Influence Safety Climate and Safety Behavior Against the Safety Behavior on Bus Rapid Transit Driver with Gender as Moderating Variable

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Abstract

Trans Jakarta is one of the service providers engaged in the transportation sector. Over the past 6 years, there have been 2,631 accidents. In 2019 there were 320 accidents. This accident is thought to have a close relationship with safety behavior. This study aims to measure the impact of the safety climate and safety culture on the safety behavior of Trans Jakarta bus drivers by identifying the most significant factors. The questionnaire was adapted to fit the characteristics of the object of transportation. Questionnaires were distributed to 261 Trans Jakarta drivers. Modeling was carried out using Structural Equation Modeling - Partial Least Square (SEM-PLS) with a confidence level of 95% (α = 5%). The test results show that all three hypotheses are accepted with a significant positive effect for H1 safety culture with the safety climate. H2 safety climate with safety behavior. H3 safety culture and safety behavior. For the moderating variable gender does not moderate the effect of safety culture on safety climate either H4 and H5 safety climate on safety behavior also H6 gender does not moderate the effect of safety culture on safety behavior. T-statistic 1.143 and P-Values 0.254 (significance greater than 0.05).

Keywords
Safety culture, Safety climate, Safe behavior, Public transportation, and Gender.

1. Introduction
Public transportation is one of the most integral parts of citizens in the capital city. It becomes a daily necessity to commute to the workplace or for leisure trips to entertainment and recreation areas. Nowadays, the public pays more attention to the requirement for quality transportation. Using public transportation becomes a solution to save commuting costs compare with personal vehicles. Moreover, by using public transport, the public also contributes to reducing traffic congestion and reducing the impact of carbon emissions from private vehicles.
Until August 2017, there were thirteen operating corridors owned by Trans Jakarta that had been operated. The first corridor was inaugurated on January 15, 2004. With these 13 corridors, Trans Jakarta has the world's longest bus rapid transit routes, which is 230.9 km in length and has 234 bus stops from 13 corridors. According to Herbert W. Heinrich in his research in 1920, the causes of 7,500 incidents from the industry. 2 factors that contribute to these accidents are unsafe conditions and unsafe behavior.
Every year, there are various accidents involving Trans Jakarta buses caused by multiple factors starting from buses hitting a separator until colliding with other vehicles. According to WHO, many people are known killed or seriously injured by motor vehicles in road accidents every year. Gender becomes one factor that has been considered risky driving. It has generally been found in risky behavior in road traffic that men are more likely to take and generous risks than women (Oltedal and Rundmo 2006) in accidents than women, and a woman has a 25% less chance than a man to be involved in a road accident (Rhodes and Pivik 2011). However, new research reports that female drivers are more likely than male to be injured in traffic accidents since she fails to handle the vehicle until control the traffic situation (Cordellieri et al. 2016).
According to data from PT Trans Jakarta, passenger safety is something that must be prioritized when driving a bus. In practice, several aspects are unpredicted by Trans Jakarta bus drivers that can lead to accidents. The unsafe behavior that occurred in Trans Jakarta is related to the behavior of drivers who do not concentrate, are tired and sleepy when driving. Meanwhile, the unsafe conditions for Trans Jakarta drivers are many private vehicles or other public buses still trying to enter the busway lane to beat the traffic, the weather, and the imperfect bus conditions. In this situation, the driver is required to be more concentrated. If workers' behavior can be controlled, then accidents can be avoided. As a person who drives a vehicle, the driver has his obligation and responsibility to maintain the safety of himself, the vehicle, and passengers as his service users. In addition, Trans Jakarta drivers, both men, and women need to pay more attention

to the importance of knowing the conditions and situation of the existing roads. During the last 6 years, there have been 2631 accidents, with the highest cases in 2016 as many as 783 incidents, and the second-highest incidence in 2014 as many as 770 incidents, and this was also experienced by female drivers.

