

OCCUPATIONAL SAFETY AND MASLOW-BASED MOTIVATION INFLUENCE ON PERFORMANCE THROUGH PRODUCTIVITY

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Abstract: This research investigates the impact of Occupational Safety and Health (OSH) and motivation, based on Abraham Maslow's hierarchy of needs, on employee performance with productivity as a mediating variable. The study was conducted on 48 employees in the Maintenance Department of PT Arutmin Indonesia NPLCT, a high-risk mining environment where OSH compliance and intrinsic motivation are critical. Employing a quantitative approach and total sampling method, data were collected via questionnaires and analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4.0. The results demonstrate that both OSH and motivation have a positive and significant effect on employee performance, both directly and indirectly through productivity. Productivity was proven to fully mediate the relationship between both exogenous variables and performance. The study contributes to human resource management literature by validating the theoretical linkage between workplace safety, psychological motivation, and performance outcomes. It also provides practical insights for organizations operating in hazardous industries to enhance performance through integrated safety and motivational interventions.

Keywords: Employee Performance, Maslow's Hierarchy, Motivation, Occupational Safety and Health, Productivity

1. Introduction

The success of an organization in achieving its goals is largely determined by the performance of its human resources. Employee performance does not occur in a vacuum, it is influenced by multiple interrelated factors including the physical work environment, employee motivation, and the policies adopted by the company to safeguard employee welfare. In high-risk industries such as mining, these influences become even more critical due to the presence of constant hazards and operational pressure. PT Arutmin Indonesia NPLCT, a prominent player in the Indonesian coal mining sector, recognizes this challenge. However, despite the existence of safety protocols and human resource initiatives, the Maintenance Department has reported inconsistencies in employee productivity and performance, signaling a potential disconnect between policy and employee response.

Occupational Safety and Health (OSH) is not merely a regulatory requirement; it is a critical foundation that ensures employees are physically and psychologically secure in performing their duties. The success of OSH implementation in the workplace fosters a sense of safety, minimizes accidents, and reduces physical strain, thereby creating a more stable and productive work environment. Employees who feel safe are more likely to focus on their responsibilities and achieve higher performance outcomes.

Motivation is another internal factor that directly impacts employee performance. According to Abraham Maslow's hierarchy of needs, human motivation arises from the drive to satisfy layered needs from the most basic physiological demands to the desire for self-actualization.

When applied in a work context, this theory implies that unmet safety needs (such as unsafe working conditions or job insecurity) inhibit employees from advancing to higher-order needs like esteem and fulfillment. PT Arutmin, through its Maintenance Department, provides an ideal setting to explore this framework due to the presence of both physical hazards and the need for motivation strategies tailored to its technical workforce.

The relationship between OSH and employee performance has been widely examined. Studies such as that of Hadiyanti and Setiawardani (2018) found a significant positive relationship between safety implementation and productivity. Meanwhile, Yusuf et al. (2012) emphasized that motivation significantly affects performance, especially when aligned with employees' psychological needs. However, results across studies remain inconclusive. Some researchers find that motivation and OSH directly improve performance; others argue their influence is indirect, mediated through variables like productivity or job satisfaction.

This fragmented empirical landscape invites further inquiry, especially in contexts that combine physical hazard with psychological complexity. Productivity, in this case, plays a central role. It reflects the effectiveness and efficiency with which employees execute their tasks, often becoming the vehicle through which external (OSH) and internal (motivation) factors manifest into performance. An employee who is well-protected and psychologically fulfilled is likely to demonstrate optimal productivity, which in turn leads to high performance. Integrated models that account for the simultaneous influence of OSH and Maslow-based motivation while also recognizing productivity as a mediating variable are still scarce in the literature. Many studies treat these variables in isolation or apply them in low-risk or administrative settings. The lack of research within high-risk industrial contexts, particularly in Indonesia, represents a notable gap that this study aims to address.

