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The Mechanism Of Safety Leadership And Psychosocial Safety Climate On Safety Citizenship Behavior (A Study On The Logistics Industry In Indonesia)

Faidal[1], Ria Sakinah[2*]
[1,2] Trunodjoyo University, Madura, Indonesia

**Corresponding Author: sakinahrian30@gmail.com*

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ABSTRACT

This study aims to analyze the influence of safety leadership and psychosocial safety climate on safety citizenship behavior, using safety climate as a mediator. Using a quantitative explanatory approach, data were collected from 142 employees of PT SILOG Group through proportionate stratified random sampling. Data analysis used PLS-SEM with SmartPLS 3.0. The results showed that safety leadership and psychosocial safety climate had a significant positive effect on the formation of safety citizenship behavior. However, safety leadership, psychosocial safety climate, and safety citizenship behavior did not significantly influence safety citizenship behavior. This indicates that in the logistics sector, safety tends to be defined as formal compliance rather than voluntary participation.

INTRODUCTION

Workplace accidents remain a crucial global problem, consistently showing no significant downward trend. In Indonesia, data from the Indonesian Ministry of Manpower recorded a surge in workplace accidents, from 370,747 in 2023 to 462,241 in 2024 (Kemnaker, 2024). Considering that human behavior is a contributing factor to nearly 90% of all accident incidents (Sankar & Anandh, 2024). Conventional approaches that rely solely on administrative compliance with basic safety procedures are deemed inadequate. In a dynamic and high-risk work environment, accident prevention requires voluntary and proactive initiatives from employees beyond their primary job descriptions, known as Safety Citizenship Behavior (SCB).

The cement and logistics industry is one of the sectors with a very high level of occupational safety risk, due to the high mobility of heavy vehicles and loading and unloading activities (Slil et al., 2025). One Indonesian logistics company has demonstrated a proactive commitment to Occupational Safety and Health (OHS), as evidenced by obtaining international certifications ISO 45001:2018 and ISO 14001:2015 (Admin SILOG.co.id, 2025). However, this formal commitment has not completely eliminated risks in the field.

Data recorded 29 traffic accidents involving logistics fleets between January 2024 and February 2025. The fatal accident involving the T.688 fleet in early 2025 highlighted that basic compliance measures often fail to prevent incidents when not balanced with SCB behaviors, such as employees' courage to report emergencies outside of standard procedures. This is exacerbated by a management response oriented toward a blame culture, which directly suppresses proactive employee initiatives due to fear of sanctions.

This phenomenon demonstrates that safety implementation is highly dependent on employees' psychological perceptions of organizational priorities. Psychosocial Safety Climate (PSC) is defined as the collective perception of leaders' dedication to protecting employee mental health above productivity demands. Furthermore, Safety Leadership (SL) from field leaders actively shapes the safety climate by signaling the company's true safety priorities. Effective leadership and adequate psychosocial support will create a positive Safety Climate (SC), which in turn acts as a psychological bridge to foster SCB (Zhao et al., 2022).

Although a wealth of literature has explored safety management, comprehensive studies integrating Safety Leadership, Psychosocial Safety Climate, Safety Climate, and their impact on Safety Citizenship Behavior (SCB) in the Indonesian logistics sector are still very limited. The logistics sector has unique characteristics, rhythms, and work pressures compared to the manufacturing industry, thus requiring a specific approach. Therefore, this study aims to fill this gap by analyzing the role of Safety Leadership and Psychosocial Safety Climate as predictors of SCB, as well as examining the mediating role of Safety Climate among employees of PT SILOG Group in the Gresik Area.

Social Exchange Theory is the main foundation for understanding employee motivation to engage in safety citizenship behavior. This theory emphasizes the principle of mutually beneficial reciprocal relationships (Saleem & Malik, 2022). In the context of this research, when a company or leader provides support, both in terms of resources and fair treatment, employees tend to reciprocate by contributing positively beyond their job requirements (safety citizenship behavior). Organizational commitment to safety and psychological well-being is seen as an investment that triggers a reciprocal response from employees in the form of proactive safety behavior (Suardana I, 2023).

