*International Journal of Business and Management Invention (IJBMI)*
*ISSN (Online): 2319 – 8028, ISSN (Print): 2319 – 801X*
*www.ijbmi.org || Volume 13 Issue 3 || March, 2024 || PP—131-149*

# The Effect of Management Commitment And Training On Safety Performance Through Safety Behavior As Mediation In Rocktree Logistics

REGZI SRI HARYANTI
*Master of Management, Faculty of Economics and Business, Mulawarman University, Indonesia*

ZAINAL ILMI
*Master of Management, Faculty of Economics and Business, Mulawarman University, Indonesia*

WIRASMI WARDHANI
*Master of Management, Faculty of Economics and Business, Mulawarman University, Indonesia*

***ABSTRACT:*** *The purpose of this research is to analyze and prove the effect of management commitment on safety performance, to analyze and prove the effect of management commitment on safety behavior, to analyze and prove the effect of training on safety performance, to analyze and prove the effect of training on safety behavior, to analyze and prove the effect of safety behavior on safety performance, to analyze and prove safety behavior in mediating the effect of management commitment on safety performance and to analyze and prove safety behavior in mediating the effect of training on safety performance.This research was conducted at Rocktree Logistics Company in Samarinda City, East Kalimantan. The research design uses an explanatory research approach. This type of this research is quantitative research. The population in this study is the 70 crew who work on ships owned by Rocktree Logistics. The sampling technique in this research uses saturated sampling or census sampling, where all members of the population are sampled. Data collection was carried out through distributing questionnaires. The data analysis technique used is the SEM method, namely PLS (Partial Least Square) with the help of Smart PLS 3.0 software.The results show that management commitment has negative positive and not significant effect on safety performance, management commitment has a positive and significant effect on safety behavior, training has a positive and significant effect on safety performance, training has a positive and significant effect on safety behavior, and safety behavior has a positive and significant effect on safety performance. In this research, positive and significant results were also obtained between safety behavior mediating the influence of management commitment and training on safety performance.*

***Keywords:*** ***Management Commitment, Training, Safety Behavior and Safety Performance***

---

Date of Submission: 15-03-2024 Date of acceptance: 30-03-2024

---

## I. INTRODUCTION

In the mineral shipping industry, company operations always involve pure natural materials. To ensure that quality, quantity, and continuity are met, work equipment, machines, service processes, chemicals, labor and various equipment are needed using the help of high technology. Apart from fulfilling aspects of quality, quantity and product continuity, the shipping industry is also encouraged to fulfill safety aspects in every work process and use work equipment safely to prevent work accidents and work-related diseases. Losses resulting from work accidents can cause fatalities, material losses for workers and victims' families, and hamper the company's overall service process. This number of work accidents is the reason why work safety is an important part in every organizational unit. Work accidents in the shipping industry can cause significant losses for a company. These losses can be caused by various factors, including medical costs, compensation claims, legal costs, increased insurance costs, loss of productivity, reputation damage, regulatory penalties, and loss of business opportunities (Zhang et al., 2019). To mitigate these losses and improve workplace safety, shipping companies must prioritize safety measures, provide comprehensive training to employees, maintain a strong safety culture, and regularly evaluate and improve their safety protocols. In addition, they must also have insurance protection and risk management strategies to overcome the potential financial impact if a work accident occurs. In the world of safety, companies can compare the number of work incidents and accidents through a benchmarking or comparison system commonly known as Lost Time Injury Frequency (LTIF) and Total Recordable Case Frequency (TRCF). LTIF & TRCF have been used as safety indicators in the process

industry. LTIF itself refers to the amount or amount of loss of operational time due to injuries at work which result in an employee being unable to work on the next full working day, which is calculated by comparing the number of accidents in a certain period of time to the number of hours worked at that workplace (Sarkheil, 2021). Meanwhile, TRCF refers to the number of all work incidents, both small and large, that have or do not have an impact on employees or company assets.

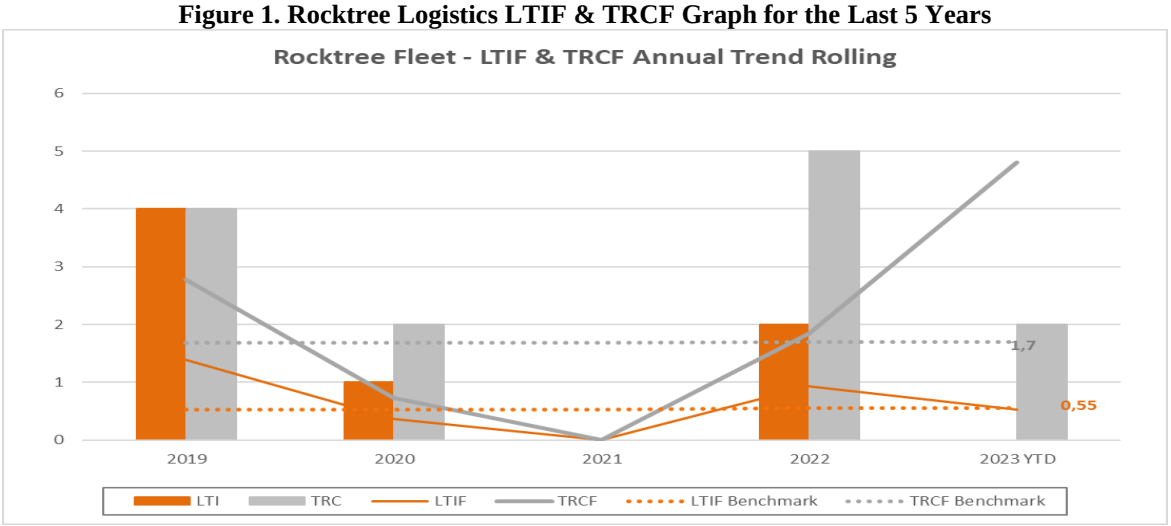
One company that uses this benchmarking method is Rocktree Logistics. Rocktree Logistics uses the LTIF & TRCF benchmarking method to monitor work accident statistics each year. Rocktree Logistics itself is a company providing services in the fields of Transshipment, Custom Logistics Solutions, Tugs and Barges and Ship Management which focuses on mineral transshipping services such as coal, bauxite and nickel ore from and to several locations in various parts of the world. Operational activities carried out by Rocktree employees, especially those who work on ships, have a fairly high level of risk. Therefore, Rocktree Logistics is one of the mineral shipping companies in the global market that upholds the safety of its workers and prevents work accidents and is anticipated in various ways. Throughout 2021, Rocktree Logistics has successfully achieved the "zero accident" target. In other words, for 1 year throughout 2021 there were no work accidents at all, either minor or major, to Rocktree employees or assets. This can be seen from the LTIF and TRCF statistics which decreased significantly from 2020 with LTIF values of 0.3626 and TRCF of 0.7251 to 0.000 at the end of 2021 as follows:

**Table 1. HSE Statistics 2020 – 2022**

| | 2020 | 2021 | 2022 |
|---|---|---|---|
| **Total Crew (Fleet)** | 2028 | 1905 | 2954 |
| **Exposure Hours (Year/Fleet)** | 2.758.080 | 2.609.280 | 2.162.040 |
| First Aid Case (FAC) | 2 | 0 | 1 |
| Medical Treatment Case (MTC) | 1 | 0 | 1 |
| Fatality and Disability | 0 | 0 | 0 |
| Restricted Work Case (RWC) | 0 | 0 | 1 |
| Lost Workday Case (LWC) | 1 | 0 | 2 |
| Lost Time Injury (LTI) | 1 | 0 | 2 |
| **LTIF (Fatality, Disability + LWC)** | 0,3626 | 0,0000 | 0,9251 |
| **TRCF (FAC+MTC+RWC+LTI)** | 0,7251 | 0,0000 | 1,8501 |

The table above also shows that the achievement of "zero accident" at Rocktree will not last long because there will be a significant increase in 2022, even surpassing the level of work incidents that occurred in 2020. This shows that there is instability in the number of work accidents over the last three years at the Rocktree Company. Logistics. The following are LTIF and TRCF statistics at Rocktree Logistics for the last 5 years. It can also be seen that there have been several work incidents which have caused an increase in TRCF throughout 2023.

**Figure 1. Rocktree Logistics LTIF & TRCF Graph for the Last 5 Years**




**Source : Rocktree Logistics.**

At the end of 2020, at Rocktree Logistics there was a change in filling the position of Head of HSSEQ. HSSEQ represents Health, Safety, Security, Environment and Quality which is the department responsible for the safety of employees and company assets as a whole. This change in position resulted in changes to several safety policies and regulations implemented by Rocktree. Such as the obligation to report unsafe acts/Unsafe Act, unsafe conditions/Unsafe Conditions and near accidents from each department and each ship at least 3 times every month. This is done with the aim of identifying hazards before work incidents and accidents occur in the future. In addition, the new Head of HSSEQ also determined a significant increase in the safety budget in 2021 with the aim of providing safety equipment such as rigging equipment, life rafts, lifeboats and personal protective equipment such as helmets, safety glasses and shoes with international certification. The commitment of the Head of HSSEQ is one of the factors causing a significant reduction in the number of accidents in 2021 so that the achievement of "zero accidents" is achieved.

