

FROM LEADERSHIP TO INNOVATION: THE MEDIATING ROLE OF JOB SATISFACTION IN A SEMI-MILITARY ORGANIZATION

Abdul Basir^{*1}, Ela Elliyana²

¹Universitas Mitra Bangsa, Indonesia

²Universitas Kalbis, Indonesia

Citation (APA 7th): Basir, A., & Elliyana, E. From Leadership to Innovation: The Mediating Role of Job Satisfaction in a Semi-Military Organization. *Jurnal Minds: Manajemen Ide Dan Inspirasi*, 13(1), 27–38.
<https://doi.org/10.24252/minds.v13i1.63129>

Submitted: 01 December 2025

Revised: 01 February 2026

Accepted: 02 March 2026

Published: 29 March 2026



Copyright: © 2026 by the authors.

ABSTRACT: This study examines how transformational leadership and organisational culture influence innovative work behaviour in semi-military defence organisations, with job satisfaction as a mediating variable. Drawing on transformational leadership theory, Denison's cultural model, and affective-motivational perspectives, the study explores psychological mechanisms that shape innovation in highly hierarchical settings. A quantitative survey of 288 employees from a state-owned defence manufacturer in Indonesia was analysed employing PLS-SEM (Partial Least Squares Structural Equation Modelling). The current study's findings demonstrate that organizational culture and transformational leadership both significantly boost job satisfaction. While transformational leadership has no direct impact, organizational culture also directly develops creative work practices. Instead, satisfaction with work completely mediates its impact on innovation. Job satisfaction itself emerges as a strong predictor of innovative behaviour. These findings suggest that in rigid and hierarchical environments, innovation is more likely to arise from cultural support and positive employee experiences than from leadership behaviours alone.

Keywords: Innovative Work Behavior; Job Satisfaction; Organizational Culture; Semi-Military Organizations; Transformational Leadership

*Corresponding Author: abdulbasir8571@gmail.com

DOI: <https://doi.org/10.24252/minds.v13i1.63129>

ISSN-E: 2597-6990

ISSN-P: 2442-4951

<http://journal.uin-alauddin.ac.id/index.php/minds>

Publisher: Management Department, Universitas Islam Negeri Alauddin Makassar, Indonesia

INTRODUCTION

Innovation has become an essential requirement in an effort to ensure the survival of an organization in a rapidly changing technological environment, geopolitical uncertainty, and the intensification of global industrial competition. While innovation is often present in flexible, creative, and market-driven private organizations, recent research shows that employees with highly structured and bureaucratic environments can also exhibit strong innovative behaviors if placed in conducive internal conditions (Hughes et al., 2018; Pham et al., 2024). This viewpoint is especially pertinent for state-owned businesses in the industrial and key defense industries, where hierarchical controls, discipline, and militaristic routines have traditionally been seen as barriers to innovation. However, the increasing need for modernization, digitalization, and strategic autonomy in the defense industry has forced these organizations to rethink how leadership and culture can be leveraged to drive employee-driven innovation.

In Indonesia, the defense industry contributes a strategic part in strengthening national resilience and advancing the capabilities of the domestic industry. As one of the oldest and most established defense manufacturers in Southeast Asia, PT Pindad (Persero) operates with a hybrid organizational structure that blends civil administration with semi-military work norms. This duality presents a unique context in which employees must navigate a disciplined environment while being driven to generate new ideas, improve processes, and support the company's long-term transformation agenda. Despite efforts to promote modernization, the implementation of innovative work behaviors (IWBs) in semi-military organizations remains challenging due to strong hierarchical cultures, strict procedural compliance, and centralized command structures. This condition often leads to risk aversion, limited autonomy, and weak psychological empowerment, which can hinder creative expression and idea implementation.

The existing literature suggests that leadership and culture are the two most influential antecedents of the IWB. Intellectual stimulation, inspirational motivation, individual consideration, and ideal influence are characteristics of transformational leadership (TL). This type of leadership has consistently been found to increase employees' intrinsic motivation, creativity, and willingness to take initiative (Bass & Riggio, 2006; Bednall et al., 2018). Leaders who embody transformational qualities are able to communicate compelling visions, provide meaningful feedback, and create a psychologically safe environment, allowing employees to feel more confident in expressing new ideas even in rigid or semi-military organizational settings. Meanwhile, organizational culture (OC) shapes behavioral norms, shared meaning, and collective identity, serving as an internal compass that guides how employees respond to challenges. A strong culture that emphasizes engagement, adaptability, mission clarity, and consistency as conceptualized by Denison and Mishra (1995) can significantly strengthen employees' readiness to innovate.

However, although both variables are studied extensively in innovation research, the mechanisms by which leadership and culture influence innovative behavior are not fully understood, especially in organizations with strict command and control systems. Some studies have shown that psychological states, such as job satisfaction (JS), often act as mediating variables that translate leadership and cultural experiences into behavioral outcomes (Basir & Aminah, 2025; Judge et al., 2001; Khazanchi et al., 2007; Rahmadani et al., 2022). Job satisfaction reflects an employee's emotional response to their work environment, including feelings of satisfaction, meaningfulness, recognition, and work-life balance. When employees feel satisfied, they are more likely to invest discretionary efforts, survive through obstacles, and engage in proactive behaviors such as innovation. However, in semi-military contexts, the function of job satisfaction mediation is not well studied, where satisfaction can be shaped not only by leadership and culture but also by structural discipline and formal authority.

