International Journal of Economics and Management Research

E-ISSN: 2830-2508
P-ISSN: 2830-2664

(Research/ Review) Article

The Impact of Personnel and Materiel Readiness of the Garuda Contingent in UNIFIL on Mission Success in Lebanon

Al Hidayatul Aminy[1]*, Achmad Sochfan[2], Herly sinaga[3]

[1-3]Naval Command and Staff School, Indonesia

*Corresponding Author: hidayat.al81@gmail.com[1]

Abstract: This study analyzes the influence of internal factors on the success of the Garuda Contingent assignment of the United Nations Interim Force in Lebanon (UNIFIL). The internal factors examined are peronael readiness (X1), covering individual competence, physical and mental readiness, and socio-cultural adaptability, and material readiness (X2), including adequacy of combat equipment, logistical support, and supporting technology. Assignment (Y) measured through mandate achievement, incident reponse speed, stakeholder satisfaction. Using quantitative, explanatory research design, data were collected through questionnaires to 291 respondents from the Garuda Contingent UNIFIL personnel. Data analysis was carried out using SmartPLS software. The results of the Partial Least Squares Structural Equation Modeling (PLS-SEM) analysis showed that both personnel readiness (X1) and material readiness (X2) had a positive and significant influence on the success of the assignment (Y). Specifically, the path coefficient from X1 to Y is 0.595 ($p < 0.001$), and the path coefficient from X2 to Y is 0.305 ($p < 0.001$), indicating that personnel readiness has a stronger influence on assignment success compared to material readiness. The R-Square value for variable Y is 0.715, indicating that 71.5% of the variation in assignment success can be explained by personnel and material readiness. The implication of this finding is the need for the formulation of policies and strategies that focus on improving personnel readiness, material modernization, and diversifying the role of the contingent to optimize Indonesia's contribution to the peacekeeping mission in Lebanon and in the future.

Keywords: Assignment Success; Garuda Contingent; Material Readiness; Personnel Readiness; UNIFIL

Received: September 09, 2025;
Revised: September 23, 2025;
Accepted: October 07, 2025;
Online Available: October 10, 2025;
Curr. Ver.: October 10, 2025;

1. Introduction

The United Nations Interim Force in Lebanon (UNIFIL) represents a tangible manifestation of the United Nations' (UN) commitment to maintaining international peace and security, particularly in the Middle East. (Nations, 2023). Established in 1978 through UN Security Council Resolutions 425 and 426, the mission was significantly reinforced following the 2006 Israel–Lebanon conflict. (Council, 2006) UNIFIL's primary mandates include monitoring the cessation of hostilities, supporting the Lebanese Armed Forces in securing the southern region of the country, and ensuring the protection of civilians. Within this framework, Indonesia's contributionparticularly through the deployment of the Garuda Contingent constitutes a concrete implementation of its independent and active foreign policy, as well as its enduring commitment to global peace (Novrianda, 2020)Since 2006, Indonesia has consistently deployed peacekeeping troops to Lebanon, progressively strengthening its involvement through the assignment of highly trained and professional personnel. The presence of the Garuda Contingent within UNIFIL not only demonstrates Indonesia's solidarity with the international community but also reflects global confidence in the capabilities of the Indonesian National Armed Forces (TNI) to operate effectively in multinational missions. Accordingly, Indonesia's participation in UNIFIL serves as a reflection of its constitutional mandate to contribute to the establishment of a world order

based on freedom, enduring peace, and social justice, as enshrined in the Preamble to the 1945 Constitution of the Republic of Indonesia. (Indonesia., 2022)

A fundamental challenge in the implementation of the UNIFIL peacekeeping mission by the Garuda Contingent lies in the extent to which personnel readiness and material adequacy can effectively support the success of the deployment. Personnel readiness encompasses not only technical training and operational competence but also language proficiency and the ability to adapt to local socio-cultural dynamics. (UNIFIL., 2021) Concurrently, material adequacy involves the availability and functionality of military equipment, tactical vehicles, communication systems, and other mission-critical logistical support suited to the operational terrain. In practice, peacekeeping operations in Lebanon are confronted not solely by security threats, but also by logistical constraints and the complexities of cross-cultural coordination. Several incidents including logistical delays, vehicle malfunctions, and instances of miscommunication with local communities highlight potential deficiencies in these key resource domains. These challenges underscore the necessity of a systematic and scholarly examination of the impact that personnel readiness and materiel sufficiency have on operational effectiveness (UNIFIL., 2021).Without optimal preparedness in both dimensions, the comprehensive achievement of UNIFIL's mandate is unlikely to be realized.

Despite the abundance of studies on Indonesia's role in United Nations peacekeeping missions, research that specifically links personnel and materiel readiness to the success of the Garuda Contingent's deployment in UNIFIL remains notably limited. Most prior studies have predominantly focused on aspects of foreign policy, defense diplomacy, or Indonesia's quantitative contributions to UN missions, while more targeted evaluations of internal factors influencing field successsuch as personnel competence and the availability of military equipmentare still lacking. Such assessments are crucial for informing evidence-based policy (Sugiyanto, 2024). Moreover, the scarcity of research employing empirical approaches and quantitative analysis has resulted in an information gap concerning the operational effectiveness of Indonesian contingents. This gap poses a challenge to the formulation of strategic, targeted policies, particularly in the context of defense sector reform and the enhancement of the Indonesian Armed Forces' professionalism on the global stage. Therefore, this study is essential not only to fill the existing gap in the literature but also to serve as both an academic foundation and a practical reference for future improvements. It is expected to offer a comprehensive understanding of the extent to which internal resource readiness influences mission outcomes in the field. (Wirawan, 2023).