Regardless of management commitment, safety training is always a major contributor to the success of accident prevention programs in any organization (Setyawan, Nainggolan, et al., 2021). Training is a process that equips workers with the skills and knowledge to work safely while carrying out their duties. Specifically, safety training is defined as the transfer of knowledge related to safety and how the knowledge gained can enable workers to work as safely as possible and without endangering themselves (Law et al., 2006). A proper training plan can stimulate positive safety behavior among workers. Through training, workers are able to recognize dangers and minimize the possibility of work accidents occurring in their respective work areas. In connection with this, Rocktree Logistics also has a minimum training matrix for all its employees to support the prevention of work accidents and improve safety performance in the company. This training matrix is simply the minimum training requirements that will be provided to each employee upon joining Rocktree. Other special training will be provided according to needs that are relevant to the work area of each position.

**Table 1. Minimum Training Requirements for Rocktree Logistics Employees**

| Position & Function | DNVGL Shipmanager | ISM - ISO 9001, ISO 14001 & ISO 45001 | Internal Auditor | Risk Assessment | Incident Investigation |
|---|---|---|---|---|---|
| Chief Executive Officer | | X | | | |
| Head of Fleet | X | X | | X | X |
| HSSEQ | X | X | X | X | X |
| Technical | X | X | | X | X |
| HR | | X | | | |
| Operations | | X | | X | |
| Purchasing | X | X | | | |
| Finance | | X | | | |
| IT | | X | | X | |
| Emergency Response Team | | X | | X | X |
| Business Development | | X | | X | |

**Source : Rocktree Logistics.**

Training is a major contributor to the success of any organization's accident prevention program. Safety training is a process that provides workers with skills and knowledge to behave safely while doing work (Hasan & Jha, 2013). A proper training plan can stimulate positive safety behavior among workers. Through training, workers are able to recognize hazards and minimize them before they become disasters. Several studies show that the high level of work accidents can be seen from the low level of safety performance. (Hong et al., 2018) stated that safety performance can be measured from various factors, including management commitment, leadership, employee involvement, training and safety culture. By managing these factors, companies can create a safe work environment to prevent work accidents. This statement is supported by research conducted by (Khurosani & Warinangin, 2021). The results of the research state that management commitment has a positive and very significant impact on improving safety performance. The research results also prove that safety behavior plays an important role in improving safety performance. This is because safety behavior exists as a result of the strong driving force of management commitment. However, research conducted by (Setyawan, Sudhartio, et al., 2021) in the manufacturing industry in the city of Batam shows that the t-test results of management commitment do not have a positive or significant impact on safety performance. His research also concluded that management commitment factors do not have a significant effect on safety performance because Senior Managers who work in the manufacturing sector generally prioritize production aspects and cost reduction (lean manufacturing) rather than safety aspects. However, the t-test results from safety training showed that there was a positive and significant impact on safety performance. His research concluded that

training has a positive influence on safety performance because training has an impact on changing employees' safety attitudes and behavior.

From the description of the background above, it can be concluded that there is a gap on which this research was conducted, namely the first gap is the difference in research from (Setyawan, Sudhartio, et al., 2021) which states that management commitment has no effect on safety performance. The second gap is research from (Khurosani & Warinangin, 2021) which uses safety behavior as a variable that mediates management commitment and safety performance, but no research has been found that examines safety behavior as a variable that mediates between training and safety performance. With the above background, this research was conducted to analyze how much influence management commitment and training has on safety performance with safety behavior as a mediating variable in one of the shipping companies operating in the mineral shipping industry, namely Rocktree Logistics.

## II. LITERATURE REVIEW

### Management Commitment

Commitment is a work attitude because it reflects a person's feelings (likes or dislikes) towards the organization where the individual works (Robbins & Judge 2017, 47). They also explained that in organizational commitment, emotional involvement in the organization and belief in its values are the main standards for employee commitment. While Bansal, et al. (2004) defines commitment as the force that binds a person to an action that has relevance to one or more goals. Management itself is a typical process consisting of planning, organizing, activating, and controlling actions to determine and achieve goals through the use of human resources and other resources (Wijaya & Rifai 2016, 14). So, management commitment is defined as involvement in maintaining behaviour that helps others to achieve a goal. Another opinion from Babakus et al. (2003) defines management commitment as an employee's assessment of the organization's commitment to maintaining, developing, supporting, and appreciating each employee with the aim of achieving good service.

### Training

Training is an activity to improve a person's work abilities, helping employees understand practical knowledge and its application, in order to improve the skills and attitudes needed by the organization in its efforts to achieve its goals. Training is the process of teaching new or existing employees the basic skills they need to carry out their jobs (Dessler, 2018). Training is one effort to improve the quality of human resources in the world of work. Training is very important so that workers can work more expertly and better at the work they do. Training will provide employees with the opportunity to develop their skills and abilities at work so that what they know and master now and in the future can help them understand what is actually done and why it must be done, as well as providing opportunities to increase knowledge and expertise (Nurahaju & Utami , 2020)

### Safety Behavior

Safety behavior refers to actions individuals undertake for self-protection, such as safety regulations to avoid danger (Neal et al., 2000). Safety behavior is the actions of workers to carry out and support the company's safety program (Friend & Kohn, 2000). Safety behavior includes a series of activities that individuals carry out in the workplace to keep their work area safe by aligning individual actions to comply with safety rules and procedures that apply to the organization (Kapp, 2012). Safety behavior is a certain action that, when it conflicts with existing safety regulations or policies or if an individual's steps do not comply with the rules, can cause an accident (Seo et al., 2015).

### Safety Performance

Safety performance relates to the effectiveness of preventing injuries and illnesses as well as providing a safe and healthy workplace (ISO 45001:2018, 2018). Safety performance can be seen as a subsystem of organizational performance. Safety performance measures a company's success in preventing accidents by showing the company's commitment to preventing accidents and work-related illnesses and increasing work productivity (Hasan & Jha, 2013).

### Relationship Between Variables

### The Effect of Management Commitment on Safety Performance

According to Hong, et al. (2018) safety performance can be measured from various factors, including management commitment, leadership, employee involvement, training and safety culture. Through management commitment, the Company avoids the risk of moral and material losses, loss of working hours, as well as human safety and the surrounding environment resulting from accidents.

In line with research previously conducted by (Su, 2021) entitled "The Effects of Safety Management Systems, Attitude and Commitment on Safety Behaviors and Performance" it proves that management commitment (X1) has a positive and significant influence on safety performance (Y2) with test results β=0.289 and p<0.01. Apart from that, there is another research conducted by (Bayram, 2018) with the title "The Management Commitment to OHS, Employee Satisfaction and Safety Performance: An Empirical Study" showing that there is a significant indirect influence between management commitment (X1) on safety performance ( Y2) which is mediated by employee satisfaction with a coefficient test result of 0.099. This makes it clear that the higher the level of commitment from management by avoiding the risk of moral and material loss, loss of working hours, as well as human safety and the surrounding environment, the Company's safety performance can be improved. Based on the theoretical studies and empirical studies expressed above, the hypothesis formulated in this research is:
H1: Management commitment has a positive and significant effect on safety performance.

**The Effect of Management Commitment on Safety Behavior**

Management commitment plays an important role in the large number of work accidents because with good commitment from company management in preventing work accidents, all aspects will be affected, such as the safety behavior of its employees (Diana et al., 2018). This is in line with research previously conducted by (Setyawan, Sudhartio, et al., 2021) with the title "Factors Affecting Safety Behavior at Construction Companies in Batam" proving that based on the t-test results, the management commitment variable (X1) has an effect positive and significant impact on safety behavior (Y1) in this study is proven by a significance value of 0.000 < 0.05. Another research previously conducted by (Hassan et al., 2020) with the title "Management Commitment and Safety Training as Antecedent of Workers Safety Behavior" which was tested using SPSS also proved that management commitment (X1) has a significant relationship with safety behavior (Y1) with T value test results of 16,105 > 1.96 and significance of 0.000 < 0.05. When employees see that their managers are genuinely concerned about their safety, they are more likely to take safety precautions seriously and actively contribute to a safer work environment. Based on the theoretical studies and empirical studies expressed above, the hypothesis formulated in this research is:
H2: Management commitment has a positive and significant effect on safety behavior.

**The Effect of Training on Safety Performance**

According to Sidauruk, et al. (2014) education and training make an important contribution to the implementation of employee safety management. The knowledge generated through training makes a worker have better awareness and initiative to do their job safely. In line with research previously conducted by (Setyawan, Nainggolan, et al., 2021) with the title "The Influence of Management Commitment, Leadership, Employee Engagement, and Training on Safety Performance at A Manufacturing Industry In Batam" proves that based on the results testing, the training variable (X2) has a significant effect on safety performance (Y2) as evidenced by a significance value of 0.000 < 0.05. This research makes it clear that training provided to employees can encourage better safety performance. Based on the theoretical studies and empirical studies expressed above, the hypothesis formulated in this research is:
H3: Training has a positive and significant effect on safety performance.