2. Safety Variable

2.1 Safety Culture

Safety culture comprises 3 interrelated aspects: psychological aspects, behavioral aspects, and situational aspects (Cooper Ph.D. 2000). Psychological elements are commonly known as safety climate, behavioral elements, and situational or company factors. The psychological element of safety culture refers to "how people act about safety and security management systems." Includes values, beliefs, attitudes, and perceptions of individuals and groups at all organizational levels. This aspect can be measured subjectively by using a safety climate questionnaire.
The behavioral aspect refers to "anything an individual does," which includes the relationship with safety activities, actions, and behavior, habits shown by employees. The situational aspect of the OSH culture refers to "what the organization has." This is reflected in organizational policies, SOPs, work environment, equipment, workflow systems. These three aspects each influence each other, therefore it can be measured the degree of safety culture achieved by the company.

Safety culture can be measured through qualitative observational methods and quantitative methods (interviews, questionnaires). So far, the questionnaire is the most popular measuring equipment considering its efficiency and effectiveness. The Safety Culture Enactment Questionnaire (SCEQ) is a questionnaire designed to assess the degree of a safety culture based on the 3 dimensions safety culture model, which comprises 21 statements divided into dimensions of strategic decisions ensuring safety, human resource practices driving, and daily activities and behavior supporting safety. Each part represents elements of safety climate, behavior, and performance (de Castro et al. 2017).

Safety culture and safety climate contribute to improving safety outcomes. Multiple studies state that safety climate and safety culture are unity, but several studies state that safety climate and safety culture are two different things. One of the studies which mentioned that safety culture and safety climate are various shows the study results in an organization that owned a robust safety culture has a positive impact on the safety climate, which means that if the workplace safety culture increases, the work safety climate will also increase (Martínez-Córcoles et al. 2011). A good safety culture influenced employees' safety behavior towards workplace safety which is manifested through a safety attitude in the workplace. A positive safety culture can generate better health and safety and organizational performance (Glendon and Litherland 2001). Therefore, we have Hypothesis 1: there is a positive relationship between safety culture and safety climate.

2.2 Safety Climate

Safety climate is an essential factor that describes safety behavior and safety performance. Safety Climate relates to the perception of safety policies, procedures, and practices in the workplace (Neal and Griffin 2006). Work safety climate is defined as the employees' perception of safety policies, procedures, rules, and safety interests and priorities. Employees' perceptions are mainly related to the efforts to assure safe activities in the workplace as a perceived image or related to employees' perception of the safety importance and how this can be determined in the organization (Vinodkumar and Bhasi 2010).

In comparison to the concept of safety culture, the notion of climate reflects the opinions and perceptions of employees about their organization's policies and management actions about safety. Zohar (1980) illustrates this with the following definition of safety climate: "a summary of molar perceptions that employees share about their work environments" (p. 96). These perceptions are then used as a frame of reference to determine which behaviors are acceptable and which will lead to an increased risk of injury. Zohar's definition of safety climate is fairly broad and does not provide a detailed understanding of what safety climate entails. Many other researchers have created their definition of safety climate. For example, Denison (1996) defines safety climate as "perceptions of 'observable' practices and procedures that are closer to the 'surface' of organization life" (p. 622). In this definition, safety climate is described as perceptions of what is observed and practiced in organizations; thus, it addresses the manifest aspects of safety regarding organizational functioning. According to Allen, Baran, and Scott (2010), safety climate "refers to a type of organizational climate in which employees perceive that management, rewards, supports, and expects safe practices" (p. 750). All three of these definitions agree that safety climate focuses on the employees' perceptions of safety norms and practices within their organization. However, Zohar (1980) believes these perceptions are shared and directed towards the work environment. Conversely, Denison (1996) suggests that the perceptions are directed towards observable behavior, as they deal with surface features. Lastly, Allen and colleagues (2010) propose that safety climate is primarily concerned with employees'

perceptions about management. As demonstrated, the concept of safety climate has an abundance of varied definitions that require analysis. However, there is another area of conceptual confusion surrounding the concept of safety climate. In addition to the disagreement surrounding the definition of safety climate, there is also uncertainty surrounding the relationship between notions of safety culture and safety climate. Next, Hypothesis 2: there is a positive relationship between safety climate and safety behavior. (Neal et al. 2000).