This research investigates the influence of OSH and motivation on employee performance with productivity as an intervening variable, using the Maintenance Department of PT Arutmin Indonesia NPLCT as the case study. By doing so, the study contributes both theoretically and practically, it validates the combined impact of external safety and internal motivation within a single conceptual framework, and it provides mining companies with insights to develop performance-enhancing strategies grounded in real working conditions.

This research has interesting novelties to study, which are: (1) integrating OSH and Maslow-based motivation within a mediated model of employee performance, (2) examining productivity as a mediating variable, and (3) conducting the analysis within a high-risk mining maintenance setting in Indonesia, an empirical context that remains underexplored in the literature

2. Literature Review

Employee Performance

Employee performance refers to the extent to which individuals achieve the results expected of them within their organizational roles. According to Nankervis et al. (2020), performance management should align with strategic objectives and consider key factors such as validity, reliability, and freedom from contamination. Zeuch (2016) emphasizes that performance appraisal systems should be tailored to organizational goals, ensuring that performance standards remain relevant and effective. Kusuma et al. (2023) further elaborate that employee performance is a systematic process encompassing goal setting, performance evaluation, feedback provision, and development initiatives.

Occupational Safety and Health (OSH)

OSH plays a crucial role in workplace productivity and employee well-being. Reese (2017) defines OSH as an effort to identify and mitigate operational hazards. Elbadiansyah (2019) highlights the moral, legal, and financial imperatives for OSH implementation, ensuring worker safety and organizational compliance. Dessler (2020) underscores the role of the Occupational Safety and Health Administration (OSHA) in regulating and enforcing safety standards across industries.

Motivation

Motivation drives individuals to achieve specific goals and sustain effort over time. Robbins & Judge (2018) define motivation as a process involving intensity, direction, and persistence. Tewal et al. (2017) distinguish between intrinsic and extrinsic motivation, emphasizing their role in employee engagement. Maslow's hierarchy of needs theory, as discussed by Luthans et al. (2021), provides a framework for understanding motivational drivers in workplace settings, ranging from physiological needs to self-actualization.

Productivity

Productivity measures efficiency in converting inputs into outputs. Robbins & Judge (2018) highlight that organizational productivity depends on balancing cost efficiency with service effectiveness. Wibowo (2022) argues that productivity is influenced by economic, social, and human resource factors. Nankervis et al. (2020) note that productivity encompasses labor output per hour and multifactor productivity, affecting overall organizational resilience.

3. Method

This study employed a quantitative approach with an explanatory research design to examine the influence of occupational safety and health (OSH) and motivation based on Maslow's hierarchy of needs on employee performance, with productivity as a mediating variable. The unit of analysis was the Maintenance Department of PT Arutmin Indonesia NPLCT, a division operating in high-risk technical environments. This context was selected due to the strategic importance of both safety compliance and intrinsic motivation in ensuring sustainable workforce performance.

The population in this research comprised all 48 employees within the maintenance division. Due to the manageable size of the population and the goal of maximizing model representation, a saturated sampling technique was applied, whereby the entire population was used as the sample. Primary data were obtained through the distribution of structured questionnaires developed based on relevant theories and previous studies. Responses were captured using a five-point Likert scale ranging from "strongly disagree" to "strongly agree."

The variables investigated in this study included: OSH as an exogenous variable (X1), motivation based on Maslow's theory as another exogenous variable (X2), productivity as a mediating variable (Z), and employee performance as the endogenous variable (Y). The operational definition of each construct was derived from theoretical and empirical literature. For instance, the motivation variable was broken down into five dimensions based on Maslow's hierarchy: physiological, safety, social, esteem, and self-actualization needs. The OSH variable encompassed hazard control, use of personal protective equipment, health services, safety training, and working conditions. Productivity was measured through indicators of work output, punctuality, and effectiveness, while employee performance was assessed based on task completion, timeliness, compliance, and target achievement.

Hypothesis Development:

H1: Occupational Safety and Health has a positive and significant effect on employee performance.

H2: Motivation based on Maslow's hierarchy has a positive and significant effect on employee performance.

H3: Occupational Safety and Health has a positive and significant effect on employee productivity.

