

The Relationship Between Company Compliance Levels with Occupational Health and Safety (K3) Claims in the Manufacturing Sector: A Literature Review

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Abstract

This study aims to examine the relationship between corporate compliance with Occupational Safety and Health (OSH) standards and the high number of Work Accident Insurance (JKK) claims in the manufacturing sector. The background of the study is based on the high number of occupational accident cases in Indonesia, which reached 462,241 cases in December 2024, with the highest concentrations in industrial regions such as East Java and West Java. This research employs normative legal research and literature review methods using statutory, conceptual, and case approaches. The data were obtained from primary and secondary legal materials as well as occupational accident statistics as supporting data. The findings show that low levels of compliance with OSH standards have a significant correlation with the increase in JKK claims. The effectiveness of OSH implementation is influenced by management commitment, quality of OSH management systems, safety culture, worker competence, and the effectiveness of supervision and law enforcement. This study concludes that strengthening substantive compliance with OSH standards is a key factor in reducing the number of JKK claims in the manufacturing sector in Indonesia.

Keywords: OSH Compliance; Work Accident Insurance; Manufacturing Sector; JKK Claims; Occupational Safety.

Introduction

Occupational Safety and Health (OHS) is a fundamental aspect of modern industrial relations, particularly in the manufacturing sector, which carries a relatively high risk of workplace accidents. Work environments involving heavy machinery, chemicals, high-tech production processes, and the pressure of production targets make this sector one of the most vulnerable to workplace accidents. In the context of social security for workers in Indonesia, this risk is accommodated through the Occupational Accident Insurance (JKK) program managed by BPJS Ketenagakerjaan. However, the high frequency of JKK claims raises serious questions about the extent to which companies have effectively complied with OHS standards and regulations. (Napitupulu et al., 2025)

The latest empirical data shows that the workplace accident rate in Indonesia remains very high. As of December 2024, the total number of workplace accidents reached 462,241, consisting of 423,644 cases in the Wage Recipient (PU) segment, 34,364 cases in the Non-Wage Recipient (BPU) sector, and 4,233 cases in the Construction Services sector. The provinces with the highest number of cases are



dominated by areas with a strong manufacturing industry base, such as East Java (80,771 cases), West Java (79,768 cases), and West Java (79,768 cases). (cases), and DKI Jakarta (29,008 cases). These high figures indicate that real occupational safety risks remain a structural issue in Indonesia's industrial sector, particularly in areas that are centers of manufacturing activity. (Hutagalung, 2022)

Literature reviewed in published journals shows a strong correlation between a company's level of compliance with OHS implementation and the number of workplace accidents. (Muharam et al., 2022) One important finding in the literature states that companies that consistently implement an OHS Management System, including the provision of Personal Protective Equipment (PPE), regular training, internal audits, and an occupational safety culture, tend to have lower workplace accident rates than companies that only implement OHS as an administrative formality. This confirms that the effectiveness of OHS lies not only in the existence of regulations, but also in the quality of their implementation at the operational level. (Marbun & Nugroho, 2022)

In the context of occupational health and safety claims, several journals also reveal that the increase in claims is not solely due to worker negligence, but is more related to weak risk control systems at the company level (Muthoharoh & Wibowo, 2020). Minimal supervision, poor compliance with standard operating procedures, and a lack of top management commitment are dominant factors triggering workplace accidents that lead to occupational health and safety claims (Marbun & Nugroho, 2022). This suggests that occupational health and safety claims can be used as an indirect indicator to measure the effectiveness of occupational health and safety (K3) implementation in companies, particularly in the manufacturing sector. (Pratiwi et al., 2023)

Another reviewed journal also emphasized that there remains a gap between the normatively comprehensive OHS regulations and the reality of their implementation in the field. Many companies have fulfilled administrative obligations such as preparing OHS documents, establishing an OHS advisory committee (P2K3), and routine reporting, but have not yet fully developed a substantive occupational safety culture (Hutagalung, 2022). As a result, the risk of accidents remains high even though the company has formally declared its compliance with regulations. (Pratiwi et al., 2023)

In the manufacturing sector, pressures for efficiency and productivity often push companies to prioritize safety (Napitupulu et al., 2025). The literature shows that in many cases, production targets and market demands tend to shift management's focus from accident prevention to achieving output, resulting in suboptimal implementation of occupational health and safety standards. This directly impacts the risk of workplace accidents and, ultimately, the number of occupational health and safety claims (JKK). (Napitupulu et al., 2025)