2.3 Safety behavior

Job performance theory provides a valuable basis for conceptualizing the relationship between safety climate and safety behavior. Safety behavior is classified into two types: safety compliance and safety participation. Safety compliance describes the core activities that individuals must perform to maintain workplace safety, including compliance with Standard operating procedures and wearing personal protective equipment. Safety participation involves activities that may not directly contribute to an individual's safety but help develop an environment that supports safety. This behavior includes participating in voluntary safety activities, helping coworkers with safety-related issues, and attending safety meetings. (Neal and Griffin 2006).

Safety behavior is the workplace's actual safety behavior (Lyu et al., 2018). The knowledge and ability determine safety behavior for certain behaviors (Neal et al. 2000). Safety participation refers to voluntary behavior that cannot promote personal safety directly but contributes to improving safety in the workplace, such as attending meetings and helping colleagues. On the contrary, safety compliance shows mandatory behavior that must be performed to maintain workplace safety, such as wearing personal protective equipment and complying with safety rules and procedures (Vinodkumar and Bhasi 2010).

In addition, research on safety behavior and safety climate still need to be assessed because there are various causes of work accidents and work environments. Therefore it is necessary to research to find out the factors that contribute to work accidents in the same workplace or a workplace which has the same characteristics, as well as a warning to employees to have safe behavior during working in the workplace and individual motivation to perform these behaviors (Neal et al. 2000). Safety behavior is the employee's behavior who can work with security, comfort, and comply with company regulations by the SOP (Standard Operating Procedure) that applies in the company to prevent workplace accidents. Most of the safety behavior studies are carried out through measurement (Taqwa 2017). Many factors influence driver safety behavior. Previously, research on driving behavior in Indonesia concluded that job satisfaction is one factor that has a significant effect on driver behavior (Ho and Wiandingrum 2016). Hypothesis 3: There is a positive relationship between safety culture and safety behavior.

2.4 Gender

The United Nations 2030 Sustainable Development (UNSD) goal for gender equality (United Nations, 2015a) was set to aid with closing gender gaps around the world. Gender “refers to the social differences and relations between men and women which are learned, vary widely among societies and cultures, and change over time” (Pavlic et al. 2000). Furthermore, gender equality is a basic human right included in the Universal Declaration of Human Rights which denounces discrimination based on gender (United Nations, 2015b). The UNSD goal to achieve gender equality is already exerting a positive influence, as can be seen in many stock exchanges around the world, which have adopted regulations that now require companies to report both gendered data and strategies to reduce gender gaps (Ramchandani et al. 2018; Sustainable Stock Exchanges Initiative, 2017).

Cohen et al. (2011) analyzed vehicle parking skills, and the results showed that men parked more accurately and faster. However, younger male drivers are less likely to respect speed limits (Delhomme 2011). Based on the repertoire of evolutionist theory, development, and personality. Cross et al. (2011) concluded that risky activities are more common in men. The factor that when passengers accompany drivers may reduce the tendency to violate traffic rules while driving, especially if the passenger has a close relationship with the driver. In other countries with high mortality from traffic accidents, differences in behavior between men and women regarding the tendency to take riskier behaviors while driving a car are documented in the literature. In this case, Li et al. (2016), based on data collected in China, found differences in driving between men and women. Therefore Hypothesis 4: the influence of gender as moderating variables can moderate the positive relationship between safety culture and safety climate. Hypothesis 5: the influence of gender as moderating variable can moderate the positive relationship between safety climate and safety behavior. Hypothesis 6: the influence of gender as moderating variable can moderate the positive relationship between safety culture and safety behavior.

3. Methods

3.1 Participant

Data were collected from 261 drivers. The sampling technique from this population used the Slovin formula because the total number of existing populations was known. In the beginning, the distribution of questionnaires was carried out by the operational section to drivers who had been appointed became respondents. There was 261 Correspondent. The average respondent is a driver who has worked for 3-4 years with an average age of 31 to 40 years.