H4: Motivation has a positive and significant effect on employee productivity.

H5: Productivity has a positive and significant effect on employee performance.

H6: Productivity mediates the relationship between Occupational Safety and Health and employee performance.

H7: Productivity mediates the relationship between motivation and employee performance.

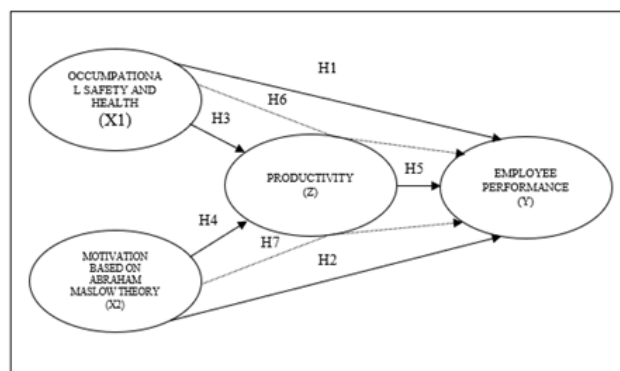


Figure 1: Conceptual Framework
 Sources: Author's work (2024)

4. Result and Discussion

Effect of Occupational Safety and Health (X1) on Employee Performance (Y)

The first hypothesis in this study is that Occupational Safety and Health has a positive and significant effect on Employee Performance at Maintenance Department Employees of PT Arutmin Indonesia NPLCT. Based on the above hypothesis tested by the bootstrapping method using SmartPLS software, the following values were obtained. From the calculation results, it can be seen the effect of occupational safety and health on employee performance by looking at the original sample estimate value (O) of 0.295. This figure shows that occupational safety and health has an influence on employee performance, if occupational safety and health increases, employee performance will also increase. The critical point value of t (count) is 2.889 (>1.64) and the P Value of 0.004 is smaller than $\alpha = 0.05$ which means significant. The test results show that there is sufficient evidence empirically to accept that H1 is accepted, namely that there is an effect of occupational safety and health on employee performance of maintenance department employees of PT Arutmin Indonesia NPLCT. This means that the more the occupational safety and health of the maintenance department employees of PT Arutmin Indonesia NPLCT increases, the employee performance will increase. Thus, it can be said that occupational safety and health has a positive and significant effect on employee performance.

The occupational safety and health variable consists of 12 items developed from 6 indicators. In the distributed questionnaires, the statement items "I am confident that budget reviews for

healthcare and safety expenditures are conducted quarterly to ensure adequate financing” and “I am confident that a system for reporting and handling negligence is established, ensuring all incidents are investigated and corrective actions are taken.” received the lowest scores. The highest scoring item was “I believe that scheduled maintenance and routine inspections are enforced to ensure all safety equipment functions properly and meets standards”. indicating a lack of confidence or lower understanding of the importance of proper budget allocation and the effectiveness of the safety incident reporting system.

This indicates that the implementation of a good Occupational Health and Safety (OHS) policy can improve employee performance, which in turn contributes to increased productivity and efficiency of the company. In this case, if employee performance does not meet the expected target, management should investigate the factors that influence it, including OHS aspects. If employee performance is not optimal, the company needs to involve employees more in the development of OHS policies and provide relevant training, both internally and externally. By creating a safer and healthier work environment, companies can motivate employees to be more focused, productive, and innovative, which will ultimately improve overall organizational performance.

The findings of this study are in accordance with previous research conducted by Putri et al. (2018), Rostina et al. (2020), Akbar & Kustini (2021), Setiawan et al. (2022), Iman et al. (2023), Tsenawatme (2013) which states that Occupational Health and Safety has a positive and significant effect on Employee Performance. Contrary to research from Kaharudin et al. (2021) In this study, the T-statistic on the OSH variable is 1.521 (<1.64) and the P-value is 0.129 (>0.05), thus Occupational Safety & Health (OSH) has no effect on Employee Performance. The implementation of Occupational Safety & Health procedures within the company has no effect and must be implemented with the help of mediating variables, in this case the required variable is the work discipline of all employees in carrying out K3 procedures within the company.

