



The Influence of Intrinsic and Extrinsic Motivation on Performance with Situational Leadership as a Mediating

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ABSTRACT

This study examines the impact of intrinsic and extrinsic motivation on the performance of ship crews, with situational leadership as a mediating variable at PT. Salam Pacific Indonesia Lines. The national shipping industry faces complex operational challenges, where crew performance is a key determinant of success. A quantitative causal research design was utilized, employing proportional stratified random sampling to collect samples of 150 respondents. The research population consisted of approximately 250 ship crews of PT. SPIL. Data were collected through questionnaires utilizing a five-point Likert scale and analyzed using SEM-PLS. The findings indicate that intrinsic motivation does not have a significant effect on performance ($\beta=0.085$; $p=0.415$), whereas extrinsic motivation has a positive and significant effect ($\beta=0.171$; $p=0.022$). Situational leadership is found to fully mediate the effect of intrinsic motivation on performance and partially mediate the effect of extrinsic motivation on performance. These results integrate Social Exchange Theory (SET), Self-Determination Theory (SDT), and Situational Leadership Theory (SLT) within the maritime industry context. Managerial implications highlight the need for developing situational leadership training programs for ship captains and enhancing fair compensation systems to optimally drive crew performance.

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INTRODUCTION

The national and global shipping industry is currently undergoing a significant transformation driven by market dynamics, global logistics pressures, and increasing demands for operational efficiency. Within this context, human resource management, particularly ship crew members, has become a critical determinant of operational success, safety, and business sustainability. Ship crew members, comprising captains, deck officers, engine officers, helmsmen, engineers, able-bodied seamen, and other technical personnel, operate in a unique working environment characterized by isolation, high-risk conditions, extended working hours, and complex physical and psychological challenges. Crew performance affects not only efficiency and delivery timeliness but also the safety of lives, vessel assets, and marine environmental sustainability (Thai & Vu, 2020). Consequently, maintaining motivation and effective leadership onboard ships has become a strategic necessity.

PT. Salam Pacific Indonesia Lines (PT. SPIL) is a national shipping company that plays a vital role in supporting Indonesia's connectivity and logistics. The company operates a fleet serving domestic routes, focusing on cargo transportation. As a strategic sector enterprise, PT. SPIL faces challenges including

market demand fluctuations, intense competition with other operators, and increasingly stringent maritime regulations. To remain competitive, the company must ensure that operational performance is supported by optimal human resource performance, particularly from crew members who serve as the frontline of service delivery. However, internal indicators suggest challenges related to turnover, workload complaints, and variations in performance quality across vessels, which are suspected to be associated with motivation and leadership factors at the operational level. Achieving optimal performance results from complex interactions among various factors. Previous research by Abbas (2013) in the educational context demonstrated that both intrinsic motivation (internal drives such as achievement and responsibility) and extrinsic motivation (external factors such as rewards and working conditions) have significant positive effects on performance. This finding suggests that in the context of ship crews, both forms of motivation likely play crucial roles.

Meanwhile, situational leadership emphasizes leaders' flexibility in adapting their leadership styles to the situation, characteristics, and readiness levels of subordinates (Hersey & Blanchard, 2013). Falah et al. (2025) asserted that leaders must be able to adapt to various levels of individual and group maturity to produce flexible and effective behavior using situational leadership styles. However, the strength of intrinsic and extrinsic motivation may not stand alone. Leadership is considered capable of mediating the relationship between motivation, organizational culture, and performance. Putri et al. (2024) concluded that a combination of positive organizational culture with inspirational and adaptive leadership styles has a significant positive impact on employee performance. Effective leaders can create a supportive work climate, thereby strengthening the positive impact of intrinsic motivation, extrinsic motivation, and organizational culture on crew performance (Bass & Riggio, 2006).

On the other hand, Ena & Djami (2020) cautioned that extrinsic motivation alone, without internal factors and appropriate leadership support, may be insufficient to drive individual performance optimally. This indicates that leadership serves not only as a driver but also as a balancer and amplifier of other factors. Based on the aforementioned descriptions and empirical findings from relevant journals, there remains a scarcity of research examining the simultaneous interaction of these three factors within the unique context of the shipping industry. Therefore, this study aims to comprehensively analyze the influence of intrinsic and extrinsic motivation on performance with situational leadership as a mediating variable among crew members of PT. Salam Pacific Indonesia Lines.

