
**THE INFLUENCE OF CERTIFICATION BODY MANAGEMENT SYSTEM
IMPLEMENTATION AND ORGANIZATIONAL PERSONNEL COMPETENCE
ON PERSONNEL PERFORMANCE: THE MEDIATING EFFECT OF JOB
SATISFACTION ACROSS GENERATIONS AT PT GARUDA SERTIFIKASI
INDONESIA**

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Abstract

Personnel performance is a critical determinant of service quality in certification bodies; however, studies examining the mediating role of job satisfaction remain limited. This study aims to examine the effects of certification body management system implementation and organizational personnel competence on personnel performance, with job satisfaction serving as a mediating variable across generations at PT Garuda Sertifikasi Indonesia. A quantitative explanatory research design was employed involving all 80 personnel using a census sampling technique. Primary data were collected through questionnaires and supported by company documentation, while the data were analyzed using Structural Equation Modeling–Partial Least Squares (SEM-PLS). The results indicate that the certification body management system and personnel competence have positive and significant effects on both job satisfaction and personnel performance. Furthermore, job satisfaction positively affects personnel performance and partially mediates the relationships between the management system, personnel competence, and personnel performance. These findings highlight the importance of integrating effective management systems, personnel competence, and job satisfaction to improve personnel performance across generations. The study contributes by extending the literature on certification bodies through a mediation model that provides practical guidance for strengthening organizational performance and service quality.

Keywords: Certification Body Management System, Organizational Personnel Competence, Job Satisfaction, Personnel Performance

INTRODUCTION

The success of service organizations is largely determined by the quality of their human resources, as personnel serve as the primary drivers in achieving organizational objectives. Within certification bodies, personnel performance is particularly critical because certification processes require a high level of technical competence, objectivity, consistency, and compliance with international standards. Therefore, organizations must implement effective management systems supported by highly competent personnel to deliver high-quality services and enhance customer satisfaction (Afandi, 2022; Rivai, 2022). In the context of certification bodies, improving personnel performance has also become a strategic priority for maintaining organizational competitiveness amid the increasing number of certification bodies operating in Indonesia.

Previous studies have consistently demonstrated that management system implementation and personnel competence are key determinants of organizational performance. (Dao et al., 2023; Hernandez & Wong, 2024; Wahidah et al., 2024; Zehir & Zehir, 2023) reported that effective management systems significantly enhance personnel performance. Likewise, (Ahmed & Rahman, 2024; Kumar & Vasudevan, 2024; Purnomo & Sijanti, 2025; Wulandari, 2024) found that personnel competence has a positive effect on performance improvement. Other studies have further indicated that job satisfaction strengthens the relationship between human resource management practices and personnel performance, thereby serving as an important mechanism for improving organizational effectiveness (Memon et al., 2023; Yen Mac Thi Hai & Cuong Tran Thi, 2026).

Despite these findings, the empirical conditions at PT Garuda Sertifikasi Indonesia indicate that personnel performance has not yet reached its optimal level. This is reflected in the fluctuations in the number of customers during the 2022–2024 period, suggesting inconsistencies in the quality of organizational services. Furthermore, the organization faces differences in work characteristics across generations, including Baby Boomers, Millennials, and Generation Z, which influence work patterns, technological adaptability, and consistency in service delivery. These challenges are further exacerbated by suboptimal interdepartmental coordination, unclear task allocation, inadequate utilization of information technology, disparities in personnel competence, and low levels of job satisfaction resulting from ineffective reward systems and less supportive workplace relationships.

On the other hand, the existing literature presents inconsistent findings regarding the relationships among these variables. (Rosalina, 2023) reported that management systems have no significant effect on personnel performance, whereas (Hajiali et al., 2021) found that neither personnel competence nor job satisfaction significantly improves personnel performance. In contrast, the majority of previous studies have reported positive and significant relationships. These inconsistent findings indicate the existence of a research gap, particularly regarding the mechanisms through which management systems and personnel competence influence personnel performance. Moreover, studies examining these relationships within certification bodies while considering cross-generational workforce characteristics remain limited, highlighting the need for further investigation.

