

Analysis of The Relationship Between Safety Culture and Safety Leadership Toward Employees' Safety Performance Through Mediating Variable Motivation of PT. Aneka Coffee Industry

Maya Takhsun *)

M. Ridwan Basalamah **)

Rahmawati *)**

Email: mayatakhsun29@gmail.com

Universitas Islam Malang

Abstract

The purpose of this study aims to analyze of the relationship between safety culture and safety leadership toward employees' safety performance through mediating variable motivation at PT. Aneka Coffee Industry. This study employs a quantitative method with descriptive-causality research type. The population in this study were all employees of PT. Aneka Coffee Industry with total of 410 employees, while the sample was 80 employees as respondents. Data collection was carried out by distributing questionnaires to the respondent. The established data analysis used Partial Least Square Structural Equation Modeling (PLS-SEM). The results of this study showed that safety culture, safety leadership, and motivation has a significant positive effect toward safety performance. Safety culture and safety leadership has a significant positive effect toward motivation. Motivation can mediate the relationship between safety culture and safety leadership toward safety performance.

Keyword: Safety Culture, Safety Leadership, Motivation, and Safety Performance.

Introduction

Occupational health and safety has been an important priority for company or industry, because the potential danger and unexpected events leading to physical injury is always present in every kind of job. Occupational health and safety practices include prevention, making written policies, communicating the concept to workers, reporting incidents (accidents), giving sanctions to workers who are proven to have committed negligence that result in work accidents, also healing wounds for workers who need treatment. Occupational health and safety that is not implemented properly can cause work accidents that have an impact on all aspects such as human, social and economic costs (Rahardian, 2021).

According to the International Labor organization (2023) in every year around 2.93 million employees succumb of work-related factors injury or disease in the world. Worldwide, there are over 395 million workers who sustained non-fatal work injuries. Meanwhile, based on annual year report data of Social Security Agency (BPJS) for Employment (2024), explained the number of cases of work accidents in Indonesia is still high, the following table is showing the calculated number cases of work accidents in Indonesia from 2019-2023:

Table 1. Cases of Work Accidents in Indonesia 2019-2023

Year	Number of Cases
2019	182.835
2020	221.740
2021	234.370
2022	297.725
2023	360.635

Sources: BPJS for Employment (2024)

This calculated number of cases is based on the claims submitted by employees who have Social Security Agency (BPJS) accidents insurance, the actual number is higher because not all employees have become Social Security Agency (BPJS) participants.

Major industrial accidents pose a significant threat to workers and the wider community. The increasing number of work accidents each year is a concern for all industries. Even for the food and beverage (F&B) manufacturing sector industries such as PT. Aneka Coffee Industry. PT. Aneka Coffee Industry is one of the largest instant and roasted coffee producers in Southeast Asia, with factory location in Sidoarjo – East Java, Indonesia. Based on data from PT. Aneka Coffee Industry, it can be seen the cases of work accidents have occurred at the company in last three years, consist:

Table 2. Cases of Work Accident PT. Aneka Coffee Industry 2022-2024

Year	Number of Cases	Month											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Des
2022	10	0	0	0	1	2	0	1	1	2	0	0	2
2023	3	0	0	0	0	1	0	0	1	0	0	1	0
2024	7	0	1	1	0	0	0	1	2	1	0	1	1

Sources: Primary Data Processed (2025)

Table 2. shows that the number of work accidents data at PT. Aneka Coffee industry includes accidents that occur in the factory area and traffic accidents involving employees (when going to work or returning from work). According to Anizar (2021), unsafe acts (human factors) and unsafe conditions (environmental factors) are two common causes of accidents. Based the statement of the employees of the Occupational health and safety division at PT. Aneka Coffee Industry, the human factor is the dominant factor in causing work accidents in factory area such as not wearing Personal Protective Equipment (PPE), ignoring safety signs installed in the factory area, and ignoring work safety procedures.

An occupational health and safety management system is absolutely necessary in a work considering the risks of work accidents. By implementing safety properly and the company pays attention to their safety guarantees, it can create a healthy and safe work environment and so as to reduce the possibility of work accidents or illness due to negligence which results in deficiency of work productivity (Sugiarto & Fitriady, 2019).