Table 1. Hypothesis Probability of the Effect of X1 on Y

Hypothesis	Variable	Original sample (O)	T statistics	P values	Description
H1	Occupational Safety and Health (X1) -> Employee Performance (Y)	0.295	2.889	0.004	Accepted

Sources: Results of primary data processing (2024)

Effect of Motivation Based on Abraham Maslow Theory's (X2) on Employee Performance (Y)

The second hypothesis in this study is that Motivation Based on Abraham Maslow Theory's has a positive and significant effect on Employee Performance at Maintenance Department Employees of PT Arutmin Indonesia NPLCT. Based on the above hypothesis tested by the bootstrapping method using SmartPLS software, the following values were obtained. From the calculation results, it can be seen the effect of motivation based on Abraham Maslow theory's on employee performance by looking at the original sample estimate value (O) of 0.293. This figure shows that motivation based on abraham maslow theory's gives an influence on employee performance, if motivation based on abraham maslow theory's increases, employee performance will also increase. The critical point value of t (count) is 3.016 (>1.64) and the P Value of 0.003 is smaller than $\alpha = 0.05$ which means significant. The test results show that there is enough empirical evidence to accept that H2 is accepted, namely that there is an

effect of motivation based on Abraham Maslow's theory on employee performance of the maintenance department employees of PT Arutmin Indonesia NPLCT. This means that the more increased / better the motivation based on Abraham Maslow theory's maintenance department employees of PT Arutmin Indonesia NPLCT, the employee performance will increase. Thus it can be said that motivation based on Abraham Maslow theory's is positive and significant to employee performance.

The motivation based on Abraham Maslow theory's variable consists of 10 items developed from 5 indicators. In the distributed questionnaires, the statement "I feel recognized for my contribution to mine operations, especially in jobs that require precision and high responsibility" and "I feel I have the opportunity to develop new ideas that can improve work efficiency" is the higher. This indicates that work motivation based on Abraham Maslow's theory shows that recognition of employee contributions and opportunities to develop new ideas have a positive impact on improving performance and job satisfaction. In this case, if employee motivation is not achieved as expected, management needs to investigate the factors that may hinder it. If employee motivation is not increasing as targeted, leaders and managers can involve employees more in the decision-making and reward process, both through internal and external approaches. By increasing recognition of employee contributions and providing room for innovation, companies can encourage employees to be more motivated, creative and passionate in carrying out their duties, which will ultimately contribute to improving overall company performance.

The findings of this study are in accordance with previous research conducted by Riza & Anisah (2014), Noor (2022), , E. Kurniawan et al. (2020), Idris et al. (2021), Noviarita et al. (2021), Rima et al. (2021), Pangemanan (2015). which states that motivation has a positive and significant effect on employee performance. Contrary to research from Kasyifillah (2023) the results of testing the first hypothesis show that the regression coefficient is positive and insignificant for motivation worth 0.178. The value of $0.178 > 0.05$ is not proven. This means that motivation has an insignificant effect on the performance of employees of PT Usaha Yekapepe Surabaya.

Table 2. Hypothesis Probability of the Effect of X2 on Y

Hypothesis	Variable	Original sample (O)	T statistics	P values	Description
H2	Motivation Based on Abraham Maslow Theory's (X2)-> Employee Performance(Y)	0.293	3.016	0.003	Accepted

Sources: Results of primary data processing (2024)

Effect of Occupational Safety and Health (X1) on Productivity (Z)

The third hypothesis in this study is that Occupational Safety and Health has a positive and significant effect on Employee Performance at Maintenance Department Employees of PT Arutmin Indonesia NPLCT. Based on the above hypothesis tested by the bootstrapping method using SmartPLS software, the following values were obtained. From the calculation results, it can be seen the effect of occupational safety and health on productivity by looking at the original sample estimate value (O) of 0.321. This figure shows that occupational safety and health has an influence on employee performance, if occupational safety and health increases, productivity will also increase. The critical point value of t (count) is 2.342 (> 1.64) and the P Value of 0.019 is smaller than $\alpha = 0.05$ which means significant. The test results show that

there is sufficient evidence empirically to accept that H3 is accepted, namely that there is an effect of occupational safety and health on productivity of maintenance department employees of PT Arutmin Indonesia NPLCT. This means that the more the occupational safety and health of the maintenance department employees of PT Arutmin Indonesia NPLCT increases, the employee performance will increase. Thus it can be said that occupational safety and health has a positive and significant effect on productivity.