Safety Citizenship Behavior is a voluntary, prosocial action taken by employees to support workplace safety beyond the formal demands of their jobs (Kadher et al., 2024). SCB includes initiatives such as helping fellow coworkers understand safety standards, voicing opinions for system improvements, and proactively reporting potential hazards. This behavior is an important indicator of a mature safety culture because it arises from an individual's internal commitment, not simply compliance with sanctions.

Safety Climate is defined as a collection of shared employee perceptions regarding safety policies, procedures, and practices that are truly valued and supported by management (Amoadu et al., 2023). Safety climate serves as a guideline that directs employee adaptive behavior in the field (Faidal, 2024). Because of its ability to reflect the organization's safety

conditions at a given time, safety climate is often used as a leading indicator to assess the effectiveness of safety management before an accident occurs.

Safety Leadership is the dynamic process by which leaders influence the beliefs and behaviors of their employees to achieve shared safety goals (Sankar et al., 2024). Effective safety leadership involves participatory management, demonstrating a genuine concern for safety, and providing incentives for safe behavior. Concrete actions by leaders, such as visiting work sites and engaging in dialogue about risks, serve as a strong signal to employees about the company's true safety priorities.

Psychosocial Safety Climate (PSC) describes employees' collective perceptions of organizational policies and procedures aimed at protecting their psychological health and safety (Khan et al., 2024). PSC focuses on management support for stress prevention and mental health in the workplace. PSC also serves as an upstream resource, it establishes the context in which managers operate. Organizations with high PSC prioritize employee mental well-being above or equal to productivity targets.

RESEARCH METHODS

His study employed a quantitative approach with an explanatory cross-sectional design, where data collection was conducted at a specific point in time. The population comprised all 219 employees within PT SILOG Group in the Gresik Area, spanning three corporate entities: the 3V group (PT VUBA, PT VUDS, PT VULS), PT Semen Indonesia Distributor (SID), and PT Semen Indonesia Logistik (SILOG). The sample size was determined using the Slovin formula with a 5% margin of error, resulting in a sample size of 142 respondents. The sampling technique used proportionate stratified random sampling to determine the proportion per stratum, followed by simple random sampling within each corporate entity (Wildan, 2023).

Primary data collection was conducted through a survey using a questionnaire distributed directly to respondents. All research variables were measured using a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The collected data was analyzed using the Partial Least Squares Structural Equation Modeling (PLS-SEM) method operated through SmartPLS 3.0 software.

RESEARCH RESULTS

This study involved 142 employees within the PT SILOG Group Gresik Area. Respondents were distributed across PT Semen Indonesia Logistik (76 respondents), PT Semen Indonesia Distributor (49 respondents), and the 3V group of companies (17 respondents). This representation encompasses all of the group's business lines, from land logistics and maritime to retail distribution.

Convergent validity test results indicated that all indicators had outer loading values above 0.60. Indicators for the Psychosocial Safety Climate (PSC) variable had values ranging from 0.722 to 0.839, while those for the Safety Citizenship Behavior (SCB) variable ranged

from 0.724 to 0.849. All latent variables had Average Variance Extracted (AVE) values above 0.50, meaning they explained more than half of the variance in their indicators (Hair F.Joseph, 2021).

Reliability tests showed Cronbach's Alpha and Composite Reliability values for all constructs were above 0.70. The PSC variable recorded the highest value (CR = 0.952), followed by SC (CR = 0.923), SL (CR = 0.919), and SCB (CR = 0.866). Discriminant validity was also met through the Fornell-Larcker criterion, where the square root of the AVE of each variable is greater than the correlation between the other variables in the model.

Multicollinearity test results showed that the Variance Inflation Factor (VIF) values for all variables were below 3.0, thus concluding that there were no collinearity issues among the independent variables. The coefficient of determination (R2) for the Safety Climate variable was 0.586, indicating that 58.6% of the variance in safety climate can be explained by Safety Leadership and PSC. Meanwhile, the R2 value for SCB was 0.425, meaning the model was able to explain 42.5% of the variance in safety citizenship behavior.