**The Effect of Training on Safety Behavior**

According to Guo, et al. (2016) training provides workers with skills and knowledge to work safely while carrying out their duties. A proper safety training plan can stimulate positive safety behavior among workers.
This statement is in line with previous research conducted by Hassan, et al. (2020) with the title "Management Commitment and Safety Training as Antecedent of Workers Safety Behavior" which was tested using SPSS also proved that training (X2) has a positive and significant relationship with safety behavior (Y1) with T value test results of 2,765 > 1 .96 and significance of 0.006 < 0.05.
The research shows that investing in comprehensive job training not only improves job quality but also reduces the risk of accidents by creating a more engaged and safety-conscious workforce. Based on the theoretical studies and empirical studies expressed above, the hypothesis formulated in this research is:
H4: Training has a positive and significant effect on safety behavior.

**The Effect of Safety Behavior on Safety Performance**

Safety behavior is an important element in accident prevention because it directly correlates with safety performance. The nature of values, norms and attitudes related to safety will be linked to safety behavior in the workplace which will ultimately influence safety level outcomes (Asamani, 2020). This is in line with research previously conducted by (Atikasari et al., 2022) with the title "The Effects of Safety Leadership, Safety Culture and Safety Behavior on Safety Performance After a Company Merger: A Case Study" which was tested with SEM PLS to prove that safety behavior (Y1) has a positive and significant effect on safety performance (Y2)

with t-test results of 3.486 > 1.96. Based on the theoretical studies and empirical studies expressed above, the hypothesis formulated in this research is:
H5: Safety behavior has a positive and significant effect on safety performance.

**The Effect of Management Commitment on Safety Performance through Safety Behavior**

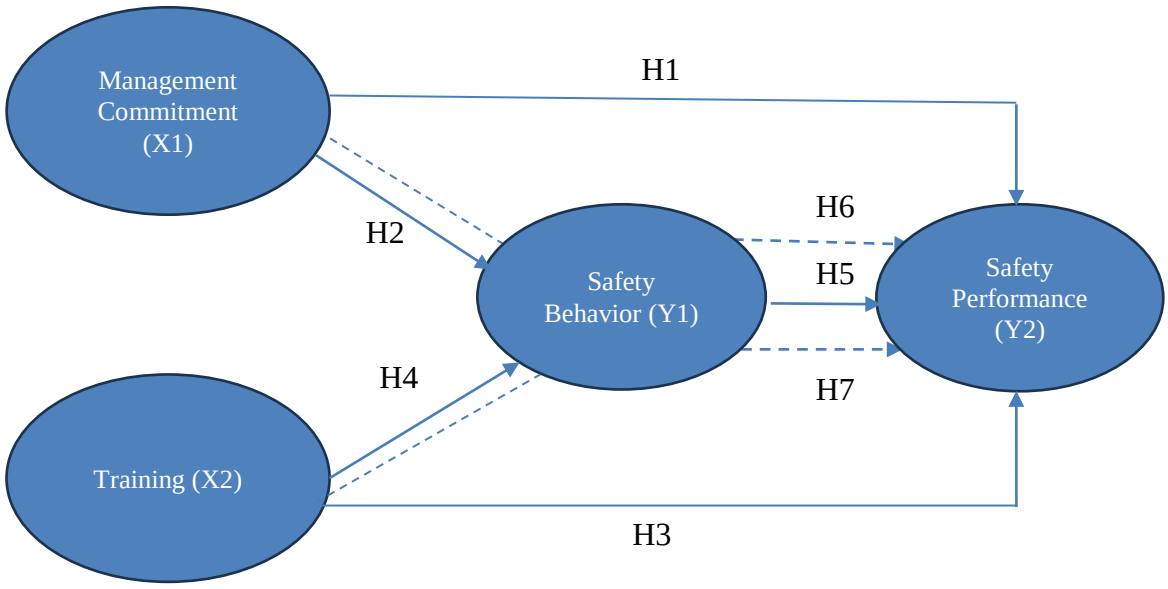
According to Zhao, et al. (2021) management commitment to safety is a positive driver for improving safety performance in various industries and operations, where the better management commitment to safety, the better the safety behavior which will result in better safety performance. This is in line with research previously conducted by (Khurosani & Warinangin, 2021) with the title "Developing a Safety Performance Model through Mediation of Safety Behavior" which was tested using SPSS to prove that management commitment (X1) has an impact on safety performance (Y2 ) with a significance of 0.000 < 0.05 and a significance of safety behavior (Y1) of 0.000 < 0.05. Safety behavior (Y1) as a mediating variable between management commitment (X1) and safety performance (Y2) also has a positive impact with a significance of 0.030 < 0.05.
Based on the theoretical studies and empirical studies expressed above, the hypothesis formulated in this research is:
H6: Management commitment has a positive and significant effect on safety performance.

**The Effect of Training on Safety Performance through Safety Behavior**

Christian et al. (2009) stated that safety motivation supports a person's safety participation and safety behavior. Meanwhile, safety performance is determined by the interactions and knowledge possessed by employees. They also stated that safety performance is closely related to employees' safety knowledge and safety behavior.

Referring to research previously conducted by (Setyawan, Sudhartio, et al., 2021) with the title "Factors Affecting Safety Behavior at Construction Companies in Batam" it proves that based on test results, the training variable (X2) has a significant effect on safety behavior ( Y1) is proven by a significance value of 0.000 < 0.05. Another research conducted by (Atikasari et al., 2022) with the title "The Effects of Safety Leadership, Safety Culture and Safety Behavior on Safety Performance After a Company Merger: A Case Study" also proves that safety behavior (Y1) has a significant effect on safety performance (Y2) with t-test results of 3.486 > 1.96. Even though the research does not discuss safety behavior as a variable that mediates training and safety performance, the research explains and proves that safety behavior mediates the safety culture variable on safety performance with a t-test of 2.175 > 1.96. The explanation above strengthens the statement that through safety training, workers are able to recognize dangers and minimize them before they become disasters.
Based on the theoretical studies and empirical studies expressed above, the hypothesis formulated in this research is:
H7: Training has a positive and significant effect on safety performance.
Based on several theories and previous research, the research conceptual framework is as seen in this Figure 2.

**Figure 2. Research Conceptual Framework**



## III. RESEARCH METHOD

**Operational of Definitions**

1. Management Commitment (X1)

   Management commitment in this research is the active involvement of Rocktree Logistics company managers in conveying and demonstrating the company's commitment to safety to its workers. The Management Commitment variable is measured by 9 (nine) indicators adopted from (Fruhen et al., 2019), namely:

   Communication regarding safety issues (X1.1)

a. Rocktree Logistics management representatives conveyed the company's commitment regarding safety to its employees.
b. Face-to-face visits to the field (X1.2)
   Rocktree Logistics management representatives visited the field (site) to have direct/face-to-face interactions with workers.
c. Involvement in Safety Inspections (X1.3)
   Rocktree Logistics management representatives are directly involved in carrying out safety inspections in the field.
d. Involvement in Accident Investigation (X1.4)
   Rocktree Logistics management representatives are directly involved in carrying out investigations when work accidents occur.
e. Be a Positive Example (X1.5)
   Rocktree Logistics management representatives are positive role models for employees by always prioritizing safety when carrying out work.
f. Investment for Safety Activities (X1.6)
   Rocktree Logistics organizes company assets to support employee safety while working.
g. Safety Policy Implementation (X1.7)
   Rocktree Logistics management representatives are exemplary in implementing the Company's safety policies.
h. Act Quickly on Safety Issues (X1.8)
   Rocktree Logistics management representatives acted quickly in responding to employee safety concerns.
i. Involving Employees in Setting Safety Goals (X1.9)
   Rocktree Logistics management representatives involve their employees in implementing the Company's safety goals.

2. Training (X2)

   The training in this research is a teaching program to improve skills and knowledge provided by the Rocktree Logistics company to support its employees to do their work more safely. The training variable is measured with 6 (six) indicators adopted from (Hunjra et al., 2015), namely:

a. Company facilitates training programs (X2.1)
   Rocktree Logistics provides training program facilities to eliminate gaps between current and expected employee knowledge, skills and abilities in order to work more safely.
b. Training is provided in accordance with international standards (X2.3)
   Rocktree Logistics provides training that complies with international standards.
c. The material provided is relevant to the job (X2.4)
   The material presented in training is appropriate to support the work that employees do.
d. Working conditions support the training program (X2.5)
   Conditions at the work location support the implementation of the training provided.
e. Employees participate in training programs (X2.2)
   The training provided by Rocktree Logistics attracts employee participation to take part in the training provided.
f. The company conducts an evaluation after the training is provided (X2.6)
   Rocktree Logistics conducted an analysis of the effectiveness and impact of the training program.

