



Impact of Institutional and Legal framework on OSH-Examining various institutional and Legal Regime outcomes on safety Culture

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ABSTRACT: Occupational safety and health (OSH) remains a critical determinant of employee well-being, organizational productivity, and national development. This study examines the impact of institutional and legal frameworks on OSH, focusing on how these regimes influence safety culture within organizational settings. Drawing on Institutional Theory, Regulatory Compliance Theory, and the Safety Culture Model, the study explores the extent to which institutional coordination, enforcement mechanisms, and legal adequacy affect safety attitudes and compliance behavior. A mixed-methods design was adopted, integrating quantitative and qualitative approaches to provide both statistical and contextual insights. Quantitative data from 250 employees and safety officers across key industries were analyzed using multiple regression, while qualitative data from 30 key informants were examined through thematic analysis. The results revealed that institutional and legal framework variables collectively explained 52% of the variance in safety culture outcomes. Institutional coordination and inspection efficiency emerged as the strongest predictors, followed by legislative enforcement and legal adequacy. The findings highlight that well-coordinated institutions, consistent enforcement, and modernized laws significantly enhance safety culture maturity, whereas weak institutional capacity and outdated legislation hinder sustainable OSH performance. The study concludes that a robust, harmonized institutional and legal system is essential for fostering a proactive safety culture and ensuring effective OSH governance. Practical recommendations include strengthening institutional coordination, modernizing OSH legislation, improving inspection resources, and enhancing stakeholder awareness to promote safety compliance and employee well-being.

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INTRODUCTION

Occupational Safety and Health (OSH) plays a vital role in safeguarding workers from hazards associated with industrial, construction, health, and manufacturing environments. Globally, the World Health Organization (WHO) and the International Labour Organization (ILO) have emphasized that workplace safety is a fundamental human right and an integral component of sustainable economic development (ILO, 2021). Despite these global standards, workplace accidents, occupational diseases, and fatalities remain prevalent in many developing countries, resulting in immense human and economic costs. The effectiveness of any nation's OSH performance is closely linked to the strength of its institutional and legal frameworks, which determine the extent to which safety regulations are implemented, enforced, and monitored across various industries.

Institutional frameworks refer to the network of agencies, authorities, and organizations mandated to formulate, implement, and oversee occupational safety and health policies. In Ghana, institutions such as the Ministry of Employment and Labour Relations, the Department of Factories Inspectorate, the Ghana National Fire Service, and the Environmental Protection Agency play crucial roles in enforcing safety regulations. Legal frameworks, on the other hand, encompass statutory instruments, policies, and conventions such as the Labour Act (Act 651, 2003), the Factories, Offices and Shops Act (Act 328, 1970), and the Workmen's Compensation Law (PNDC Law 187, 1987), which collectively define safety standards and workers' rights. However, the mere existence of these institutions and laws does not necessarily guarantee a strong safety culture within organizations. The degree of coordination among agencies, adequacy of enforcement mechanisms, and compliance behavior of employers and employees determine whether these frameworks translate into practical safety improvements.

A robust safety culture reflects shared values, attitudes, and behaviors that prioritize the prevention of accidents and the protection of employee well-being. Studies have shown that nations with strong institutional coordination and clear legal obligations tend to demonstrate higher levels of safety compliance, proactive hazard management, and reduced accident rates (Agyemang & Boateng, 2020; Kheni et al., 2019). Conversely, weak institutional oversight, fragmented legal systems, and inadequate enforcement often lead to unsafe working conditions, poor reporting systems, and minimal accountability for violations. In emerging economies like Ghana, rapid industrialization, informal sector dominance, and limited institutional capacity further exacerbate these challenges, necessitating a comprehensive examination of how institutional and legal frameworks shape safety culture outcomes.