3.1 Metode

The theoretical model is presented in Figure 1. Each circle represents a variable safety symbol, and arrows indicate a relationship. The variables obtained from previous studies did not entirely focus on the public transportation object. A pilot study was conducted to validate construct variables to observe whether the respondents could understand the questions in the instrument. The drivers answered with a Likert scale, ranging from the lowest with a weight of one (strongly disagree) to the highest importance of five (strongly agree). Drivers were instructed to assess the suitability of content with the object of research. Unsuitable questions will be eliminated. Based on this approach, there were 63 questions used in this survey to eliminate bias.

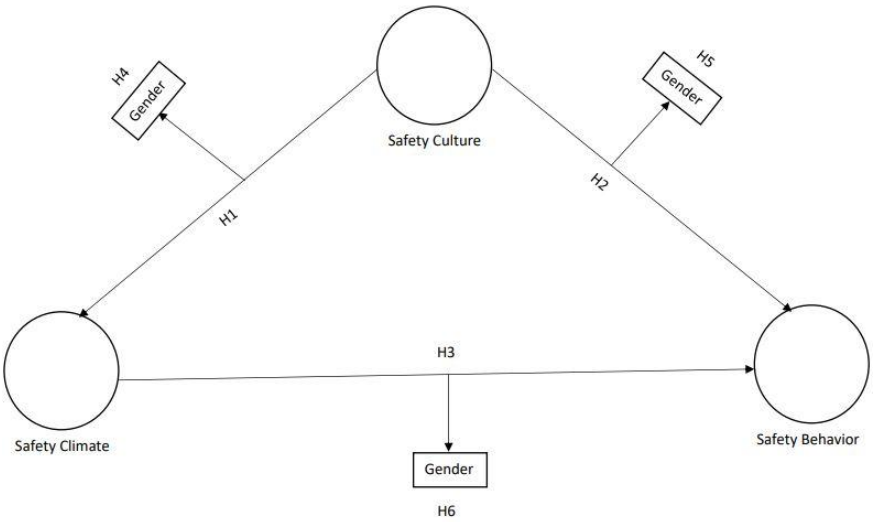

Figure 1. Theoretical model

4. Data Collection

4.1 Hypothesis testing

A partial least square-structural equation modeling (PLS-SEM) approach was used to test the hypothesis model. There were 63 indicators and two variables in this study, namely latent variables and manifest variables (unobserved variables). The figure shows that the latent variable is the safety culture as an exogenous latent variable and the safety climate and safety behavior as an endogenous latent variable. While the manifest variable (observed) is an indicator of each variable validated, and its reliability has been known from previous tests. The first step in analyzing the PLS-SEM is evaluating the measurement model, better known as the outer model. In this study, the PLS model used is reflective. Therefore, the validity and reliability testing is carried out in four stages.

4.2 Outer Model

Evaluation of measurement model consists of validity and reliability tests. The validity tests comprise :1. Convergent validity test consists of loading factor and Average Variance Extracted (AVE), 2. discriminant validity consists of Fornell-Larcker criterion and Cross Loading. 3. reliability test, which consists of composite reliability and Cronbach's Alpha. The first step is the convergent validity test that looks at the loading factor. The loading factor is the value that each indicator has. The measurement of the outer model is a measurement between the latent variable and the indicator. The purpose of this study was to assess the suitability of indicators with latent variables. The indicator is valid if the loading factor value is above 0.7. Based on the results, the loading factor value of the safety culture is above 0.7, the safety climate value is above 0.7, and the safety behavior is above 0.7. Based on the AVE value, AVE is the value that is owned by each variable. AVE value is good if it has a value greater than 0.50. The results of outer loading have shown

that all loading factors have a value above 0.7; therefore, none of the constructs of all variables are eliminated from the model. The study results showed that the AVE value of the research model for all research variables is above 0.5; therefore, the AVE value for convergent validity testing is fulfilled for further studies.