In addition, research focused on innovation in defense-related or semi-military organizations is still limited. Most innovation studies in Indonesia and developing countries focus on private sector manufacturing, creative industries, or public services, leaving significant gaps in understanding how innovation emerges in highly regulated, government-owned, and mission-driven institutions. This gap is important as defense organizations face increasing pressure to innovate to support national priorities, reduce reliance on foreign technologies, and increase competitiveness. In addition, semi-military organizations exhibit unique behavioral dynamics: high power distance, centralized decision-making, collective discipline, and strict adherence to

standards. These characteristics can suppress or strengthen an employee's willingness to innovate depending on the leadership style and cultural atmosphere set by the organization.

To respond to these research gaps, this study explores how job satisfaction functions as a mediator between the practice of organizational culture, transformational leadership, and innovative work in Indonesian semi-military enterprises. Focusing on state-owned defense manufacturing firms, the study offers empirical insights into how leadership and culture dynamics operate within highly regulated organizational environment to foster employees' psychological readiness and innovation-related behaviors. Unlike research conducted in the private or creative sectors, this study highlights the importance of military-influenced organizational structures and routines, offering contextual insights into how innovation can be sustained in disciplinary settings.

The novelty of this research lies in three main areas. First, it examines innovative work behaviors in semi-military organizational structures, an area rarely investigated in the Indonesian context. Second, it incorporates job satisfaction as a psychological mechanism that connects leadership and organizational culture to innovation, allowing for a deeper understanding of how employees internalize organizational stimuli before translating them into behavioral outcomes. Third, it employs a robust quantitative approach involving 288 respondents across different divisions, enabling a comprehensive analysis of behavioral dynamics within large defense organizations. The current study is further strengthened by the application of Partial Least Squares Structural Equation Modeling (PLS-SEM), which takes into account complex connections and second-order constructs.

However, in semi-military and high-control organizational environments, leadership and organizational culture operate under structural constraints that limit behavioral discretion and risk-taking. Transformational leadership, while effective in shaping employee motivation and affective states, may not directly translate into innovative behavior when hierarchical discipline and procedural compliance dominate daily operations. In contrast, organizational culture provides a more stable normative framework that shapes collective expectations regarding acceptable forms of innovation. From an affective-motivational perspective, job satisfaction contributes a vital part in translating leadership and cultural experiences into innovative work behavior by enhancing psychological readiness, perceived safety, and willingness to engage in discretionary actions. Thus, utilizing job satisfaction as a mediating mechanism, this current research aims to investigate how organizational culture and transformational leadership influence creative work practices in semi-military enterprises. The current investigation offers theoretical contributions to the leadership and innovation literature, while also providing practical insights for defense organizations that must reconcile rigid disciplinary structures with the demands of sustained innovation.

THEORETICAL REVIEW

Transformational Leadership

A leadership approach known as transformational leadership (TL) encourages, inspires, and intellectually stimulates staff members to go above and beyond expectations and contribute to group objectives (Bass & Riggio, 2006). The theory highlights four core dimensions: inspirational motivation, individual consideration, ideal influence, intellectual stimulation. In addition, leaders who exhibit these behaviors build compelling organizational visions, foster autonomy, support employees' personal growth, and encourage creative problem-solving.

Positive employee outcomes, such as enhanced creativity, psychological empowerment, and proactive behavior, are frequently linked to transformational leadership in innovation studies (Gumusluolu & Ilsev, 2009; Hughes et al., 2018). In hierarchical or rigid environments—such as semi-military organizations transformational leaders help bridge structural constraints by creating a psychologically safe climate where employees feel valued and motivated to innovate. The direct impact of transformational leadership on job satisfaction is supported by a number of empirical research, which show that leaders who foster trust, recognition, and developmental assistance tend to boost workers' positive affective reactions to their jobs (Judge & Piccolo, 2004). Likewise, transformational leaders have been shown to positively influence innovative work behaviors by encouraging the creation of ideas, championing new initiatives, and reducing employees' fear of failure (Bednall et al., 2018).

H1: Transformational leadership positively influences job satisfaction.

H2: Transformational leadership positively influences innovative work behaviour.

Organizational Culture

Organizational culture (OC) refers to the values, norms, and expectations of shared behavior within the organization that guide how members interpret and respond to internal and external challenges. The Denison model conceptualizes culture through four dimensions: engagement, consistency, adaptability, and mission (Denison & Mishra, 1995). A strong culture promotes coordination, clarity, and alignment, facilitating the conditions for psychological readiness and innovation.

Research reveals that workers attitudes and behaviors are greatly affected by culture. Cultures that emphasize engagement and adaptability tend to increase job satisfaction by providing employees with autonomy, recognition, and meaningful work experience (Lok & Crawford, 2004). Meanwhile, a culture characterized by strong mission and consistency promotes stability, clarity, and shared identity—attributes that reinforce commitment and proactive performance. Previous studies have also confirmed that organizational culture directly contributes to innovative work behaviors by establishing norms that value experimentation, continuous improvement, and collective learning (De Jong & Den Hartog, 2010; Škerlavaj et al., 2010).

H3: Organizational culture positively influences job satisfaction.

H4: Organizational culture positively influences innovative work behaviour.

Job Satisfaction as a Mediating Psychological Mechanism

Job satisfaction (JS) represents an employee's affective evaluation of their work environment. It includes perceptions of meaningfulness, supervisory support, fairness, autonomy, and growth opportunities. In behavioral research, job satisfaction is commonly viewed as a psychological condition that connects organizational factors with individual behavioral outcomes (Judge et al., 2001).