Recent studies have enriched the understanding of personnel readiness and the role of materiel in Indonesia's peacekeeping missions. For instance, the study "Enhancing Intelligence Capacity for Indonesian Peacekeepers in a Dynamic Peacekeeping Landscape" (Subagyo Zaesohar, 2024) emphasizes that beyond technical preparedness, intelligence capabilities and adaptability to dynamic mission environments are critical. The study highlights that strengthening intelligence capacity including information processing and security situation monitoring can significantly influence personnel readiness by enabling more proactive responses to unforeseen scenarios. Furthermore, the article "Defense Diplomacy through Peacekeeping Operations (PKO): A Reflection on the Role of the Garuda Contingent in 2023" (Pertiwi, 2025) describes how organizational structure, inter-agency coordination, and technical support from the Peacekeeping Mission Training Center (PMPP) contribute to maintaining personnel readiness and materiel sufficiency. This research finds that, in addition to physical and technical training, defense diplomacy and soft power are integral to overall readiness, including the preparation of communication and logistics systems to support multinational operations such as UNIFIL. In a broader context, (Doyle, 2006) underscore the importance of adequate training, cross-cultural communication, and reliable logistics systems as crucial determinants of peacekeeping success. Empirical evidence from several troop-contributing countries further reveals that forces equipped with modern communication technology and appropriate operational vehicles are more capable of fulfilling their mandates effectively. Within the context of UNIFIL, however, the limited references to the operational performance of the Garuda Contingent pose a challenge to conducting a comprehensive evaluation of its contribution. Therefore, a more in-depth, field-based analysis is still required to capture the operational

realities faced by Indonesian peacekeepers in implementing their mandates. This study aims to address this gap by presenting empirically grounded findings that are both contextually relevant and practically insightful. (Nations., 2019)

The urgency of this research lies in the critical need to enhance the effectiveness of Indonesia's contribution to international peacekeeping missions, particularly in complex operational environments such as Lebanon. The operational landscape, characterized by uncertainty, sectarian conflict, and geographical challenges, demands highly prepared and sustainably supported resources (Subagyo Zaesohar, 2024). In this context, deployed personnel must possess strong technical capabilities and social adaptability to perform their duties efficiently and safely. At the same time, materiel support such as armored vehicles, tactical communication tools, and reliable logistics is essential for sustaining field operations. An imbalance between personnel quality and equipment sufficiency may lead to the failure in fulfilling the mission mandate and could jeopardize troop safety. (Pertiwi, 2025) Therefore, a thorough assessment of these two critical aspects is urgently needed to inform strategic decision-making. This study aims to identify existing vulnerabilities and formulate data-driven, actionable solutions that can be implemented by relevant stakeholders. (Khoirunnisa, 2022)

Beyond the operational dimension, the urgency of this research is also closely tied to Indonesia's need to maintain and enhance its international reputation as an active contributor to United Nations peacekeeping missions (Nations, Ranking of military and police contributions to UN operations, 2023). As one of the world's top five troop-contributing countries, Indonesia is expected to demonstrate a high degree of accountability and professionalism in every deployment (Nations, 2022) In this regard, evaluating the on-the-ground performance of its contingents is essential to sustaining global confidence in the competence of Indonesian forces. (Wirawan, 2023) Moreover, the findings of this study may serve as a valuable internal reflection for national defense institutions in formulating policies aimed at enhancing personnel capacity and modernizing military equipment. By understanding the relationship between personnel and materiel readiness and the achievement of operational performance, the government can design more targeted strategies for quality improvement. (Sugiyanto, 2024) Simultaneously, this research is also relevant in supporting the broader vision of Indonesia Emas 2045, which places global security as an integral component of the national development agenda. Thus, the urgency of this study is not merely technical, but also strategic and political, situated within the broader framework of defense diplomacy (Pertiwi, 2025).

This study holds significant theoretical and practical value within the fields of defense studies, international relations, and public policy. (Baylis, 2020) Theoretically, it contributes to the scholarly literature on the determinants of peacekeeping mission success, particularly in the context of developing countries. The findings are expected to serve as a reference for the advancement of theories related to military operations and the effectiveness of multinational missions. (Subagyo Zaesohar, 2024). Practically, the results of this research may inform the evaluation and improvement of troop deployment policies by the Indonesian National Armed Forces (TNI) and the Ministry of Defense. The recommendations derived from the analysis can also be utilized by military training institutions to design programs that are more adaptive to international operational demands. (Hadrianus, 2022) Furthermore, the study's findings may provide valuable input for the government in setting budgetary priorities, particularly concerning the procurement of equipment and supporting facilities. At a broader level, this research also contributes to raising public awareness about the importance of national support for peacekeeping forces. Thus, the benefits of this study extend across academic, institutional, and societal domains. (Pertiwi, 2025)

The primary objective of this research is to conduct a comprehensive analysis of the impact of personnel readiness and materiel adequacy on the success of the Garuda Contingent's deployment in the UNIFIL mission in Lebanon. This study aims to identify specific components within personnel readiness that significantly contribute to field performance. Furthermore, it will evaluate the role of materiel and supporting facilities in facilitating the smooth execution of operational tasks within the mission area. Employing both quantitative and qualitative methodologies, the research will objectively map the relationship between these two variables and the level of mission success. Based on the data

collected, the researcher will formulate practical recommendations for improving recruitment systems, training programs, and the procurement of operational resources. Additionally, this study seeks to provide strategic insights to policymakers to reinforce Indonesia's position in global peacekeeping operations. Overall, the research intends to support the enhancement of the effectiveness, efficiency, and professionalism of Indonesian forces engaged in international peacekeeping missions.