A company's achievement in avoiding accidents can be evaluated through safety performance, which shows that the company is committed to reducing work-related accidents and illnesses, and is able to increase work efficiency (Atikasari et al., 2022). A sustainable safety culture not only protects the health and safety of workers, but also plays a role in improving operational efficiency and meeting work needs (Kabiesz, 2024).

Safety leadership is also an important method in guiding employees or team members to always work with attention to safety factors. This ability allows a leader to motivate employee to avoid the risk of accidents in the work environment (Supardi et al., 2021). According to Sleepers et al. (2015) leadership actions have a direct impact on safety performance in preventing injuries and helping to reduce accident rates in the workplace.

In addition, employee motivation for occupational health and safety is important. Motivation creates every employee wants to work hard and enthusiastically so that work passion is created and they want to work together to achieve company goals, one of which is increasing the number of Occupational health and safety of employees (Dhani et al., 2022). According to the result of research by Kalvei (2022) the responsible leadership is positively linked to safety motivation and it is explained that safety motivation predicts future participation in optional safety activities and an individual's willingness to maintain a safety culture that promotes workplace safety.

Review of Literature

Safety Culture

Safety culture comes from the word "culture" which is related to companies, safety and security, also protection in the workplace (Abeje & Luo, 2023). Safety culture is values, beliefs, attitudes, and

actions of people implementing safety management in an organization. It can also be interpreted as behavior to manage safety risks in the workplace (Supardi et al., 2021). If a company has a strong safety culture, it will certainly have a strong organizational culture and will be oriented towards occupational health and safety in production (Setiono, 2019).

Safety Leadership

Safety leadership is defined as the capacity of leaders to encourage direct and mobilize all subordinates to achieve the target of establishing a safety at work within the organization. In the aspect of occupational health and safety, all parties in all areas of the organization have the potential to become leaders, because leadership is related to the perspective and attitude of leaders towards all aspects of their responsibility (Supardi et al., 2021). Leaders as role models who rely heavily on exemplary factor, strong work ethic, responsibility, personality, openness, trustworthiness, consistency, motivating and effective communication to achieve safety (Setiono, 2019).

Safety Performance

Safety performance represents a way to understand safe work habits through the lens of job effectiveness principles. Safety performance of each individual is a reflection of the overall performance of the organization (Setiono, 2019). Safety performance consists of a collection of guidelines, regulations, and actions aimed at enhancing safety in the workplace within companies and encouraging health and safety at work (Ashour et al., 2018). Safety performance is used to measure a company's in its efforts to avoid accidents and health issues at work, which can lead to improved work efficiency (Atikasari et al., 2022).

Motivation

Motivation potray as the collection of mental processes that trigger the start, guidance, strength, and continuation of a person's actions. Motivation is a fundamental thing because it concerns material and moral needs, it can make individual safety performance motivated to carry out safety better and can change the mindset to be more positive in carrying out work (Haadir, 2013). Based on Mariana & Curcuruto (2015) on Ekong & Ogunbawo (2023) motivation can be explained as an individual's willingness to exert energy in developing safe practices along with the principles linked to those actions. Both internal and external motivation are deliberately maintained to achieve desired results, which often benefit the organization due to the influence of motivation.

Conceptual Framework

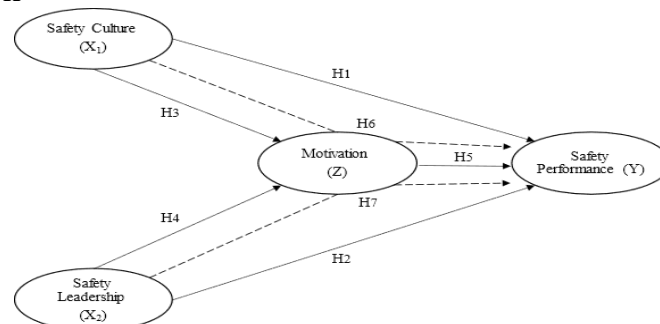


Figure 1. Research Framework

The following hypothesis are referring the conceptual framework, consist:

- H1: Safety culture has a positive effect toward safety performance.
- H2: Safety leadership has a positive effect toward safety performance.
- H3: Safety culture has a positive effect toward motivation.
- H4: Safety leadership has a positive effect toward motivation.

H₅: Motivation has a positive effect toward safety performance.

H₆: Safety culture has a positive effect toward safety performance when mediated through motivation.

H₇: Safety leadership has a positive effect toward safety performance when mediated through motivation.