Based on these data and findings, it is clear that the relationship between company compliance with OHS and JKK claims is not merely an administrative one, but rather a complex causal relationship (Napitupulu et al., 2025). The high number of workplace accidents, particularly in provinces with a strong manufacturing base, reflects a gap between OHS legal norms and their practical implementation. The reviewed literature consistently shows that the higher a company's level of compliance with OHS standards, the lower the potential for workplace accidents and JKK claims. Conversely, weak compliance is directly proportional to the increasing burden of JKK claims, which ultimately impacts the burden on the national social

security system. (Nugraha & Yulia, 2019)

Based on these conditions, it is important to conduct a literature review that specifically examines the relationship between the level of company compliance with OHS standards and JKK claims in the manufacturing sector, so that it can be understood how the relationship between the two patterns and the extent to which compliance with OHS contributes to reducing the risk of work accidents. Thus, this study is directed to answer how the relationship between the level of company compliance with OHS standards and the high number of JKK claims in the manufacturing sector and what factors influence the effectiveness of OHS implementation in reducing the number of JKK claims, so that the results of the study are expected to provide a scientific basis for strengthening policies, improving OHS governance, and developing a more effective work safety culture in the manufacturing industry environment.

Research methods

This study uses a normative legal research method that focuses on the study of legal norms governing Occupational Safety and Health (K3) and the Work Accident Insurance (JKK) mechanism, as well as their relationship to the level of company compliance in the manufacturing sector. Normative legal research was chosen because the object of study is not direct social behavior, but rather written legal norms, legal principles, and doctrines that form the basis for the regulation and implementation of K3 and JKK. This approach is in line with the views of Soerjono Soekanto and Sri Mamudji who stated that normative legal research aims to examine law as a rule or norm that applies in society.

The types of approaches used in this study include a statutory approach, namely analyzing the laws and regulations governing K3 and JKK, such as the Employment Law, regulations on K3 management systems, and regulations on employment social security. In addition, a conceptual approach is also used to examine the concepts of legal compliance, corporate responsibility, and legal protection for workers, as stated by Peter Mahmud Marzuki who emphasized the importance of conceptual analysis in normative legal research. To strengthen the analysis, this study also uses a case approach through a review of court decisions and work accident cases that have legal force, especially those related to disputes over JKK claims and corporate responsibility.

The legal sources used in this study consist of primary legal materials, in the form of laws and regulations, court decisions, and official state documents; secondary legal materials, in the form of legal textbooks, scientific journals, and relevant previous research; and tertiary legal materials, in the form of legal dictionaries and legal encyclopedias. The legal materials were collected through document study (library research) with a systematic search of regulations, literature, and legal databases. This process was carried out to ensure the completeness and accuracy of the normative data analyzed.

The analysis of legal materials was conducted using legal interpretation and legal construction methods. Interpretation was conducted through grammatical interpretation to understand the normative meaning of an article, systematic interpretation to see the relationship between norms, and teleological interpretation to understand the purpose of the legislators in regulating K3 and JKK. Furthermore, prescriptive legal reasoning was conducted to formulate conclusions regarding the ideality of regulating and implementing K3 compliance obligations in

relation to JKK claims in the manufacturing sector. The results of this study are normative-prescriptive in nature, namely providing recommendations for legal construction that are expected to strengthen company compliance with K3 and minimize the risk of workplace accidents.

Results and Discussion

The Relationship between the Level of Company Compliance with K3 Standards and the High Number of JKK Claims in the Manufacturing Sector

The relationship between a company's level of compliance with Occupational Safety and Health (K3) standards and the high number of Work Accident Insurance (JKK) claims in the manufacturing sector is both causal and systemic (Nugraha & Yulia, 2019). Conceptually, K3 is designed as a preventive mechanism to reduce the risk of accidents and occupational diseases. Meanwhile, JKK is a social protection instrument that functions as a compensatory mechanism when such risks actually occur. In this context, JKK claims actually reflect the failure of the K3 prevention system at the company level. (Rachmawati, 2022)

A company's level of compliance with OHS standards can be understood as the degree to which its behavior aligns with the normative obligations stipulated in laws and regulations. This compliance includes the availability of safe work procedures, safety training, the use of personal protective equipment, an incident reporting system, and effective internal oversight. (Rachmawati, 2022) When compliance is formalistic and limited to document fulfillment, the potential for workplace accidents remains high. Conversely, if compliance is implemented substantively, the risk of accidents can be significantly reduced.