2. Preliminaries or Related Work or Literature Review

Personnel Readiness in Peacekeeping Missions

Personnel readiness constitutes a fundamental aspect in the successful execution of peacekeeping missions. According to Glickman and Gough (1990), operational readiness comprises four main components: personnel, training, equipment, and logistical support. Ready personnel are not only equipped with adequate technical and physical skills but also possess mental preparedness and the capacity to adapt to dynamic local environments. (Doyle, 2006). Emphasizes that cross-cultural training and a clear understanding of mission mandates are pivotal in shaping personnel readiness. In the context of the Garuda Contingent in UNIFIL, the training provided includes conflict scenario simulations and foreign language acquisition; however, reports indicate that adaptation to Lebanon's unique geographical and social conditions remains challenging (Howard, 2008). Astuti and Subekti (2021) found that the greatest obstacle lies in the limited direct experience in interacting with Lebanon's multicultural communities. Therefore, personnel readiness must be enhanced through more context-specific training and adequate field experience.

The Role of Materiel and Logistics in Mission Success

Materiel and logistical support constitute critical factors influencing the effectiveness of peacekeeping missions. Assert that the success of operations heavily depends on the availability of appropriate equipment and reliable logistical systems (Doyle, 2006) In the UNIFIL mission, geographical challenges and difficult terrain necessitate robust armored vehicles and stable communication systems. report that delays in logistical supplies and equipment malfunctions frequently impede patrols and operational activities. This situation is exacerbated by limited spare parts availability and budgetary constraints for materiel maintenance. Consequently, adaptive and modern logistical management is imperative to ensure mission continuity. This study seeks to empirically analyze the relationship between materiel adequacy and operational success of the Garuda Contingent in UNIFIL. (Prayitno, 2023)

Theories of Peacekeeping Mission Success

The success of peacekeeping missions can be examined using the Success Conditions Framework proposed by Fortna (2004). This model highlights four primary determinants of success: a clear mandate, troop readiness, logistical support, and active participation of the host nation. In the context of multinational missions such as UNIFIL, the readiness of personnel and materiel emerges as core, interacting elements that shape operational success. Satoh and Imai (2013) introduced the Integrated Mission Success Framework (IMSF), emphasizing the importance of synergy between internal troop readiness and the ability to adapt to the external environment. This model contends that mission success is not merely the sum of personnel and materiel preparedness but the dynamic interaction of these factors within complex local socio-political contexts. This study employs this framework to elucidate the factors influencing the operational effectiveness of the Garuda Contingent in UNIFIL.

Military Logistics Models in Peacekeeping Operations

Military logistics in peacekeeping operations possess unique characteristics that distinguish them from conventional combat logistics. Williams (2002) posits that logistical models for peacekeeping must prioritize flexibility, rapid responsiveness, and interoperability among multinational units. An effective logistics system must overcome geographical, political, and cultural constraints, ensuring continuous and timely supply delivery. Riyadi (2019) further underscores the importance of information technology integration in logistics management to enhance efficiency and transparency in materiel distribution. Within the context of the Garuda Contingent, logistical challenges include infrastructure limitations and dependence on support from other nations. Therefore, this study examines how an adaptive

and integrated logistics model can improve materiel readiness and bolster mission success in Lebanon.

3. Proposed Method

Research Design

This study adopts a quantitative approach with an explanatory survey design, aimed at analyzing the causal relationship between the independent variables (Personnel and Materiel Readiness) and the dependent variable (Mission Success). The selection of a quantitative method is based on its capacity to deliver measurable data, facilitate rigorous hypothesis testing through statistical analysis, and produce objective and generalizable findings. Grounded in a positivist epistemological paradigm, this approach relies on systematic observation of empirical phenomena using standardized instruments such as closed-ended questionnaires and measurement scales. The explanatory design was chosen not only to describe relationships among variables but also to determine the extent to which Personnel and Materiel Readiness of the Garuda Contingent in UNIFIL collectively influence the success of mission assignments in Lebanon. This method enables the quantification of the interactive effects between the readiness conditions of personnel and materiel and their contribution to the overall operational outcomes, within the framework of international peacekeeping missions. Moreover, generalization of the research findings to the target population (Garuda Contingent UNIFIL 2024) can be achieved with greater validity through the application of stratified random sampling, which accounts for the specific characteristics of functional units and areas of deployment. Thus, the quantitative approach not only answers the research questions with precision but also provides a robust empirical foundation for data-driven policy recommendations.

Population and Sample

In the context of this research, the population refers to the group of individuals or entities that possess specific characteristics defined by the researcher and serve as the primary focus for drawing valid inferences. The selected population comprises all personnel of the Garuda Contingent assigned to UNIFIL in 2024, totaling 1,079 individuals, including Satgas Yonmek 850 personnel,Satgas FHQSU 155 personnel, Satgas MPU 40 personnel, Satgas MCOU 18 personnel, Satgas CIMIC 7 personnel, Satgas Level II Hospital 9 personnel. Due to constraints in time and budget, nonprobability sampling with a random sampling approach was applied. Although the total population consists of 1,079 personnel, the sample size was determined under the assumption of a normal distribution and calculated using the Slovin formula:

$$n = \frac{N}{1+(Nxe^2)}$$

Where:

n = Minimum required sample size

N = Population size (1,079)

e^2 = Margin of error (set at 5%)

By applying this formula:

$$n = \frac{1.079}{1+(1.079x0{,}05^2)} \qquad n = \frac{1.079}{1+(1.079x0{,}0025)} \qquad n = \frac{1.079}{3{,}6975} = 291$$

Hence, the final sample size determined for this study is 291 respondents, drawn from Garuda Contingent personnel undergoing pre-deployment preparation at the TNI Peacekeeping Mission Center (PMPP TNI).

Data Collection Techniques

The primary data for this research was collected using the following methods:

Literature Review

A desk study was conducted to obtain secondary data by reviewing books, academic journals, and relevant literature that support the conceptual and theoretical framework of the study.

Questionnaire

The main instrument used was a structured, closed-ended questionnaire, designed to collect responses using a Likert-scale scoring system. This format allows for quantifiable measurement of respondent perceptions and assessments.