The findings of this study are in accordance with previous research conducted Baghdadi (2024), Veronica et al. (2022), Kurniawan et al. (2024), Raffles et al. (2023), Khair et al. (2022), Maharani et al. (2022), Yannor et al. (2021), which states that occupational safety and health has a positive and significant on productivity. Contrary to research from Utama & Woestho (2023) The Occupational Health and Safety (OSH) variable (X1) has no significant effect on Labor Productivity (Y). This is stated based on the t value of 1.242 which is lower than the t table value of 1.66629, and the significance or probability value of 0.218 which is greater than the significance level of 0.1 (α).

Table 3. Hypothesis Probability of the Effect of X1 on Z

Hypothesis	Variable	Original sample (O)	T statistics	P values	Description
H3	Occupational Safety and Health(X1) -> Productivity(Z)	0.321	2.342	0.019	Accepted

Sources: Results of primary data processing (2024)

Effect of Motivation Based on Abraham Maslow Theory's (X2) on Productivity (Z)

The fourth hypothesis in this study is that Motivation Based on Abraham Maslow Theory's has a positive and significant effect on productivity at Maintenance Department Employees of PT Arutmin Indonesia NPLCT. Based on the above hypothesis tested by the bootstrapping method using SmartPLS software, the following values were obtained. From the calculation results, it can be seen the effect of motivation based on Abraham Maslow theory's on productivity by looking at the original sample estimate value (O) of 0.281. This figure shows that motivation based on abraham maslow theory's gives an influence on employee performance, if motivation based on abraham maslow theory's increases, employee performance will also increase. The critical point value of t (count) is 2.448 (>1.64) and the P Value of 0.014 is smaller than $\alpha = 0.05$ which means significant. The test results show that there is enough empirical evidence to accept that H4 is accepted, namely that there is an effect of motivation based on Abraham Maslow's theory on productivity of the maintenance department employees of PT Arutmin Indonesia NPLCT. This means that the more increased / better the motivation based on Abraham Maslow theory's maintenance department employees of PT Arutmin Indonesia NPLCT, the employee performance will increase. Thus it can be said that motivation based on Abraham Maslow theory's is positive and significant to productivity. The findings of this study are in accordance with previous research conducted Aye et al. (2022), Priatna et al. (2020), Meutia Hairo & Martono (2019), Ekatama et al. (2022), Putra & Mujiati (2022), Marlapa & Mulyana (2020), Ferena & Dewanto (2023), which states that motivation has a positive and significant on productivity. Contrary to research from Dhyan et al. (2021) Based on the first hypothesis test (H1) in this study, the Original Samples value is 0.087 and the T Statistic value $< T$ table ($0.522 < 1.96$), thus the first hypothesis in this case is rejected. This test proves that Motivation has no significant effect on Employee Productivity.

Table 4. Hypothesis Probability of the Effect of X2 on Z

Hypothesis	Variable	Original sample (O)	T statistics	P values	Description
H4	Motivation Based on Abraham Maslow Theory's (X2) -> Productivity(Z)	0.281	2.448	0.014	Accepted

Sources: Results of primary data processing (2024)

Effect of Productivity (Z) on Employee Performance (Y)