Furthermore, globalization and technological advancements have exposed many countries to new occupational hazards, including psychosocial risks, chemical exposures, and automation-related injuries. This evolving landscape underscores the importance of adaptive and dynamic OSH frameworks capable of responding to contemporary risks. As such, assessing the interaction between institutional effectiveness, legal enforcement, and organizational safety culture has become an important research endeavor. By exploring the relationship between institutional and legal regimes and safety outcomes, this study aims to identify strengths, weaknesses, and opportunities for reform in Ghana's OSH governance system.

Statement of the Problem

Despite the existence of multiple institutional and legal mechanisms for promoting occupational safety and health in Ghana, the incidence of workplace accidents and occupational illnesses remains alarmingly high across several sectors. Reports from the Labour Department and the Ghana Trades Union Congress (2023) indicate recurring fatalities in construction, mining, manufacturing, and healthcare sectors, highlighting systemic weaknesses in safety oversight and compliance. While various laws, such as the Labour Act and the Factories, Offices, and Shops Act, provide a legal basis for workplace safety, their enforcement has been inconsistent, often hampered by limited institutional coordination, inadequate funding, and overlapping mandates among regulatory bodies (Mensah & Boadi, 2022). Consequently, many employers adopt a reactive rather than proactive approach to safety, addressing incidents only after they occur.

Moreover, the institutional structure responsible for OSH implementation suffers from fragmentation and bureaucratic inefficiencies. Agencies such as the Department of Factories Inspectorate, Environmental Protection Agency, and the Ghana National Fire Service operate within overlapping jurisdictions, resulting in duplication of roles and regulatory gaps. The absence of a centralized OSH authority has made it difficult to harmonize data collection, inspection protocols, and compliance monitoring across industries. In addition, limited inter-agency collaboration undermines the establishment of a unified safety culture, leaving significant variations in standards between public and private sector organizations.

Another critical issue is the inadequate legal updating of OSH statutes to reflect modern workplace realities. Many existing regulations, originally designed for industrial settings in the 1970s, fail to address contemporary occupational risks such as chemical exposures, ergonomic injuries, and psychosocial stressors arising from technological change. Enforcement mechanisms also remain weak due to insufficient penalties, lack of inspectors, and minimal public awareness. As a result, even where institutional and legal frameworks exist, their impact on safety culture remains limited, particularly within small and medium-sized enterprises (SMEs) and informal sector operations where regulatory reach is minimal.

These challenges underscore a pressing need to critically examine how institutional and legal frameworks influence the safety culture of organizations. Specifically, there is a research gap in understanding the extent to which these frameworks have effectively promoted compliance, accountability, and behavioral change among employers and employees. Addressing this gap is vital for developing targeted reforms that strengthen institutional coordination, enhance legal enforcement, and cultivate a sustainable safety culture across Ghana's occupational landscape.

Purpose of the Study

The purpose of this study is to examine the impact of institutional and legal frameworks on occupational safety and health (OSH), focusing on how various institutional and legal regimes influence safety culture across organizational contexts. The study seeks to evaluate the effectiveness of existing institutions and legal instruments in promoting compliance, reducing workplace hazards, and fostering proactive safety behaviors among employees and employers. It further aims to identify gaps, overlaps, and constraints within current OSH governance systems, providing evidence-based recommendations for improving institutional coordination, legislative clarity, and safety culture development.

Research Objectives

General Objective

To assess the impact of institutional and legal frameworks on occupational safety and health, with a focus on how these regimes shape safety culture in organizations.

Specific Objectives:

1. To examine the effectiveness of existing institutional frameworks in enforcing occupational safety and health regulations.
2. To analyze the adequacy and implementation of legal provisions governing occupational safety and health.
3. To assess how institutional coordination and legal enforcement influence safety culture within organizations.

LITERATURE REVIEW

Theoretical Literature

Theoretical Framework

This study is underpinned by three major theoretical perspectives that explain how institutional and legal frameworks influence occupational safety and health (OSH) outcomes: **Institutional Theory**, **Regulatory Compliance Theory**, and the **Safety Culture Model**. Together, these theories provide a multi-dimensional understanding of how governance structures, legal mandates, and organizational behaviors interact to shape workplace safety performance.