Research Method

Type, Location, and Time of the Study

A quantitative method with descriptive-causality research type are used in this study. Quick & Hall (2015) explained that a quantitative method involve scientific studies that are structured around the relationships between various components and events, and the causes behind those relationships. The type of this research is descriptive-causality because the goal of this study is to examine how different variables are related and to convey what the study found (Sugiyono, 2015). The location of this research was conducted at factory of PT. Aneka Coffee Industry. The time of this research was conducted from January to March 2025.

Population and Sample

Population explains as a group of objects or subjects with a specialization set of characteristics. The research population is determined and then observations are made, in a case-control study, observations are made on a group of people (Banerjee & Chaudhury, 2020). Population in this research is all employees of PT. Aneka Coffee Industry with a total of 410 employees. According to Banerjee & Chaudhury (2020), a sample is any subset of the population that is fully determined, the sample must be representative. In this research, the calculation of the number of samples has been done using the Slovin formula and an error tolerance limit of 10%. The number of samples in this study was 80 employees as respondents.

Sources and Data Collection Method

This research sources of data obtained from primary and secondary data. According to Sugiyono (2015) primary data is defined as data collected by researchers from direct sources, using methods such as surveys, questioners, interviews, or experiments. The primary data in this research is a direct assessment of the employees of PT. Aneka Coffee Industry. Furthermore, secondary data is a source of data that is indirectly provided to researchers, for example through documents or other people. (Sugiyono, 2015). This secondary data is obtained from books, journals, artikel and related literature.

The data collection method that used in this research is involve a questionnaire and interviews. Sugiyono (2015) described that questionnaire is a set of information that consists of various questions or written statements that are submitted to a person (respondent) to be answered. Then, interviews are data collection where researchers can ask questions to respondents who are considered to be able to provide valid information (Creswell, 2014).

Result and Discussion

Descriptive Statistics Analysis

Table 3. Descriptive Statistics of Variable

Variable	Items	Min	Max	Mean	Std. Deviation
Safety Culture	SC1	3	5	4,04	0,431
	SC2	3	5	4,09	0,453
	SC3	3	5	4,08	0,412
	SC4	1	5	3,60	0,768
	Overall	2,5	5	3,95	0,516
Safety Leadership	SL1	2	5	3,98	0,386
	SL2	2	5	4,04	0,459
	SL3	2	5	4,11	0,591
	SL4	2	5	3,94	0,578
	SL5	2	5	4,08	0,565

Variable	Items	Min	Max	Mean	Std. Deviation
Safety Performance	SL6	1	5	3,93	0,803
	SL7	2	5	4,08	0,628
	Overall	1,86	5	4,02	0,573
	SP1	3	5	4,15	0,477
	SP2	3	5	4,10	0,339
	SP3	4	5	4,20	0,400
	SP4	2	5	3,93	0,628
Motivation	Overall	3,00	5	4,09	0,461
	M1	3	5	4,10	0,374
	M2	3	5	4,21	0,466
	M3	3	5	4,16	0,401
	M4	1	5	2,79	0,958
	M5	2	5	3,76	0,825
	Overall	2,4	5	3,81	0,605

Source: Primary Data Processed (2025)

Based on the table 3, the standard deviation values for each item in all variable are less than 1, it can be concluded that the respondents' answers are relatively identical or grouped at the calculated average value (mean), which the respondents' assessment of each variable is very good.

Measurement Model (Outer Model)

Convergent Validity

As stated by Ghazali (2021) the variable that has an outer loading value > 0.5 is considered sufficient to the convergent validity requirements and described as valid. In the first stage of running the research data with SmartPLS, it was found that there were two items that had an outer loading value of less than 0,5 which were SC4 and M4. So, the next step is to drop or eliminate items SC4 and M4 because is not sufficient to the convergent validity requirements. Then perform data processing again to obtain a valid convergent validate value for each item. The following table 4 are the convergent validity values after re-estimation:

Table 4. Outer Loading Values

Variable	Items	Outer Loading	Description
Safety Culture	SC1	0,743	Valid
	SC2	0,808	Valid
	SC3	0,813	Valid
Safety Leadership	SL1	0,696	Valid
	SL2	0,742	Valid
	SL3	0,882	Valid
	SL4	0,863	Valid
	SL5	0,875	Valid
	SL6	0,598	Valid
	SL7	0,928	Valid
Safety Performance	SP1	0,854	Valid
	SP2	0,745	Valid
	SP3	0,888	Valid
	SP4	0,603	Valid
Motivation	M1	0,791	Valid
	M2	0,762	Valid
	M3	0,791	Valid
	M4	0,706	Valid
	M5	0,706	Valid