From an affective-motivational perspective, satisfied employees are more likely to invest discretionary effort, persist in midst of challenges, and engage in proactive behaviors such as innovation. Research indicates that the impact of cultural and leadership factors on outcomes like performance, civic engagement, and innovation is mediated by job satisfaction (Pham et al., 2024; Rahmadani et al., 2022). Moreover, when employees feel valued and fulfilled, they develop a stronger intrinsic motivation to explore new ideas, make improvements, and contribute beyond the formal job description. In semi-military organizations, where hierarchical authority and structured routines dominate the day-to-day workflow, job satisfaction can serve as a very powerful mechanism that allows employees to reconcile discipline with innovation. Satisfied employees may perceive organizational constraints not as obstacles but as challenges that inspire creative solutions within a regulated framework.

H5: Job satisfaction positively influences innovative work behaviour.

H6: Job satisfaction mediates the relationship between transformational leadership and innovative work behaviour.

H7: Job satisfaction mediates the relationship between organizational culture and innovative work behaviour.

Innovative Work Behaviour

Actions by individuals pertaining to the development, promotion, and use of fresh ideas meant to enhance a job function, team, or organization are referred to as innovative work behavior (IWB) (De Jong & Den Hartog, 2010). In addition, IWB is a multidimensional construct that involves idea implementation, opportunity exploration, idea championing, idea generation. In structured organizations, such as defense manufacturers, innovative behavior is essential for operational improvement, technology adoption, and modernization efforts.

Leaders and culture form the foundations that shape psychological motivation and behavioral readiness for innovation. Thus, including IWB as an outcome variable in this study allows for an integrated understanding of how leadership and culture drive innovation through the affective state of employees. We present the conceptual framework linking job satisfaction, organizational culture, transformational leadership, and innovative work behaviors in Figure 1.

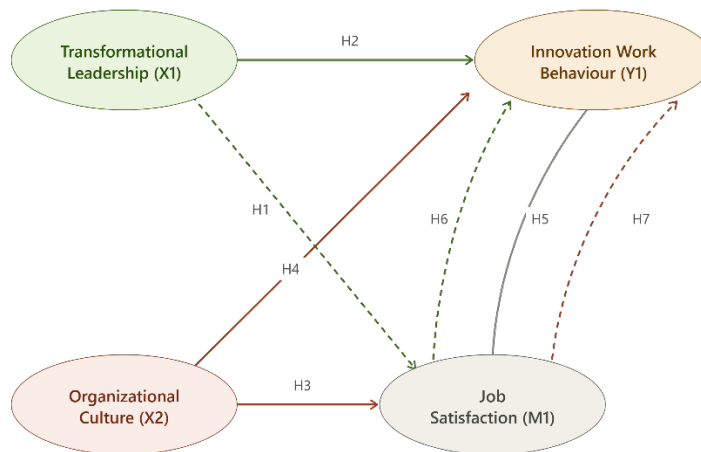


Figure 1. Conceptual Framework

RESEARCH METHOD

The current investigation implemented a cross-sectional survey method with a quantitative research methodology. In the context of semi-military companies, this methodological choice aims to investigate the connections between job satisfaction, innovative work, organizational culture, and transformational leadership practices. The quantitative approach is considered appropriate because the research model includes several latent variables, direct effects, and mediating pathways that require rigorous statistical testing. The cross-sectional design allows researchers to capture employee perceptions at a particular point in time, reflecting the dynamics of cross-divisional behavior in a defense manufacturing environment.

Its population consists of employees of state-owned defense manufacturers in Indonesia who operate under a semi-military hierarchical structure. The organization is made up of several strategic divisions, including armaments, ammunition, special vehicles, engineering, and support administrative units. The company employs a mix of civilian professionals, semi-military workers, and contract staff, making it a unique environment to examine how leadership and culture shape innovation.

The study involved 288 employees. The minimum threshold for PLS-SEM analysis, which suggests at least ten times the maximum number of structural pathways aimed at each latent construct, is exceeded by this sample size (Hair et al., 2019). Tiered proportional sampling is used to ensure that respondents represent a wide range of functional areas and hierarchical levels. In order to lessen social bias of desire particularly important in semi-military systems where command hierarchies might affect responses participation was voluntary and respondents were assured anonymity and confidentiality.

Four latent variables were measured in this study: job satisfaction (JS), innovative work behaviour (IWB), organizational culture (OC), transformational leadership (TL). Transformational leadership is measured as a second-level construct with indicators representing inspirational motivation, individual consideration, ideal influence, intellectual stimulation, based on the Bass and Avolio (1995) Multifactor Leadership Questionnaire. Organizational culture is also modeled as a second-level construct using the dimensions of Denison and Mishra (1995): engagement, consistency, adaptability, and mission. The use of second-level construction is in line with a theoretical framework that conceptualizes leadership and culture as multidimensional phenomena rather than single-dimensional attributes.

Job satisfaction is measured using items adapted from the Job Satisfaction Scale, capturing dimensions such as job content, supervisor support, recognition, and overall emotional evaluation of the job. Meanwhile, innovative work behavior was measured using a scale designed by De Jong and Den Hartog (2010), which consisted of 4 dimensions: opportunity exploration, idea creation, idea champion, and idea implementation. A five-point Likert scale, with 1 representing "strongly disagree" and 5 representing "strongly agree" was used to rate each item. This scale has sufficient sensitivity to capture differences in employee perception and is frequently used in behavioral research..