Despite the extensive body of research on motivation, leadership, and performance in various organizational contexts, several significant gaps remain in the maritime industry literature, particularly concerning ship crew members in Indonesian shipping companies, as the application of Self-Determination Theory (SDT), Social Exchange Theory (SET), and Situational Leadership Theory (SLT) to seafaring work has been limited despite the unique characteristics of shipboard environments that may moderate these relationships (Ryan & Deci, 2017; Thai & Vu, 2020), while previous studies have produced inconsistent findings regarding the effects of intrinsic and extrinsic motivation on performance (Abbas, 2013; Nugroho, 2022; Wedhu et al., 2023; Ena & Djami, 2020), suggesting that context and mediating variables such as leadership may play crucial roles, and the majority of research has been conducted in banking, manufacturing, and education sectors, with the maritime industry receiving disproportionately little attention, particularly in the Indonesian context (Theotokas & Progolaki, 2020), and previous studies have predominantly employed qualitative approaches or simple regression analyses, limiting their ability to examine complex mediating relationships, whereas this study employs SEM-PLS to test the mediating role of situational leadership in the motivation-performance relationship. The study addresses several theoretical and practical problems that have not been adequately resolved, including theoretical inconsistency regarding the relative importance of intrinsic versus extrinsic motivation, the underdeveloped role of leadership as a mediating mechanism in the motivation-performance relationship, and from a practical perspective, PT. Salam Pacific

Indonesia Lines faces critical challenges including suboptimal leadership performance (Captains averaging 78.45 out of 100), crew turnover, workload complaints, and variations in performance quality across vessels, yet lacks empirical evidence to guide targeted human resource interventions.

The primary objective of this study is to examine the influence of intrinsic and extrinsic motivation on crew performance with situational leadership as a mediating variable among ship crew members of PT. Salam Pacific Indonesia Lines, specifically aiming to examine seven hypothesized relationships: the direct effects of intrinsic motivation (H1) and extrinsic motivation (H2) on crew performance; the effects of intrinsic motivation (H3) and extrinsic motivation (H4) on situational leadership; the effect of situational leadership on crew performance (H5); and the mediating roles of situational leadership in the relationships between intrinsic motivation and performance (H6) and between extrinsic motivation and performance (H7), while from a theoretical perspective integrating SET, SDT, and SLT into a coherent model applicable to the maritime context, and from a practical perspective providing evidence-based recommendations for management regarding leadership training, compensation systems, and crew development initiatives. This study offers several novel contributions across theoretical, empirical, contextual, and methodological dimensions: theoretically, it provides a novel integration of SET, SDT, and SLT into a single framework positioning situational leadership as the mediating mechanism that explains how motivation translates into performance, distinguishing between full mediation for intrinsic motivation and partial mediation for extrinsic motivation, while extending SLT by examining how subordinate motivation influences leaders' ability to apply adaptive styles; empirically, it generates original findings on the motivation-leadership-performance relationship in the maritime industry, challenging the universal applicability of SDT's emphasis on intrinsic motivation; contextually, it focuses on the under-researched Indonesian shipping industry addressing the unique characteristics of seafaring work; methodologically, it employs SEM-PLS with bootstrapping to test complex mediating relationships; and practically, it identifies that developing situational leadership capabilities among captains may be more effective than simply increasing motivation for translating intrinsic motivation into performance outcomes.

LITERATURE REVIEW

Situational Leadership Theory (SLT)

Situational Leadership Theory, developed by Hersey and Blanchard (1969), proposes that effective leadership requires adapting one's style to the maturity level of followers defined by their competence and commitment to perform specific tasks (Hersey et al., 2015). The theory identifies four leadership styles: Telling (S1: high task, low relationship) for followers with low competence and low commitment; Selling (S2: high task, high relationship) for followers with low competence but high commitment; Participating (S3: low task, high relationship) for followers with high competence but variable commitment; and Delegating (S4: low task, low relationship) for followers with high competence and high commitment (Blanchard et al., 2017). Recent empirical research supports SLT when leader and follower perceptions of maturity are congruent (Thompson & Glaso, 2018), though challenges remain in assessing follower development levels. Contemporary studies also examine SLT's applicability in sustainability-driven organizations, suggesting the model may require theoretical modifications to address modern leadership demands (Pino-Marchito et al., 2025).

Work Motivation: Concept, Theory, and Application

Work motivation is defined as an internal process that activates, directs, and sustains goal-oriented behaviour in the work context, comprising three elements: intensity, direction, and persistence (Latham, 2017). Self-Determination Theory (SDT) provides the most comprehensive framework for understanding work motivation, distinguishing between six types of motivation along a continuum of self-determination: amotivation, external regulation, introjected regulation, identified regulation, integrated regulation, and intrinsic motivation (Ryan & Deci, 2017). SDT posits that motivation quality is determined by the satisfaction of three basic psychological needs: autonomy (feeling volition), competence (feeling mastery), and relatedness (feeling connected) (Deci & Ryan, 2000). Meta-analytic findings demonstrate that autonomous forms of motivation (identified, integrated, and intrinsic) are associated with better work outcomes than controlled forms (external and introjected), with intrinsic motivation explaining the greatest proportion of variance in work outcomes, though identified regulation more strongly predicts performance (Van den Broeck et al., 2016). Contemporary SDT



research expands the theory to consider alternative work arrangements and technological changes as boundary conditions for motivation processes (Gagne et al., 2026).