Data Analysis Techniques

This study utilizes the Structural Equation Modeling - Partial Least Squares (SEM-PLS) method for data analysis, implemented via SmartPLS 3.0 software. SEM-PLS is chosen for its ability to analyze complex relationships among latent variables, even with small sample sizes and non-normal data distributions. This approach supports the integration of both reflective and formative indicators within a single structural model, making it well-suited for exploratory research. Prior to analysis, the raw data undergoes a three-stage preprocessing procedure: (1)Editing, Verifying the completeness, consistency, and accuracy of responses, (2)Coding, Converting qualitative responses into numerical data,(3)Tabulation , Organizing data into frequency distribution tables to facilitate further statistical analysis. Following data preparation, the analysis proceeds in two main stages:

Measurement Model Evaluation (Outer Model)

This stage assesses the validity and reliability of the constructs through:

a. Convergent Validity, Assessed via loading factors, with a minimum acceptable value of ≥ 0.50 (ideal ≥ 0.70).
b. Discriminant Validity, Ensures constructs are distinct using Average Variance Extracted (AVE) and the Fornell-Larcker Criterion.
c. Composite Reliability (CR), Evaluates internal consistency; a CR value above 0.70 indicates acceptable reliability.

Structural Model Evaluation (Inner Model)

This stage examines the causal relationships between latent variables, including:

a. Coefficient of Determination (R^2) – Measures the variance explained by exogenous variables.
b. Predictive Relevance (Q^2) – Assesses the model's predictive power.
c. Path Coefficient Significance Testing – Utilizes t-statistics and p-values to determine the strength and significance of hypothesized paths. Path analysis is conducted to estimate the magnitude of both direct and indirect effects, based on standardized regression coefficients. Hypothesis testing employs the bootstrapping resampling technique developed by Geisser and Stone, which is especially suitable for small-sample, non-normally distributed data (minimum 30 observations).

Statistical Hypotheses Tested

For the Outer Model:

H_0: $\lambda_i = 0 \rightarrow$ The indicator is not significantly related to its construct

H_1: $\lambda_i \neq 0 \rightarrow$ The indicator is significantly related to its construct

For the Inner Model:

H_0: $\gamma_i = 0 \rightarrow$ No effect of exogenous variable on endogenous variable

H_1: $\gamma_i \neq 0 \rightarrow$ There is an effect of exogenous variable on endogenous variable

The threshold for statistical significance is set at $p \leq 0.10$, corresponding to a 90% confidence level. If the p-value falls below this threshold, the hypothesis is deemed statistically significant. Under this approach, indicators that are significant in the outer model are considered valid measurement tools, while significance in the inner model confirms the strength of causal relationships among variables.

4. Results and Discussion

Results

Evaluasi Model Pengukuran (Outer Model)

a. Indicator Validity Assessment

The validity of the indicators was assessed through their outer loading values on the respective latent constructs. Based on the results of the analysis using SmartPLS, the outer loading values for the three latent variables varied in magnitude. For the variable X1 (Personnel Readiness), loading values ranged from 0.565 to 0.856, with indicator X1.10 demonstrating the highest loading at 0.856, followed by X1.9 at 0.836. The lowest loading values were observed for X1.7 (0.565) and X1.15 (0.601). For the variable X2 (Materiel Readiness), outer loading values ranged from 0.604 to 0.839, with X2.14 (0.839) and X2.15 (0.795) showing the highest levels of indicator validity, while X2.4 recorded the lowest at 0.604. Although a number of indicators fall below the ideal threshold of 0.70, the majority of indicators within X2 still exhibit acceptable loading values and are considered appropriate to be retained in the measurement model**.**

Table 1. Indicator Validity Assessment.

Indicator (X1)	Loading	Indicator (X2)	Loading	Indicator (Y)	Loading
X1.1	0.652	X2.1	0.704	Y.1	0.539
X1.2	0.763	X2.2	0.670	Y.2	0.668
X1.3	0.703	X2.3	0.719	Y.3	0.697
X1.4	0.746	X2.4	0.604	Y.4	0.562
X1.5	0.827	X2.5	0.781	Y.5	0.751
X1.6	0.740	X2.6	0.718	Y.6	0.753
X1.7	0.565	X2.7	0.774	Y.7	0.601
X1.8	0.711	X2.8	0.776	Y.8	0.707
X1.9	0.836	X2.9	0.775	Y.9	0.774
X1.10	0.856	X2.10	0.670	Y.10	0.772
X1.11	0.716	X2.11	0.768	Y.11	0.767
X1.12	0.699	X2.12	0.771	Y.12	0.754
X1.13	0.716	X2.13	0.772	Y.13	0.797
X1.14	0.693	X2.14	0.839	Y.14	0.749
X1.15	0.601	X2.15	0.795	Y.15	0.648

The analysis results indicate that the majority of indicators exhibit outer loading values exceeding 0.70, which signifies satisfactory indicator reliability. However, several

indicators demonstrate loadings between 0.50 and 0.70. According to Hair et al. (2019), such indicators may still be retained in the measurement model provided that the Average Variance Extracted (AVE) and Composite Reliability criteria are adequately met. For the dependent variable Y, indicator loadings range from 0.539 to 0.797. The highest loadings were observed in indicators Y.13 (0.797) and Y.10 (0.772), while the lowest loadings appeared in indicators Y.1 (0.539) and Y.4 (0.562). Although these latter indicators fall below the conventional threshold of 0.70, their values remain above 0.50, justifying their retention in the model under prevailing validity considerations. Specifically, several indicators such as X1.7 (0.565), X1.15 (0.601), X2.4 (0.604), Y.1 (0.539), and Y.4 (0.562) fall short of the ideal 0.70 loading benchmark yet surpass the 0.50 minimum. Hair et al. (2019) recommend maintaining indicators within the 0.40 to 0.70 range if their removal does not substantially enhance the construct's overall reliability. In this study, the decision to retain these indicators was grounded in theoretical justification and their contribution to content validity. Nevertheless, future research could consider revisiting or refining these indicators to strengthen measurement validity. Conversely, indicators with the highest loadings—namely X1.10 (0.856), X1.9 (0.836), X2.14 (0.839), and Y.13 (0.797)—are deemed the most representative of their respective constructs. These indicators should be prioritized in subsequent instrument development efforts to optimize construct measurement fidelity.

b. Construct Reliability

Construct reliability constitutes a critical aspect in the evaluation of measurement models. Based on the analysis results, the construct reliability values for the three latent variables are presented in the following table

Table 2. Construct Reliability.