The process of data collection was executed over four weeks through a structured questionnaire distributed through internal communication channels. Before being distributed, the questionnaire underwent a face validity assessment involving two experts from organizational behavior academics and two practitioners from defense organizations. Trials involving 30 employees were also conducted to certify the clarity of the words, validity, and reliability of the instrument's content. Minor revisions are made based on pilot results to improve the understanding of the item. Given the semi-military context, special care is taken to ensure that participation is voluntary and free from coercion. Employees are notified of the research's aim, confidentiality, and their freedom to leave at any moment. No identifying information was collected, and responses were collected during the analysis to maintain anonymity.

Modeling of Partial Least Squares Structural Equations (PLS-SEM) with SmartPLS 4.0 was used as the primary analysis technique. PLS-SEM was chosen for several reasons. Firstly, it is suitable for complex models with some latent construction, direct and indirect effects, and second-order construction (Becker et al., 2012; Hair et al., 2019). Second, PLS-SEM is suitable for predictive-oriented research, which is in line with the purpose of this study to understand behavioral mechanisms in innovation. Third, PLS-SEM can handle abnormal data distribution, which is common in employee perception surveys.

The analysis is continued in two stages: structural model assessment and measurement model assessment. In addition, measurement model assessment included evaluating indicator load, internal consistency reliability (Cronbach alpha, composite reliability, ρ_A), convergent validity (mean variance extracted), and discriminant validity using Fornell-Larcker criteria and HTMT ratios. For second-order construction, a repeating indicator approach is used, allowing for an accurate representation of multidimensional variables including organizational culture and transformational leadership.

The p-values, t-values, and path coefficients generated by bootstrapping with 5,000 subsamples are evaluated in order to evaluate the structural model (Hair et al., 2017). In order to determine the explanatory capacity of the model, mediation analysis was performed by looking at the indirect effects for the connections of $TL \rightarrow JS \rightarrow IWB$ and $OC \rightarrow JS \rightarrow IWB$. determination coefficient (R^2), predictive relevance (Q^2), and effect size (f^2) were also evaluated.

The choice of methodology was justified by the research objective of examining the complex behavioral relationships in structurally rigid organizations. The use of second-level constructs allows for richer and more accurate representations of organizational culture and transformational leadership. Meanwhile, the inclusion of job satisfaction as a mediator provides a psychological mechanism that connects the antecedents of the organization with innovative behaviors. The PLS-SEM approach ensures that analysis is robust even with multidimensional constructions and hierarchical data structures.

RESULTS

A total of 288 employees participated in the study, representing a broad cross-section of divisions within defense manufacturing organizations, such as engineering, weapons development, production, quality assurance, and administration. The sample includes managerial and non-managerial staff with varying tenures, ranging from early-career employees to those with more than two decades of service. This diversity reinforces the representation of data for the setting of semi-military organizations.

Overall, respondents reported a generally positive perception across the study's main constructs. The perception of transformational leadership and organizational culture is quite high, indicating that employees experience leadership support and cultural clarity even in hierarchical environments. Job satisfaction is also assessed positively on most dimensions, and employees show a consistent tendency toward innovative work behaviors. This descriptive pattern provides a meaningful foundation for further structural analysis.

Measurement Model Assessment

To make sure the indicators accurately and consistently represent the corresponding constructs, the measurement model is verified. External load, internal consistency, convergent validity, and discriminant validity are among the criteria for assessment. Every indicators show a load above the suggested cutoff point of 0.70 (Hair et al., 2021), ranging from 0.798 (Surveillance)

to 0.950 (Adaptability). These values indicate that each item contributes substantially to the intended latent variable and meets the indicator's reliability criteria. Internal consistency was evaluated utilizing the reliability of alpha, rho_A, and Cronbach's alpha. All constructions show strong reliability, with values well above 0.70 (Hair et al., 2017) guideline as in Table 1.

Table 1. Validity and Reliability Composition

Construct	Cronbach's Alpha	rho_A	Composite Reliability	AVE
IWB	0.928	0.931	0.949	0.824
JS	0.888	0.891	0.918	0.692
OC	0.939	0.942	0.956	0.846
TL	0.944	0.947	0.959	0.855

Every construct had AVE values more than 0.50 (Fornell & Larcker, 1981), meaning that more than half of the indicator variation was captured by each construct. This confirms the satisfactory validity of the convergent. Furthermore, Heterotrait-Monotrait (HTMT) ratios and Fornell-Larcker criteria were used to determine discriminant validity. Each construct's square root of the AVE value was above the correlation among constructs, passing the discriminant validity requirements:

Table 2. The HTMT Criterion of Discriminant Validity

Construct	IWB	JS	OC	TL
IWB	0.908			
JS	0.655	0.832		
OC	0.613	0.812	0.920	
TL	0.501	0.746	0.640	0.925

Furthermore, most HTMT values are comfortable under the recommended threshold of 0.85 (Dijkstra & Henseler, 2015). The HTMT value for organizational culture and job satisfaction (0.882) slightly exceeds the strict cutoff but remains below the more widely accepted threshold of 0.90. Given the conceptual proximity between organizational culture and job satisfaction in a hierarchical environment, this values are still considered acceptable and does not compromise discriminant validity.

While organizational culture and job satisfaction are strongly correlated, they remain conceptually distinct constructs. Organizational culture represents a collective normative system embedded in shared values, routines, and organizational practices, whereas job satisfaction reflects an individual affective evaluation of work experience. High correlation between these constructs are theoretically expected in hierarchical and collectivist organizational settings, where shared norms and institutional structures strongly shape employees' emotional response.