Intrinsic Motivation

Intrinsic motivation is defined as the natural tendency to seek novelty, challenges, and internal satisfaction derived from the activity itself, rather than from external consequences (Deci & Ryan, 2000). Thomas (2009) operationalized intrinsic motivation through four measurable dimensions: meaningfulness, choice, competence, and progress.

Extrinsic Motivation

Extrinsic motivation is defined as the drive to perform an activity due to external consequences, such as obtaining rewards or avoiding punishment (Ryan & Deci, 2017). Milkovich, Newman, & Gerhart (2017) distinguished between direct compensation (base pay, overtime, performance bonuses) and indirect compensation (health insurance, allowances, leave, repatriation costs).

Situational Leadership

Situational leadership is defined as the leader's ability to adapt leadership style (telling, selling, participating, delegating) based on subordinate maturity (competence and commitment). Hersey, Blanchard, & Johnson (2015) emphasized that the diagnosis of the situation and flexibility in style application are central to effective leadership.

Crew Performance

Campbell & Wiernik (2015) defined performance as behaviors or actions relevant to organizational goals performed by individuals in their work roles. In the maritime context, crew performance encompasses:

Task Performance: Core behaviors directly supporting organizational transformation (watchkeeping, logbook recording, routine maintenance, safe mooring procedures).

Safety Performance: Behaviors contributing to accident, injury, and occupational disease prevention (safety compliance and safety participation as per ISM Code).

Contextual Performance: Behaviors supporting the psychological, social, and organizational environment (perseverance, teamwork, organizational compliance, organizational support, OCB).

H1: Intrinsic motivation positively affects crew performance at PT. Salam Pacific Indonesia Lines.

Based on Self-Determination Theory (SDT), intrinsically motivated individuals tend to demonstrate higher performance because they work out of interest and enjoyment, not external pressure (Ryan & Deci, 2017). Shimazu et al. (2019) found intrinsic motivation as the strongest predictor of safety compliance behavior among East Asian seafarers ($\beta=0.51$, $p<0.01$). Putra & Dewi (2021) also found a positive effect of intrinsic motivation on employee performance

H2: Extrinsic motivation positively affects crew performance at PT. Salam Pacific Indonesia Lines.

Based on Social Exchange Theory (SET), individuals reciprocate the rewards they receive from the organization with proportional contributions. Nugroho (2022) found compensation significantly influences seafarer performance ($\beta=0.38$, $p<0.01$). The ILO (2022) identified salary as the primary retention factor for global seafarers.

H3: Intrinsic motivation positively affects situational leadership at PT. Salam Pacific Indonesia Lines.

Intrinsic motivation affects the interaction between subordinates and leaders. Subordinates with high intrinsic motivation demonstrate high commitment, enabling leaders to use more participative (S3) or delegative (S4) leadership styles. Higher intrinsic motivation creates conditions for adaptive leadership.

H4: Extrinsic motivation positively affects situational leadership at PT. Salam Pacific Indonesia Lines.

Based on SET, seafarers satisfied with compensation, working conditions, supervision, and company policies develop positive perceptions and trust, creating a climate that enables adaptive leadership. Theotokas & Progoulaki (2020) found that captains on vessels with better working conditions more easily apply participative and delegative styles.

H5: Situational leadership positively affects crew performance at PT. Salam Pacific Indonesia Lines.

According to SLT, effective leaders who match their style to subordinate maturity improve performance (Hersey et al., 2015). Kim (2018) found a positive correlation between crew perceptions of leadership style congruence and crew performance ($r=0.54$, $p<0.01$). Theotokas & Progoulaki (2020) found that vessels with flexible captains experienced 40% lower accident rates.

H6: Situational leadership mediates the influence of intrinsic motivation on crew performance at PT. Salam Pacific Indonesia Lines.

Mediation occurs when a third variable explains the mechanism through which the independent variable affects the dependent variable. Intrinsic motivation creates psychological "fuel" (energy, enthusiasm, commitment) that needs to be channeled through appropriate "steering" (situational leadership). Piccolo et al. (2010) found transformational leadership mediates the relationship between proactive personality and performance.

H7: Situational leadership mediates the influence of extrinsic motivation on crew performance at PT. Salam Pacific Indonesia Lines.

Extrinsic motivation creates "psychological safety" for seafarers. When basic needs (salary, food, accommodation) are met, seafarers can focus their energy on work. Adaptive leadership capitalizes on this positive climate to improve performance further.