Konstruk	Cronbach's Alpha	rho_a	Composite Reliability (rho_c)	AVE
X1	0,934	0,938	0,943	0,527
X2	0,942	0,947	0,949	0,555

The Cronbach's Alpha values for X1 (0.934) and X2 (0.942) are highly satisfactory, significantly exceeding the recommended threshold of 0.7. Similarly, the composite reliability coefficients (rho_c) for X1 (0.943) and X2 (0.949) indicate excellent internal consistency.The Average Variance Extracted (AVE) values for X1 (0.527) and X2 (0.555) both surpass the minimum acceptable level of 0.5, demonstrating that over 50% of the variance in the indicators is accounted for by their respective latent constructs. This affirms robust convergent validity for both constructs.Notably, Cronbach's Alpha and composite reliability values for X1 and X2 not only exceed the recommended threshold but also corroborate each other in indicating a high degree of internal consistency. According to Hair et al. (2019), composite reliability is a more appropriate reliability measure than Cronbach's Alpha, as it does not assume equal indicator reliability. In this study, both reliability metrics reveal highly satisfactory results, suggesting that the indicators consistently measure the same underlying constructs. The AVE values further substantiate convergent validity by confirming that the latent constructs explain more than half of the variance in their respective indicators, thereby supporting the constructs' convergent validity within the measurement model.

c. Discriminant Validity

Discriminant validity assesses the extent to which a construct is truly distinct from other constructs within the model. In this study, discriminant validity was evaluated using the Heterotrait-Monotrait Ratio (HTMT) criterion.

Table 3. Heterotrait-Monotrait Ratio (HTMT).

Konstruk	X1	X2	Y
X1			
X2	0,765		
Y	0,873	0,786	

The HTMT values between constructs were as follows: 0.765 between X1 and X2, 0.873 between X1 and Y, and 0.786 between X2 and Y. According to Henseler et al. (2015), HTMT values below 0.90 indicate adequate discriminant validity. All HTMT values in this study fall below this threshold, thereby confirming the presence of discriminant validity. Although the HTMT value between X1 and Y approaches the 0.90 cutoff, it remains acceptable within the context of this research. Discriminant validity was assessed using the Heterotrait-Monotrait Ratio (HTMT), which is regarded as a more rigorous criterion compared to traditional measures such as Fornell-Larcker or cross-loadings. Specifically, the HTMT values of 0.765 (X1–X2), 0.873 (X1–Y), and 0.786 (X2–Y) are all below the recommended threshold of 0.90 set by Henseler et al. (2015). Notably, the HTMT value between X1 and Y (0.873) approaches the more stringent threshold of 0.85 but remains within an acceptable range for this study. For future research, it is advisable to address the discriminant validity between X1 and Y by refining or revising indicators that may contribute to the elevated inter-construct correlation. Overall, the measurement model evaluation demonstrates that the instruments employed exhibit sound psychometric properties, providing a robust foundation for interpreting the structural model results.

Structural Model Evaluation (Inner Model)

a. R-Square Values

The R-Square value serves as an indicator of the proportion of variance in the dependent variable that is explained by the independent variables. Based on the analysis, the R-Square value for the dependent variable Y is 0.715, with an adjusted R-Square value of 0.713. This indicates that approximately 71.5% of the variance in Y can be explained by the predictors X1 and X2, while the remaining 28.5% is attributable to factors outside the model. According to Chin's (1998) classification, an R-Square value of 0.715 is considered substantial, as it exceeds the threshold of 0.67. This underscores the model's strong predictive capability and highlights the significant role of variables X1 and X2 in accounting for the variability observed in Y.

b. Path Coefficients and Significance Levels

Path coefficients represent the strength and direction of relationships among latent variables within the structural model. The results of the path coefficient analysis are presented in the table below.

Table 4. Path Coefficients and Significance Levels

Hubungan	Original Sample (O)	T Statistics	P Values	2.5%	97.5%
X1 -> Y	0,595	10,042	0,000	0,488	0,720
X2 -> Y	0,305	4,948	0,000	0,177	0,419

The path coefficient from X1 to Y is 0.595, accompanied by a t-statistic of 10.042 and a p-value of 0.000. Given that the t-statistic exceeds the critical value of 1.96 and the p-value is below the 0.05 threshold, the influence of X1 on Y is statistically significant. The 95% confidence interval for this coefficient ranges from 0.488 to 0.720, which does not include zero, thereby further substantiating the significance of this relationship. Similarly, the path coefficient from X2 to Y is 0.305, with a t-statistic of 4.948 and a p-value of 0.000. These values likewise indicate a statistically significant positive effect of X2 on Y. The 95% confidence interval spans from 0.177 to 0.419 and excludes zero, confirming the robustness of this effect. Both independent variables, X1 and X2, exert a positive and statistically significant influence on the dependent variable Y; however, the effect of X1 is notably stronger than that of X2. The confidence interval for the path coefficient from X1 to Y is narrower ([0.488, 0.720]) compared to that from X2 to Y ([0.177, 0.419]), suggesting a more precise estimation of X1's effect. These findings carry important theoretical and practical implications regarding the dynamics among X1, X2, and Y. Despite both predictors having significant effects, X1's contribution is approximately twice as large as that of X2. This suggests that strategic interventions aimed at enhancing X1 are likely to be more effective in improving Y, although comprehensive approaches targeting both variables may yield optimal outcomes.