Collinearity was assessed at both the construct level and the indicator level. Construct-level VIF values were all under the recommended threshold of 5, meaning the absence of multicollinearity among exogenous variables. Indicator-level VIF values ranged from 1.946 to 8.385, which remain acceptable for reflective indicators under the <10 guideline recommended by Hair et al. (2019). In addition, collinearity does not pose a concern in this model. This study also presents the fit index available in the PLS-SEM function. Despite not a confirmatory statistics, this function serves another presentation for the model cohesiveness. The model demonstrates an acceptable level of fit, as indicated by an SRMR value of 0.080 in both the saturated and estimated models, meeting the commonly accepted threshold. However, the NFI value of 0.792 suggests a moderate fit, indicating that while the model is reasonably specified (Dijkstra & Henseler, 2015).

Structural Model Assessment

Structural models were evaluated using R^2 , path coefficients, effect sizes, and predictive relevance. To illustrate the structural relationships examined in the current research, Figure 1 presents the final PLS-SEM model. Organizational culture has the strongest impact on job satisfaction, followed by transformational leadership. Job satisfaction has a meaningful impact on innovative behavior. Negligible F^2 for TL → IWB is in line with the insignificant direct effects observed (Hair et al., 2017). These values show that transformational leadership and

organizational culture explain a substantial proportion (74.5%) of job satisfaction, while job satisfaction, along with two organizational factors, explain 44.8% of innovative work behaviors. Both values indicate a strong and meaningful structural model (Hair et al., 2017). Job satisfaction greatly mediates the two relationships (Baron & Kenny, 1986; Hair et al., 2017). For transformational leadership, full mediation leadership behaviors increase satisfaction, and satisfaction in turn drives innovation. For organizational culture, mediation is partial, showing direct and indirect paths. The information is presented in Table 3.

Table 3. Structural Model Results, Effect Sizes, and Mediation Analysis

Relationship	(β)	t-value	p-value	f^2	Effect Size	R^2	Adj. R^2
Endogens							
IWB	—	—	—	—	—	0.448	0.442
JS	—	—	—	—	—	0.745	0.743
Direct Effects							
JS $\rightarrow$ IWB	0.453	3.902	0	0.095	Small	—	—
OC $\rightarrow$ IWB	0.24	2.094	0.036	0.035	Small	—	—
OC $\rightarrow$ JS	0.566	10.12	0	0.743	Large	—	—
TL $\rightarrow$ IWB	0.01	0.106	0.916	0	None	—	—
TL $\rightarrow$ JS	0.383	8.536	0	0.34	Medium	—	—
Indirect (Mediation) Effects							
OC $\rightarrow$ JS $\rightarrow$ IWB	0.256	3.599	0	—	—	—	—
TL $\rightarrow$ JS $\rightarrow$ IWB	0.173	3.394	0.001	—	—	—	—

Note: IWB = Innovative Work Behavior; JS = Job Satisfaction; OC = Organizational Culture; TL = Transformational Leadership. Coefficient (β) represents standardized path coefficients obtained from PLS-SEM estimation. R^2 and Adjusted R^2 indicate the explained variance of endogenous constructs. Effect size (f^2) is interpreted following conventional thresholds (0.02 = small, 0.15 = medium, 0.35 = large). Statistical significance is determined based on bootstrapping results (two-tailed), with $p < 0.05$ considered significant.

Source: Processed from PLS-SEM via SmartPLS 4 (2025)

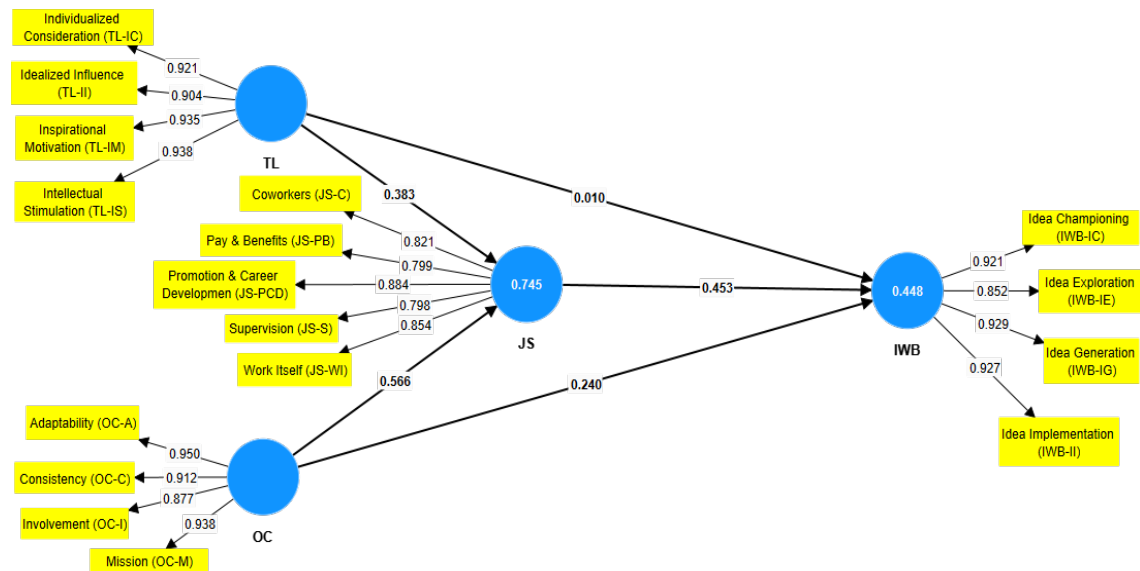


Figure 1. Final PLS-SEM path model

DISCUSSION

The current investigation sought to examine the effects of organizational culture and transformational leadership influence on innovative work behaviour, involving job satisfaction taking part as a mediating mechanism within a semi-military organization context. The findings extend existing innovation literature by offering empirical evidence from a rigid and hierarchical

setting, highlighting how leadership and cultural influences on innovation differ from those commonly observed in more flexible organizational environments.