Hypothesis testing was conducted using a bootstrapping procedure to determine the significance of direct and indirect effects.

Table 1.1 Hypothesis Testing Results (Direct Effect)

	Original Sample (O)	T Statistics (|O/STDEV|)	P Values	Description
SL > SCB	0,258	1,942	0,053	Rejected
SL > SC	0,465	5,425	0,000	Accepted
PSC > SCB	0,280	1,952	0,051	Rejected
PSC > SC	0,405	4,585	0,000	Accepted
SC > SCB	0,197	1,344	0,180	Rejected

Based on the table above, it can be seen that Safety Leadership (H2) and PSC (H4) have a positive and significant effect on Safety Climate. However, the direct effect of SL (H1) and PSC (H3) on SCB was declared statistically insignificant at the 5% level, although it showed marginal significance. Furthermore, Safety Climate was shown to have no significant effect on SCB (H5).

Table 1.2 Results of the Mediation Hypothesis Test

	Original Sample (O)	T Statistics (|O/STDEV|)	P Values	Description
SL -> SC -> SCB	0,092	1,255	0,210	Rejected
PSC -> SC -> SCB	0,080	1,299	0,194	Rejected

The results of the mediation test in the table above indicate that Safety Climate was not proven to significantly mediate the relationship between Safety Leadership and PSC on Safety Citizenship Behavior (H6 and H7 were rejected). This occurred because the influence path from the mediator variable (Safety Climate) to the dependent variable (Safety Citizenship Behavior) was broken.

DISCUSSION

The research results provide strong empirical evidence that Safety Leadership (SL) and Psychosocial Safety Climate (PSC) are key predictors of a positive Safety Climate (SC) in the logistics environment. Leaders who demonstrate commitment, role models, and two-way communication successfully build a safety foundation based on trust, not fear. This is evident in the implementation of programs such as the Learn and Share forum, which facilitates open communication between leaders and subordinates.

Furthermore, the high employee perception of PSC demonstrates that management's mental health protection and stress prevention translate into a holistic perception of safety. The availability of transparent information, such as the Person in Charge (PIC) Area Owner board, has been shown to be effective in reducing stress-inducing role confusion, thus strengthening employee confidence that the company truly prioritizes their well-being above mere productivity targets.

The most interesting finding of this study is the rejection of a direct effect of SL, PSC, and SC on SCB, as well as the failure of SC to mediate this relationship. This phenomenon of a broken link to safety citizenship behavior can be explained by the unique characteristics of the logistics and distribution sector.

In the logistics environment, operations are characterized by tight daily rotation targets, high levels of individual mobility, and the pressure of tight deadlines. This high physical and mental workload drains employee energy, making voluntary behavior (SCB) such as discussing safety issues across departments or assisting coworkers perceived as an additional burden that takes up operational time. Fleet employees often work in isolation behind the wheel on different routes, limiting the social interaction needed to monitor and remind each other.

The safety climate within the company tends to be understood by employees as merely formal adherence to Standard Operating Procedures (SOPs) to avoid managerial sanctions (compliance-based), rather than as an internal value that encourages mutual assistance initiatives. The sense of security facilitated by PSC actually makes employees feel comfortable and dependent on the company's established systems, rather than challenged to act independently and proactively. This confirms that to trigger SCB, a transactional safety climate is not enough; it requires internal motivation and a deeper emotional bond.

CONCLUSION AND SUGGESTION

Conclusion

This study concludes that Safety Leadership and Psychosocial Safety Climate have been shown to significantly shape and strengthen the Safety Climate in logistics environments. However, safety leadership, psychosocial support, and a positive safety climate have not been able to automatically encourage Safety Citizenship Behavior among employees. Safety Climate has also not been shown to mediate the relationship between these predictors and proactive behavior. The operational realities of logistics, with high mobility and tight

deadlines, mean that safety is still perceived as merely a formal obligation to avoid sanctions, rather than a voluntary, participatory initiative.