No.	Province	Seg men Participants			Amount
		Public Works	B PU	Service Construction	
1	Aceh	1,128	228	11	1,367
2	S. mutaneraNorth	22,388	1,104	247	23,739
3	S. mutaneraWest	7,613	1,049	105	8,767
4	Riau	30,411	1,275	180	31,866
5	Jambi	6,682	438	15	7,135
6	S. mutanera South	6,584	320	27	6,931
7	Bengkulu	990	65	7	1,062
8	Lampung	3,630	128	8	3,766
9	Kep. BangkaBelitung	1,225	123	4	1,352
10	Kepulauan Riau	21,448	826	277	22,551
11	DKI Jakarta	25,313	3,204	491	29,008
12	JavaWest	74,207	5,000	561	79,768
13	Java Middle	53,789	4,821	346	58,956
14	DI Yogyakarta	10,818	2,007	115	12,940
15	Java East	74,319	5,585	867	80,771
16	Banten	32,579	1,589	278	34,446
17	Bali	6,978	3,050	41	10,069
18	Nusa SoutheastWest	735	381	53	1,169
19	Nusa Southeast East	413	87	30	530
20	K AlimantanWest	3,657	512	24	4,193
21	K Alimantan Middle	9,139	149	14	9,302
22	K Alimantan South	5,801	513	30	6,344
23	K Alimantan East	10,957	796	192	11,945
24	K AlimantanNorth	1,359	228	122	1,709
25	SulawesiNorth	868	83	19	970
26	Sulawesi Middle	4,812	134	55	5,001
27	South Sulawesi	2,446	401	68	2,915
28	Sulawesi Southeast	757	24	2	783
29	Gorontalo	190	59	-	249
30	SulawesiWest	90	30	5	125
31	Maluku	128	30	4	162
32	North Maluku	376	38	7	421

33	West Papua	518	23	19	560
34	Papua	1,296	64	9	1,369
	Amount	423,644	34,364	4,233	462,241

Table 1 Number of Workplace Accident Cases in Indonesia by Province and Participation Segment in December 2024

Source: BPJS Employment

The presented workplace accident data provides a very strong empirical picture of the magnitude of this problem. As of December 2024, 462,241 cases of workplace accidents were recorded nationally, with 423,644 cases in the wage earner (PU) segment, which generally reflects formal sector workers such as manufacturing. Provinces with a strong manufacturing industry base showed the highest rates, such as East Java (80,771 cases), West Java (79,768 cases), Central Java (58,956 cases), and Banten (34,446 cases). This pattern indicates that the industrial sector, particularly manufacturing, still faces serious challenges in effectively implementing OHS standards (Ramadhani, 2024).

The high number of occupational health and safety (JKK) claims in these regions can be understood as an indirect indicator of weak company compliance with OHS standards (Ardi & Prabowo, 2024). Theoretically, the higher the level of OHS compliance, the lower the likelihood of workplace accidents, thus decreasing the number of OHS claims. Conversely, if OHS standards are ignored or only half-heartedly implemented, the likelihood of accidents increases, resulting in a surge in OHS claims. This relationship exhibits a negative correlation, where increased OHS compliance should be inversely proportional to increased OHS claims.

In the manufacturing sector, occupational risk characteristics are more complex than in other sectors (Ramadhani, 2024). Production activities involve high-speed machinery, extreme temperatures, high pressure, hazardous chemicals, and shift work systems that can increase fatigue (Claudia & Lie, 2024). These conditions demand stricter and more disciplined implementation of occupational safety and health (K3). However, in practice, many manufacturing companies face a dilemma between occupational safety and production efficiency. The literature shows that a focus on production targets often leads companies to neglect safety procedures, which are perceived as slowing down work processes.

Low OHS compliance is also correlated with a weak safety culture within the organization (Claudia & Lie, 2024). Companies that fail to foster a safety culture tend to place safety responsibility solely on workers, rather than as a shared responsibility. As a result, incident reporting is low, safe work procedures are ignored, and unsafe acts become "normal" practices. In situations like this, JKK claims are a logical consequence of a work system that has not prioritized safety from the outset.