This study's main finding is that transformational leadership has no direct influence on the behaviour of innovative work. This diverges from many prior studies, which reported positive and significant effects of transformational leadership on innovation (Gumusluolu & Ilsev, 2009; Hughes et al., 2018; Pieterse et al., 2010). These studies were largely conducted in private-sector, high-autonomy, or creative industries where leaders' inspirational and motivational behaviours more easily translate into proactive, idea-driven actions.

Furthermore, it is unwise to view transformational leadership's little direct impact on innovative behaviors as a theoretical flaw. Instead, it highlights the context-contingent nature of leadership effectiveness. In command-driven and hierarchical organizations, leaders primarily influence employees' affective states rather than their discretionary behaviors. Innovation, which inherently involves risk-taking and deviation from established routines, is less likely to emerge directly from leadership behaviors unless employees first experience psychological safety and job satisfaction.

However, several recent studies have begun to show mixed results. Research in public-sector and high-control settings (Choi et al., 2016; Pham et al., 2024) found that the transformational leadership often influences innovation indirectly, mediated by psychological states such as satisfaction or commitment. This pattern aligns with previous assessments that emphasize job satisfaction as a strategic psychological connection among innovation and organizational situation (Elliyana & Basir, 2025; Lei et al., 2020; Yuda et al., 2024).

The present study supports this emerging pattern. In a semi-military environment characterized by procedural rigidity and limited discretion, leader behaviour appears to improve affective experience but not innovation directly. This finding strengthens theoretical arguments that transformational leadership outcomes are situational, with command-driven constructions acting as a structural constraint on its effectiveness. Moreover, the strong and significant impact of transformational leadership on job satisfaction aligns with prior findings (Alqatawenah, 2018; Miao & Cao, 2019), reinforcing that leadership can shape employees' emotional states even when behavioural outcomes are limited by structural constraints.

The impact of organizational culture on innovative work behaviour and job satisfaction is consistent with a large body of previous literature, particularly in structured organizational contexts. Studies by Denison and Mishra (1995), Chang and Lee (2007), and Khazanchi et al. (2018) demonstrated that cultures emphasising involvement, adaptability, and mission clarity foster stronger motivation and innovation.

The strong effect of OC → JS in this study echoes findings from public organizations, where culture shapes perceptions of meaningfulness, stability, and belonging (Rashid et al., 2003). Furthermore, the direct positive effect of OC on IWB supports studies showing that culture provides behavioural norms that either enable or suppress innovation (Ahmed, 1998; Martins & Terblanche, 2003). In structured or semi-military environments, cultural signals rather than leadership play a more consistent position in encouraging workers to involve in idea generation and implementation. In addition, this reinforces the argument that culture is more deeply embedded than leadership behaviours and therefore exerts broader influence.

The strong positive effect of job satisfaction on innovative work behaviour aligns with research in organisational behaviour showing that worker satisfaction boosts the likelihood that they will take proactive and discretionary actions (Janssen, 2000; Judge et al., 2010). Previous studies have highlighted that satisfaction enhances intrinsic motivation, reduces fear of negative consequences, and increases willingness to propose and implement new ideas.

In semi-military settings, these psychological effects are even more critical. The environment may discourage risk-taking and emphasize compliance. Thus, job satisfaction appears to function as a buffer, giving employees the confidence and emotional security needed to engage in innovative behaviour. This aligns with Affective Events Theory, which argues that emotions play a central role in shaping employees' proactive behaviours.

The mediation results, suggesting that job satisfaction mediates any impact of culture and leadership on innovative behavior, are consistent with previous investigations highlighting the meaning of affective states in indirect connections to innovation. For example, research by Choi et al. (2016) and Aryee et al. (2012) stated that employees' psychological experiences often bridge the connection among leadership and innovative outcomes. Similarly, organizational

culture has been shown to influence innovation indirectly through satisfaction, engagement, or psychological empowerment (Nazir et al., 2019; Zheng et al., 2010).

In the current investigation, job satisfaction is conceptualized not merely as an attitudinal evaluation of work conditions, but as an affective-motivational mechanism that enhances psychological readiness and confidence to engage in innovative behavior. In semi-military contexts characterized by high power distance and strict procedural control, job satisfaction functions as a psychological buffer that reduces fear of failure and legitimizes discretionary innovation. The stronger mediation effect for organizational culture compared to transformational leadership underscores the idea that culture represents a more stable and pervasive source of meaning in organizations with strict hierarchy or military influence. Meanwhile, the full mediation for transformational leadership confirms that leadership in rigid environments affects innovation primarily through emotional rather than direct behavioural channels.