Source: Processed Data, SmartPLS 4.1 (2025)

Based on table 4 the outer loading values, it shows that all items in each safety culture, safety leadership, safety performance, and motivation variable are $> 0,5$ considered sufficient to the convergent validity requirements which described as valid. In addition, convergent validity can also be seen from the Average Variance Extracted (AVE) and considered valid if its value is more than 0,5 (Ghozali, 2021). The AVE values are in the following table 5:

Table 5. Average Variance Extracted (AVE) Values

Variable	Average Variance Extracted (AVE)	Description
Safety Culture	0,622	Valid
Safety Leadership	0,649	Valid
Safety Performance	0,610	Valid
Motivation	0,573	Valid

Source: Processed Data, SmartPLS 4.1 (2025)

The AVE values of all variable exceeds 0,5. Therefore, the outer loading and AVE values in this research is in accordance with the established standards of convergent validity.

Discriminant Validity

Discriminant validity evaluation can be assessed with cross loading. A measure of reflexivity is said to be high if it has a correlation of 0.7 or higher with the structure being measured. However, cross loading values in the range of 0.5 to 0.60 are considered acceptable (Ghozali, 2021). The results of discriminant validity can be seen in cross loading values the following table 6:

Table 6. Cross Loading Values

Items	Safety Culture	Safety Leadership	Safety Performance	Motivation
SC1	0,743	0,314	0,44	0,298
SC2	0,808	0,208	0,457	0,352
SC3	0,813	0,331	0,603	0,526
SL1	0,256	0,696	0,224	0,244
SL2	0,201	0,742	0,357	0,33
SL3	0,382	0,882	0,712	0,616
SL4	0,301	0,863	0,483	0,399
SL5	0,28	0,875	0,647	0,532
SL6	-0,007	0,598	0,184	0,339
SL7	0,454	0,928	0,639	0,607
SP1	0,663	0,671	0,854	0,675
SP2	0,331	0,362	0,745	0,607
SP3	0,573	0,562	0,888	0,68
SP4	0,386	0,316	0,603	0,342
M1	0,383	0,426	0,509	0,766
M2	0,429	0,395	0,651	0,791
M3	0,473	0,321	0,546	0,762
M5	0,288	0,606	0,577	0,706

Source: Processed Data, SmartPLS 4.1 (2025)

Based on table 6 it known that the cross loading value on each item or indicator has a greater value then the value of other construct and more than 0,5. So, it can be concluded that the cross loading values has an accordance with the discriminant validity criteria.

Reliability Test

The results of the reliability test can be seen in construct reliability values in the following table 7:

Table 7. Construct Reliability Values

Variable	Cronbach's Alpha	Composite Reliability	Description
Safety Culture	0,705	0,831	Reliable
Safety Leadership	0,911	0,927	Reliable
Safety Performance	0,782	0,860	Reliable
Motivation	0,751	0,843	Reliable

Source: Processed Data, SmartPLS 4.1 (2025)

According to Hair et al. (2022) to be considered reliable cronbach's alpha values and composite reliability values for each construct should be >0,7, although a value above 0,6 is still considered acceptable. In this research cronbach's alpha values and composite reliability values of safety culture, safety leadership, safety performance, and motivation is all above 0,7. So it can be concluded that the research model is reliable for use.

Structural Model (Inner Model)

R-square (R^2)

The result of R^2 values are in table 8 as follows:

Table 8. R-square (R^2) Values

Variable	R-square (R^2)	R-square (R^2) Adjusted
Safety Performance	0,713	0,702
Motivation	0,447	0,433

Source: Processed Data, SmartPLS 4.1 (2025)

Based on the table 8 it can be seen that there are two endogenous variables used in this structural model. This concluded that both of safety performance and motivation variable has R^2 values above 0,5. According to Hair et al. (2022) R^2 values above 0,5 are considered moderate relationship respectively.