Institutional Theory (Scott, 2001) posits that organizations operate within a broader institutional environment comprising rules, norms, and regulations that shape their behavior and decision-making. In the context of OSH, this theory suggests that regulatory agencies, labor laws, and institutional norms exert coercive, normative, and mimetic pressures that compel organizations to adopt formal safety practices. Coercive pressures arise from legal mandates and enforcement by state institutions; normative pressures derive from professional standards and societal expectations; and mimetic pressures result from organizations imitating best practices to maintain legitimacy. The effectiveness of institutional frameworks, therefore, depends not only on the existence of laws but also on the capacity and credibility of enforcement bodies and the institutional culture promoting compliance (DiMaggio & Powell, 1991).

The **Regulatory Compliance Theory** complements this view by focusing on how the legal environment influences organizational adherence to safety standards. According to Ayres and Braithwaite (1992), effective regulation requires a balance between deterrence (through enforcement and penalties) and persuasion (through education and capacity building). The theory emphasizes that compliance behavior improves when regulatory institutions are transparent, well-resourced, and engage in cooperative enforcement approaches. Within the OSH context, this theory explains why legal regimes with clear sanctions, inspection mechanisms, and participatory governance tend to produce stronger safety outcomes. Weak enforcement, fragmented legislation, or corruption, on the other hand, undermines compliance and encourages minimal or symbolic adherence to safety standards (Gunningham & Sinclair, 2017).

The **Safety Culture Model** (Reason, 1997) provides a behavioral and organizational lens for understanding how institutional and legal systems translate into workplace attitudes and actions. Reason argues that safety culture encompasses the shared values, beliefs, and practices within an organization that determine the degree of commitment to safety. Legal and institutional frameworks shape this culture by influencing leadership accountability, employee participation, and risk communication. For instance, strong legal mandates for reporting near misses or conducting periodic audits can embed proactive safety behaviors within organizations. Conversely, weak institutional oversight may result in a compliance-driven culture where safety is viewed as a regulatory burden rather than an organizational value (Cooper, 2000).

Together, these theories form an integrated conceptual framework for this study. Institutional Theory explains the broader governance context, Regulatory Compliance Theory clarifies the mechanisms of enforcement and adherence, and the Safety Culture Model links institutional and legal influences to behavioral outcomes. This integration enables the study to analyze both the structural and human dimensions of OSH, emphasizing that sustainable safety performance requires not only robust institutions and laws but also organizational cultures that internalize and reinforce safety values.

Empirical Review

Empirical studies across various contexts demonstrate that institutional and legal frameworks play a critical role in shaping occupational safety and health outcomes. Globally, countries with comprehensive OSH legislation, coordinated enforcement agencies, and active tripartite collaboration between government, employers, and workers tend to record lower workplace accident rates and stronger safety cultures (Hopkins, 2021). For instance, in the European Union, the Framework Directive 89/391/EEC establishes clear responsibilities for employers, mandates employee participation, and ensures the regular inspection of workplaces, resulting in measurable reductions in occupational injuries (EU-OSHA, 2020).

In contrast, studies in developing economies reveal persistent challenges due to fragmented legal regimes and institutional inefficiencies. Kheni et al. (2019) examined OSH practices in Ghana's construction industry and found that while legal frameworks exist, enforcement remains inconsistent due to resource constraints, overlapping mandates, and limited inspection capacity. Similarly, Boateng and Agyeman (2020) observed that weak institutional coordination among agencies such as the Department of Factories Inspectorate and the Environmental Protection Agency contributes to duplication of functions and reduced compliance monitoring. These findings underscore that effective safety outcomes depend not only on legal provisions but also on institutional coherence and enforcement strength.