To address these gaps, the present study offers a novel contribution by developing an integrated model that incorporates certification body management system implementation, organizational personnel competence, and job satisfaction as a mediating variable, while

simultaneously considering a cross-generational perspective in explaining personnel performance. This approach is expected to provide a more comprehensive understanding of the factors influencing personnel performance within certification bodies and to extend the existing human resource management literature in the context of certification service organizations, an area that has received considerably less attention than the manufacturing and public sectors.

Based on the foregoing discussion, this study aims to examine the effects of certification body management system implementation and organizational personnel competence on personnel performance, both directly and indirectly through the mediating role of job satisfaction across generations at PT Garuda Sertifikasi Indonesia. The findings are expected not only to contribute to the advancement of human resource management theory but also to provide practical implications for organizational management in formulating strategies to strengthen personnel competence, enhance management system implementation, and improve job satisfaction in order to achieve more effective and sustainable personnel performance.

REVIEW OF LITERATURE

Goal Setting Theory

Goal Setting Theory, introduced by Locke, posits that individuals will exhibit higher performance when they have specific, challenging goals, coupled with a commitment to achieving them. This theory asserts that goals serve as a primary driver of individual behavior, thereby enhancing motivation, focus, and effort in the completion of tasks. In the context of this study, the implementation of management systems, the development of competencies, and the enhancement of job satisfaction are viewed as organizational mechanisms that support the achievement of personnel work goals, ultimately leading to improved performance. Thus, Goal Setting Theory serves as the theoretical foundation for explaining the relationships among management systems, competencies, job satisfaction, and personnel performance (Suwarmadani, 2022).

Certification Body Management System

A certification body management system refers to a structured set of managerial processes designed to coordinate organizational activities effectively and efficiently in achieving predetermined objectives. The implementation of an effective management system encompasses planning, organizing, directing, and controlling organizational resources to ensure compliance with applicable standards and improve service quality. Within certification bodies, an effective management system facilitates coordination among personnel, enhances operational consistency, and supports continuous improvement, thereby contributing to higher organizational performance (Koontz & O'Donnell, 2023; Stoner et al., 2023).

Organizational Personnel Competence

Personnel competence is defined as the combination of knowledge, skills, abilities, and work attitudes that enable individuals to perform their duties effectively and in accordance with organizational standards. Competent personnel are more capable of adapting to changes, solving work-related problems, and maintaining service quality, particularly in organizations operating under internationally recognized certification standards. Therefore,

competence is regarded as one of the primary determinants of personnel performance because it enhances both work effectiveness and efficiency (Rivai, 2022; Wibowo, 2022).

Job Satisfaction

Job satisfaction represents a positive emotional state resulting from an individual's evaluation of his or her job and work experiences. Employees with higher levels of job satisfaction tend to demonstrate stronger organizational commitment, greater motivation, and higher performance. Conversely, dissatisfaction may reduce work enthusiasm and negatively affect organizational outcomes. In certification bodies, job satisfaction is particularly important because it supports service consistency and encourages personnel to perform their responsibilities according to established quality standards (Isac et al., 2022; Robbins et al., 2022).

Personnel Performance

Personnel performance refers to the level of achievement attained by employees in completing their assigned responsibilities based on predetermined standards, both in terms of quality and quantity. High personnel performance reflects employees' ability to complete tasks accurately, efficiently, and within the specified timeframe while maintaining organizational service quality. In certification organizations, personnel performance plays a critical role in ensuring the reliability of certification processes and sustaining customer trust. Therefore, organizations must continuously improve management practices and personnel competence to achieve superior performance outcomes (Afandi, 2022; Mangkunegara, 2021).

RESEARCH METHOD

This study employed a quantitative approach with an explanatory research design to examine the effects of certification body management system implementation and organizational personnel competence on personnel performance, with job satisfaction serving as a mediating variable across generations. The study was conducted at PT Garuda Sertifikasi Indonesia, Denpasar, Bali, involving all company personnel as respondents using a census sampling technique, resulting in a total sample of 80 participants. The research utilized both primary data collected through questionnaire surveys and secondary data obtained from company documents. Prior to data analysis, the research instrument was assessed for validity and reliability. Subsequently, the data were analyzed using Structural Equation Modeling–Partial Least Squares (SEM-PLS), including the evaluation of the measurement model (outer model), the structural model (inner model), hypothesis testing, and mediation effect analysis to examine the relationships among the study variables (Hair et al., 2021).