3. Safety Behavior (Y1)

   The safety behavior in this research is the safety practices of Rocktree Logistics employees in the workplace or the way employees carry out their work as safely as possible to avoid work accidents. Safety behavior variables are measured with 6 (six) indicators adopted from (Lu & Yang, 2010), namely:

a. Employees realize the importance of safety in the workplace (Y1.1)
   Rocktree Logistics employees realize the importance of maintaining personal safety when carrying out work.
b. Employees do not neglect safety even when in a hurry (Y1.2)

Rocktree Logistics employees are able to comply with safety policies even when in a pinch.

c. Employees comply with applicable safety regulations (Y1.3)
Rocktree Logistics employees are able to comply with all applicable safety regulations while carrying out work.

d. Employees wear personal protective equipment at work (Y1.4)
Rocktree Logistics employees work using Personal Protective Equipment (PPE) that complies with standards.

e. Employees participate in setting safety goals (Y1.5)
Rocktree Logistics employees are directly involved in setting safety goals with company management representatives.

f. Employees actively participate in safety meetings (Y1.6)
Rocktree Logistics employees play an active role in every safety meeting with company management representatives.

4. Safety Performance ($Y_2$)
Safety performance in this research is the safety practices of Rocktree Logistics employees in the work area or the way employees carry out their work by prioritizing safety to avoid and prevent work incidents and accidents. The safety performance variable is measured using 7 (seven) indicators adopted from (Vinodkumar & Bhasi, 2010), namely:

a. Employees are able to carry out work safely (Y2.1)
Rocktree Logistics employees have the ability to carry out their work safely

b. Employees follow correct safety procedures when carrying out work (Y2.2)
Rocktree Logistics employees are able to carry out work correctly according to applicable procedures.

c. Employees ensure the highest level of safety when carrying out work (Y2.3)
Rocktree Logistics employees are able to guarantee a good level of safety during work.

d. Employees help co-workers when they work in risky or dangerous conditions (Y2.4)
Rocktree Logistics employees are willing to go the extra mile to help co-workers in risky situations.

e. Employees always point out to management if there are problems related to safety at the work site (Y2.5)
Rocktree Logistics employees are able to raise safety concerns with company management.

f. Employees make extra efforts to improve workplace safety (Y2.6)
Rocktree Logistics employees are willing to raise safety standards on the job site

g. Employees encourage colleagues to work safely (Y2.8)
Rocktree Logistics employees are willing to go the extra mile to ensure their colleagues do their jobs safely.

**Population and Sample**

The population used in this research was 70 employees on board the ship who worked at the Rocktree Logistics branch office in Samarinda. By using a sampling technique, namely a saturated sample, the entire population was sampled as research respondents.

**Analysis Method**

Data analysis techniques use SEM-PLS or component or variant-based Structural Equation Modeling (SEM) models. According to Ghozali & Latan (2015:17), the PLS approach is distribution free (does not produce data with a certain distribution, which can be nominal, ordinal, interval, and ratio). According to Ghozali & Latan (2015:17) PLS is a powerful factor indetermination analysis method because it does not assume that the data must be measured on a certain scale and the sample size is small. PLS is used to confirm the theory, when compared with covariance-based SEM, components based on PLS can avoid two major problems faced by convariance based SEM. The difference between covariance-based SEM and component-based PLS is whether we will use structural equation models to test theory or develop theory for prediction purposes.

**Hypothesis Test**

Hypothesis testing between constructs, namely exogenous constructs against endogenous constructs and endogenous constructs against endogenous constructs, is carried out using the bootstrap resampling method (Ghozali & Latan, 2015:25). The test statistic used is the t statistic or t test, the application of the resampling method allows freely distributed data to be applied, does not require the assumption of a normal distribution, and does not require a large sample. Further explanation by Ghozali & Latan, 2015: 81) reveals the role of thumb in structural model evaluation regarding the two-tailed significance test, where if the significance value is t-value > 1.96 with a significance level of 5% or 0.05 then it is concluded significant. The following is the basis for making the decision, namely as follows:

a. If the t-value is smaller than the t-table value or t-value < 1.96 then Ho is accepted and Ha is rejected.
b. If the t-value is greater than or equal to the t-table or t-value > 1.96 then Ho is rejected and Ha is accepted.

**Mediation Testing**

In this mediation test, the VAF method is used. The Variance Accounted For (VAF) method and bootstrapping in the distribution of indirect effects are considered more appropriate because they do not require any assumptions about the distribution of variables so they can be applied to small sample sizes. This approach is most appropriate for PLS which uses the resampling method and has higher statistical power than the Sobel method. The following formula is used to calculate the VAF value, namely.

$$VAF = \frac{\text{Indirect Effect}}{\text{Direct Effect + Indirect Effect}}$$

If the VAF value is above 80%, it shows the role of full mediation. Then the VAF value ranges from 20% - 80% indicating the partial mediation role category. Meanwhile, a VAF value below 20% indicates that there is almost no mediation effect or that mediation is not supported (Sholihin & Ratmono, 2020: 113).

## IV. ANALYSIS AND DISCUSSION

**Structural Equation Modelling (PLS-SEM)**

**Measurement Model Evaluation (Outer Model)**

The following are the criteria that must be met in testing this measurement model (outer model), namely as follows:

1. *Convergent Validity*

This test is carried out by looking at the standardized loading factor. The value describes the magnitude of the relationship between each indicator and its construct. The loading factor value can be said to be valid in this research if it has a loading factor value greater than 0.7. SmartPLS 3.0 output for loading factors gives results as shown in Table 3. below.

**Table 3. Convergent Validity Test Results with Outer Loading (Initial)**

| | Management Commitment (X1) | Training (X2) | Safety Behaviour (Y1) | Safety Performance (Y2) |
|---|---|---|---|---|
| X1.1 | 0,783 | | | |
| X1.2 | 0,814 | | | |
| X1.3 | 0,774 | | | |
| X1.4 | 0,710 | | | |
| X1.5 | 0,800 | | | |
| X1.6 | 0,588 | | | |
| X1.7 | 0,758 | | | |
| X1.8 | 0,766 | | | |
| X1.9 | 0,787 | | | |
| X2.1 | | 0,753 | | |
| X2.2 | | 0,846 | | |
| X2.3 | | 0,847 | | |
| X2.4 | | 0,792 | | |
| X2.5 | | 0,630 | | |
| X2.6 | | 0,761 | | |
| Y1.1 | | | 0,738 | |
| Y1.2 | | | 0,748 | |
| Y1.3 | | | 0,819 | |
| Y1.4 | | | 0,749 | |
| Y1.5 | | | 0,829 | |
| Y1.6 | | | 0,760 | |
| Y2.1 | | | | 0,833 |
| Y2.2 | | | | 0,744 |
| Y2.3 | | | | 0,862 |

| | | | | |
|---|---|---|---|---|
| **Y2.4** | | | | **0,911** |
| **Y2.5** | | | | **0,848** |
| **Y2.6** | | | | **0,877** |
| **Y2.7** | | | | **-0,176** |

**Source : SmartPLS 3.0.**

Based on the Table 3 above, the results show that not all indicators used to measure each variable in this study have a loading factor value of more than 0.70. The X1.6 indicator has a loading factor value of 0.588, then the X2.5 indicator has a loading factor value of 0.630 and the Y2.7 indicator has a loading factor of -0.176. Therefore, these three indicators are not valid for explaining variables (constructs) so these three indicators were removed in this study. When indicators XI.6, X2.5 and Y2.7 have been removed from the model, the PLS test is carried out again. The SmartPLS 3.0 output in the second test for loading factor gave results as seen in Table 4. Below.

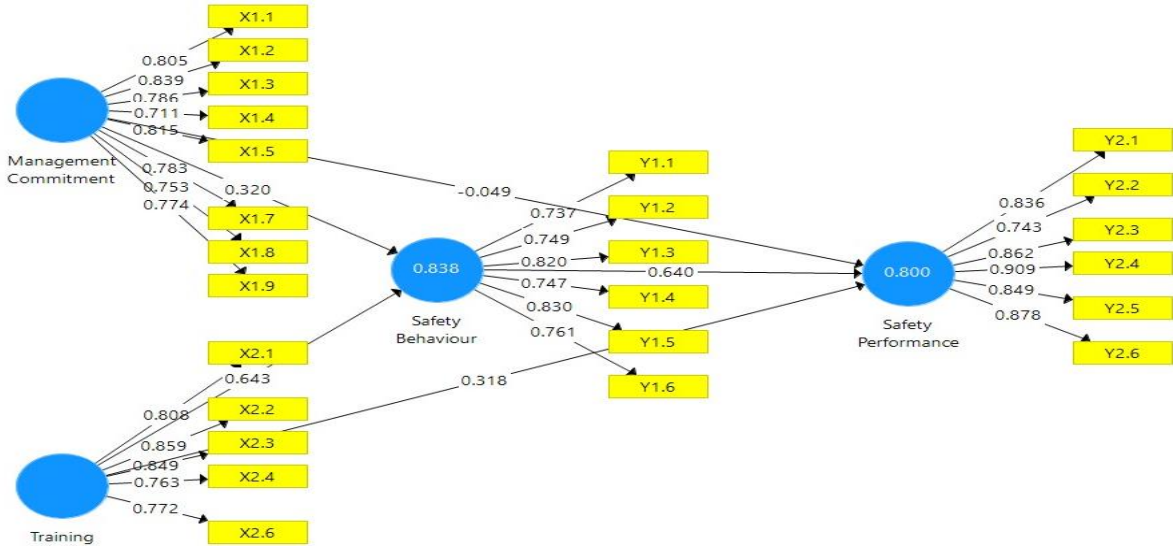
**Table 4. Convergent Validity Test Results with Outer Loading (Final)**