Q-square (Q^2)

In accordance with the data in table 8, the Q^2 can be calculated as follows:

$$Q^2 = 1 - (1 - R^2) \times (1 - R^2)$$

$$Q^2 = 1 - (1 - 0,713) \times (1 - 0,447)$$

$$Q^2 = 1 - (0,287) \times (0,553)$$

$$Q^2 = 1 - 0,159$$

$$Q^2 = 0,841$$

Based on the calculation the value of Q^2 is 0,841. This means the diversity of research can explained by the structural model is 84,1%. As stated by Hair et al. (2022) the model has a relevant prediction because the Q^2_{predict} value > 0 .

F-square (F^2)

The effect of variables at the structural level can be seen with the effect size F^2 . General guidelines for assessing F^2 suggest values of 0,02 is a small, 0,15 is a medium, and 0,35 is a large effect size (Hair et al., 2022). The result F^2 values in the table 4.16 as follows:

Table 9. F-square (F^2) Values

Relationship Between Variable	F-square (F^2)	Effect Size
Safety Culture → Safety Performance	0,269	Medium
Safety Leadership → Safety Performance	0,166	Medium
Motivation → Safety Performance	0,362	Large
Safety Culture → Motivation	0,194	Medium
Safety Leadership → Motivation	0,324	Medium

Source: Processed Data, SmartPLS 4.1 (2025)

Goodness of Fit (GoF)

Goodness of Fit (GoF) is used value is used for overall model validation. GoF is used to evaluate the measurement model (outer model) and structural model (inner model). GoF value is obtained from the average square root of the average AVE value and the average R^2 value (Ghozali, 2021).

The GoF can be calculate as follows:

$$\text{GoF} = \sqrt{\text{AVE} \times R^2}$$

$$\text{GoF} = \sqrt{0,614 \times 0,580} \quad \text{GoF} = 0,597$$

Based on the calculation the value of GoF is 0,597, which included in the large category. So, it can be interpreted that the resulting model in this research has an accuracy and feasibility of 59,7% in explaining empirical data.

Hypothesis Testing

Direct Effects

The results of direct effect in the relationship between variable can be seen in the following table 10:

Table 10. Path Coefficient Direct Effects

Hypothesis	Relationship Between Variable	Path Coefficient	T Statistics	P Values
H ₁	Safety Culture → Safety Performance	0,326	2,723	0,007
H ₂	Safety Leadership → Safety Performance	0,270	2,858	0,004
H ₃	Motivation → Safety Performance	0,433	4,052	0,000
H ₄	Safety Culture → Motivation	0,352	3,038	0,003
H ₅	Safety Leadership → Motivation	0,454	4,242	0,000

Source: Processed Data, SmartPLS 4.1 (2025)

Indirect Effects

The result of indirect effect in the relationship between variable can be seen in the following table 11:

Table 11. Path Coefficient Indirect Effects

Hypothesis	Relationship Between Variable	Path Coefficient	T Statistics	P Values
H ₆	Safety Culture → Motivation → Safety Performance	0,152	2,240	0,025
H ₇	Safety Leadership → Motivation → Safety Performance	0,197	3,064	0,002

Source: Processed Data, SmartPLS 4.1 (2025)

Discussion

The Effect of Safety Culture Toward Safety Performance

The results of hypothesis testing obtained that the relationship between safety culture with safety performance has a positive and significant relationship at PT. Aneka Coffee Industry, as proven by positive path coefficient value of 0,326 with t-statistics of 2,723 which is greater than the provision of 1,96 and a significance value of 0,007 which is less than 0,05. The positive effect indicates the higher the role of leaders in influencing employees in order to achieve safety goals, the higher the employee safety performance. The results of this research are in line with the results obtained from research by Atikasari et al. (2022) which stated that safety culture had a significant effect on safety performance. So, that safety culture can encourage safety performance formation. Abeje & Luo (2023) also revealed that safety culture had a positive and significant impact on safety performance.

The Effect of Safety Leadership Toward Safety Performance

The results of hypothesis testing obtained that the relationship between safety leadership with safety performance has a positive and significant relationship at PT. Aneka Coffee Industry, as proven by positive path coefficient value of 0,270 with t-statistics of 2,858 which is greater than the provision of 1,96 and a significance value of 0,004 which is less than 0,05. The positive effect indicates the higher the role of leaders in influencing employees in order to achieve safety goals, the higher the employee safety performance. The results of this research support and validate the results of Sumarsid et al. (2022) previous studies which showed that safety leadership had a positive and significant impact on safety performance. It also explained that safety leadership that carries out correctly will affect and increase safety performance. As well as, Prayoga et al. (2024) described that safety leadership had a significant positive effect on safety performance.