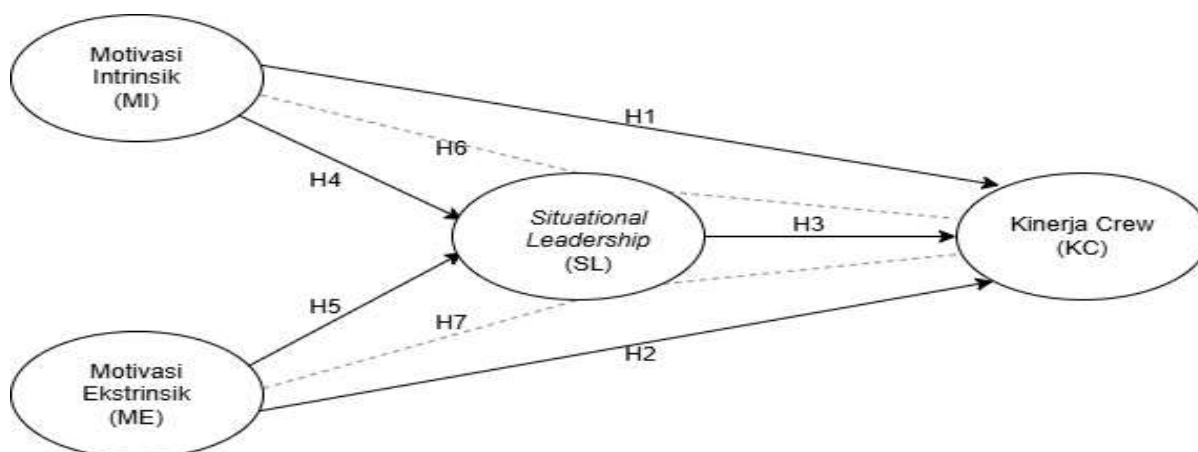


Figure 1. Research Framework

METHOD

This study employs a quantitative approach with a causal design to examine the influence of intrinsic and extrinsic motivation on crew performance, with situational leadership as a mediating variable. The population comprises approximately 250 crew members of PT. Salam Pacific Indonesia Lines, from which a sample of 150 respondents was selected using proportional stratified random sampling based on job rank. Primary data were collected through a structured closed-ended questionnaire utilizing a 5-point Likert scale, covering four variables: intrinsic motivation (8 items), extrinsic motivation (8 items),



situational leadership (8 items), and crew performance (8 items). The instrument was validated through content validity, construct validity (confirmatory factor analysis with outer loading >0.70 and AVE >0.50), discriminant validity (Fornell-Larcker criterion and HTMT <0.90), and reliability tests (Cronbach's Alpha and Composite Reliability >0.70). Data analysis was performed using Structural Equation Modeling-Partial Least Squares (SEM-PLS) with SmartPLS 4.0, encompassing two stages: outer model evaluation (measurement model) and inner model evaluation (structural model), including path coefficient estimation, R^2 , Q^2 , f^2 , and hypothesis testing through bootstrapping with 5,000 subsamples at a significance level of $\alpha=0.05$.

RESULT

Model Measurement

The respondent profile provides essential demographic information about the ship crew members of PT. Salam Pacific Indonesia Lines. Understanding these characteristics is crucial for contextual interpretation of the research findings.

Table 1. Respondent Characteristics (n=150)

Characteristic	Category	Frequency	Percentage (%)
Gender	Male	150	100
	Female	0	0
Age	26-35 years	33	22.0
	36-45 years	32	21.3
	>45 years	85	56.7
Work Experience	<1 year	20	13.3
	1-2 years	22	14.7
	2-5 years	32	21.3
	5-10 years	43	28.7
	>10 years	33	22.0
Certification	ANT/ATT 1	58	38.7
	ANT/ATT 2	54	36.0
	ANT/ATT 3	24	16.0

All 150 respondents (100%) were male, reflecting the male-dominated nature of the seafaring profession in Indonesia, consistent with the maritime industry's traditional gender composition. The majority of respondents (56.7%) were aged over 45 years, indicating a mature workforce with extensive professional experience. In the maritime industry, older age is typically associated with greater mental maturity and emotional stability in dealing with the psychological pressures of sea life (Gardner, 2019). This age profile suggests that the company has been successful in retaining senior seafarers, representing a valuable asset given the high costs of recruiting and training new crew members.

The distribution of work experience was relatively balanced, with 50.7% of respondents having more than 5 years of experience. This indicates a high employee retention rate at PT. SPIL, contributing to operational stability and institutional knowledge preservation. The diverse distribution of work experience is highly relevant to the Situational Leadership framework, as captains must employ different leadership styles to effectively manage crew members at various maturity levels (Hersey et al., 2015). Newer seafarers typically correspond to M1 or M2 maturity levels requiring more directive

approaches, while senior seafarers correspond to M3 or M4 levels allowing for participative or delegative styles.

Regarding certification, the largest group held ANT/ATT 1 (38.7%), followed by ANT/ATT 2 (36.0%), confirming that the company employs a substantial proportion of highly qualified and experienced seafarers, consistent with the older age profile and longer work experience patterns observed.