The next step was assessing discriminant validity. Initially, there was a lack in Fornell-Larcker because latent variables were more related to other latent variables compared with latent variables with their variables. Therefore, it was necessary to modify the model on outer loading. The model modification was conducted by removing the indicators that have the smallest outer loading value. After eliminating the smallest outer loading value, the appropriate Forell-Lacker results were obtained. After testing with Fornell-Larcker, the next step is to experiment with cross-loading.

Table 1. Measurement model testing

Variable Laten	Indikator	Outer Loading	AVE	Fornell Larcker	Cross Loading			Composite Reliability	Cronbach's Alpha
Safety Climate	SCL2.3	0.822	0.679 Valid	0.824 Valid	0.822	0.634	0.697	0.944 Reliable	0.932 Reliable
	SCL2.4	0.830			0.830	0.660	0.656		
	SCL2.6	0.838			0.838	0.637	0.686		
	SCL3.3	0.826			0.826	0.636	0.668		
	SCL3.4	0.836			0.836	0.606	0.670		
	SCL4.1	0.794			0.794	0.754	0.664		
	SCL4.2	0.863			0.863	0.665	0.706		
	SCL6.2	0.782			0.782	0.679	0.674		
Safety Culture	SCU1.2	0.746	0.649 Valid	0.805 Valid	0.732	0.746	0.646	0.957 Reliable	0.950 Reliable
	SCU1.3	0.774			0.666	0.774	0.664		
	SCU1.5	0.778			0.592	0.778	0.586		
	SCU2.4	0.737			0.565	0.737	0.610		
	SCU2.5	0.765			0.634	0.765	0.635		
	SCU2.6	0.837			0.642	0.837	0.643		
	SCU2.8	0.829			0.711	0.829	0.696		
	SCU3.1	0.855			0.643	0.855	0.664		
	SCU3.3	0.859			0.621	0.859	0.639		
	SCU3.4	0.845			0.598	0.845	0.621		
	SCU3.5	0.836			0.599	0.836	0.614		
	SCU3.8	0.791			0.699	0.791	0.727		
Safety Behavior	SB2	0.871	0.845 Valid	0.919 Valid	0.713	0.708	0.871	0.956 Reliable	0.939 Reliable
	SB3	0.926			0.758	0.749	0.926		
	SB4	0.952			0.809	0.773	0.952		
	SB5	0.926			0.742	0.728	0.926		

In contrast to Fornell-Lacker, if Fornell-Larcker correlates variables to variables, then cross-loading is a correlation between indicators and variables. Indicators that should measure the correlation variable must be greater than the correlation between indicators and other variables. From the results of the discriminant validity analysis, there are no issues. Therefore, it can be concluded that the measurement model is valid.

After the validity test was carried out, the next step was to test the reliability value by observing the composite reliability value. The composite reliability value of the research model shows that each variable has a composite reliability value above 0.70. Namely, the safety behavior has a composite reliability value of 0.956. Climate safety has a composite reliability value of 0.944, and safety culture has a composite reliability value of 0.957. From these results, it can be concluded that the research model complies with the composite reliability value, and this study is declared reliable. The Cronbach's alpha value from the research model shows that each variable has a Cronbach's alpha value above 0.70.

Which is, safety behavior has a Cronbach's alpha value of 0.939, safety climate has a Cronbach's alpha value of 0.932, and the safety culture has a Cronbach's alpha value of 0.950. From these results, it can be concluded that the research model has met Cronbach's alpha value, and this research is declared reliable. Table 1 shows the summary evaluation of the measurement model testing, and Figure 2 shows the outer model.