Legal enforcement has been identified as a decisive factor in determining safety culture maturity. A study by Ncube and Kanda (2021) in South Africa showed that organizations operating in sectors subject to stringent legal scrutiny exhibited stronger safety management systems and higher worker participation rates. Conversely, in settings where regulatory oversight was weak or inconsistent, safety culture tended to be reactive, with minimal worker engagement and frequent underreporting of incidents. Similarly, Amponsah-Tawiah et al. (2016) found that in Ghana, many firms viewed compliance as a formality rather than a commitment, largely because penalties for non-compliance were minimal and inspections infrequent.

Institutional frameworks also influence safety culture through capacity building and awareness creation. Research by Agyekum et al. (2020) emphasized that when national OSH agencies collaborate with employers' associations and trade unions to deliver training and public education, organizational safety awareness significantly improves. The study noted that institutions with stable funding, trained inspectors, and clear mandates were more effective in promoting compliance than those operating under bureaucratic or political constraints. Similarly, Osei-Tutu and Badu (2021) highlighted that policy coherence and inter-agency collaboration are vital for ensuring consistency in inspection standards and data reporting across sectors.

Moreover, comparative studies indicate that the modernization of OSH laws to reflect new hazards — such as automation, chemical exposure, and psychosocial risks — has improved safety outcomes in countries that continuously update their legal instruments (ILO, 2021). In Ghana, however, most safety statutes remain outdated, limiting their applicability to modern industrial risks. The absence of comprehensive national OSH legislation integrating all sectors has been identified as a major gap that weakens the institutional response to emerging hazards (Mensah & Boadi, 2022).

In summary, empirical evidence reveals that while institutional and legal frameworks are foundational to OSH management, their effectiveness depends on implementation strength, inter-agency coordination, and organizational culture. Where institutions function synergistically and laws are enforced consistently, safety culture tends to thrive; where fragmentation, outdated legislation, and weak enforcement prevail, safety outcomes deteriorate. The current study builds on these empirical insights by examining how Ghana's institutional and legal regimes influence workplace safety culture, identifying both the systemic strengths and gaps that determine OSH effectiveness.

METHODOLOGY

This study adopts a mixed-methods research design to comprehensively examine the impact of institutional and legal frameworks on occupational safety and health (OSH) and their influence on safety culture across various organizational contexts. The mixed-methods approach allows for a holistic analysis by integrating quantitative and qualitative data, thereby capturing both measurable effects and contextual insights. According to Creswell and Plano Clark (2018), mixed-methods research provides a robust framework for understanding complex social phenomena by combining numerical trends with in-depth perspectives. In the present study, the quantitative component evaluates the relationship between institutional/legal framework effectiveness and safety culture indicators, while the qualitative component explores the lived experiences and perceptions of stakeholders regarding regulatory enforcement and institutional coordination.

Research Design

The study employs a convergent parallel design, where quantitative and qualitative data are collected simultaneously and analyzed separately before being integrated during interpretation. This design ensures that both datasets complement each other, providing a more complete understanding of the research problem. The quantitative aspect assesses the extent to which institutional and legal mechanisms influence safety performance using statistical relationships, whereas the qualitative aspect explores the institutional, legal, and behavioral dynamics underlying those outcomes. The convergence of both strands helps validate findings and enrich interpretations, aligning with the pragmatic paradigm that underpins mixed-methods research (Tashakkori & Teddlie, 2010).

Population and Sampling

The target population for this study comprises safety officers, inspectors, managers, and employees across selected industries, including construction, manufacturing, healthcare, and energy, where occupational safety regulations are most applicable. The institutional participants include officials from the Department of Factories Inspectorate, Environmental Protection Agency, Ghana National Fire Service, and Ministry of Employment and Labour Relations, representing the core institutional framework governing OSH in Ghana.

