The Influence of Organizational Commitment and Conflict Resolution Skills on Safety Climate and Its Impact on Accidents with Moderation of High-performance Work System in Steel Manufacturing Industries in East Java Province

M. Yusuf Arnol, Ida Aju Brahmasari and Riyadi Nugroho
Department of Economic, 17 August 1945 Surabaya University, Simolowaru, Surabaya, Indonesia

Keywords: The Organizational Commitment, Conflict Resolution Skills, Safety Climate, Accidents, High-performance Work System.

Abstract: This research aims to examine and analyze the influence of organizational commitment and conflict resolution skills on safety climate and its impact on accidents with moderation of high-performance works system in steel manufacturing industries in East Java Province. Data were collected from 115 production division employees of steel manufacturing industries in East Java Province. Structural Equation Modelling was used to analyze the data using AMOS 20.0 software. The results of this study indicate that: organizational commitment and conflict resolution skills have a positive and significant influence on safety climate; safety climate has positive and significant influence on accidents; and high-performing work system significantly moderating the influence of safety climate on accidents in steel manufacturing industries in East Java province.

1 INTRODUCTION

Data from the Indonesian Institution of Social Security Employment or *Badan Penyelenggara Jaminan Sosial Ketenagakerjaan* (BPJS Ketenagakerjaan) of East Java province showed that until July 2016, there were 1,390 work accidents that occurred. There were 11 work accidents arise causing 21 deaths, every day. This means that every working day one worker dies during working hours, in various sectors, including manufacturing industry. Every worker, especially in the production division may be affected directly or indirectly by his or her activities in the workplace, which means that it is urgently needed to involve health and safety protection. (Umeokafor et al., 2014).

The primary cause of any accident occurring in the steel manufacturing industry in East Java province is human error, lack of organizational commitment of an individual or group and the structure in the company in carrying out the efforts to prevent any accidents from occurring. The skills in resolving conflicts are important so that all Occupational Health and Safety (OHS) programs can be implemented.

Mc Collum (2009) explains that conflict is a fact of life, and there is no way we can avoid it. Conflict can be avoided if the same perception of a group has formed in a working climate, in particular, to build and strengthen the safety climate.

The goal of OHS programs, in general, is to prevent injuries and reduce accidents which will be easily achieved by applying high-performance work systems (HWPS). HWPS manages human resources as a competitive advantage so that other people or organizations find it difficult to imitate because every employee is motivated and directed continuously to innovate and advance himself in completing his duties.

2 LITERATURE REVIEW

2.1 Organizational Commitment

The Commitment is a relative strength of the individual in identifying his involvement into a part; it is characterized by 3 things, namely: (1) Acceptance of values and objectives, (2) readiness and willingness to earnesty, and (3) The desire to

Arnol, M., Brahmasari, I. and Nugroho, R.
The Influence of Organizational Commitment and Conflict Resolution Skills on Safety Climate and Its Impact on Accidents with Moderation of High-performance Work System in Steel Manufacturing Industries in East Java Province.
DOI: 10.5220/0008489301300133
In *Proceedings of the 7th International Conference on Entrepreneurship and Business Management (ICEBM Untar 2018)*, pages 130-133
ISBN: 978-989-758-363-6

maintain membership within the organization (Porter et al., 1982).

Meyer and Allen (1990) formulated a definition of commitment in organizing as a psychological construct that characterizes the relationship of members of the organization to its organization and has implications for the individual's decision to continue his membership in the organization. Based on this definition, members who are committed to their organization will be more able to survive as part of the organization than members who are not committed to the organization.

Sopiah (2008) develops a scale called Self Report Scales to measure employee commitment to the organization, which is an elaboration of 3 aspects; (a) Acceptance of organizational goals, (b) The desire to work hard, and (c) The desire to survive belonging to the organization.

2.2 Conflict Resolution Skills

Conflict can be explained as a process of interaction that occurs due to the difference between two opinions or point of view of the parties involved having either a positive influence or a negative influence (Robbins, 2004).

Conflicts can appear because there are conditions that are underlying or preceding. The condition can also be called the source of the conflict, which consists of three factors, namely: (1) Communication factors, (2) Structural factors, (3) Personal factors. Conflict resolution skills play a constructive role in the development of new ideas and practices that finally create new opportunities for organizations to grow (Damanpour, 1991).

2.3 Safety Climate

Safety climate is an adherence and individual participation in safety maintenance activities in the workplace (Griffin and Neal, 2000). In measuring the safety climate, there are factors that consist of five systems, including (1) Management value, 2) Safety communication, (3) Safety practices, (4) Safety training, and (5) Safety equipment (Neal and Griffin, 2004).

2.4 Safety Accidents

Accidents are unexpected and undesirable incidents that disrupt the process of an organized activity (Santoso, 2004). Accidents do not happen accidentally, but there is a reason.

Accidents can be prevented and similar accidents do not recur again, as such, it is worth investigating and finding the cause of the accident, in order to take further corrective action aimed at the cause and conduct preventive efforts (Suma'ur, 2009).

Occupational accident prevention is aimed at: (1) Work environment, (2) Machinery and work equipment, (3) Work equipment tools, (4) Human factors (Suma'mur, 2009).

2.5 High-performance Work System

Dharma and Sunatrio (2002) explained that the High-Performance Work System (HPWS) Measurement puts the foundation for building human resources into strategic assets by maximizing employee performance. The performance of each element of the human resource system should be included in the collection of indications of each measurement of the human resources system.