| | Management Commitment (X1) | Training (X2) | Safety Behaviour (Y1) | Safety Performance (Y2) |
|---|---|---|---|---|
| **X1.1** | **0,805** | | | |
| **X1.2** | **0,839** | | | |
| **X1.3** | **0,786** | | | |
| **X1.4** | **0,711** | | | |
| **X1.5** | **0,815** | | | |
| **X1.7** | **0,783** | | | |
| **X1.8** | **0,753** | | | |
| **X1.9** | **0,774** | | | |
| **X2.1** | | **0,808** | | |
| **X2.2** | | **0,859** | | |
| **X2.3** | | **0,849** | | |
| **X2.4** | | **0,763** | | |
| **X2.6** | | **0,772** | | |
| **Y1.1** | | | **0,737** | |
| **Y1.2** | | | **0,749** | |
| **Y1.3** | | | **0,820** | |
| **Y1.4** | | | **0,747** | |
| **Y1.5** | | | **0,830** | |
| **Y1.6** | | | **0,761** | |
| **Y2.1** | | | | **0,836** |
| **Y2.2** | | | | **0,743** |
| **Y2.3** | | | | **0,862** |
| **Y2.4** | | | | **0,909** |
| **Y2.5** | | | | **0,849** |
| **Y2.6** | | | | **0,878** |

**Source : SmartPLS 3.0.**

Based on the Table 4 above, in the second test, the results showed that the indicators used to measure each variable in this study had a loading factor value of more than 0.70, so it can be concluded that all indicator items in the second test were declared valid for explaining variables (constructs). Apart from that, this measurement model is used to explain the relationship between latent variables and manifest variables or indicators as in Figure 3 below.

**Figure 3. Measurement Model Diagram (Outer Model)**




**Source : SmartPLS 3.0.**

2. Discriminant Validity

This test was carried out by looking at the value of the cross loading between the indicators in the construct and the Fornell-Lacker's cross loading. Cross loading between indicators is used to compare the correlation between indicators with their constructs and other block constructs. Meanwhile, Fornell Lacker's cross loading value looks at the root value of AVE between constructs and other constructs. The cross loading value between indicators must show that the correlation between the indicator and the construct is higher when compared to other constructs. In this research, the following are the results of discriminant validity testing based on the cross loading values shown in Table 5.

**Table 5. Cross Loading Results**

| Management Commitment (X1) | Training (X2) | Safety Behaviour (Y1) | Safety Performance (Y2) |
|---|---|---|---|
| 0,805 | 0,542 | 0,608 | 0,588 |
| 0,839 | 0,482 | 0,514 | 0,409 |
| 0,786 | 0,442 | 0,537 | 0,442 |
| 0,711 | 0,534 | 0,502 | 0,421 |
| 0,815 | 0,526 | 0,608 | 0,471 |
| 0,783 | 0,657 | 0,656 | 0,602 |
| 0,753 | 0,792 | 0,755 | 0,745 |
| 0,774 | 0,747 | 0,811 | 0,687 |
| 0,509 | 0,808 | 0,685 | 0,694 |
| 0,678 | 0,859 | 0,744 | 0,694 |
| 0,672 | 0,849 | 0,737 | 0,700 |
| 0,791 | 0,763 | 0,717 | 0,661 |
| 0,518 | 0,772 | 0,737 | 0,700 |
| 0,676 | 0,652 | 0,737 | 0,601 |
| 0,549 | 0,635 | 0,749 | 0,693 |
| 0,591 | 0,734 | 0,820 | 0,750 |
| 0,542 | 0,640 | 0,747 | 0,644 |
| 0,833 | 0,775 | 0,830 | 0,752 |

| | | | |
|---|---|---|---|
| 0,609 | 0,704 | 0,761 | 0,656 |
| 0,684 | 0,714 | 0,776 | 0,836 |
| 0,613 | 0,719 | 0,670 | 0,743 |
| 0,618 | 0,723 | 0,779 | 0,862 |
| 0,657 | 0,732 | 0,786 | 0,909 |
| 0,553 | 0,700 | 0,712 | 0,849 |
| 0,563 | 0,742 | 0,762 | 0,878 |

**Source : SmartPLS 3.0.**

Based on the Table 5. It can be seen that the results of the discriminant validity test for each indicator of each latent variable still have a cross loading value that is greater than 0.7 and is greater than the loading value when connected to other latent variables. This means that each construct or latent variable has good or high discriminant validity, where the indicators in the construct indicator block are better than the indicators in other blocks. Discriminant validity can also be seen by comparing the AVE value with the correlation between other constructs in the model. In research on the influence of management commitment and training on safety performance through safety behavior as mediation at Rocktree Logistics, the results show that the Average Variance Extracted (AVE) value is greater than 0.5, which means that discriminant validity has been achieved as shown in Table 6 below.

**Table 6. Results of Average Variance Extracted (AVE)**

| Constructs | Average Variance Extracted (AVE) |
|---|---|
| Management Commitment (X1) | **0,615** |
| Training (X2) | **0,658** |
| Safety Behaviour (Y1) | **0,600** |
| Safety Perormance (Y2) | **0,719** |

**Source : SmartPLS 3.0.**

Meanwhile, for the Fornell-Lacker's cross loading value, the AVE root value between constructs must be greater when compared to the value with other constructs. In this research, the root AVE value between constructs for each construct also meets the requirements so it can be used in research. Fornell-Lacker's cross loading values can be seen in Table 7 below.

**Table 7. Results of Fornell-Lacker's Cross Loadings**

| | Safety Performance (Y2) | Commitment Management (X1) | Training (X2) | Safety Behaviour (Y1) |
|---|---|---|---|---|
| Safety Performance (Y2) | **0,848** | | | |
| Commitment Management (X1) | 0,726 | **0,784** | | |
| Training (X2) | 0,811 | 0,782 | **0,851** | |
| Safety Behaviour (Y1) | 0,884 | 0,823 | 0,775 | **0,894** |

**Source : SmartPLS 3.0.**

Based on the Table 7 above, it can be seen that each statement indicator has the highest loading factor value on the latent construct tested compared to other latent constructs, meaning that each statement indicator is able to be predicted well by each latent construct, in other words, discriminant validity has been achieved. valid. So it can be concluded from the results of tables 5.7, 5.8 and 5.9 that all constructs meet the discriminant validity criteria.

3. Realibility Test

This test is carried out by looking at the composite reliability value with a threshold of 0.7. The composite reliability value for the four constructs used in this research is above 0.7 so that all constructs meet the requirements for use in research on the influence of management commitment and training on safety

performance through safety behavior as mediation at Rocktree Logistics. The highest composite reliability value is in the Safety Performance construct of 0.938 and the lowest value is in the Safety Behavior construct of 0.900. The composite reliability value for each construct can be seen in Table 8.

**Table 8. Measurement Model Reliability Test Results**

| Constructs | *Cronbach's Alpha* | *Composite Reliability* |
|---|---|---|
| Commitment Management (X1) | **0,912** | **0,927** |
| Training (X2) | **0,869** | **0,906** |
| Safety Behaviour (Y1) | **0,866** | **0,900** |
| Safety Performance (Y2) | **0,921** | **0,938** |

**Source : SmartPLS 3.0.**

Based on the Table 8 above, it shows that the Cronbach's alpha value is greater than 0.6 and the composite reliability is greater than 0.7 for all research variables. This indicates that exploratory research with the instruments used to measure the constructs in this research is acceptable or reliable.

**Structural Model Evaluation (Inner Model)**

1. Coefficient of Determination (R2 or R square)

The coefficient of determination (R2 or R square) is used to find out how big the influence is between endogenous and exogenous variables. The R2 (R square) value for each endogenous variable is the predictive power of the structural model, where the R square value can be seen in Figure 5.1 above. Changes that occur in the R2 (R square) value can be used to assess the ability of exogenous variables to explain the influence of endogenous variables. The following are the results of testing the R2 (R square) value of the endogenous variable in Table 9 below:

**Table 9. R2 Test Results (R square)**

| Endogen Construct | R-square | R-square adjusted | Description |
|---|---|---|---|
| Safety Behaviour (Y1) | 0,838 | 0,833 | Strong |
| Safety Perormance (Y2) | 0,800 | 0,791 | Strong |

**Source : SmartPLS 3.0.**

Based on the Table 9, the R2 (R square) value for the Safety Behavior variable (Y1) is 0.838 or 83.8%, while for the Safety Performance variable (Y2) it is 0.800 or 80%. These results show that for the Safety Behavior variable (Y1) the coefficient of determination is 0.838 or 83.8% is influenced by Management Commitment (X1) and Training (X2) while the remaining 16.2% is influenced by other variables outside this research. For the Safety Performance variable (Y2) with a coefficient of determination of 0.800 or 80% influenced by Management Commitment (X1); Training (X2); and Safety Behavior (Y1) while the remaining 20% is influenced by other variables outside this research. According to the test results, the R2 (R square) value for the Safety Behavior variable (Y1) is 0.838 and the Safety Performance variable (Y2) is 0.800, so it can be concluded that the model is in the strong category.