Table 2. Descriptive Statistic of Variables

Variable	Mean	Std. Deviation	Category
<i>Intrinsic Motivation</i>	4.78	0.369	Very High
<i>Extrinsic Motivation</i>	4.28	0.325	Very High
<i>Situational Leadership</i>	4.51	0.329	Very High
<i>Crew Performance</i>	4.59	0.361	Very High

Outer model evaluation

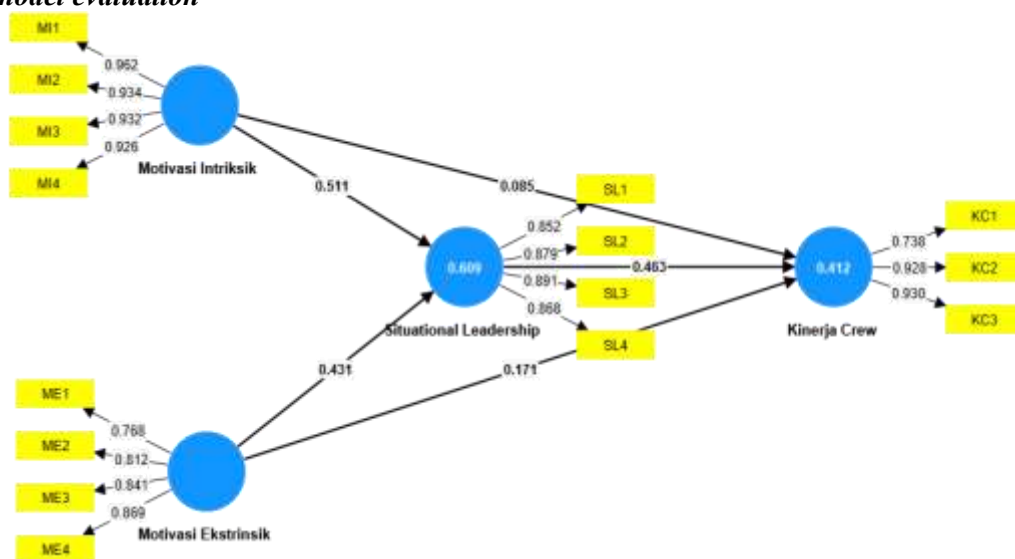


Figure 2. Outer Model

According to Figure 2, the purpose of this external model test is to assess the validity and reliability of the employed constructs or indicators. Validity and reliability tests are employed to assess the indicated measurement model. The results of factor loadings, Cronbach's alpha, composite factors, and Average Variance Extracted (AVE) from this study are displayed in Figure 2.

Table 3. Test Outer Model

VARIABLE	Item	Outer loadings	Cronbach's Alpha	Composite Reliability	AVE
<i>Intrinsic Motivation</i>	MI1	0,738	0.955	0.967	0.881
	MI2	0,928			
	MI3	0,930			
	MI4	0,768			
<i>Extrinsic Motivation</i>	ME1	0,812	0.841	0.894	0.678
	ME2	0,841			
	ME3	0,869			
	ME4	0,962			
<i>Situational Leadership</i>	IQ1	0,934	0.896	0.927	0.762
	IQ2	0,932			



	IQ3	0,926			
	IQ4	0,852			
	IU1	0,879			
<i>Crew Performance</i>	IU3	0,891	0.835	0.902	0.757
	IU4	0,868			

Based on Table 2, All indicators exceeded the recommended threshold (outer loading >0.70, AVE >0.50), confirming convergent validity. The Fornell-Larcker criterion and HTMT ratios (<0.90) confirmed discriminant validity. Cronbach's Alpha and Composite Reliability values exceeded 0.70, confirming reliability.

Table 4. Fornell-Lacker Validity Test

Variable	<i>Crew Performance</i>	<i>Extrinsic Motivation</i>	<i>Intrinsic Motivation</i>	<i>Situational Leadership</i>
<i>Crew Performance</i>	0.870			
<i>Extrinsic Motivation</i>	0.489	0.823		
<i>Intrinsic Motivation</i>	0.458	0.367	0.939	
<i>Situational Leadership</i>	0.626	0.619	0.669	0.873

The Fornell-Larcker criterion was employed to assess discriminant validity, as presented in Table 3. According to this criterion, the square root of the Average Variance Extracted (AVE) for each construct, displayed on the diagonal, should exceed the inter-construct correlations, shown as off-diagonal values. The empirical results confirm that, from a statistical standpoint, the four constructs—*intrinsic motivation*, *extrinsic motivation*, *situational leadership*, and *crew performance*—are empirically distinct and do not exhibit substantial overlap, thereby satisfying the discriminant validity requirement.