The fifth hypothesis in this study is that productivity has a positive and significant effect on employee performance at Maintenance Department Employees of PT Arutmin Indonesia NPLCT. Based on the above hypothesis tested by the bootstrapping method using SmartPLS software, the following values were obtained. From the calculation results, it can be seen the effect of productivity on employee performance by looking at the original sample estimate value (O) of 0.472. This figure shows that productivity gives an influence on employee performance, if productivity increases, employee performance will also increase. The critical point value of t (count) is 4.322 (>1.64) and the P Value of 0.000 is smaller than $\alpha = 0.05$ which means significant. The test results show that there is enough empirical evidence to accept that H5 is accepted, namely that there is an effect of productivity on employee performance of the maintenance department employees of PT Arutmin Indonesia NPLCT. This means that the more increased / better the productivity maintenance department employees of PT Arutmin Indonesia NPLCT, the employee performance will increase. Thus it can be said that productivity is positive and significant to employee performance.

The findings of this study are in accordance with previous research conducted Hijriatin et al. (2021), Arif (2021), Budi (2022), Utami & Utami (2024), Amalya et al. (2021), which states that productivity has a positive and significant on employee performance. Contrary to research from Rangkuti et al. (2021) based on t-count $2.334 > t\text{-table } 1.6772$ with a significance level of $0.024 > 0.05$, H_0 is rejected and H_a is accepted partially Productivity (X2) has no effect on Employee Performance.

Table 5. Hypothesis Probability of the Effect of Z on Y

Hypothesis	Variable	Original sample (O)	T statistics	P values	Description
H5	Productivity (Z)-> Employee Performance(Y)	0.472	4.322	0.000	Accepted

Sources: Results of primary data processing (2024)

Effect of Occupational Safety and Health (X1) on Employee Performance (Y) through Productivity as Intervening Variable (Z)

The sixth hypothesis in this study is that Occupational Safety and Health has a positive and significant effect on employee performance with productivity as intervening variable at Maintenance Department Employees of PT Arutmin Indonesia NPLCT. Based on the above hypothesis tested by the bootstrapping method using SmartPLS software, the following values were obtained. From the calculation results, it can be seen the effect of occupational safety and health on employee performance by looking at the original sample estimate value (O) of 0.151. This figure shows that occupational safety and health has an influence on employee

performance, if occupational safety and health increases, productivity and employee performance will also increase. The critical point value of t (count) is 2.009 (>1.64) and the P Value of 0.045 is smaller than $\alpha = 0.05$ which means significant. The test results show that there is sufficient evidence empirically to accept that H_6 is accepted, namely that there is an effect of occupational safety and health on employee performance through productivity of maintenance department employees of PT Arutmin Indonesia NPLCT. This means that the more the occupational safety and health of the maintenance department employees of PT Arutmin Indonesia NPLCT increases, the employee performance through productivity will increase. Thus it can be said that occupational safety and health has a positive and significant effect on employee performance through productivity.

The findings of this study are in accordance with previous research conducted Kholik (2017) and Iman et al. (2023), which states that occupational safety and health has a positive and significant on employee performance through productivity as intervening variable.

Table 6. Hypothesis Probability of the Effect of X1 on Y through Z

Hypothesis	Variable	Original sample (O)	T statistics	P values	Description
H6	Occupational Safety and Health (X1) -> Productivity (Z) -> Employee Performance (Y)	0.151	2.009	0.045	Accepted

Sources: Results of primary data processing (2024)

Effect of Motivation Based on Abraham Maslow Theory's (X2) on Employee Performance (Y) through Productivity as Intervening Variable (Z)

The seventh hypothesis in this study is that Motivation Based on Aabraham Maslow Theory's has a positive and significant effect on Employee Performance through productivity as intervening variable at Maintenance Department Employees of PT Arutmin Indonesia NPLCT. Based on the above hypothesis tested by the bootstrapping method using SmartPLS software, the following values were obtained.