Hypothesis Testing

The results of the hypothesis testing, derived from path analysis and statistical significance evaluations, provide robust empirical support for both proposed hypotheses.Hypothesis 1, which posited that variable X1 has a significant positive effect on Y, is strongly supported by the data. The path coefficient for X1 is 0.595, accompanied by a t-statistic of 10.042 well above the critical threshold of 1.96 and a p-value of 0.000, indicating a high level of statistical significance. Furthermore, the 95% confidence interval for this estimate [0.488; 0.720] does not include zero, further confirming the strength and reliability of the relationship.

Similarly, Hypothesis 2, which asserted a positive and significant influence of X2 on Y, is also supported. The path coefficient for X2 is 0.305, with a t-statistic of 4.948 and a p-value of 0.000, both of which meet conventional criteria for statistical significance. The 95% confidence interval for this relationship ranges from 0.177 to 0.419, excluding zero and reinforcing the conclusion of a meaningful effect. Overall, both independent variablesX1 and X2 demonstrate statistically significant and positive contributions to the dependent variable Y. Notably, the magnitude of the effect of X1 is nearly double that of X2, indicating that X1 plays a more dominant role in influencing Y. These findings highlight the critical importance of X1 in shaping outcomes related to Y, while also acknowledging the meaningful, albeit more moderate, role of X2. This has implications for both theoretical refinement and the formulation of targeted strategies to enhance Y through a prioritized focus on X1.

Discussion

The Relationship Between Personnel Readiness (X1) and Mission Success (Y)

The path coefficient from X1 to Y, valued at 0.595, indicates a strong and statistically significant positive relationship between personnel readiness and mission success. The corresponding t-statistic of 10.042 and p-value < 0.001 suggest that this relationship is not due to random chance, but reflects a genuine effect within the population of the Garuda UNIFIL contingent. This finding aligns with the work of Kusumaningtyas & Riyadi (2022), who assert that personnel readiness encompassing dimensions such as training, discipline, and technical proficiency is a key predictor of success in non-combat military operations. Similarly, the study by Molina-Guzmán et al. (2023) on Latin American peacekeeping forces emphasizes that mission success is highly dependent on the readiness of human resources, particularly in terms of cultural adaptability and decision-making capabilities in the field. These results underscore the strategic role of personnel readiness (X1) in ensuring the operational effectiveness of peacekeeping deployments. They reinforce the theoretical premise that human factors constitute a fundamental asset in the execution of multinational operations such as UNIFIL**.**

The Relationship Between Materiel Readiness (X2) and Mission Success (Y)

The path coefficient from X2 to Y, measured at 0.305, also reveals a statistically significant positive influence of materiel readiness on mission success, albeit with a moderate effect size. A t-statistic of 4.948 and a p-value < 0.001 confirm the robustness of this relationship, thereby validating the inclusion of X2 as a relevant factor in the model. This finding is supported by Rahman et al. (2023), who highlight the critical role of logistics, equipment maintenance, and reliable communication systems in enhancing the success of peacekeeping operations. Furthermore, Sambanis & Schulhofer-Wohl (2021) identify inadequate military assets and logistical shortcomings as primary causes of peacekeeping mission failures. Although the effect of materiel readiness is less pronounced than that of personnel readiness, it remains essential particularly in sustaining operational continuity, responding to emergency scenarios, and ensuring the mobility of troops within the mission area.

The Collective Influence of Personnel Readiness (X1) and Materiel Readiness (X2) on Mission Success (Y)

The structural model reveals that the combination of personnel and materiel readiness explains 71.5% of the variance in mission success (Y), demonstrating that these two independent variables are critical determinants of operational performance for the Garuda Contingent in Lebanon.The disparity in effect sizes between X1 (0.595) and X2 (0.305) reinforces the argument that personnel readiness exerts a more dominant influence primarily

due to the human factor's direct role in decision-making, field adaptation, and tactical-operational execution. Nevertheless, materiel readiness remains a vital supporting component, enhancing mobility, mission sustainability, and logistical efficiency. These findings are consistent with the conclusions of Widodo & Harjanto (2021), who emphasize the importance of synergy between human resource preparedness and the adequacy of operational facilities as the cornerstone of Indonesian peacekeeping mission success. Additionally, Howard et al. (2024), in their recent study on peacekeeping effectiveness in Africa, underscore the concept of integrated readiness a holistic framework combining personnel and materiel readiness as a primary predictor of mission outcomes

5. Comparison

The findings of this study contribute meaningfully to the existing body of knowledge by empirically validating the combined effect of personnel readiness and materiel readiness on mission success in the context of peacekeeping operations. Compared to prior research, such as that of Kusumaningtyas & Riyadi (2022) and Rahman et al. (2023), which examined these variables in isolation, this study offers a more integrated perspective by simultaneously evaluating both human and material dimensions of operational preparedness. While previous studies have often emphasized either personnel training or logistical adequacy as stand-alone predictors, this research provides quantitative evidence that personnel readiness (X1) exerts a stronger and more dominant influence on mission success than materiel readiness (X2). Specifically, with a path coefficient of 0.595 for X1 and 0.305 for X2, the model illustrates a differential impact, underscoring the critical role of human factors in tactical and strategic decision-making. This aligns with Howard et al. (2024), who advocate for an "integrated readiness" approach, wherein both human and material resources must function cohesively to achieve optimal operational outcomes. Furthermore, the high explanatory power of the model $R^2 = 0.715$ exceeds the predictive capabilities demonstrated in several previous peacekeeping studies, thereby affirming the robustness and contextual relevance of this research within the Indonesian UNIFIL contingent framework. The study thus not only reinforces existing theories but also advances them by presenting a more holistic and empirically grounded model of mission success, which may serve as a benchmark for future peacekeeping evaluations in similar operational environments.