Table 5. HTMT Validity Test

Variable	<i>Crew Performance</i>	<i>Extrinsic Motivation</i>	<i>Intrinsic Motivation</i>	<i>Situational Leadership</i>
<i>Crew Performance</i>				
<i>Extrinsic Motivation</i>	0.586			
<i>Intrinsic Motivation</i>	0.495	0.408		
<i>Situational Leadership</i>	0.719	0.709	0.721	

Based on the Table 4, The Heterotrait-Monotrait Ratio (HTMT) is defined as the ratio of the average correlations among indicators across different constructs to the average correlations among indicators within the same construct. The recommended threshold for HTMT is below 0.90, with an ideal value below 0.85.

Inner Model

tests the coefficient of determination Q-square, F-square, and significance tests are used to assess the structural model (inner model). The influence of determination analysis is utilized in SEM analysis to ascertain the extent to which the exogenous variables contribute to the endogenous variables. The coefficient of determination (R²) determines R-squared. The findings of this study's coefficient of determination (R-squared) and Q-square test are as follows:

Table 6. R-Square (R²) and Q-square (Q²)

Endogenous Variable	R ²	R ² Adjusted	R ² Adjusted
<i>Situational Leadership</i>	0.609	0.603	0.770

Crew Performance	0.412	0.400
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Referring to the Table 5, R² Situational Leadership 60.9%, indicating that intrinsic and extrinsic motivation jointly explain 60.9% of the variance in situational leadership. R² Crew Performance 41.2%, indicating that intrinsic motivation, extrinsic motivation, and situational leadership jointly explain 41.2% of the variance in crew performance. Q² 0.770 > 0, confirming good predictive relevance.

The degree to which the latent predictor variables contribute to the model's influence at the structural level is then determined using an F-square test. There are four categories for this impact: extremely little, small, Medium, and significant. These impacts are categorized using the following thresholds: A : extremely little effect is indicated by F² < 0.02, a small effect by 0.02 < F² < 0.15, a medium effect by 0.15 < F² < 0.35, and a significant effect by F² > 0.35. The F-square test yielded the following results:

Table 7. F-Square. Test

Relationship	f ²	Interpretation
Intrinsic Motivation → Situational Leadership	0.576	significant
Extrinsic Motivation → Situational Leadership	0.411	significant
Situational Leadership → Crew Performance	0.143	medium
Extrinsic Motivation → Crew Performance	0.031	small
Intrinsic Motivation → Crew Performance	0.007	extremely little

Hypothesis Test

To test the hypothesis, the coefficient value for each line will be ascertained. In this analysis, a significance level of 0.05 is accepted. The direct effect hypothesis and indirect effect hypothesis tests presented the following results:

Table 8. Direct effect hypothesis

Hypothesis	Relationship	Original Sample	T Statistics	P Values	Result
H1	Intrinsic Motivation → Performance	0.085	0.815	0.415	Rejected
H2	Extrinsic Motivation → Performance	0.171	2.286	0.022	Accepted
H3	Intrinsic Motivation → Situational Leadership	0.511	10.359	0.000	Accepted
H4	Extrinsic Motivation → Situational Leadership	0.431	8.921	0.000	Accepted
H5	Situational Leadership → Performance	0.463	4.326	0.000	Accepted

Based on Table 7, the results of direct hypothesis testing are as follows:

The p-value is 0.415 > 0.05 and the T statistic value is 0.815 < 1.64. With a path value of 0.085, this suggests that intrinsic motivation has a nonsignificant effect on performance crew.

The p-value is 0.022 < 0.05 and the T statistic value is 2.286 > 1.64. With a path value of 0.171, this suggests that extrinsic motivation has a significant effect on performance crew.

The p-value is 0.000 < 0.05 and the T statistic value is 10.359 > 1.64. With a path value of 0.511, this suggests that intrinsic motivation has a significant effect on Situational Leadership.

The p-value is 0.000 < 0.05 and the T statistic value is 8.921 > 1.64. With a path value of 0.431, this suggests that extrinsic motivation has a significant effect on Situational Leadership.

The p-value is 0.000 < 0.05 and the T statistic value is 4.326 > 1.64. With a path value of 0.463, this suggests that Situational Leadership has a significant effect on performance crew.

Table 9. indirect effect hypothesis

Hypothesis	Relationship	Original Sample	T Statistics	P Values	Result
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H6	Intrinsic Motivation → Situational Leadership → Performance crew	0.236	4.115	0.000	Accepted (full mediation)
H7	Extrinsic Motivation → Situational Leadership → Performance crew	0.200	3.616	0.000	Accepted (partial mediation)

Based on Table 7, the results of direct hypothesis testing are as follows:

The p-value is $0.000 < 0.05$ and the T statistic value is $4.115 > 1.64$. With a path value of 0.236, this suggests that intrinsic motivation has a significant effect on performance crew with the full mediation of situational leadership.