2. Goodness of Fit (GOF)

Goodness of Fit (GoF) is used to test the feasibility of a model, where this test is carried out to validate the overall model. The goodness of fit (GoF) value in PLS (partial least square) analysis can be seen from the predictive relevance (Q2) value or known as Stone Geisser's. The Q2 value is calculated based on the R2 value of each endogenous variable. Based on Table 5.11, the calculation of predictive relevance is:

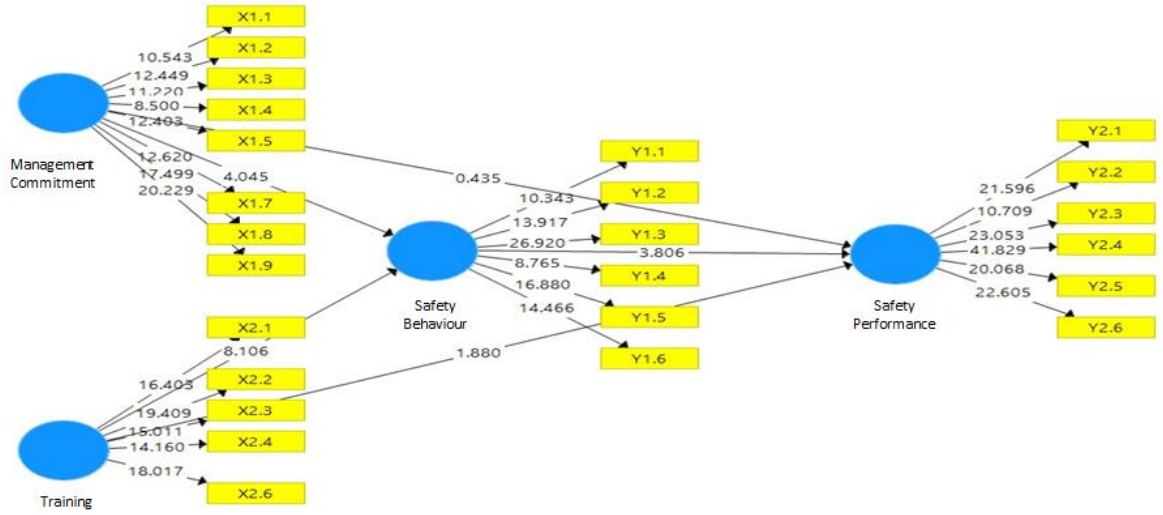
$Q^2$ = 1 – ((11 – $R_1^2$) x (1 – $R_2^2$))
= 1 – ((1 – 0,838) x (1 – 0,800))
= 1 – (0,162 x 0,200)
= 1 – 1,0324
= **<u>0,967</u>**

Based on the calculation above, the Q2 value of 0.967 with a percentage of 96.7% is declared as a strong category so that the model can be said to be relevant as a value or predictive model. Besides that, the predictive relevance value of 96.7% indicates that the diversity of data distribution that can be explained by the model is 96.7% or in other words the information contained in this research is 96.7% while the remaining 3.3% is explained by other variables or those not yet contained in the model and errors.

**Hyphitesis Testing**

The basis used to test the significance value or hypothesis result is the value contained in the structural model image (inner model) as seen in Figure 4 below.

**Figure 4. Structural Model Results (Inner Model)**




**Source : SmartPLS 3.0.**

According to Figure 4 above, the inner model shows the relationship between variables in the research which will then result in hypothetical decision making. In testing the hypothesis in this study, it is reflected in the T-Statistics (t-count) and P-values which can be stated as an accepted hypothesis if tcount > ttable (1.96) with significance values (P-values) < 0.05 or 5 %. However, if it does not comply with these provisions, the hypothesis is rejected. The following are the results of hypothesis testing obtained through the inner model as seen in Table 10 below.

**Table 10. Hypothesis Testing Results via Path Coefficients**

| | Original sample (O) | Sample mean (M) | Standard deviation (STDEV) | T-statistics (\|O/STDEV\|) | P values |
|---|---|---|---|---|---|
| Management Commitment -> Safety Performance | -0,049 | -0,064 | 0,113 | 0,435 | **0,332** |
| Management Commitment -> Safety Behaviour | 0,320 | 0,325 | 0,079 | 4,045 | **0,000** |
| Training -> Safety Performance | 0,318 | 0,281 | 0,169 | 1,980 | **0,032** |
| Training -> Safety Behaviour | 0,643 | 0,634 | 0,079 | 8,106 | **0,000** |
| Safety Behaviour -> Safety Performance | 0,640 | 0,687 | 0,168 | 3,806 | **0,000** |

**Source : SmartPLS 3.0.**

**Mediation Testing**

To see the influence of the brand image construct as a mediating variable, see Table 11 below.

**Table 11. Mediation Test Results**

| | Original sample (O) | Sample mean (M) | Standard deviation (STDEV) | T statistics (\|O/STDEV\|) | P values |
|---|---|---|---|---|---|
| Commitment Management -> Safety Behaviour -> Safety Performance | 0,205 | 0,222 | 0,073 | 2,789 | **0,003** |
| Training -> Safety Behaviour -> Safety Performance | 0,412 | 0,435 | 0,122 | 3,383 | **0,001** |

**Source : SmartPLS 3.0.**

From Table 11 above, the results of hypothesis testing for the mediating variable are obtained, namely as follows:
To review the mediating role of safety behavior variables that influence management commitment to safety performance, the VAF formula can be used, namely:

$$VAF = \frac{\text{Indirect Effect}}{\text{Direct Effect + Indirect Effect}}$$
$$= \frac{0,205}{-0,049 + 0,205}$$
$$= \frac{0,205}{0,156} = \textbf{1,314 or 131,4\%}$$

According to the results of this calculation, the mediating role of safety behavior variables that influence management commitment to safety performance is 1.314 or 131.4%, which means it shows the full mediation role category.
Then, to review the mediating role of safety behavior variables that influence training on safety performance, the VAF formula can be used, namely:

$$VAF = \frac{\text{Indirect Effect}}{\text{Direct Effect + Indirect Effect}}$$
$$= \frac{0,412}{0,318 + 0,412}$$
$$= \frac{0,412}{0,730} = \textbf{0,564 or 56,4\%}$$

According to the results of this calculation, the mediating role of safety behavior variables that influence training on safety performance is 0.546 or 56.4%, which means it shows the category of partial mediation role.

**Finding and Interpretation**

**1. The Effect of Management Commitment on Safety Performance**

Management commitment has an estimated value of -0.049 on safety performance, which means there is a negative relationship between these two variables. This means that the higher management commitment, the possibility that safety performance tends to decrease. However, the test results stated that tcount < ttable, namely 0.435 < 1.96 and the resulting significance level was 0.332 > 0.05, which means that the influence of management commitment on safety performance is not significant or small. It can be concluded that based on the results of this analysis, the eight indicators of the management commitment variable do not have a positive or significant effect on safety performance at the Rocktree Logistics Company. Therefore, H1 (first hypothesis) in this study is rejected. This may be due to the possibility that management commitment at Rocktree Logistics is still low. When workplace safety is not yet a top priority for management, the attention and resources needed to improve safety performance may be lacking. Low management commitment often means a lack of support and resource allocation for workplace safety initiatives. This is supported by the results of descriptive analysis of indicator XI.6, namely "investment in safety activities" with the lowest average score compared to other indicators of management commitment, namely 3.81. Without sufficient support from management, implementation of safety policies and programs can be hampered or ineffective. And a low priority on safety can lead to a lack of attention to existing safety risks.

**2. The Effect of Management Commitment on Safety Behavior**

Management commitment has an estimated value of 0.320 for safety behavior, which means there is a unidirectional and positive relationship between these two variables. This means that the higher the management's commitment, the higher the safety behavior of the workers. The test results state that tcount > ttable is 4.045 > 1.96 and the resulting significance level is 0.000 < 0.05, which means there is a significant influence between management commitment and safety behavior. It can be concluded based on the results of this analysis, the eight indicators of the management commitment variable have a positive and significant influence on safety behavior at the Rocktree Logistics Company. Therefore, H2 (second hypothesis) in this study is accepted. This means that the higher commitment that Rocktree Logistics management gives to its employees can encourage better safety behavior from Rocktree employees who work on managed vessels. The most meaningful factor in improving safety behavior through management commitment starts from factor X1.5, namely "being a positive example" because it has the highest factor loading value, namely 0.815. This indicates that management behaviors and actions that stand out in supporting and practicing good safety practices can influence employees to imitate the same behavior. Concrete actions from management such as using personal protective equipment and following safety procedures increase employee awareness of the importance of safety in the workplace.