The Effect of Motivation Toward Safety Performance

The results of hypothesis testing obtained that the relationship between motivation with safety performance has a positive and significant relationship at PT. Aneka Coffee Industry, as evidenced by positive path coefficient value of 0,433 with t-statistics of 4,052 which is greater than the provision of 1,96 and a significance value of 0,000 which is less than 0.05. This explained that good motivation regarding work safety will encourage employees to improve their best safety performance. The results of this research align with the results of research by Karina & Ariffin (2024) which stated that safety motivation had a significant impact on safety performance.

The Effect of Safety Culture Toward Motivation

The results of hypothesis testing obtained that the relationship between safety culture with motivation has a positive and significant relationship at PT. Aneka Coffee Industry, as evidenced by positive path coefficient value of 0,352 with t-statistics of 3,038 which is greater than the provision of 1,96 and a significance value of 0,003 which is less than 0,05. Besides that, it can be seen from the effect size (F^2) value between safety culture to motivation is 0,194, which indicates that safety culture has medium effect size on motivation. This means a good safety culture can increase motivation because it can create a comfortable and healthy work environment, so that employee will be more enthusiastic to implementing work safety. The results of this research are consistent with earlier

research by Ekong & Ogunbawo (2023) which stated that perceived process safety culture significantly improved employee safety motivation. Mardhiani et al. (2023) also revealed that safety culture had a direct influence on safety motivation. If the safety culture condition is excellent, it can increase safety motivation.

The Effect of Safety Leadership Toward Motivation

The results of hypothesis testing obtained that the relationship between safety leadership with motivation has a positive and significant relationship at PT. Aneka Coffee Industry, as evidenced by positive path coefficient value of 0,3454 with t-statistics of 4,242 which is greater than the provision of 1,96 and a significance value of 0,000 which is less than 0.05. Moreover, it can be seen from the effect size (F2) value between safety leadership to motivation is 0,324, which show that safety leadership has medium effect size on motivation. This means the better safety leadership will increase safety motivation. The results of this research are in accordance with the results of research by Wibawanti et al. (2024) which stated that safety leadership had an impact on safety motivation. According to Slil, et al. (2025), safety leadership enhances workplace safety by promoting employee contentment and regard, which are essential to motivating compliance with safety measures.

The Effect of Safety Culture Toward Safety Performance When Mediated Through Motivation

The results of hypothesis testing obtained that the relationship between safety culture with safety performance through motivation has a positive and significant relationship at PT. Aneka Coffee Industry, as evidenced by positive path coefficient value of 0,152 with t-statistics of 2,240 which is greater than the provision of 1,96 and a significance value of 0,025 which is less than 0.05. The direction of the positive relationship indicates that the better motivation in mediating, the relationship between safety culture and safety performance will also increase. The results of this research are consistent with the results from research by Karina & Ariffin (2024) which prove that perceived safety culture had a significant impact on safety performance by mediating the safety motivation.

The Effect of Safety Leadership Toward Safety Performance When Mediated Through Motivation

The results of hypothesis testing obtained that the relationship between safety leadership with safety performance through motivation has a positive and significant relationship at PT. Aneka Coffee Industry, as evidenced by positive path coefficient value of 0,197 with t-statistics of 3,064 which is greater the provision of 1,96 and a significance value of 0,002 which is less than 0.05. The direction of the positive relationship indicates that the better motivation in mediating, the relationship between safety leadership and safety performance will also increase. The results of this research are in line with the results of research from Basahel (2021) which revealed that safety leadership through motivation as mediating variable significantly affected safety participation and safety compliance which was a component of safety performance.

Conclusion and Suggestion

Conclusion

Based on the results and discussion of this study, several conclusions can be drawn as follows:

1. Safety culture has a significant positive effect toward safety performance at PT. Aneka Coffee Industry.
2. Safety leadership has a significant positive effect toward safety performance at PT. Aneka Coffee Industry.
3. Safety culture has a significant positive effect toward motivation at PT. Aneka Coffee Industry.
4. Safety leadership has a significant positive effect toward motivation at PT. Aneka Coffee Industry.
5. Motivation has a significant positive effect toward safety performance at PT. Aneka Coffee Industry.