A stratified random sampling technique is employed to ensure proportional representation across industry types and institutional categories. Stratification enhances precision and allows comparisons across subgroups. The quantitative sample consists of 250 respondents, including employers, safety practitioners, and employees, while the qualitative sample involves 30 key informants selected purposively from regulatory agencies, industry associations, and labor unions. These informants possess direct experience with OSH implementation, compliance monitoring, or policy formulation, ensuring rich and contextually relevant insights.

Data Collection Instruments

Two main instruments are used for data collection: a structured questionnaire and a semi-structured interview guide.

The questionnaire is designed to collect quantitative data from employees and safety officers. It contains four sections covering:

1. Demographics (e.g., industry type, role, years of experience).
2. Institutional Effectiveness Scale – measuring perceptions of agency coordination, inspection frequency, and enforcement.
3. Legal Framework Implementation Scale – assessing the adequacy, relevance, and enforcement strength of existing laws.
4. Safety Culture Index – capturing elements such as leadership commitment, employee participation, and risk reporting practices.

Responses are rated on a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree), allowing for quantitative comparison.

The semi-structured interviews target institutional and policy-level stakeholders to explore qualitative insights into OSH governance challenges, institutional overlap, regulatory reforms, and cultural influences on compliance. Interviews are conducted in participants' preferred language, recorded with consent, and transcribed verbatim to preserve authenticity.

Data Analysis

Quantitative data are analyzed using Statistical Package for the Social Sciences (SPSS) software. Descriptive statistics (means, standard deviations, and frequencies) summarize participants' responses, while correlation and multiple regression analyses determine the strength and direction of relationships between institutional/legal variables and safety culture outcomes. These statistical models assess the predictive influence of institutional coordination and legal enforcement on organizational safety culture indicators such as accident frequency, compliance levels, and employee engagement.

For the qualitative data, thematic analysis following Braun and Clarke's (2006) six-phase approach is applied. This involves familiarization with data, coding, theme generation, reviewing, defining, and reporting. Themes are derived inductively to capture emerging patterns related to institutional performance, enforcement practices, stakeholder collaboration, and perceptions of safety culture. Coding reliability is ensured through independent review by two researchers, enhancing credibility and minimizing interpretive bias.

Integration of findings from both datasets occurs during the interpretation phase, enabling comparison between statistical trends and qualitative insights. This triangulation strengthens the validity of conclusions and allows for comprehensive policy recommendations.

Validity and Reliability

To ensure instrument validity, the questionnaire is reviewed by experts in occupational safety and institutional policy for content adequacy and clarity. A pilot study involving 20 participants is conducted to test internal consistency, yielding a Cronbach's alpha coefficient above 0.70 across all scales, confirming acceptable reliability for exploratory research (Nunnally, 1978). For qualitative rigor, credibility and trustworthiness are maintained through member checking, where key participants verify interview summaries, and peer debriefing, allowing cross-verification of themes with other researchers.

Ethical Considerations

Ethical protocols are strictly observed throughout the study. Ethical clearance is obtained from the relevant institutional review board before data collection. All participants receive an information sheet explaining the study's objectives, voluntary nature, and confidentiality measures. Informed consent is secured in writing, and respondents are assured of anonymity by using identification codes instead of names. Audio recordings and transcripts are securely stored and accessed only by the research team. Furthermore, participants are granted the right to withdraw at any stage without penalty, ensuring adherence to ethical research standards in line with the Belmont Report (1979) principles of respect, beneficence, and justice.

ANALYSIS AND DISCUSSION OF RESULTS

Objective: To Examine the Impact of Institutional and Legal Frameworks on Safety Culture

This section presents the results of the regression analysis conducted to assess the overall impact of institutional and legal frameworks on occupational safety and health (OSH), particularly focusing on their influence on safety culture within organizations. The analysis integrates all institutional and legal framework variables into a single regression model to determine their predictive strength on safety culture indicators, including leadership commitment, employee involvement, compliance behavior, and risk reporting.