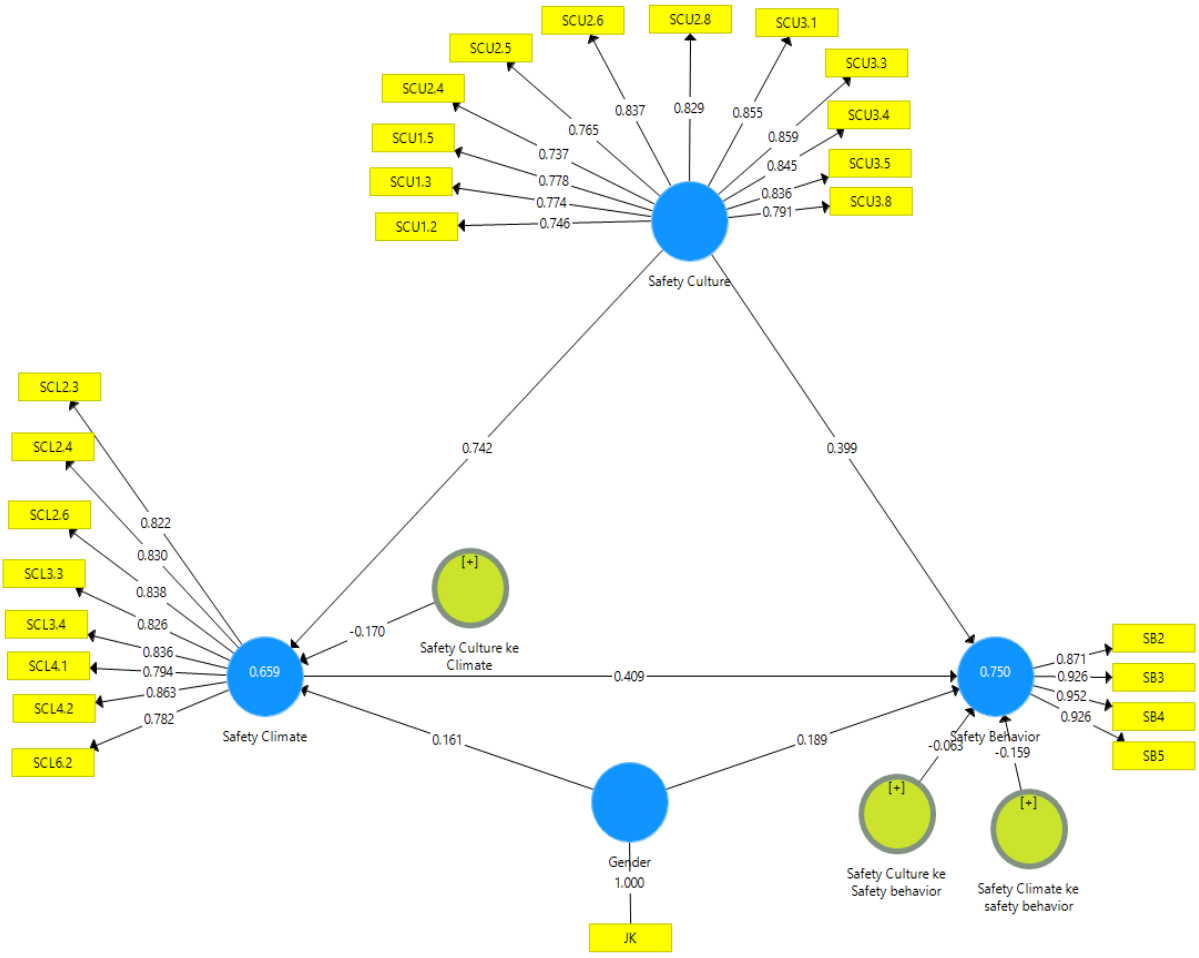

Figure 2. Outer model

5. Results and Discussion

5.1 Model Structural

When assessing the structural model with PLS-SEM, initially observed the R-Square value for each endogenous variable as the predictive strength of the structural model. Any changes in the R-Square value indicate the effect of exogenous variables on endogenous variables whether they have an important effect. According to (Hair et al. 2010) that the R-Square value> 0.75 means strong, the R-Square value > 0.5 means moderate, and the R-Square value > 0.25 means weak. It can be observed that the ability of the independent safety culture variable to explain the dependent variable safety behavior is 0.750 or 75%, and the value of R 2 is strong. The rest is explained by other independent variables that are not included in the research model formulated. Meanwhile, the ability of the independent safety culture variable to explain the dependent variable safety climate is 0.659 or 65.9%, and the R 2 value is moderate. The rest is explained by other independent variables that are not included in the research model formulated. As shown in table 2.