RESULTS AND DISCUSSION

Inferential Analysis

Inferential analysis was conducted using Structural Equation Modeling–Partial Least Squares (SEM-PLS) with the assistance of SmartPLS 3.0 software. The analytical procedures included the evaluation of the outer model, evaluation of the inner model, hypothesis testing, and mediation effect analysis.

Measurement Model Evaluation (Outer Model)

The outer model was evaluated to assess the validity and reliability of the constructs through convergent validity, discriminant validity, and composite reliability.

Convergent Validity Test

Convergent validity was assessed using the outer loading values, with indicators considered valid when the outer loading exceeded 0.70 and was statistically significant ($p < 0.05$).

Table 1.
Outer Loading Result

	Outer Loading	T-Statistic	P Values
X1.1 ← Management System	0.943	69.296	0.000
X1.2 ← Management System	0.920	46.366	0.000
X1.3 ← Management System	0.894	36.578	0.000
X1.4 ← Management System	0.961	114.641	0.000
X2.1 ← Competence	0.894	34.657	0.000
X2.2 ← Competence	0.917	39.747	0.000
X2.3 ← Competence	0.962	115.420	0.000
X2.4 ← Competence	0.945	80.749	0.000
X2.5 ← Competence	0.926	44.822	0.000
X2.6 ← Competence	0.901	34.253	0.000
M1 ← Job Satisfaction	0.806	18.814	0.000
M2 ← Job Satisfaction	0.958	108.252	0.000
M3 ← Job Satisfaction	0.907	38.063	0.000
M4 ← Job Satisfaction	0.954	99.324	0.000
M5 ← Job Satisfaction	0.952	90.604	0.000
Y1 ← Personnel Performance	0.950	80.588	0.000
Y2 ← Personnel Performance	0.944	75.694	0.000
Y3 ← Personnel Performance	0.911	52.373	0.000
Y4 ← Personnel Performance	0.878	29.241	0.000
Y5 ← Personnel Performance	0.918	58.806	0.000

Based on Table 1, all indicators achieved outer loading values greater than 0.50 and t-statistics above 1.96, indicating that all indicators are valid measures of their respective constructs.

Discriminant Validity Test

Discriminant validity was assessed using cross-loading values, with indicators considered valid if they exhibited the highest loading on their respective constructs.

Table 2.
Discriminant Validity Results

Fornell–Larcker Criterion			
	Job Satisfaction	Personnel Performance	Competence Management System
Job Satisfaction	0.917		
Personnel Performance	0.794	0.921	
Competence	0.798	0.774	0.924

Management System	0.769	0.771	0.768	0.930
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Table 2 shows that the loading values of all indicators for the management system, competence, job satisfaction, and personnel performance constructs are highest on their respective constructs, indicating that all indicators are valid.

Reliability Test

Construct reliability was assessed using Composite Reliability and Cronbach's Alpha, with values greater than 0.70 indicating satisfactory reliability.

Table 3.
Reliability Test

Constructs	Cronbach's Alpha	Composite Reliability	Description
Management System (X1)	0.948	0.948	Reliable
Competence (X2)	0.966	0.968	Reliable
Job Satisfaction (M)	0.952	0.959	Reliable
Personnel Performance (Y)	0.955	0.957	Reliable

Table 3 shows that all constructs of the management system, competence, job satisfaction, and personnel performance achieved Composite Reliability and Cronbach's Alpha values above 0.70, indicating satisfactory reliability.

Structural Model Evaluation (Inner Model)

The inner model was evaluated using R-Square (R^2), Q-Square Predictive Relevance (Q^2), and Goodness of Fit (GoF) to assess the predictive power and overall fit of the structural model.

R-Square (R^2) Test

R-Square (R^2) was used to assess the explanatory power of the structural model, with values of 0.67, 0.33, and 0.19 indicating substantial, moderate, and weak predictive accuracy, respectively.

Table 4.
R-Square (R^2) Test

Constructs	R Square	R Square Adjusted
Job Satisfaction	0.696	0.688
Personnel Performance	0.714	0.703

As shown in Table 4, the R^2 values of 0.696 and 0.714 indicate that the structural model has good predictive power for explaining job satisfaction and personnel performance, respectively.