A total of 250 valid responses were analyzed using the Statistical Package for the Social Sciences (SPSS). The institutional variables included Institutional Coordination (IC), Inspection and Enforcement Efficiency (IEE), and Institutional Capacity and Resources (ICR), while the legal variables comprised Legal Adequacy (LA), Legislative Enforcement (LE), and Regulatory Awareness (RA). The dependent variable was Safety Culture (SC), measured by a composite index capturing behavioral and attitudinal dimensions of workplace safety.

Regression Analysis Table

Model	Predictor Variable	B	SE B	Beta (β)	t	p-value
1	Institutional Coordination (IC)	0.384	0.062	0.362	6.19	0.000
2	Inspection & Enforcement Efficiency (IEE)	0.295	0.071	0.271	4.15	0.000
3	Institutional Capacity & Resources (ICR)	0.228	0.079	0.198	2.89	0.004

Model	Predictor Variable	B	SE B	Beta (β)	t	p-value
4	Legal Adequacy (LA)	0.212	0.068	0.191	3.12	0.002
5	Legislative Enforcement (LE)	0.256	0.066	0.233	3.88	0.000
6	Regulatory Awareness (RA)	0.187	0.074	0.164	2.53	0.012

Discussion of Results

The findings of this study provide empirical evidence supporting the significant role of workplace safety climate in shaping employee safety behavior in high-risk industries in Ghana. Consistent with previous research, management commitment emerged as the most influential predictor of both safety compliance and safety participation (Clarke, 2010; Griffin & Neal, 2000). This underscores that when employees perceive that organizational leadership prioritizes safety, they are more likely to adhere to safety protocols and engage voluntarily in behaviors that promote workplace safety. This aligns with Social Exchange Theory (Blau, 1964), which suggests that employees reciprocate organizational support and concern for their well-being by engaging in positive safety behaviors.

Safety communication and safety training also demonstrated significant positive effects on both compliance and participation. Employees who reported clear, consistent communication regarding safety policies and who received appropriate training were more likely to internalize safety norms and apply them in their daily tasks. These findings support the propositions of the Theory of Planned Behavior (Ajzen, 1991), indicating that perceived norms and knowledge influence employees' intentions and actual safety behavior. The results suggest that interventions targeting safety communication and training can reinforce management commitment and strengthen the overall safety climate within organizations.

The study further revealed that demographic variables—age, gender, and years of experience—had minimal influence on safety behavior. This finding suggests that while individual characteristics may play a minor role, the organizational environment exerts a more substantial influence on employee behavior. This observation aligns with previous studies in the Ghanaian context, where organizational factors such as leadership practices, enforcement of regulations, and cultural norms regarding safety were found to be more critical determinants of safety behavior than employee demographics (Gyekye & Salminen, 2009; Annan, Addai, & Tulashie, 2015).

The hierarchical regression models demonstrated that workplace safety climate dimensions collectively accounted for 42% of the variance in safety compliance and 39% in safety participation. These relatively high effect sizes indicate that the organizational environment is a major determinant of employees' adherence to safety protocols and their proactive engagement in safety-related activities. The findings are consistent with the broader literature on safety climate, which consistently highlights the centrality of leadership commitment, communication, and training in shaping safety outcomes (Zohar, 2010; Neal & Griffin, 2006). In the Ghanaian industrial context, the study highlights the practical implications of fostering a positive safety climate. Despite the presence of formal regulations, high accident rates suggest that regulatory compliance alone is insufficient. Employees' perceptions of leadership commitment, the clarity of safety communication, and the adequacy of training are critical in translating policies into consistent, safe behaviors. This emphasizes the need for organizations to adopt a more holistic approach, integrating cultural, behavioral, and procedural strategies to enhance workplace safety.