6. Conclusions

This study aimed to investigate the influence of X1 and X2 on Y using the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach. Based on the analysis and discussion, several key conclusions can be drawn.First, the evaluation of the measurement model (outer model) demonstrates that the measurement instruments exhibit strong psychometric properties, with most indicators showing satisfactory reliability. The construct reliability values, as measured by Cronbach's Alpha and Composite Reliability, for both X1 and X2 significantly exceed the recommended thresholds, indicating high internal consistency. Convergent validity is confirmed by Average Variance Extracted (AVE) values above 0.50 for both constructs. Discriminant validity is also met, based on the Heterotrait-Monotrait Ratio (HTMT) criterion, although the HTMT value between X1 and Y approaches the critical threshold.Second, the evaluation of the structural model (inner model) reveals that the model possesses substantial predictive power, with an R^2 value of 0.715 for Y. This indicates that 71.5% of the variance in Y can be explained by the combined effects of X1 and X2. The path coefficients show that X1 exerts a strong positive effect on Y ($\beta = 0.595$), while X2 has a moderate positive effect ($\beta = 0.305$). Both relationships are statistically significant, with t-statistics well above 1.96 and p-values below 0.05, confirming the robustness of the results.Third, hypothesis testing confirms that both research hypotheses are empirically supported. X1 has a statistically significant positive influence on Y (H1), and X2 also demonstrates a statistically significant positive effect on Y (H2). Notably, the effect size of X1 on Y is approximately twice as large as that of X2, highlighting the more dominant role of X1 in determining the outcome variable Y. Fourth, the findings carry important theoretical and practical implications. Theoretically, the results reinforce the validity of the conceptual framework underpinning the relationships among X1, X2, and Y, while also suggesting the need for greater emphasis on the contribution of X1. Practically,

the findings imply that interventions aimed at improving Y would likely be more effective if they prioritize enhancing X1, although a comprehensive strategy incorporating both X1 and X2 would likely yield optimal outcomes. In sum, this study provides a nuanced understanding of the dynamics between X1, X2, and Y, while underscoring the predominant role of X1 as a determinant of Y. These findings offer a solid foundation for future theoretical development and for designing more effective policies and practices aimed at improving Y.

Reference

Anwar, D. F. (2010). Indonesia's Contributions to UN Peacekeeping Missions. Asian Survey, 50(4), 691–715. https://doi.org/10.1525/as.2010.50.4.691

Baylis, J. S. (2020). *The globalization of world politics: An introduction to international relations (8th ed.).* Oxford University Press.

Barney, J. B. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management*, 17(1), 99–120. https://doi.org/10.1177/014920639101700108

Becker, G. S. (1964). Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education. University of Chicago Press. https://doi.org/10.7208/chicago/9780226041223.001.0001

Bitar, A. (2015). Logistics Challenges in UN Peacekeeping Operations. *Journal of International Peacekeeping*, 19(3), 243–260. https://doi.org/10.1163/18754112-01903003

Council, U. N. (2006). *Resolution 1701 (2006) on the situation in the Middle East*. New York: United Nations.

Doyle, M. W. (2006). *Making war and building peace: United Nations peace operations. Princeton University Press.* Princeton University Press.

Donny Erfianto. (2024). Pengaruh Rekrutmen Dan Pelatihan Terhadap Keberhasilan Tugas Personel Peacekeeping TNI Dalam Rangka Mendukung Operasi Pemeliharaan Perdamaian Dunia [Tesis]. Sekolah Staf dan Komando Angkatan Laut (SESKOAL), Jakarta.

Durch, W. J., & Berkman, T. C. (2006). Who Should Keep the Peace? Stimson Center. https://www.stimson.org/wp-content/files/file-attachments/Who_Should_Keep_the_Peace_0.pdf

Gaibulloev, K., & Sandler, T. (2018). Demand for United Nations Peacekeeping. *Journal of Conflict Resolution*, 62(4), 705–733.

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2021). A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM) (3rd ed.). SAGE Publications.

Howard, L. M., Doyle, M., & Johnson, K. (2024). State Capacity and Peacekeeping Success: Comparative Study in African Missions. Peace and Conflict Studies Review, 29(1), 33–50.

Howard, L. M. (2008). UN Peacekeeping in Civil Wars. Cambridge University Press. https://doi.org/10.1017/CBO9780511755933

Hadrianus, Y. (2022). Pendekatan komunikasi lintas budaya dalam pre-deployment training Satuan Tugas Garuda XXIII-J/UNIFIL di Lebanon Selatan. *Strategi Pertahanan Darat*, 8(2), 45–62.

Howard, L. M. (2008). *UN peacekeeping in civil wars.* Cambridge: Cambridge University Press.

Indonesia, K. P. (2022). Laporan Evaluasi Kesiapan Kontingen Garuda UNIFIL. *Kementerian.* Jakarta.

Johnson, L. M. (2021). Cultural Competence in Peacekeeping: Enhancing Local Trust Through Personnel Training. Global Security Studies, 15(2), 112–130.

Johnson, L., Smith, R., & Brown, T. (2018). Ethics vs. Protocol in Military Hospitals. US Army Medical Journal, 12(3), 45–50.

Kementerian Pertahanan Republik Indonesia. (2022). Laporan Evaluasi Kesiapan Kontingen Garuda UNIFIL. Jakarta: Kementerian

Khoirunnisa, T. A. (2022). Kontribusi Indonesia dalam Peacekeeping Mission di Lebanon sebagai Implementasi Diplomasi Pertahanan. *Jurnal Transformasi Global*,, 9(1).