6. Safety Culture has a significant positive effect toward safety performance when mediated through motivation at PT. Aneka Coffee Industry.
7. Safety leadership has a significant positive effect toward safety performance when mediated through motivation at PT. Aneka Coffee Industry.

Limitation of the Study

Based on the research has been conducted, there are several limitations as follows:

1. The distribution of questionnaires in this research was offline and there were respondents who were not at the location or were busy with work, so it takes time to wait for the data to be collected or was inefficient.
2. The object of this research is only in the scope of PT. Aneka Coffee Industry, so there is no comparative object in this research.

Suggestion

Based on the results of this study, several suggestions can be put forward as follows:

1. For companies
 - a. It is recommended for the company to pay more attention to improvements occupational health and safety so that employees feel more comfortable and safe while working
 - b. It is recommended for the company to improve the provision of personal protective equipment for employees such as helmets, goggles, earmuffs, masks, respiratory, gloves, safety vests, safety shoes, and etc.
 - c. It is recommended for the company to adding the number of hazard symbol or safety signs in the factory area such as slippery floors, slippery stairs, chemicals, noise levels, explosions, and etc.
 - d. It is recommended for the company to give a reward to employees who comply with the regulations in force in the company and for demonstrating exemplary safety performance, so that employees feel more appreciated for their efforts.
2. For further researchers
 - a. This research was conducted at PT. Aneka Coffee Industry as a manufacturing sector in the food and beverage industry, so that further researchers is expected to examine other objects as wider scope with a high risk potential of workplace accidents
 - b. Further researchers is expected to develop the research model by adding variables in relation to safety performance such as safety behavior, safety training and safety climate.

References

- Abeje, M., & Luo, F. (2023). The Influence of Safety Culture and Climate on Safety Performance: Mediating Role of Employee Engagement in Manufacturing Enterprises in Ethiopia. *Sustainability (Switzerland)*, 15 (14).
- Anizar. (2021). *Teknik Keselamatan dan Kesehatan Kerja di Industri Edisi 2*. Yogyakarta: Graha Ilmu.
- Ashour, A.M., Hassan, Z., Alekam, J. (2018). A Conceptual Framework for Upgrading Safety Performance by Influence Safety Training, Management Commitment to Safety and Work Environment: Jordanian Hospitals. *International Journal of Business and Social Research*, 8(7), 25-35.
- Atikasari, C. D., Sudiarno, A., & Priyanto, E. (2022). The Effect of Safety Leadership, Safety Culture, and Safety Behavior on Safety Performance After a Company Merger: A Case Study. *Jurnal Sistem Dan Manajemen Industri*, 6(2), 187–199.
- Banerjee, A., & Chaudhury, S. (2010). Statistics without tears: Populations and samples. *Industrial Psychiatry Journal*, 19(1), 60.
- Basahel, A. M. (2021). Safety Leadership, Safety Attitudes, Safety Knowledge and Motivation Toward Safety-related Behaviors in Electrical Substation Construction Projects. *International Journal of Environmental Research and Public Health*, 18(8).