Table 5.
Q-Square Test Results

Constructs	R Square	R Square Adjusted
Job Satisfaction	0.696	0.688
Personnel Performance	0.714	0.703

$$\begin{aligned}
 Q^2 &= 1 - (1 - R^2_1)(1 - R^2_2) \\
 &= 1 - (1 - 0,696)(1 - 0,714) \\
 &= 1 - (0,304)(0,286) \\
 &= 1 - (0,217056) \\
 &= 0,782944 \text{ dibulatkan menjadi } 0,783
 \end{aligned}$$

Based on Table 5, the Q^2 value of 0.783 indicates that the model has good predictive capability, explaining 78.3% of the data variance.

Hypothesis Testing

Hypothesis testing was conducted to examine the direct and indirect effects among the study variables.

Table 6.
Direct Relationships among Management System, Competence, Job Satisfaction, and Personnel Performance

	Original Sample (O)	T Statistics	P Values	Decision
Management System → Job Satisfaction	0.382	2.999	0.003	Accepted
Competence → Job Satisfaction	0.505	4.275	0.000	Accepted
Management System → Personnel Performance	0.292	2.101	0.038	Accepted
Competence → Personnel Performance	0.264	2.429	0.017	Accepted
Job Satisfaction → Personnel Performance	0.358	3.951	0.000	Accepted

Based on the SmartPLS 3.0 analysis, the relationships among the study variables are presented in Table 6.

- H1: The management system has a positive and significant effect on job satisfaction ($\beta = 0.382$, $t = 2.999$, $p = 0.003$); H1 is accepted.
- H2: Competence has a positive and significant effect on job satisfaction ($\beta = 0.505$, $t = 4.275$, $p < 0.001$); H2 is accepted.
- H3: The management system has a positive and significant effect on personnel performance ($\beta = 0.292$, $t = 2.101$, $p = 0.038$); H3 is accepted.
- H4: Competence has a positive and significant effect on personnel performance ($\beta = 0.264$, $t = 2.429$, $p = 0.017$); H4 is accepted.
- H5: Job satisfaction has a positive and significant effect on personnel performance ($\beta = 0.358$, $t = 3.951$, $p < 0.001$); H5 is accepted.

The indirect effects were evaluated using the total indirect effects, as presented in Table 7.

Table 7.
Total Indirect Effect Results

	Original Sample (O)	T Statistics	P Values	Description
Management System → Job Satisfaction → Personnel Performance	0.137	2.212	0.029	Partial Mediation
Competence → Job Satisfaction → Personnel Performance	0.181	2.942	0.004	Partial Mediation

- H6: The management system has a positive and significant effect on personnel performance through job satisfaction ($\beta = 0.137$, $t = 2.212$, $p = 0.029$); H6 is accepted.
- H7: Competence has a positive and significant effect on personnel performance through job satisfaction ($\beta = 0.181$, $t = 2.942$, $p = 0.004$); H7 is accepted.

Discussion

The Effect of Management System on Job Satisfaction

The results indicate that the management system has a positive and significant effect on job satisfaction at PT Garuda Sertifikasi Indonesia. This finding suggests that the more effective the implemented management system, the higher the level of personnel job satisfaction. According to (Stoner et al., 2023), a management system encompassing planning, organizing, leadership, and controlling functions enhances organizational efficiency and creates a more supportive work environment. A transparent, fair, and well-structured management system enables personnel to feel valued and appreciated, thereby increasing job satisfaction. These findings are consistent with those reported by (Badriyah et al., 2024; Freire & Pieta, 2022; Sosiady, 2022), who demonstrated that management systems have a positive and significant influence on job satisfaction.

The Effect of Personnel Competence on Job Satisfaction

The findings reveal that personnel competence has a positive and significant effect on job satisfaction at PT Garuda Sertifikasi Indonesia, indicating that higher levels of personnel competence are associated with greater job satisfaction. (Kuncoro, 2022) explains that competence represents an organization's core capability that supports individual success in performing job responsibilities. Personnel possessing adequate knowledge, skills, and abilities tend to exhibit greater self-confidence, perform their duties more effectively, and receive recognition for their achievements, thereby enhancing job satisfaction. These findings are consistent with the studies conducted by (Kharisma & Rosia, 2022; Supriyadi, 2025).