Kusumaningtyas, A., & Riyadi, S. (2022). Determinants of Military Readiness in Non-War Operations: A Case Study of Peacekeeping Units. *Jurnal Pertahanan dan Keamanan,* 8(1), 55–70.

Lee, S., & Kim, H. (2023). Logistics and Sustainability in UN Peacekeeping: Lessons from Lebanon and South

Molina-Guzmán, L., Ortega, D., & Rivas, M. (2023). Readiness and Effectiveness of Peacekeeping Forces in Latin America. *Journal of International Peacekeeping*, 15(2), 88–104.

Mission Success: A Case Study of UNIFIL. Journal of International Peacekeeping, 29(3), 45–67.

Nations, U. (2022). *UN peacekeeping fact sheet.* epartment of Peace Operations.

Nur Rizky Ramadhania, & Hidayat, N. (2024). Analysis of Clean Ocean Campaign Framing in Instagram Account Posts @pandulaut.id and @theoceancleanup . International Journal of Environmental Communication (ENVICOMM), 2(1), 11-23.

Nations, U. (2023). *Ranking of military and police contributions to UN operations.* Nations Peacekeeping.

Nations, U. (2023). *United Nations Interim Force in Lebanon (UNIFIL): Mandate and background.* New York: United Nations.

Nations., U. (2019). *Current and emerging uniformed capability requirements for United Nations peacekeeping.* UN Department of Peace Operations.

Novrianda, R. (2020). Indonesia's contribution to UNIFIL: Peacekeeping missions and foreign policy implementation. *Jurnal Hubungan Internasional*, 9(2), 101–115.

N. Hidayat and J. U. Hadibroto, "Tradisi Tiatiki dan pemimpin opini: Analisis media vernakular dalam komunikasi, pelestarian lingkungan, dan politik lokal Papua," *JURRISH*, vol. 4, no. 3, pp. 967–979, Jul. 2025.

N. Hidayat, "Narasi kebangsaan di era media sosial: Relevansi Pancasila dalam ekosistem digital," *PACIVIC*, vol. 5, no. 1, pp. 105–118, Apr. 2025. doi: 10.36456/p.v5i1.10183.

Pertiwi, A. D. (2025). Defense Diplomacy through Peacekeeping Operations (PKO): A Reflection on the Role of the Garuda Contingent in 2023. *nternational Journal of Humanities Education and Social Sciences*, 5(1).

Prayitno, M. E. (2023). Analysis of Indonesian Naval Ship Maintenance Strategy at Jakarta Military Sea Lift Unit to Support Sea Transportation. *International Journal of Marine Engineering Innovation and Research.*

Patel, R., Al-Mansoori, F., & Nguyen, T. (2020). Personnel Performance in Hybrid Peacekeeping Environments: A Quantitative Analysis. Conflict Resolution Quarterly, 37(4), 301–320.

Rahman, F., Yusuf, M., & Siregar, A. (2023). Logistics Support and Operational Success in UN Missions: Evidence from Southeast Asia. *International Journal of Military Operations*, 11(3), 201–219.

Rumus Slovin: Panacea Masalah Ukuran Sampel. *Suksma Jurnal Psikologi Universitas Sanata Dharma,* 4(2), 24–43.

Ramayah, T., Cheah, J., Chuah, F., Ting, H., & Memon, M. A. (2018). Partial Least Squares Structural Equation Modeling (PLS-SEM) Using SmartPLS 3.0. Pearson Malaysia Sdn Bhd.

Sambanis, N., & Schulhofer-Wohl, J. (2021). Measuring the Effectiveness of UN Peacekeeping. World Politics, 73(4), 511–554.

Smith, J. A., Brown, K. L., & Davis, R. M. (2022). The Impact of Technological Readiness on Peacekeeping

Soejanto, T., & Rahayu, S. (2019). Role Conflict among Military Nurses in Indonesia. *Jurnal Keperawatan Indonesia*, 22(2), 34–40.

Stimson Center. (2006). Who Should Keep the Peace? Diakses pada 1 April 2024 dari https://www.stimson.org

Sugiyono. (2009). Metode Penelitian Kuantitatif, Kualitatif dan R&D. Bandung: Alfabeta.

Sugiyono. (2014). Metode Penelitian Kuantitatif Kualitatif dan R& B. Bandung: Alfabeta.

Subagyo Zaesohar, H. P. (2024). nhancing Intelligence Capacity for Indonesian Peacekeepers in a Dynamic Peacekeeping Landscape. *International Journal of Humanities Education and Social Sciences*, 3(5), 1323–1335.

Sugiyanto, R. M. (2024). Indonesia's Defense Diplomacy in Lebanon through the Peacekeeping Force of the United Nations Interim Force in Lebanon (UNIFIL). *Indonesian Journal of Social Science Research,*, 5(2), 621–630.

UNIFIL. (2021). *Report on Operational Challenges in Southern Lebanon (UN Doc. S/2021/732).*

U. Halim and N. Hidayat, "The Sequential Levels of the Digital Divide in the Educational Domain Among Indonesian University Students," Inject (Interdisciplinary J. Commun., vol. 10, no. 1, pp. 179–208, Jun. 2025, doi: 10.18326/inject.v10i1.4427.

Wirawan, L. H. (2023). Kapabilitas Satuan Tugas Indonesia Battalion Kontingen Garuda (Konga) Menjaga Perdamaian di Lebanon Selatan (Kajian Profesionalisme Pelaksanaan Tugas Pokok TNI). *Aliansi: Jurnal Politik, Keamanan dan Hubungan Internasional.*

Widodo, H., & Harjanto, B. (2021). *Human Resource and Materiel Readiness in Indonesian Peacekeeping Missions*. Jurnal Keamanan Nasional, 5(2), 147–162.