**3. The Effect of Training on Safety Performance**

Training has an estimated value of 0.318 on safety performance, which means there is a unidirectional and positive relationship between these two variables. This means that the better the training given to workers, the better the safety performance of these workers will be. The test results state that tcount > ttable is 1.980 > 1.96 and the resulting significance level is 0.032 < 0.05, which means there is a significant influence between training and safety performance. It can be concluded based on the results of this analysis, the five indicators of the training variable have a positive and significant influence on safety performance at the Rocktree Logistics Company. Therefore, H3 (third hypothesis) in this research is accepted. The most significant factor in improving safety performance through training starts from factor X2.2, namely "the company facilitates training programs" because it has the highest factor loading value, namely 0.859. Meanwhile, the factor that drives increased safety performance by employees on ships owned by Rocktree Logistics is Y2.6, namely "employees always show management if there are problems related to safety at the work site" with a loading factor of 0.878. This indicates that the training program provided by Rocktree Logistics teaches employees about workplace safety principles, including identification of potential risks and appropriate preventive measures. With a good understanding of their respective work areas, employees are better able to recognize existing dangerous situations or conditions. Apart from that, the training provided by Rocktree can also be a platform to improve communication between employees and management about safety issues so that Rocktree employees have greater motivation to report them.

**4. The Effect of Training on Safety Behavior**

Training has an estimated value of 0.643 on safety behavior, which means there is a unidirectional and positive relationship between these two variables. This means that the better the training given to workers, the better the safety behavior of these workers will be. The test results state that tcount > ttable is 8.106 > 1.96 and the resulting significance level is 0.000 < 0.05, which means there is a significant influence between training and safety behavior. It can be concluded based on the results of this analysis, the five indicators of the training variable have a positive and significant influence on safety behavior at the Rocktree Logistics Company. Therefore, H4 (fourth hypothesis) in this study is accepted. The most significant factor in improving safety behavior through training starts from factor X2.2, namely "the company facilitates training programs" because it has the highest factor loading value, namely 0.859. Meanwhile, the factor that encourages increased safety behavior carried out by employees on board Rocktree Logistics ships is Y1.5, namely "employees participate in setting safety targets" because it has the highest factor loading value, namely 0.830. This indicates that through appropriate and effective training provided by Rocktree Logistics, employees can obtain the knowledge, skills and attitudes needed to work safely in their work environment. When employees gain a better understanding of the risks and consequences of workplace insecurity through training, Rocktree employees are more likely to actively participate in setting realistic and worthwhile safety goals.

**5. The Effect of Safety Behavior on Safety Performance**

Safety behavior has an estimated value of 0.640 on safety performance, which means there is a unidirectional and positive relationship between these two variables. This means that the higher the level of safety behavior of a worker, the higher his safety performance will be. The test results state that tcount > ttable is 3.806 > 1.96 and the resulting significance level is 0.000 < 0.05, which means there is a significant influence between safety behavior and safety performance. It can be concluded based on the results of this analysis, the six indicators of the safety behavior variable have a positive and significant influence on safety performance at the Rocktree Logistics Company. Therefore, H5 (fifth hypothesis) in this study is accepted. The most significant factor in improving safety performance through safety behavior starts from factor Y1.5, namely "employees participate in setting safety targets" because it has the highest factor loading value, namely 0.830. This indicates that Rocktree Logistics involves its employees in the field in setting safety targets, giving them a sense of ownership and responsibility for workplace safety. When employees feel that their behavior contributes directly to achieving the safety goals they have helped set, those employees are more likely to adopt safe behavior. Employees recognize that their actions have a direct impact on their personal safety and that of their co-workers.

**6. The Effect of Management Commitment on Safety Performance Mediated by Safety Behavior**

Management commitment has an estimated value of 0.205 on safety performance through safety behavior, which means there is a unidirectional and positive relationship between these three variables. This means that the higher the management's commitment, the higher the safety behavior of the workers which will ultimately improve the safety performance of the workers. The test results state that tcount > ttable is 2.789 > 1.96 and the resulting level of significance is 0.003 < 0.05, which means there is a significant influence between management commitment and safety performance through employee safety behavior at the Rocktree Logistics Company. Therefore, H6 (sixth hypothesis) in this study is accepted. These findings are significant, even though

commitment management does not have a positive and insignificant influence on safety performance as stated in H1 (first hypothesis), safety behavior can mediate the influence between commitment management and employee safety performance on ships owned by the Rocktree Logistics Company. Safety behavior mediates the influence of management commitment on safety performance by 1.314 or 131.4% obtained from the calculation results (0.205/(-0.049+0.205)). The direct effect of management commitment on safety performance is -0.049, while the indirect effect is 0.205 from the effect of management commitment on safety performance through safety behavior. These results also prove that the mediating role of safety behavior is full mediation because the value is more than 80%. This analysis shows that although management commitment does not have a direct positive impact on safety performance, its indirect influence through the promotion of safety behavior is a significant factor in improving overall safety performance at the Rocktree Logistics Company. It can be concluded, when Rocktree Logistics management shows a high commitment to safety in the workplace, this creates a work environment that supports the safety and health of its employees. Employees feel that safety is an important priority for management, so they are more likely to practice good safety behavior. Such as being alert to risks, being more careful in following safety procedures, and being more proactive in reporting potentially dangerous conditions or behavior. Consistently, this can directly improve the safety performance of Rocktree Logistics employees. Good safety performance can result in a safer and more productive work environment, where preventable incidents and accidents can be minimized or avoided altogether so that the Company's overall productivity increases.

**7. The Effect of Training on Safety Performance Mediated by Safety Behavior**

Training has an estimated value of 0.412 on safety performance through safety behavior, which means there is a unidirectional and positive relationship between these three variables. This means that the better the training provided by Rocktree Logistics, the higher the safety behavior of the workers which will ultimately improve the safety performance of the workers. The test results state that tcount > ttable is 3.383 > 1.96 and the resulting significance level is 0.001 < 0.05, which means there is a significant influence between training and safety performance through employee safety behavior at the Rocktree Logistics Company. Therefore, H7 (seventh hypothesis) in this study is accepted. These findings mean that safety behavior can mediate the influence between training and employee safety performance at the Rocktree Logistics Company. Safety behavior mediates the influence of training on safety performance by 0.564 or 56.4% obtained from the calculation results (0.412/(0.318+0.412)). The direct effect of training on safety performance is 0.318, while the indirect effect is 0.412 from the effect of training on safety performance through safety behavior. These results also prove the mediating role of safety behavior as partial mediation because the value is less than 80%. Then the mediation effect is complementary mediation (complementary partial mediation) because the indirect and direct effects are both significant and have the same direction. These findings mean that when employees on board Rocktree Logistics vessels receive training, they gain knowledge, skills, and a better understanding of the safety practices required in their work environment. Training can teach safe techniques, proper procedures, and the importance of safety in doing their job. As a result, employees tend to adopt safer and more responsible behaviors. With improved safety behaviors in the workplace, the risk of accidents and injuries can be reduced significantly. Employees who are more safety conscious are more likely to comply with safety procedures, identify and report potential hazards, and contribute to an overall safer and healthier work environment. As a result, safety performance at Rocktree Logistics improved as preventable incidents were minimized. Overall, safety training has a significant positive effect on safety performance. By providing employees with the necessary knowledge and skills and encouraging positive behavioral changes, training can effectively reduce the risk of workplace accidents and injuries, thereby improving overall safety performance.

## V. CLOSING

**Conclution and Reccomendation**

**Conclution**

1) Management commitment has a negative but not significant effect on safety performance at the Rocktree Logistics company. The results of the analysis show that there is a possibility that management commitment at Rocktree Logistics is still low; 2) Management commitment has a positive and significant effect on safety behavior at the Rocktree Logistics company because Rocktree management has succeeded in being a good example in supporting and practicing safety practices, thereby influencing employees to imitate the same behavior; 3) Training has a positive and significant effect on safety performance at the Rocktree Logistics company based on the training program facilities provided; 4) Training has a positive and significant effect on safety behavior at the Rocktree Logistics company due to the training factor given to its employees; 5) Safety behavior has a positive and significant effect on safety performance at the Rocktree Logistics company due to employees participating in setting safety targets; 6) Management commitment has a positive and significant effect on safety performance through safety behavior at the Rocktree Logistics company. This is because when

Rocktree Logistics management shows a high commitment to workplace safety, employees feel that safety is an important priority for management, so they are more likely to practice good safety behavior. And consistently, this can directly improve the safety performance of Rocktree Logistics employees. Good safety performance can produce a safer and more productive work environment so that the Company's overall productivity increases; and 7) Training has a positive and significant effect on safety performance through safety behavior at the Rocktree Logistics company because when Rocktree employees receive training, they gain better knowledge, skills and understanding of the safety practices required in their work environment. As a result, employees tend to adopt safer and more responsible behaviors. Employees who are more safety conscious are more likely to comply with safety procedures, identify and report potential hazards, and contribute to an overall safer and healthier work environment. As a result, safety performance at Rocktree Logistics improved as preventable incidents were minimized.