The Effect of Management System on Personnel Performance

The results demonstrate that the management system has a positive and significant effect on personnel performance at PT Garuda Sertifikasi Indonesia. This finding indicates that an effective management system improves the quality of personnel performance. (Koontz & O'Donnell, 2023) argue that a management system coordinates organizational activities to achieve organizational objectives effectively and efficiently through clear task allocation, work procedures, and control mechanisms. An effective management system enables personnel to perform their responsibilities more systematically, efficiently, and

responsibly, thereby improving their overall performance. These findings are supported by (Dao et al., 2023; Hernandez & Wong, 2024; Wahidah et al., 2024; Zehir & Zehir, 2023).

The Effect of Personnel Competence on Personnel Performance

The findings indicate that personnel competence has a positive and significant effect on personnel performance at PT Garuda Sertifikasi Indonesia. This result suggests that improvements in personnel competence lead to higher levels of personnel performance. According to (Wibowo, 2022), competence refers to an individual's ability to perform work based on knowledge, skills, and work attitudes required to accomplish assigned responsibilities effectively. Competent personnel are capable of completing tasks more accurately, efficiently, and adaptively while effectively addressing workplace challenges, thereby achieving superior performance. These findings are in line with those reported by (Kumar & Vasudevan, 2024; Purnomo & Sijanti, 2025; Wulandari, 2024).

The Effect of Job Satisfaction on Personnel Performance

The results reveal that job satisfaction has a positive and significant effect on personnel performance at PT Garuda Sertifikasi Indonesia. This finding indicates that personnel who are satisfied with their jobs are more likely to demonstrate superior work performance. (Isac et al., 2022) argue that job satisfaction arises when employees' needs and expectations are fulfilled, thereby fostering stronger motivation and greater enthusiasm toward work. Such conditions contribute to improvements in work quality and productivity. These findings are consistent with those reported by (Memon et al., 2023; Usu et al., 2024; Yen Mac Thi Hai & Cuong Tran Thi, 2026).

The Effect of Management System on Personnel Performance Through Job Satisfaction

The results indicate that the management system has a positive and significant indirect effect on personnel performance through job satisfaction, with job satisfaction serving as a partial mediating variable. This finding suggests that the management system enhances personnel performance not only directly but also indirectly by increasing job satisfaction. A structured, transparent, and consistent management system creates a supportive work environment in which personnel feel valued and motivated to perform at their best. As a result, improved job satisfaction contributes to enhanced personnel performance. These findings are consistent with the studies conducted by (Kurniawan & Desiana, 2024; Tomizh et al., 2022).

The Effect of Personnel Competence on Personnel Performance Through Job Satisfaction

The findings demonstrate that personnel competence has a positive and significant indirect effect on personnel performance through job satisfaction, with job satisfaction acting as a partial mediating variable. Personnel with high levels of competence are better able to perform their duties effectively, achieve organizational targets, and gain confidence and recognition for their accomplishments, thereby increasing job satisfaction. Higher job satisfaction subsequently encourages personnel to maintain high-quality performance, improve productivity, and contribute more effectively to organizational goals. These findings are consistent with those reported by (Kumar & Vasudevan, 2024; Pentury & Usmany, 2023; Purnomo & Sijanti, 2025).

CONCLUSION

This study demonstrates that the certification body management system, personnel competence, and job satisfaction have positive and significant effects on personnel performance at PT Garuda Sertifikasi Indonesia. In addition, job satisfaction partially mediates the relationships between the management system, personnel competence, and personnel performance. The novelty of this study lies in the development of an integrated model that incorporates job satisfaction as a mediating variable in the relationship between the certification body management system, personnel competence, and personnel performance within the context of a certification body.

The practical implications of this study suggest that PT Garuda Sertifikasi Indonesia should strengthen the effectiveness of its management system, continuously enhance personnel competence through training and professional development, and improve job satisfaction by fostering a supportive work environment and implementing a fair reward system. These initiatives are expected to enhance personnel performance and strengthen the organization's competitiveness in delivering high-quality certification services.

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