The next step was testing the path coefficient. The path coefficient is in the range of minus 1 (-1) to 1. If the path coefficient is positive, the relationship between the variables is positive, whereas if the path coefficient value is negative, the relationship between the variables is negative. This means that all independent constructs have a positive impact on the dependent construct. The highest value lies in the safety culture variable on the safety climate, with a value of 0.742. This means that the safety culture has a strong positive effect on the safety climate. In contrast to the moderating variable, all moderating variables have a negative value. This indicates that the moderating variable has a negative effect on all variables.

After that, observed the t statistical value with bootstrapping technique. The results of the bootstrapping test show that the significance test indicates the t statistical value of the safety culture variable for climate safety and climate safety for safety behavior> 1,970, which suggests that endogenous variables affect exogenous variables. Likewise, the safety culture variable on safety behavior shows a statistical t> 1.970, which indicates that the exogenous safety culture construct affects the endogenous construct of safety behavior. Safety climate mediates the effect of safety culture on safety behavior. The T-statistic value is 6.651, and the P-Values is 0.000 (significance is less than 0.05). The coefficient value is positive, 0.304, which means that the safety climate positively impacts safety culture's effect on safety behavior. Then, the predictive relevance value, which is used to assess the value of predictive relevance, represents the measurement results of how well the model and its parameter estimates reconstruct the measured variable. This measurement is suitable if the endogenous latent variable has a reflective measurement model, which means that the extent to which a variable or indicator can predict a model. The results of Q 2 is good if the value of Q 2> 0 indicates that the model has predictive relevance, while the value of Q 2 <0 indicates that the model lacks predictive relevance. Table 3 described that the Stone-Geisser value (Q 2) indicates all latent variables in the model have a value of Q 2 above 0, which is 0.620 for safety behavior and 0.438 for climate safety. This shows that these two variables have predictive relevance that reflects the realities and phenomena in the field.

Then looking for the predictive relevance value, predictive relevance is used to assess how good the resulting observations are. Predictive relevance represents the measurement results of how well the model and its parameter estimation reconstruct the measured variable. This measurement is suitable if the endogenous latent variable has a reflective measurement model, meaning the extent to which a variable or indicator can predict a model. The result is said to be good if the value of $Q^2 > 0$ indicates that the model has predictive relevance, while the value of $Q^2 < 0$ Indicates that the model lacks predictive relevance. In Table 3, it can be seen that the Stone-Geisser (Q^2) value shows that all latent variables in the model have a square value above 0 which is 0.620 for safety behavior and 0.438 for climate safety. This indicates that these two variables have predictive relevance that reflects the reality and phenomena in the field.

Finally, the goodness of fit (GoF) is used to validate the structural model as a whole. The GoF index is a single measure to validate the combined performance of the measurement model (outer model) and the structural model (inner model), focusing on predicting the model's overall performance. According to (Tenenhaus et al., 2000), GoF low = 0.1, GoF moderate = 0.25 and GoF strong = 0.38. From the calculation above, the GoF value in this study is 0.714, the general prediction of the model's performance is good. From the R 2, Q 2, and GoF testing, it can be seen that the model is strong. Therefore, hypothesis testing can be determined. The results of the hypothesis testing with a moderating effect are presented in table 4.