**Recommendations**

1) Rocktree Logistics management must be able to increase its commitment to safety, especially in the investment factor for safety activities. With sufficient support from management, implementation of safety policies and programs will run more effectively so that employee performance can increase; 2) Rocktree Logistics management has proven to be a good role model in the eyes of its employees in practicing good safety practices. This needs to continue to be maintained not only by management but also by the ranks below so that it becomes a work culture at Rocktree Logstics; 3) Employees have participated in always pointing out to management if there are problems related to safety at the work site. Therefore, management needs to respond and follow up on every problem raised as a form of support from management so that safety performance at Rocktree Logistics continues to improve; 4) The training program facilities provided by Rocktree for its workers have helped improve the safety behavior of its workers, this needs to continue to be maintained and ensure that every employee has the same opportunity to receive the training needed to support their work; 5) The behavior of employees who participate in setting safety goals has been proven to improve overall safety performance. Rocktree Logistics management needs to ensure that the goals proposed by employees are actually considered and implemented; 6) Future researchers can re-examine the influence of management commitment on safety performance in different companies and industries to fill existing gaps and to ensure whether or not there is an influence between the two variables; 7) Future researchers can also use the safety culture variable as a mediating variable to test the influence of management commitment and training on safety performance because this research shows indications that with management being a good example in implementing safety practices, this indirectly becomes an organizational culture.

**ACKNOWLEDGEMENT**

I am very grateful to Zainal Ilmi and Wirasmi Wardhani as supervising lecturers at Mulawarman University,Samarinda, East Kalimantan Province.

**REFERENCES**

[1]. Asamani, L. (2020). Promote Safety Culture and Enhance Safety Performance through Safety Behaviour. European Journal of Business and Management Research, 5(4). https://doi.org/10.24018/ejbmr.2020.5.4.405

[2]. Babakus, E., Yavas, U., Karatepe, O. M., & Avci, T. (2003). The Effect of Management Commitment to Service Quality on Employees' Affective and Performance Outcomes. Journal of the Academy of Marketing Science, 31(3), 272–286. https://doi.org/10.1177/0092070303253525

[3]. Bayram, M. (2018). The Management Commitment to OHS, Employee Satisfaction and Safety Performance: An Empirical Study. International Journal of Latest Engineering and Management Research (IJLEMR) Www.Ijlemr.Com ||, 03(July 2018), 63–71. www.ijlemr.com

[4]. Bryson, J. M., Crosby, B. C., & Stone, M. M. (2006). The Design and Implementation of Cross-Sector Collaborations : Propositions from the Literature. Public Administration Review, 66, 44–55.

[5]. Burke, M. J., Sarpy, A. S., Tesluk, P. E., & Smith-Crowe, K. (2002). General safety performance: A test of a grounded theoretical model. Personnel Psychology, 55(2), 429–457. https://doi.org/10.1111/j.1744-6570.2002.tb00116.x

[6]. Choudhry, R. M. (2014). Behavior-based safety on construction sites: A case study. Accident Analysis and Prevention, 70, 14–23. https://doi.org/10.1016/j.aap.2014.03.007

[7]. Christian, M. S., Bradley, J. C., Wallace, J. C., & Burke, M. J. (2009). Workplace Safety: A Meta-Analysis of the Roles of Person and Situation Factors. Journal of Applied Psychology, 94(5), 1103–1127. https://doi.org/10.1037/a0016172

[8]. Cohen, A., Colligan, M. J., Sinclair, R., Newman, J., & Schuler, R. (1998). Assessing Occupational Safety and Health Training A Literature Review. http://www.cdc.gov/niosh

[9]. Dessler, G. (2018). Human Resource Management (Vol. 16th). Pearson Education, Inc.

[10]. Fruhen, L. S., Griffin, M. A., & Andrei, D. M. (2019). What does safety commitment mean to leaders? A multi-method investigation. Journal of Safety Research, 68, 203–214. https://doi.org/10.1016/j.jsr.2018.12.011

[11]. Ghozali, I., & Latan, H. (2015). Partial Least Squares: Konsep, Teknik dan Aplikasi SmartPLS 3.0 untuk Penelitian Empiris (2nd ed.). Badan Penerbit Universitas Diponegoro.

[12]. Guo, B. H. W., Yiu, T. W., & González, V. A. (2016). Predicting safety behavior in the construction industry: Development and test of an integrative model. Safety Science, 84, 1–11. https://doi.org/10.1016/j.ssci.2015.11.020

[13]. Hair, J. F., Hult, G. T., Ringle, C., & Sarstedt, M. (2017). A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM) Second Edition.

[14]. Hong, C. C., Ramayah, T., & Subramaniam, C. (2018). The relationship between critical success factors, internal control and safety performance in the Malaysian manufacturing sector. Safety Science, 104(June 2016), 179–188. https://doi.org/10.1016/j.ssci.2018.01.002
[15]. Kapp, E. A. (2012). The influence of supervisor leadership practices and perceived group safety climate on employee safety performance. Safety Science, 50(4), 1119–1124. https://doi.org/10.1016/j.ssci.2011.11.011
[16]. Kaynak, R., Tuygun Toklu, A., Elci, M., & Tamer Toklu, I. (2016). Effects of Occupational Health and Safety Practices on Organizational Commitment, Work Alienation, and Job Performance: Using the PLS-SEM Approach. International Journal of Business and Management, 11(5), 146. https://doi.org/10.5539/ijbm.v11n5p146
[17]. Law, W. K., Chan, A. H. S., & Pun, K. F. (2006). Prioritising the safety management elements: A hierarchical analysis for manufacturing enterprises. Industrial Management and Data Systems, 106(6), 778–792. https://doi.org/10.1108/02635570610671470
[18]. Lu, C. S., & Yang, C. S. (2010). Safety leadership and safety behavior in container terminal operations. Safety Science, 48(2), 123–134. https://doi.org/10.1016/j.ssci.2009.05.003
[19]. Neal, A., Griffin, M. A., & Hart, P. M. (2000). The impact of organizational climate on safety climate and individual behavior. Safety Science, 34(1–3), 99–109. https://doi.org/10.1016/S0925-7535(00)00008-4
[20]. Peterson, C., Miller, G. F., Sarah, ;, Barnett, B. L., & Florence, C. (2021). Economic Cost of Injury — United States, 2019. https://www.cdc.gov/mmwr/mmwr_continuingEducation.html
[21]. Robbins, S. P., & Judge, T. A. (2014). Perilaku Organisasi (16th ed.). Salemba Empat.
[22]. Seo, H. C., Lee, Y. S., Kim, J. J., & Jee, N. Y. (2015). Analyzing safety behaviors of temporary construction workers using structural equation modeling. Safety Science, 77, 160–168. https://doi.org/10.1016/j.ssci.2015.03.010
[23]. Shea, T., De Cieri, H., Donohue, R., Cooper, B., & Sheehan, C. (2016). Leading indicators of occupational health and safety: An employee and workplace level validation study. Safety Science, 85, 293–304. https://doi.org/10.1016/j.ssci.2016.01.015
[24]. Sholihin, M., & Ratmono, D. (2020). Analisis SEM-PLS dengan WarpPLS 7.0 - untuk Hubungan Nonlinier dalam Penelitian Sosial dan Bisnis (1st ed.). Penerbit Andi.
[25]. Su, W.-J. (2021). The Effects of Safety Management Systems, Attitude and Commitment on Safety Behaviors and Performance. International Journal for Applied Information Management, 1(4), 187–199. https://doi.org/10.47738/ijaim.v1i4.20
[26]. Vinodkumar, M. N., & Bhasi, M. (2010). Safety management practices and safety behaviour: Assessing the mediating role of safety knowledge and motivation. Accident Analysis and Prevention, 42(6), 2082–2093. https://doi.org/10.1016/j.aap.2010.06.021
[27]. Wu, X., Liu, Q., Zhang, L., Skibniewski, M. J., & Wang, Y. (2015). Prospective safety performance evaluation on construction sites. Accident Analysis and Prevention, 78, 58–72. https://doi.org/10.1016/j.aap.2015.02.003
[28]. Zhang, L., Wang, H., Meng, Q., & Xie, H. (2019). Ship accident consequences and contributing factors analyses using ship accident investigation reports. Proceedings of the Institution of Mechanical Engineers, Part O: Journal of Risk and Reliability, 233(1), 35–47. https://doi.org/10.1177/1748006X18768917
[29]. Zhao, Y., Zhang, M., Liu, T., & Mebarki, A. (2021). Impact of safety attitude, safety knowledge and safety leadership on chemical industry workers' risk perception based on Structural Equation Modelling and System Dynamics. Journal of Loss Prevention in the Process Industries, 72. https://doi.org/10.1016/j.jlp.2021.104542
[30]. Zohar, D., & Polachek, T. (2014). Discourse-based intervention for modifying supervisory communication as leverage for safety climate and performance improvement: A randomized field study. Journal of Applied Psychology, 99(1), 113–124. https://doi.org/10.1037/a0034096