From the calculation results, it can be seen the effect of occupational safety and health on employee performance by looking at the original sample estimate value (O) of 0.151. This figure shows that occupational safety and health has an influence on employee performance, if occupational safety and health increases, productivity and employee performance will also increase. The critical point value of t (count) is 2.009 (>1.64) and the P Value of 0.045 is smaller than $\alpha = 0.05$ which means significant. The test results show that there is sufficient evidence empirically to accept that H_6 is accepted, namely that there is an effect of occupational safety and health on employee performance through productivity of maintenance department employees of PT Arutmin Indonesia NPLCT. This means that the more the occupational safety and health of the maintenance department employees of PT Arutmin Indonesia NPLCT increases, the employee performance through productivity will increase. Thus it can be said that occupational safety and health has a positive and significant effect on employee performance through productivity.

The findings of this study are in accordance with previous research conducted Susanto et al. (2023) and Yuliani (2021), which states that motivation has a positive and significant on employee performance through productivity as intervening variable.

Table 7. Hypothesis Probability of the Effect of X1 on Y through Z

Hypothesis	Variable	Original sample (O)	T statistics	P values	Description
H7	Motivation Based on Abraham Maslow Theory's(X2)-> Productivity (Z) Employee Performance(Y)	0.133	2.239	0.025	Accepted

Sources: Results of primary data processing (2024)

Discussion

This study enriches theoretical and empirical discussions concerning the interplay between Occupational Safety and Health (OSH), motivation (based on Maslow's hierarchy), productivity, and employee performance. The findings substantiate the notion that OSH has a direct and significant impact on employee performance. This is in line with Reese (2017), who conceptualized OSH as not merely the implementation of protocols but a system of management that mitigates fundamental causes of operational failure through structured policies, procedures, and individual awareness. Empirical findings support this framework, particularly through the work of Iman et al. (2023) and Putri et al. (2018), who affirm the importance of OSH in enhancing productivity and performance in industrial settings. However, these findings contrast with Kaharudin et al. (2021), who argue that OSH does not always yield significant performance improvements in all contexts, highlighting the relevance of industry-specific variables.

This research confirms that motivation grounded in Maslow's theory significantly influences performance. Maslow's framework posits a hierarchy of needs, from basic physiological safety to self-actualization, and this study empirically demonstrates that addressing these needs results in higher motivation and performance among employees. Robbins and Judge (2019) and Luthans et al. (2021) underscore the psychological basis of this theory, which the current study validates within the context of a high-risk mining environment. The results mirror previous work by Pangemanan (2015), Noor (2022), and Noviarita et al. (2021), and extend these insights by showing that motivation, when structured around fulfilling hierarchical needs, is an essential driver of productivity and performance.

The mediating role of productivity is particularly noteworthy. It fully mediates the effect of both OSH and motivation on employee performance, reinforcing the premise that productivity is a key mechanism through which organizational inputs are converted into performance outcomes. This aligns with Susanto et al. (2023), who emphasized productivity's function as a conduit for transforming employee potential into measurable outputs. Practical indicators such as ability, enthusiasm, efficiency, and self-development are found to be critical to productivity and are strongly influenced by both safety and motivation interventions. From a practical standpoint, the research provides several managerial implications. In the domain of OSH, organizations should not only comply with legal standards but also strategically allocate health budgets, improve access to services, ensure equipment adequacy, and empower employees with authority over safety matters. These steps will not only mitigate workplace risks but also instill a safety culture that boosts productivity and morale.

Similarly, to harness the potential of motivation based on Maslow's hierarchy, organizations are advised to structure policies that address needs at every level from providing fair compensation and healthcare (physiological and safety), to fostering inclusion (love and belonging), recognition (esteem), and personal development opportunities (self-actualization).

This can be achieved through incentive programs, skills development initiatives, and career advancement pathways that align individual aspirations with organizational goals.

Lastly, enhancing productivity requires a multidimensional approach: fostering employee capabilities through training, setting clear performance targets, rewarding goal achievement, encouraging enthusiasm, and supporting self-improvement. These strategies create a reinforcing loop where productivity becomes both the product and facilitator of high performance.

Despite its contributions, this study acknowledges several limitations. It focuses on a single department within one organization, limiting generalizability. The cross-sectional design and reliance on self-reported data may also affect the robustness of causal inference. Future studies should consider longitudinal approaches, explore additional variables such as organizational culture or leadership, and include comparative analysis across departments or industries.