Furthermore, a suboptimal external oversight system reinforces the link between weak OSH compliance and high JKK claims (Claudia & Lie, 2024). Limited labor oversight, a disproportionate number of supervisors compared to the number of companies, and low sanctions for OSH violations contribute to minimal company compliance. In this context, JKK claims not only burden the social security system but also reflect regulatory failures in ensuring effective OSH implementation (Hirowati et al., 2024).

Statistical data also shows that wage earners dominate the number of workplace accidents compared to other segments. This reinforces the assumption

that the formal sector, including manufacturing, is a major contributor to the high number of JKK claims (Hirowati et al., 2024). For example, West Java and East Java, known as industrial centers, contribute nearly a third of the national total. This fact suggests a structural relationship between the concentration of the manufacturing industry and the high number of workplace accidents and JKK claims. The relationship between OSH compliance and JKK claims can also be understood from a legal economics perspective. Companies that do not comply with OSH tend to avoid the cost of prevention in the hope of reducing production costs. However, in the long run, the costs arising from workplace accidents through JKK claims, lost work hours, decreased productivity, and potential legal sanctions are far greater. This pattern indicates that OSH compliance is not only a legal obligation but also a strategic economic needs for business sustainability (Hirowati et al., 2024).

Thus, the relationship between a company's level of compliance with OHS standards and the high number of occupational health and safety claims in the manufacturing sector is direct and significant. High levels of OHS claims essentially reflect weak OHS implementation at the company level, including internal regulations, safety culture, oversight, and managerial commitment. National workplace accident data shows that regions with high concentrations of manufacturing industries also have high rates of occupational accidents, thus concluding that OHS compliance is a key factor in reducing the burden of OHS claims in the manufacturing sector (Hirowati et al., 2024).

Factors Influencing the Effectiveness of K3 Implementation in Reducing the Number of JKK Claims in Manufacturing Companies

The effectiveness of Occupational Safety and Health (OHS) implementation in reducing the number of Work Accident Insurance (JKK) claims in manufacturing companies is influenced by various interrelated factors, both internal and external (Rahma, 2021). OHS implementation does not stand as a single variable, but rather as a system encompassing aspects of policy, organizational structure, individual behavior, work culture, and the regulatory environment. Therefore, the variability in the effectiveness of OHS implementation among manufacturing companies is highly dependent on the combined quality of these factors (Rarindo, 2018).

The first and most crucial factor is top management commitment. Literature and practice show that OHS will be effective if there is concrete support from company leadership, whether in the form of written policies, budget allocations, or exemplary behavior (Rarindo, 2018). In many cases, OHS policies will remain merely administrative documents without management commitment. Conversely, companies that prioritize OHS as part of their business strategy tend to have lower workplace accident rates and, ultimately, significantly reduce the number of occupational health insurance (JKK) claims.

The second factor is the quality of the OHS management system implemented within the company. An effective OHS management system must include hazard identification, risk assessment, risk control, and periodic evaluation mechanisms (Rahma, 2021). In the manufacturing sector, the complexity of production processes demands detailed and consistent standard operating procedures (SOPs). When OHS SOPs are not updated or adequately disseminated, the potential for accidents increases. This not only impacts worker safety but also directly impacts increased JKK claims (Rarindo, 2018).

The third factor is worker competence and training. Workers who lack adequate OHS training tend to lack an understanding of occupational risks and how to prevent them. In the manufacturing context, the use of heavy machinery, hazardous materials, and automated technology requires workers to possess both technical skills and a high level of safety awareness. Lack of training is a major cause of unsafe acts that lead to workplace accidents. Therefore, the quality of training is crucial in reducing JKK claims.

The fourth factor relates to safety culture in the workplace. Safety culture reflects the collective values, attitudes, and perceptions of workers and management regarding the importance of occupational safety. Companies with a strong safety culture generally encourage fearless reporting of incidents, reward safe behavior, and enforce discipline for violations (Rahma, 2021). Conversely, a work culture that is permissive of violations of safety procedures increases the likelihood of workplace accidents and contributes to increased JKK claims (Sahranafa & Kriswibowo, 2024).

The fifth factor is the availability and quality of safety infrastructure. Personal protective equipment (PPE), ventilation systems, fire extinguishers, machine safety devices, and occupational health facilities are essential elements of an occupational health and safety (OHS) system. In many manufacturing companies, OHS effectiveness is reduced due to unavailability, substandard conditions, or inconsistent use of PPE. This creates a direct risk to worker safety and increases the likelihood of occupational health and safety claims (Rarindo, 2018).