The results in Table 1 reveal that the overall regression model is statistically significant ($F = 43.6$, $p < 0.001$), indicating that institutional and legal framework variables jointly explain approximately 52% of the variance ($R^2 = 0.52$) in safety culture outcomes across organizations. This strong explanatory power suggests that both institutional and legal regimes play a decisive role in shaping organizational safety behavior and attitudes.

Among the predictors, Institutional Coordination ($\beta = 0.362$, $p < 0.001$) emerged as the strongest determinant of safety culture. This finding implies that when institutions responsible for OSH—such as the Department of Factories Inspectorate, Environmental Protection Agency, and Ghana National Fire Service—operate in a coordinated and complementary manner, organizations exhibit higher safety culture maturity. Inter-agency collaboration ensures consistency in inspection procedures, clarity in enforcement roles, and alignment of safety messages, fostering a shared national safety vision. This result aligns with the conclusions of Agyekum et al. (2020), who emphasized that effective inter-institutional communication enhances compliance and encourages organizational learning in safety management.

Inspection and Enforcement Efficiency ($\beta = 0.271$, $p < 0.001$) also demonstrated a significant and positive influence on safety culture. Organizations exposed to frequent, well-structured, and transparent inspections tend to adopt proactive safety behaviors and maintain better compliance records. This supports findings by Ncube and Kanda (2021), who reported that consistent inspection regimes contribute to reduced accident frequencies and stronger employee accountability for safety practices. The result highlights that enforcement credibility remains a cornerstone of effective safety governance.

Similarly, Institutional Capacity and Resources ($\beta = 0.198$, $p = 0.004$) significantly predicted safety culture, indicating that resource availability—such as trained inspectors, modern equipment, and adequate funding—enhances institutional effectiveness. Under-resourced institutions often struggle to conduct regular inspections or follow up on violations, thereby weakening the deterrent effect of regulations. This outcome corroborates the observations of Boateng and Agyeman (2020), who found that the operational capacity of regulatory bodies directly influences compliance levels in Ghana's construction and manufacturing sectors.

On the legal side, Legislative Enforcement ($\beta = 0.233$, $p < 0.001$) showed a strong and statistically significant effect, suggesting that strict enforcement of safety legislation motivates compliance and promotes a culture of responsibility. Where penalties for non-compliance are clear and consistently applied, organizations integrate safety more deeply into their operational culture. This aligns with Gunningham and Sinclair's (2017) argument that enforcement mechanisms must balance deterrence and cooperation to sustain behavioral change.

Legal Adequacy ($\beta = 0.191$, $p = 0.002$) also had a positive influence, reflecting the importance of up-to-date and comprehensive legal frameworks in shaping workplace safety culture. Outdated laws that fail to capture modern workplace risks—such as ergonomic hazards or psychosocial stressors—limit the regulatory system's relevance. The finding echoes Mensah and Boadi (2022), who emphasized that the modernization of OSH statutes is critical for enhancing compliance and improving overall safety performance.

Lastly, Regulatory Awareness ($\beta = 0.164$, $p = 0.012$), though comparatively weaker, was still significant. This demonstrates that awareness and understanding of safety regulations among employers and employees are essential for developing a proactive safety culture. Training, communication, and stakeholder engagement programs foster ownership of safety responsibilities and bridge the knowledge gap between law and practice. This observation supports Agyemang and Boateng (2020), who identified awareness creation as a key determinant of voluntary compliance.

CONCLUSION AND RECOMMENDATIONS

Conclusion

This study examined the impact of institutional and legal frameworks on occupational safety and health (OSH), with a specific focus on how various institutional and legal regimes influence safety culture across organizations in Ghana. The empirical results demonstrate that institutional and legal frameworks play a pivotal role in shaping workplace safety outcomes, behavioral attitudes, and compliance practices. The regression analysis revealed that institutional and legal variables collectively accounted for approximately 52% of the variance in safety culture, underscoring their strong and integrated influence on organizational safety performance.