- BPJS for Employment. (2024). Kecelakaan Kerja Makin Marak dalam Lima Tahun Terakhir. <https://www.bpjsketenagakerjaan.go.id/berita/28681/Kecelakaan-Kerja-Makin-Marak-dalam-Lima-Tahun-Terakhir>. [Accessed on 4th Februari 2024].
- Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative and Mixed Methods Approaches (4th ed.)*. Thousand Oaks, CA: Sage.
- Dhani, S. R. A., Paskarini, I., & Silehu, S. (2022). Safety Motivation sebagai Determinan dari Safety Performance Pekerja PT X Sidoarjo. *Jurnal Penelitian Kesehatan Suara Forikes*, 13(3), 823–827.
- Ekong, Akaninyene Edet & Ogunbawo, Babatunde Michael. (2023). Impact of Process Safety Culture on Employee Safety Motivation in Selected Oil and Gas Industries in Nigeria. *Journal of Scientific Research and Reports*, 29(12), 38-54.
- Ghozali, I. (2021). *Partial Least Squares Konsep, Teknik dan Aplikasi Menggunakan Program SmartPLS 3.2.9 Untuk Penelitian Empiris (3 ed.)*. Semarang: Universitas Diponegoro.
- Hair, J. F., Hult, G. T. M., Ringle, C. M., and Sarstedt, M. (2022). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM), 3rd Ed.* Thousand Oaks, CA: Sage.
- Hadiir, AL, S., Panuwatwanich, K., & Stewart, R. A. (2013). Empirical Analysis of the Impacts of Motivation and Safety Climate on Safety Behavior. *The 19th CIB World Building Congress: Construction and Society, May*, 1–13.
- International Labour Organization. (2023). A Call for Safer and Healthier Working Environments. *Advancing Social Justice, Promoting Decent Work ILO Is a Specialized Agency of the United Nations*, 1–20.
- Kabiesz, Patrycja. (2024). Safety Culture in SMEs of the Food Industry: A Case Study and Best Practices. *Sustainability*, 16(24), 11185.
- Kalvei, Mustapha. (2022). Responsible Leadership and Workplace Safety in the Downstream Oil and Gas Sector in Ghana: The Role of Safety Motivation and Safety Culture. *Thesis*. University of Cape Coast.
- Karina, A., & Ariffin, Z. (2024). Influence of Perceived Safety Culture and Safety Knowledge on Safety Performance Mediated by Safety Motivation. In *International research journal of management, IT and social sciences*, 11(4), 130-143.
- Mardhiani, S., Puspita, R., Tatiana, Y., Gabriella, N., Hayam, D., Chamsudi, M., Bijaksana, G., & Simatupang, V. S. (2023). Developing Crew's Safety Behavior Based on Safety Culture and Safety Motivation. *Grostlog 2023*, 95–114.
- Prayoga, Raditya Putra, Tranggono, & Islami, Mega Cattleya P.A. (2024). Analysis of The Influence of Safety Culture, Safety Leadership, and Safety Knowledge on Safety Performance in Coal Mining Companies in Berau. *International Journal of Economics Development Research*, 5(2), 1435-1455.
- Quick, J., & Hall, S. (2015). Part three: The quantitative approach. *Journal of Perioperative Practice*, 25(10), 192–196.
- Rahadian, R. (2021). Tanggung Jawab Pengusaha dan Pekerja dalam Penerapan K3 pada Proyek Konstruksi Ditinjau dari Pelaksanaan Hak dan Kewajiban Para Pihak. *Dharmasisya*, 1(2), 997–1006.
- Setiono, Beni Agus & Andjarwati, Tri. (2019). *Budaya Keselamatan, Kepemimpinan Keselamatan, Pelatihan Keselamatan, Iklim Keselamatan dan Kinerja*. Sidoarjo: Zifatama Jawa.
- Skeepers, N. C., & Mbohwa, C. (2015). A Study on the Leadership Behaviour, Safety Leadership and Safety Performance in the Construction Industry in South Africa. *Procedia Manufacturing*, 4(Iess), 10–16.
- Slil, E., Iyiola, K., Alzubi, A., & Aljuhmani, H. Y. (2025). Impact of Safety Leadership and Employee Morale on Safety Performance: The Moderating Role of Harmonious Safety Passion. *Buildings*, 15(2), 186.

- Sugiarto, T. A., & Fitriady, Y. (2019). Implementation of Occupational Health and Safety on Employees Productivity of Pre-Press Production Department At Pt Nusantara Grafika. *Jurnal Kreator: Politeknik Negeri Media Kreatif*, 2(1), 24–41.
- Sugiyono. (2015). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Bandung: Alfabeta.
- Sumarsid, Purwanto, H., & Kurniawansyah. (2022). Role of Safety Leadership, K3 Expert Commitment, Accountability on Job Satisfaction, and Safety Performance. *Jurnal Ekonomi*, 11(3).
- Supardi, S., Chandrarin, G., & Sunardi (2021). *The Role of Safety Leadership and Safety Culture in improving Safety Performance*. 4464(4), 55–62.
- Wibawanti, A. B., Sanny, L., Siahaan, D., & Djati, S. P. (2024). How Safety Leadership, Social Capital, and Safety Awareness Affect Safety Citizenship Behavior: A mediation perspective. *JPPI (Jurnal Penelitian Pendidikan Indonesia)*, 10(1), 432-443.

Maya Takhsun *) is a student of FEB UNISMA

M. Ridwan Basalamah **) is a Lecturer of FEB UNISMA

Rahmawati *)** is a Lecturer of FEB UNISMA