Recommendation

Practically, management is advised to go beyond simply meeting safety procedure standards. To encourage employees' extra-role initiatives, companies need to tap into intrinsic motivation by building a sense of belonging and providing special rewards for employees who proactively voice ideas for OHS improvements. Future researchers are advised to expand this research model by integrating internal driving variables, such as safety motivation or organizational commitment, to bridge the gap between proactive behavior in sectors with specific workloads.

BIBLIOGRAPHY

Admin SILOG.co.id. (2025). SILOG Passes ISO 45001 and ISO 14001 Certification Audits: Advancing Toward Safer and More Sustainable Operations. August 12. https://www.silog.co.id/silog-lolos-audit-sertifikasi-iso-45001-iso-14001-melangkah-lebih-andal-menuju-operasi-aman-dan-berkelanjutan/

Amoadu, M., Ansah, E. W., & Sarfo, J. O. (2023). Influence of psychosocial safety climate on occupational health and safety: a scoping review. BMC Public Health, 23(1), 1–13. https://doi.org/10.1186/s12889-023-16246-x

Faidal. (2024). Safety Behavior to Reduce Accidents for Tourism Industry Managers (B. S. Pambudi, Ed.; First Edition). Eureka Media Aksara, January 2024, Member of IKAPI Central Java.

Hair F.Joseph. (2021). Partial Least Squares Structural Equation Modeling (PLS-SEM) Using R.

Kadher, Y., Alzubi, A., Berberoğlu, A., & Öz, T. (2024). Perceived Leadership Support, Safety Citizenship, and Employee Safety Behavior in the Construction Industry: The Role of Safety Learning. Buildings, 14 (10). https://doi.org/10.3390/buildings14103260

Ministry of Manpower of the Republic of Indonesia. (2024). Occupational Accident Data 2024. https://satudata.kemnaker.go.id/data/kumpulan-data/2447

Khan, H. S. ud din, Chughtai, M. S., Ma, Z., Li, M., & He, D. (2024). Adaptive leadership and safety citizenship behaviors in Pakistan: the roles of readiness to change, psychosocial safety climate, and proactive personality. Frontiers in Public Health, 11(January), 1–12. https://doi.org/10.3389/fpubh.2023.1298428

WIldan, M. Alkirom. (2023). The Concept of Population and Sample Using a Statistical Approach. WIDYA GAMA PRESS.

Saleem, F., & Malik, M. I. (2022). Safety Management and Safety Performance Nexus: Role of Safety Consciousness, Safety Climate, and Responsible Leadership. International

Journal of Environmental Research and Public Health, 19 (20). https://doi.org/10.3390/ijerph192013686

Sankar, S. S., Anandh, K. S., & Prasanna, K. (2024). Safety Leadership: A Catalyst for Positive Safety Climate on Construction Sites. Buildings, 14 (6). https://doi.org/10.3390/buildings14061806

Senthamizh Sankar, S., & Anandh, K. S. (2024). Building Safer Workplaces: Unveiling the Impact of Safety Leadership Styles in the Construction Industry. Administrative Sciences, 14(9). https://doi.org/10.3390/admsci14090212

Slil, E., Iyiola, K., Alzubi, A., & Aljuhmani, H. Y. (2025). Impact of Safety Leadership and Employee Morale on Safety Performance: The Moderating Role of Harmonious Safety Passion. Buildings, 15(2). https://doi.org/10.3390/buildings15020186

Suardana I, M. (2023). The Role Of Organizational Commitment In Mediating The Influence Of Transformational Leadership And Workload On Organizational Citizenship Behavior: A Study On Pt. Saka Agung Abadi's Employees. Eurasia: Economics & Business, 7(July), 45–63.

Zhao, L., Yang, D., Liu, S., & Nkrumah, E. N. K. (2022). The Effect of Safety Leadership on Safety Participation of Employee: A Meta-Analysis. Frontiers in Psychology, 13(June). https://doi.org/10.3389/fpsyg.2022.827694