CONCLUSION AND FURTHER STUDY

This study concludes that innovative work behavior in semi-military organizations is shaped primarily by affective and cultural mechanisms rather than direct leadership influence. Transformational leadership, while significant in enhancing job satisfaction, does not directly drive innovation but operates through a fully mediated pathway, confirming the centrality of employee affect in rigid hierarchical systems. In contrast, organizational culture exerts both direct and indirect effects, reinforcing its dominant structural role in aligning values, norms, and behavior toward innovation. These findings refine leadership–innovation theory by demonstrating that, in command-based contexts, leadership effectiveness depends on its capacity to generate satisfaction rather than immediate behavioral change. Practically, organizations should prioritize satisfaction-enhancing leadership behaviors, cultivate adaptive and participatory cultures, and institutionalize structured innovation systems that operate within procedural constraints. Human resource policies that reinforce fairness, recognition, and development emerge as critical levers for sustaining innovation performance.

Despite these contributions, the study is constrained by its cross-sectional design, limiting causal inference, and by its focus on a single defense organization, which restricts generalizability across sectors and institutional contexts. The reliance on self-reported measures also introduces potential bias, while the model excludes other relevant psychological and organizational variables. Future research should adopt longitudinal or experimental designs to establish causality, incorporate additional mediators such as psychological safety or work engagement, and test moderated relationships across hierarchical or cultural conditions. Comparative and cross-national studies are particularly necessary to validate the contextual sensitivity of these mechanisms, while mixed-method approaches could uncover deeper interpretive insights into how employees experience leadership and culture in semi-military environments.

ETHICAL DISCLOSURE

Prior to data collection, all participants gave informed consent. They received clear information regarding the study objectives, their freedom to discontinue participation at any phase, the choice of their participation, and assurances concerning the confidentiality and anonymity of the data provided. No personal or sensitive data were collected, and all procedures complied with general ethical standards for organizational and behavioral academic study.

CONFLICT OF INTERESTS

The Authors declare no conflicts of interest.

REFERENCES

- Ahmed, P. K. (1998). Culture and climate for innovation. *European Journal of Innovation Management*, 1(1), 30–43. <https://doi.org/10.1108/14601069810199131>
- Alqatawenah, A. S. (2018). Transformational Leadership Style And Its Relationship With Change Management. *Business: Theory and Practice*, 19(0), 17–24. <https://doi.org/10.3846/btp.2018.03>

- Aryee, S., Walumbwa, F. O., Zhou, Q., & Hartnell, C. A. (2012). Transformational Leadership, Innovative Behavior, and Task Performance: Test of Mediation and Moderation Processes. *Human Performance*, 25(1), 1–25. <https://doi.org/10.1080/08959285.2011.631648>
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173–1182. <https://doi.org/10.1037/0022-3514.51.6.1173>
- Basir, A., & Aminah, H. (2025). The Role Of Job Satisfaction In Enhancing Employees' propensity To Innovate: A Systematic Literature Review (Year: 2019-2024). *Lex Localis: Journal of Local Self-Government*, 23(S4), 200–211. <https://doi.org/https://lex-localis.org/index.php/LexLocalis/article/view/800522>
- Basir, A., Hamida, H., & Aminah, H. (2025). Satisfaction as a Strategic Link between the Organizational Environment and Innovation: A Systematic Literature Review in the Context of Modern Organizations. *International Journal of Economics, Management and Accounting (IJEMA)*, 3(2), 188–197. <https://doi.org/https://doi.org/10.47353/ijema.v3i2.325>
- Bass, B. M., & Riggio, R. E. (2006). *Transformational leadership*. Psychology press.
- Becker, J.-M., Klein, K., & Wetzels, M. (2012). Hierarchical Latent Variable Models in PLS-SEM: Guidelines for Using Reflective-Formative Type Models. *Long Range Planning*, 45(5–6), 359–394. <https://doi.org/10.1016/j.lrp.2012.10.001>
- Bednall, T. C., E. Rafferty, A., Shipton, H., Sanders, K., & J. Jackson, C. (2018). Innovative behaviour: how much transformational leadership do you need? *British Journal of Management*, 29(4), 796–816. <https://doi.org/https://doi.org/10.1111/1467-8551.12275>
- Chang, S., & Lee, M. (2007). A study on relationship among leadership, organizational culture, the operation of learning organization and employees' job satisfaction. *The Learning Organization*, 14(2), 155–185.
- Choi, S. B., Kim, K., Ullah, S. M. E., & Kang, S. W. (2016a). How transformational leadership facilitates innovative behavior of Korean workers: Examining mediating and moderating processes. *Personnel Review*, 45(3), 459–479. <https://doi.org/10.1108/PR-03-2014-0058>
- Choi, S. B., Kim, K., Ullah, S. M. E., & Kang, S.-W. (2016b). How transformational leadership facilitates innovative behavior of Korean workers. *Personnel Review*, 45(3), 459–479. <https://doi.org/10.1108/PR-03-2014-0058>
- De Jong, J., & Den Hartog, D. (2010). Measuring Innovative Work Behaviour. *Creativity and Innovation Management*, 19(1), 23–36. <https://doi.org/10.1111/j.1467-8691.2010.00547.x>
- Denison, D. R., & Mishra, A. K. (1995). Toward a theory of organizational culture and effectiveness. *Organization Science*, 6(2), 204–223. <https://doi.org/https://doi.org/10.1287/orsc.6.2.204>
- Dijkstra, T. K., & Henseler, J. (2015). Consistent partial least squares path modeling. *MIS Quarterly*, 39(2), 297–316. <https://doi.org/https://www.jstor.org/stable/26628355>
- Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research*, 18(1), 39–50. <https://doi.org/10.1177/002224378101800104>
- Gumusluölu, L., & İlsev, A. (2009). Transformational leadership and organizational innovation: The roles of internal and external support for innovation. *Journal of Product Innovation Management*, 26(3), 264–277. <https://doi.org/10.1111/j.1540-5885.2009.00657.x>
- Hair Jr., J. F., Matthews, L. M., Matthews, R. L., & Sarstedt, M. (2017). PLS-SEM or CB-SEM: updated guidelines on which method to use. *International Journal of Multivariate Data Analysis*, 1(2), 107. <https://doi.org/10.1504/IJMDA.2017.087624>
- Hair, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., Danks, N. P., & Ray, S. (2021). *Partial Least Squares Structural Equation Modeling (PLS-SEM) Using R*. Springer International Publishing. <https://doi.org/10.1007/978-3-030-80519-7>
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2–24. <https://doi.org/10.1108/EBR-11-2018-0203>
- Hughes, D. J., Lee, A., Tian, A. W., Newman, A., & Legood, A. (2018). Leadership, creativity, and innovation: A critical review and practical recommendations. *Leadership Quarterly*, 29(5), 549–569. <https://doi.org/10.1016/j.leaqua.2018.03.001>