Figure 2: Structural Model (path coeff, beta)
Sources: Author's work (2024)

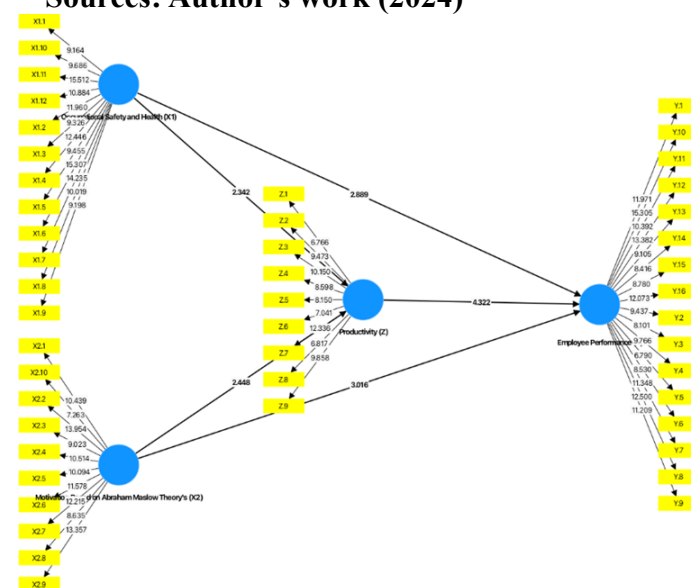


Figure 3: Significance Value (t-count)
Sources: Author's work (2024)

5. Conclusions

This study investigated the influence of Occupational Safety and Health (OSH) and motivation grounded in Abraham Maslow's hierarchy of needs on employee performance in the Maintenance Department of PT Arutmin Indonesia NPLCT, with productivity as a mediating variable. The results revealed that both OSH and motivation had a significant and positive impact on employee performance, both directly and indirectly. More specifically, the research confirmed that productivity serves as a full mediating variable between the exogenous variables (OSH and motivation) and the endogenous variable (employee performance). The direct effect of OSH on performance underscores the critical role of workplace safety in enhancing not only employee well-being but also organizational effectiveness. Employees who perceive their work environment as safe are more likely to demonstrate higher job satisfaction, lower absenteeism, and greater performance commitment. The findings also support Maslow's view that safety needs, once fulfilled, pave the way for higher-order needs to emerge, which can drive performance. Motivation, as conceptualized through Maslow's hierarchy, was also found to be a significant predictor of both productivity and performance. Employees who perceive that their physiological, safety, social, esteem, and self-actualization needs are adequately met are more inclined to engage actively in their tasks, pursue professional growth, and exceed performance expectations. The empirical results confirm the motivational model's relevance in modern, high-risk industrial contexts such as mining, where psychological and physical factors interact in shaping behavior and outcomes. Productivity, as a mediating variable, emerged as a vital link bridging OSH and motivation with employee performance. The study confirmed that higher levels of safety and motivation lead to increased productivity, characterized by timeliness, efficiency, quality, and consistency in work outcomes which subsequently improves overall employee performance. These findings imply that improving productivity is not only an outcome but also a strategic mechanism through which upstream policies such as OSH and motivational interventions can yield downstream performance gains. This research contributes both theoretically and practically. Theoretically, it strengthens the human resource management literature by integrating OSH and motivation frameworks with performance theory through the lens of productivity as a mediator. Practically, it informs management at PT Arutmin Indonesia and similar organizations operating in hazardous sectors of the importance of embedding OSH policies and psychological motivation strategies in their HR frameworks. The implementation of comprehensive safety systems, regular evaluations, protective equipment, and motivation enhancement programs (covering recognition, growth, and training) are critical strategies to foster a culture of performance. Future researchers are encouraged to extend this framework by exploring additional intervening variables such as organizational culture or leadership style and expanding the scope beyond the maintenance division to include employees from other departments such as operations, warehousing, or administration. These steps will provide a broader understanding of the dynamics influencing employee performance across industrial settings.

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