized Path Coefficients of Structural Model

Hypothesis	Path	Standardized Estimate (β)	S.E.	C.R.	p-value	Result
H1	JS ← Tr	0.612	—	—	***	Supported
H2	JP ← JS	0.328	0.090	3.891	***	Supported
H3	JP ← Tr	0.451	0.092	5.195	***	Supported

Note: *** $p < .001$.

Model Fit Summary

Table 3. Model Fit Indices for SEM

Fit Index	Obtained Value	Acceptable Threshold	Interpretation
χ^2/df	1.314	< 3.00	Excellent
GFI	0.919	≥ 0.90	Good
AGFI	0.888	≥ 0.85	Acceptable
CFI	0.987	≥ 0.95	Excellent
TLI	0.984	≥ 0.95	Excellent
RMSEA	0.043	≤ 0.06	Excellent
PCLOSE	0.689	≥ 0.05	Good
RMR	0.046	< 0.05	Excellent
HOELTER (.05)	163	≥ 150	Adequate sample size

The model exhibits an excellent fit across all indices, suggesting that the theoretical structure aligns closely with the empirical data.

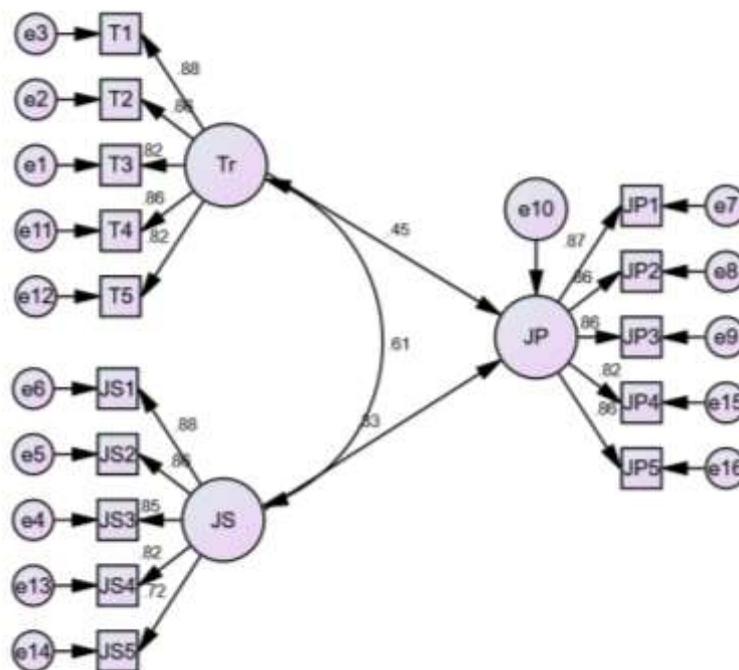
Structural Equation Modelling Diagram

Figure 1 illustrates the SEM diagram produced using AMOS 28. The model includes three latent constructs Training, Job Satisfaction and Job Performance each measured by five observed indicators. Standardized path coefficients are displayed along the directional arrows, reflecting the magnitude

and significance of relationships between variables. The diagram visually demonstrates that Training significantly influences both Job Satisfaction and Job Performance, while Job Satisfaction positively predicts Job Performance. The presence of both a direct path and an indirect path from Training to Job Performance indicated a partial mediation effect, consistent with the study’s hypothesized framework.

Overall, the results provide strong support for all four hypotheses. Training significantly improves both Job Satisfaction and Job Performance, while Job Satisfaction function as a partial mediator in the relationship between Training and Job Performance. The high levels of reliability and validity confirm that the constructs were measured accurately and the excellent model fit indices indicate that the proposed theoretical model effectively explains the observed relationships among the variables.

Figure 1: Structural Equation Model showing standardized path coefficients]



Interpretation and Discussion

The SEM results confirm that employees training positively influences both job satisfaction and job performance. These findings are consistent with Human Capital Theory, which argues that organizational investment in employee development leads to enhanced productivity (Becker, 1993). The significant relationship between training and job satisfaction also supports research by Noe (2017) and Bulut & Culha (2010), who found that training strengthens employee morale and perceived organizational support. Furthermore, the facilitating role of job satisfaction in the training-



performance relationship indicated that the benefits of training extend beyond skill acquisition; training also promotes positive work attitudes, which in turn enhance performance. This is aligned with Social Exchange Theory (Blau, 1964), which suggests that employees reciprocate organization support through improved commitment and performance (Judge et al., 2001). Additionally, the high reliability and validity scores confirm that the measurement instruments used in the study possess strong psychometric properties, ensuring accuracy and consistency in assessing the constructs.

CONCLUSION AND IMPLICATIONS

This study demonstrates that training not only directly improves job performance but also indirectly enhances performance by increasing job satisfaction. The findings highlight the strategic value of continuous training and development initiatives in building a motivated, committed and high-performing workforce. To maximize satisfaction and performance outcomes, managers should design training programs that are relevant, participative and aligned with employee goals and career aspirations. Future research could extend the proposed model by inspecting possible moderators, such as organizational culture, leadership style or employee engagement. Additionally, longitudinal research designs may offer deeper insights into the causal pathways and long-term effects of training on satisfaction and performance, providing a more comprehensive understanding of employee development dynamics.

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