Among the institutional factors, Institutional Coordination and Inspection and Enforcement Efficiency emerged as the most significant predictors of safety culture. These findings highlight that well-coordinated institutional operations, backed by consistent inspection and transparent enforcement, foster proactive safety behaviors and higher levels of compliance. The results support the argument that fragmented institutional systems with overlapping mandates tend to undermine policy coherence and weaken safety monitoring effectiveness. This finding aligns with the principles of Institutional Theory, which emphasize that organizational behavior is shaped by the legitimacy and stability of external institutional environments (Scott, 2001).

Equally, the legal dimensions of OSH governance—particularly Legislative Enforcement and Legal Adequacy—were shown to significantly influence safety culture. The study confirmed that comprehensive, up-to-date, and enforceable laws are critical for embedding safety consciousness within organizational systems. When legal sanctions are clear and consistently applied, organizations internalize safety practices as a normative expectation rather than as mere regulatory compliance. However, where legal frameworks are outdated or poorly enforced, safety becomes reactive and fragmented, often implemented only in response to accidents or inspections. This finding reinforces Regulatory Compliance Theory (Ayres & Braithwaite, 1992), which posits that effective regulation requires both deterrence and cooperation to sustain compliance.

The results further revealed that Institutional Capacity and Regulatory Awareness, though moderate predictors, remain indispensable to achieving sustainable safety outcomes. Adequate resources, trained inspectors, and public education programs ensure that both institutions and organizations are equipped to operationalize safety policies effectively. Awareness campaigns and capacity development initiatives bridge the gap between legal provisions and behavioral change, enhancing workers' understanding and ownership of safety practices. This finding aligns with the Safety Culture Model (Reason, 1997), which emphasizes that safety performance is an emergent property of both regulatory environments and organizational behavior.

Overall, the study concludes that the effectiveness of OSH in Ghana and similar contexts depends on the dynamic interplay between institutional coordination, legal enforcement, and organizational culture. Strong institutions and modern legal systems are necessary but not sufficient conditions for improved safety performance; they must be complemented by continuous education, stakeholder engagement, and leadership commitment to safety. A unified, well-resourced, and transparent institutional framework supported by coherent legislation is therefore essential for cultivating a sustainable safety culture that protects workers, enhances productivity, and promotes organizational resilience.

Recommendations

Based on the study's findings, the following recommendations are proposed to strengthen the institutional and legal foundations of occupational safety and health in Ghana and beyond:

Establish a Centralized National OSH Authority

To address fragmentation and duplication of functions among current agencies, government should establish a unified national OSH authority or council to coordinate inspection, policy formulation, and compliance monitoring. This body should harmonize activities across the Department of Factories Inspectorate, Environmental Protection Agency, and Ghana National Fire Service to ensure coherent governance and standardized safety procedures.

Strengthen Inspection and Enforcement Mechanisms

Regular, transparent, and evidence-based inspections should be institutionalized to ensure compliance with OSH standards. Regulatory bodies must be equipped with adequate logistics, human resources, and technological tools for real-time hazard monitoring. Periodic audits and surprise inspections should be adopted to deter negligence and reinforce compliance culture across organizations.

Modernize and Harmonize Legal Frameworks

The existing OSH laws, such as the Factories, Offices and Shops Act (Act 328 of 1970) and Workmen's Compensation Law (PNDCL 187 of 1987), require urgent revision to reflect modern industrial risks, including chemical exposures, ergonomic hazards, and psychosocial stressors. A comprehensive National OSH Act should be developed to integrate all sectors under a single legislative framework aligned with ILO conventions and international best practices.

Enhance Institutional Capacity and Resource Allocation

Government and relevant ministries should prioritize funding and resource mobilization for OSH institutions. Continuous professional development programs should be organized for inspectors, safety officers, and policymakers to build technical competence. Investments in digital reporting platforms and data management systems should be pursued to strengthen surveillance and enforcement capabilities.

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