Table 2. Coefficient of determination R^2

	R Square	R Square Adjusted
Safety Behavior	0.750	0.745
Safety Climate	0.659	0.655

Table 3. Stone-Geisser value (Q^2) with blindfolding

	SSO	SSE	Q² (=1-SSE/SSO)
Safety Behavior	1.044.000	396.351	0.620
Safety Climate	2.088.000	1.173.477	0.438
Safety Culture	3.132.000	3.132.000	

Table 4. Inner weight

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T statistiks (|O/STDEV|)	P Values	Uji Signifikansi
Safety Climate -> Safety Behavior	0.409	0.415	0.053	7.674	0.000	Significance
Safety Climate ke safety behavior -> Safety Behavior	-0.159	-0.151	0.060	2.650	0.008	Significance
Safety Culture -> Safety Behavior	0.399	0.394	0.053	7.535	0.000	Significance
Safety Culture -> Safety Climate	0.742	0.743	0.023	31.926	0.000	Significance
Safety Culture ke Climate -> Safety Climate	-0.170	-0.174	0.038	4.499	0.000	Significance
Safety Culture ke Safety behavior -> Safety Behavior	-0.063	-0.065	0.055	1.143	0.254	Tidak Signifikan

5.2 Hypothesis Testing

1. **Hypothesis of the Influence of Safety Culture on the Safety Climate**
   Safety culture has a significant effect on the safety climate. The T-Statistics value is 31,926, and the P-Values is 0,000 (the significance is less than 0.05). The coefficient value is positive, which is 0.742, indicating that there is a positive influence, or it can be said that higher levels of safety culture will relate to higher rates of safety climate. If drivers have a high safety culture, it will improve the safety climate to work safely. Therefore, Hypothesis 1 is accepted.
2. **Hypothesis of the Influence of Safety Climate on the Safety Behavior**
   The safety climate has a significant effect on safety behavior. The T-statistic value is 7,674, and the P-value is 0,000 (the significance is less than 0.05). The coefficient value is positive, which is 0.409, indicating a positive influence, or it can be said that a higher safety climate will relate to higher safety behavior. If drivers have a good safety climate, it will increase their behavior to work safely consistently. Therefore, Hypothesis 2 is accepted.
3. **Hypothesis of the Influence of Safety Culture on the Safety Behavior**
   Safety culture has a significant effect on safety behavior. The T-Statistics value is 7.535, and the P-Values is 0.008 (the significance is less than 0.05). The coefficient value is positive, which is 0.399, which indicates a positive influence, or it can be said that higher safety relates to higher safety behavior. If drivers have a good safety culture, it will improve their behavior constantly to work safely. Therefore, Hypothesis 3 is accepted.
4. **Hypothesis of the Influence of Gender as Moderating Variables can Moderate the Positive Relationship between Safety Culture and Safety Climate**
   Based on the results of statistical tests, the gender variable does not moderate the effect of safety culture on the safety climate. The T-statistic value is 4.449, and the P-value is 0.000 (significance is less than 0.05). The coefficient value is negative, which is -0.170. According to Guilford, (1956) if the correlation is less than 0.20 the relationship is very small and can be ignored, so in this study, it is said that gender cannot moderate the relationship between safety culture and safety climate. Therefore Hypothesis 4 is rejected.
5. **Hypothesis of the Influence of Gender as Moderating Variables can Moderate the Positive Relationship between Safety Climate and Safety Behavior**
   Based on statistical tests, the gender variable does not moderate the effect of climate safety on safety behavior. The T-statistic value is 2,650, and the P-value is 0,000 (the significance is less than 0.05). The coefficient value is negative, which is -0.159. According to Guilford, (1956) if the correlation is less than 0.20 the relationship is very small and can be ignored, so in this study, it is said that gender cannot moderate the relationship between safety climate and safety behavior. Therefore Hypothesis 5 is rejected.
6. **Hypothesis of the Influence of Gender as Moderating Variables can Moderate the Positive Relationship between Safety Culture and Safety Behavior**
   Based on the results of statistical testing, the gender variable does not moderate the effect of safety culture on safety behavior. The T-statistic value is 1.143, and the P-value is 0.254 (the significance is greater than 0.05). Therefore Hypothesis 6 is rejected

6. Conclusion

Based on the calculation of the coefficient of determination, the results show that the safety behavior variable is 75% influenced by the safety climate and safety culture, while 25% is influenced by other variables. Based on the results of statistical tests, the gender variable does not moderate the effect of safety culture on climate safety also safety culture on safety behavior, and safety climate on safety behavior.

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