The p-value is $0.000 < 0.05$ and the T statistic value is $3.616 > 1.64$. With a path value of 0.200, this suggests that extrinsic motivation has a significant effect on performance crew with partial mediation of situational leadership.

DISCUSSION

The first hypothesis (H1), which proposed a direct positive effect of intrinsic motivation on crew performance, was rejected. Intrinsic motivation did not significantly influence performance ($\beta=0.085$; $p=0.415$). This finding contradicts previous studies conducted in land-based organizational contexts, such as those by Putra & Dewi (2021) and Shimazu et al. (2019), but aligns with research in highly procedural work environments. The rejection can be attributed to several factors. First, the nature of shipboard work is highly procedural and governed by strict Standard Operating Procedures mandated by the International Safety Management (ISM) Code, which severely constrains autonomy a core psychological need in Self-Determination Theory. Second, the dominance of hygiene factors (Herzberg) means that seafarers' attention remains partially absorbed by concerns about compensation and rotation schedules, limiting the translational power of intrinsic motivation. Third, the presence of range restriction in intrinsic motivation scores (mean=4.78; SD=0.369) reduced the statistical capacity to detect significant effects. Finally, and most importantly, the influence of intrinsic motivation was fully mediated by situational leadership, indicating that internal drive requires adaptive leadership to be effectively channeled into performance outcomes.

In contrast, the second hypothesis (H2), which proposed a positive effect of extrinsic motivation on crew performance, was accepted. Extrinsic motivation significantly influenced performance ($\beta=0.171$; $p=0.022$), consistent with earlier findings by Nugroho (2022) and the International Labour Organization (2022). This result is supported by several theoretical frameworks. Herzberg's Two-Factor Theory explains that hygiene factors, when adequately fulfilled, eliminate dissatisfaction and enable seafarers to focus their energy on work performance. Vroom's Expectancy Theory further elucidates that seafarers perceive a clear link between effort, performance, and rewards, which reinforces their motivation to perform. Social Exchange Theory suggests that perceived fair treatment from the organization generates a sense of reciprocal obligation to deliver high performance. Additionally, the contractual nature of seafaring work characterized by fixed-term contracts, reliance on salaries, and promotion certainty—makes external incentives particularly powerful drivers of performance in this context.

The third hypothesis (H3), examining the effect of intrinsic motivation on situational leadership, was accepted with the strongest relationship observed in the entire model ($\beta=0.511$; $p=0.000$) and a large effect size ($f^2=0.576$). This finding indicates that intrinsically motivated subordinates demonstrate higher levels of commitment, which is a critical component of subordinate maturity in Situational Leadership Theory. Highly committed seafarers exhibit greater self-confidence, responsibility, perseverance, and initiative, thereby enabling captains to employ more participative (S3) and delegative (S4) leadership styles rather than remaining constrained to directive approaches. From the perspective of Self-Determination Theory, the fulfillment of basic psychological needs autonomy, competence, and relatedness cultivates positive subordinate behaviors that subsequently shape how captains interact with

their crew members. Social Exchange Theory further reinforces this dynamic, as subordinates demonstrating high commitment are reciprocated by leaders with greater trust, autonomy, and support, creating a virtuous cycle of adaptive leadership.

Similarly, the fourth hypothesis (H4), which proposed a positive relationship between extrinsic motivation and situational leadership, was also accepted ($\beta=0.431$; $p=0.000$), with a large effect size ($f^2=0.411$). This result suggests that seafarers who are satisfied with compensation, working conditions, supervision quality, and company policies develop trust and openness toward their leaders. This positive climate creates what may be termed "psychological safety," providing captains with the relational space to apply adaptive leadership styles. The finding confirms the qualitative observations of Theotokas & Progoulaki (2020), who found that captains on vessels with better working conditions more readily employed participative and delegative approaches. Thus, both intrinsic and extrinsic motivation contribute substantially to creating conditions conducive to situational leadership, though through different mechanisms intrinsic motivation enhances subordinate commitment, while extrinsic motivation fosters a climate of trust and reciprocity.

The fifth hypothesis (H5), examining the direct effect of situational leadership on crew performance, was accepted ($\beta=0.463$; $p=0.000$) with a medium effect size ($f^2=0.143$). This finding validates the core premise of Situational Leadership Theory in the maritime context: the congruence between leadership style (telling, selling, participating, delegating) and subordinate maturity (competence and commitment) significantly enhances performance. When captains accurately diagnose each subordinate's level of maturity and adapt their leadership style accordingly, crew members experience feelings of support, appreciation, and understanding, which motivate them to reciprocate through improved task performance, safety compliance, and organizational citizenship behaviors. Given the wide variation in maturity levels aboard vessels ranging from inexperienced cadets to seasoned chief engineers the ability of captains to dynamically adjust their leadership approach is a critical determinant of overall crew effectiveness and operational safety.