- Janssen, O. (2000). Job demands, perceptions of effort-reward fairness and innovative work behaviour. *Journal of Occupational and Organizational Psychology*, 73(3), 287–302. <https://doi.org/10.1348/096317900167038>
- Judge, T. A., & Piccolo, R. F. (2004). Transformational and Transactional Leadership: A Meta-Analytic Test of Their Relative Validity. *Journal of Applied Psychology*, 89(5), 755–768. <https://doi.org/10.1037/0021-9010.89.5.755>
- Judge, T. A., Piccolo, R. F., Podsakoff, N. P., Shaw, J. C., & Rich, B. L. (2010). The relationship between pay and job satisfaction: A meta-analysis of the literature. *Journal of Vocational Behavior*, 77(2), 157–167. <https://doi.org/10.1016/j.jvb.2010.04.002>
- Judge, T. A., Thoresen, C. J., Bono, J. E., & Patton, G. K. (2001). The job satisfaction–job performance relationship: A qualitative and quantitative review. *Psychological Bulletin*, 127(3), 376. <https://doi.org/https://psycnet.apa.org/doi/10.1037/0033-2909.127.3.376>
- Khazanchi, S., Lewis, M. W., & Boyer, K. K. (2007). Innovation-supportive culture: The impact of organizational values on process innovation. *Journal of Operations Management*, 25(4), 871–884.
- Khazanchi, S., Lewis, M. W., & Boyer, K. K. (2018). Innovation-supportive culture: The impact of organizational values on process innovation. *Journal of Operations Management*, 25(4), 871–884. <https://doi.org/10.1016/j.jom.2006.08.003>
- Lok, P., & Crawford, J. (2004). The effect of organisational culture and leadership style on job satisfaction and organisational commitment. *Journal of Management Development*, 23(4), 321–338. <https://doi.org/10.1108/02621710410529785>
- Martins, E. C., & Terblanche, F. (2003). Building organisational culture that stimulates creativity and innovation. *European Journal of Innovation Management*, 6(1), 64–74. <https://doi.org/10.1108/14601060310456337>
- Miao, R., & Cao, Y. (2019). High-Performance Work System, Work Well-Being, and Employee Creativity: Cross-Level Moderating Role of Transformational Leadership. *International Journal of Environmental Research and Public Health*, 16(9), 1640. <https://doi.org/10.3390/ijerph16091640>
- Nazir, S., Shafi, A., Atif, M. M., Qun, W., & Abdullah, S. M. (2019). How organization justice and perceived organizational support facilitate employees' innovative behavior at work. *Employee Relations: The International Journal*, ahead-of-print(ahead-of-print), 1288–1311. <https://doi.org/10.1108/ER-01-2017-0007>
- Pham, T. P. T., Van Nguyen, T., Van Nguyen, P., & Ahmed, Z. U. (2024). The pathways to innovative work behavior and job performance: Exploring the role of public service motivation, transformational leadership, and person-organization fit in Vietnam's public sector. *Journal of Open Innovation: Technology, Market, and Complexity*, 10(3), 100315. <https://doi.org/10.1016/j.joitmc.2024.100315>
- Pieterse, A. N., van Knippenberg, D., Schippers, M., & Stam, D. (2010). Transformational and transactional leadership and innovative behavior: The moderating role of psychological empowerment. *Journal of Organizational Behavior*, 31(4), 609–623. <https://doi.org/10.1002/job.650>
- Rahmadani, V. G., Schaufeli, W. B., Fauzia, R., & Nazriani, D. (2022). The moderating effect of employee growth climate on the relationship between work engagement and job outcomes among plantation workers in North Sumatra, Indonesia. *Frontiers in Psychology*, 13, 968572. <https://doi.org/10.3389/fpsyg.2022.968572>
- Rashid, Z.A., Sambasivan, M., & Johari, J. (2003). The influence of corporate culture and organisational commitment on performance. *Journal of Management Development*, 22(8), 708–728. <https://doi.org/10.1108/02621710310487873>
- Škerlavaj, M., Song, J. H., & Lee, Y. (2010). Organizational learning culture, innovative culture and innovations in South Korean firms. *Expert Systems with Applications*, 37(9), 6390–6403. <https://doi.org/10.1016/j.eswa.2010.02.080>
- Zheng, W., Yang, B., & McLean, G. N. (2010). Linking organizational culture, structure, strategy, and organizational effectiveness: Mediating role of knowledge management. *Journal of Business Research*, 63(7), 763–771. <https://doi.org/10.1016/j.jbusres.2009.06.005>