The sixth factor, no less important, is internal and external oversight of OHS implementation (Ramadhani, 2024). Internal oversight is carried out through OHS audits, routine inspections, and reporting mechanisms. External oversight is carried out by labor inspectors and related institutions (Rarindo, 2018). When oversight is weak, violations of OHS standards tend to increase. In the context of the risk-intensive manufacturing sector, weak oversight is a significant factor weakening the effectiveness of OHS implementation (Sahranafa & Kriswibowo, 2024).

The seventh factor is law enforcement and sanctions for OHS violations. The effectiveness of OHS implementation is greatly influenced by how stringently regulations are enforced. Weak or infrequently applied sanctions will reduce a company's level of compliance (Ramadhani, 2024). Conversely, consistent law enforcement will encourage companies to be more serious about implementing OHS. This has a direct impact on reducing the risk of workplace accidents and JKK claims. (Sahranafa & Kriswibowo, 2024)

The eighth factor is economic pressure and production targets. In the manufacturing sector, demands for efficiency and market competition often force companies to sacrifice safety for production speed. Excessive overtime, overly intensive workloads, and the pressure of unrealistic targets can increase fatigue and trigger human error. These conditions increase the potential for workplace accidents and lead to increased claims for work-related health insurance (JKK).

The ninth factor is the level of worker participation in the OHS program. Active worker participation in hazard reporting, safety discussions, and OHS committees is an indicator of the effectiveness of the OHS system (Ramadhani, 2024). Companies that actively involve workers typically have more effective early detection systems for potential hazards. Minimal worker participation leads to many latent risks going undetected, ultimately leading to accidents and JKK claims.

The tenth factor is the support of the social security system and the JKK

claims mechanism itself. Although JKK serves as a protection mechanism, the ease or difficulty of the claims process also affects the recorded figures. On the one hand, a transparent claims system encourages honest reporting. On the other hand, a weak system can encourage moral hazard, both from the company and the workers. However, this factor remains inseparable from the quality of K3 implementation, which is the primary factor.

Overall, the effectiveness of OHS implementation in reducing the number of occupational health and safety claims in the manufacturing sector is determined by a combination of structural, cultural, and regulatory factors (Sahranafa & Kriswibowo, 2024). Management commitment, the quality of the OHS system, worker training, safety culture, supervision, law enforcement, and economic pressure are key interacting factors (Ramadhani, 2024). The more robustly these factors are managed, the greater the opportunity for manufacturing companies to reduce the number of workplace accidents and reduce the burden of OHS claims (Sahranafa & Kriswibowo, 2024).

This discussion emphasizes that effective OHS implementation cannot be viewed as merely an administrative obligation, but rather as an integral part of sustainability-oriented corporate governance. Therefore, efforts to strengthen OHS implementation must be carried out systematically and sustainably to truly impact the reduction in the number of JKK claims in the manufacturing sector (Sahranafa & Kriswibowo, 2024).

Conclusion

Based on the discussion, it can be concluded that the relationship between the level of company compliance with Occupational Safety and Health (K3) standards and the high number of Work Accident Insurance (JKK) claims in the manufacturing sector is direct and significant. Low levels of compliance with K3 standards have been shown to increase the risk of workplace accidents, which ultimately has implications for the increase in the number of JKK claims. Work accident data showing a high number of cases in provinces with a strong concentration of manufacturing industries confirms that weak K3 implementation is not merely an administrative issue, but a structural problem in occupational safety governance in the industrial world.

Furthermore, the effectiveness of OHS implementation in reducing JKK claims is significantly influenced by various internal and external company factors. Key factors include management commitment, the quality of the OHS management system, worker competence and training, occupational safety culture, the availability of safety infrastructure, and the effectiveness of supervision and law enforcement. Pressure from production targets and an excessive efficiency focus have been shown to weaken the consistency of OHS implementation in the manufacturing sector. Therefore, OHS implementation cannot be understood solely as a legal obligation but must be positioned as an integral part of a company's business strategy and risk management.

Overall, these findings demonstrate that efforts to reduce the number of JKK claims in the manufacturing sector cannot be achieved in isolation but require a systemic and sustainable approach. Strengthening compliance with K3 standards must be accompanied by improvements in organizational culture, increased human resource capacity, and consistent oversight and law enforcement. These measures are expected to create a safer, more productive, and more sustainable work

environment, while simultaneously reducing the burden of JKK claims in Indonesia's employment social security system.

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