The mediating role of situational leadership, as proposed in the sixth hypothesis (H6), was confirmed with full mediation of the intrinsic motivation–performance relationship (indirect effect $\beta=0.236$; $p=0.000$). This indicates that intrinsic motivation exerts no direct influence on crew performance; rather, its entire effect is transmitted through situational leadership. In the maritime industry context, internal motivation stemming from pride, competence, and professional challenge does not automatically translate into superior performance without the presence of adaptive captain leadership. Intrinsic motivation serves as "fuel" that must be channeled through the appropriate "steering mechanism" situational leadership to generate tangible performance outcomes. This finding carries significant theoretical implications, suggesting that in highly procedural work environments characteristic of high-reliability organizations, intrinsic motivation loses its direct effect and becomes entirely dependent on leadership for activation.

Finally, the seventh hypothesis (H7), concerning the mediating role of situational leadership in the extrinsic motivation–performance relationship, was accepted with partial mediation (indirect effect $\beta=0.200$; $p=0.000$; VAF=53.9%). This indicates that extrinsic motivation influences crew performance through two distinct pathways. The direct pathway ($\beta=0.171$) reflects how fulfillment of compensation, working conditions, supervision quality, and organizational policies directly drives performance. The indirect pathway ($\beta=0.200$) operates through situational leadership, where extrinsic satisfaction creates a positive climate of trust and openness that enables adaptive leadership, which subsequently enhances performance. The total effect of extrinsic motivation on performance was 0.371, with more than half of this effect (53.9%) explained through the mediating pathway. These findings collectively demonstrate that situational leadership is not merely a supplementary factor but serves as the principal mechanism that translates both forms of motivation particularly intrinsic motivation into improved crew performance in the shipping industry.

CONCLUSIONS

This study examined the influence of intrinsic and extrinsic motivation on crew performance with situational leadership as a mediating variable at PT. Salam Pacific Indonesia Lines. The findings reveal that intrinsic motivation does not directly affect crew performance (H1 rejected), as its influence is fully mediated by situational leadership (H6 accepted). This indicates that internal drive stemming from pride, competence, and professional challenge requires adaptive leadership to be effectively translated into performance outcomes in the highly procedural and risk-laden maritime environment. Conversely, extrinsic motivation exerts both a direct (H2 accepted) and an indirect effect through situational leadership (H7 accepted, VAF=53.9%), confirming that fair compensation, adequate working conditions, quality supervision, and clear company policies significantly drive seafarer performance. Both intrinsic (H3 accepted, $\beta=0.511$) and extrinsic (H4 accepted, $\beta=0.431$) motivation strongly influence situational leadership, with intrinsic motivation demonstrating the strongest relationship in the model. Furthermore, situational leadership significantly enhances crew performance (H5 accepted, $\beta=0.463$), validating the core premise that congruence between leadership style and subordinate maturity improves individual and team effectiveness. The model exhibits good predictive relevance ($Q^2=0.770$), with intrinsic and extrinsic motivation jointly explaining 60.9% of the variance in situational leadership, while all three variables account for 41.2% of the variance in crew performance.

RECOMMENDATIONS

For PT. Salam Pacific Indonesia Lines Management:

Situational Leadership Training, prioritize training for captains, chief officers, and chief engineers. Emphasize diagnosing subordinate maturity (competence and commitment) and adapting leadership styles accordingly.

Compensation System Enhancement, evaluate salary structures, bonuses, and allowances to remain competitive. Provide special incentives for challenging routes and clarify performance-based bonus systems.

Integrated SDM Development, combine motivation enhancement with leadership development. In recruitment, assess intrinsic motivation aspects (professional pride, safety commitment) alongside technical certification.

RESEARCH LIMITATION

This study has six primary limitations. The cross-sectional design restricts causal inference, while single-source self-report data may introduce common method bias despite adequate discriminant validity. The single-company sample in eastern Indonesia limits generalizability, and restricted intrinsic motivation variance ($SD=0.369$) reduces statistical power. Furthermore, performance was measured through self-perceptions rather than objective company data, and potentially influential control variables including tenure, education, and vessel type were excluded. Future research should employ longitudinal designs, multi-source data, broader sampling, and incorporate control variables to strengthen validity and generalizability.

FUTURE RESEARCH

Future research should address the limitations of this study by employing longitudinal designs to capture causal dynamics, utilizing multi-source data (supervisor ratings, peer assessments, objective performance metrics) to mitigate common method bias, and expanding the scope to multiple shipping companies and vessel types (container, tanker, passenger, tugboat) to enhance generalizability. Additional variables such as safety culture, perceived organizational support, and job satisfaction should be incorporated, while moderation analyses could examine tenure and vessel type as boundary conditions. Finally, mixed-methods approaches combining quantitative surveys with qualitative interviews would provide richer contextual insights into the lived experiences of seafarers and the nuanced dynamics of leadership aboard vessels.

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