3 RESEARCH METHOD

This research is a survey research. Kerlinger (2004) explains that survey research is research conducted on large and small populations, but the data studied is data from the samples taken from the population. As such, findings involve the relative incident, distributions, and relationships between sociological and psychological variables.

Population in this research is all employees of production division from steel company which amounted to 162 employees. The number of samples used is as much as 115 respondents obtained from the Slovin formula. This research used proportional random sampling method from steel manufacturing employees.

Data analysis techniques in this research used analytical methods that can provide a simultaneous analysis process associated with multi-variant research model, namely Structural Equation Modelling (SEM) using AMOS 20.0 software. According to Ferdinand (2006: 6), SEM is a set of statistical techniques that enable the testing of a relatively complicated set of relationships simultaneously. The conceptual framework of research can be seen in Figure 1.

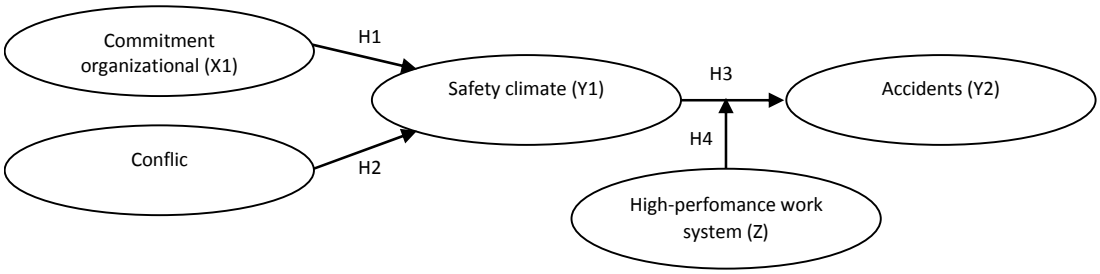

Figure 1: Conceptual Frame of Works.

Table 1: Construct Reliability Research Variables.

Variables	Indicator	*Factor Loading* (FL)	$(FL)^2$	Error $(1-FL^2)$	*Construct Reliability*
Organizational Commitment (X1)	X1.1	0,751	0,564	0,436	0,828
	X1.2	0,860	0,740	0,260	
	X1.3	0,741	0,549	0,451	
Conflict Resolution Skills (X2)	X2.1	0,722	0,521	0,479	0,795
	X2.2	0,653	0,426	0,574	
	X2.3	0,697	0,486	0,514	
	X2.4	0,734	0,539	0,461	
Safety Climate (Y1)	Y1.1	0,639	0,408	0,592	0,820
	Y1.2	0,823	0,677	0,323	
	Y1.3	0,745	0,555	0,445	
	Y1.4	0,707	0,500	0,500	
Accidents (Y2)	Y3.1	0,827	0,684	0,316	0,882
	Y3.2	0,842	0,709	0,291	
	Y3.3	0,796	0,634	0,366	
	Y3.4	0,764	0,584	0,416	
High-Performance Work System (Z)	Z.1	0,813	0,661	0,339	0,808
	Z.2	0,870	0,757	0,243	
	Z.3	0,593	0,352	0,648	

Table 2: Hypothesis Testing Through Regression Weight Test.

Relation of causality			Koef.	C.R.	*P Value*
Organizational Commitment (X_1)	→	Safety Climate (Y_1)	0,320	3,364	0,000
Conflict Resolution Skills (X_2)	→	Safety Climate (Y_1)	0,373	3,710	0,000
Safety Climate (Y_1)	→	Accidents (Y_2)	0,260	3,614	0,000

Table 3: Moderation Influence Testing.

Relation of causality			Standardized Estimate	Critical Ratio (C.R.)	P-value (P)
Safety Climate * HPWS (Y_1 * Z)	→	Accidents (Y_2)	0,473	2,088	0,043

4 RESULTS AND DISCUSSIONS

In SEM, model reliability is checked using construct reliability. A model is said to be reliable when the construct reliability value of each variable/construct is greater than 0.70 (Solimun, 2002).

The results of the construct reliability test on the research variables can be seen in Table 1, where it shows that all research variables have construct reliability values greater than 0.70, so it is concluded that these variables are reliable in formulating the models developed in this research.

Based on Table 2, it can be explained that the result of regression weight test has CR value greater than 1,96 and a p-value of less than 5%, so H_1, H_2, H_3, is positive and significant.

The influence testing of moderation on SEM is done through two stages. The first stage is calculating SEM model of the exogenous variable safety climate and moderating variable high-performance work system to accidents. The results of influence testing of moderating are presented in table 3.

Based on table 3, CR value is greater than 1.96 and p-value is less than 5%, and therefore, it can be explained that H_4 is a significant moderating variable.

5 CONCLUSION

The results of this research can be concluded: (1) Organizational commitment has a positive and significant influence on safety climate in steel manufacturing industries in East Java province; (2) Conflict resolution skills has a positive and significant influence on safety climate in steel manufacturing industries in East Java province; (3) The safety climate has positive and significant influence on accidents in steel manufacturing industries in East Java province; (4) High-performance work system as a moderating variable has positive and significant influence on safety climate towards accidents in steel manufacturing industries in East Java province.

REFERENCES

Allen, N. J., Meyer, J. P., 1990. The Measurement and Antecedents of Affective, Continuance and Normative Commitment to the Organization. *Journal of Occupational Psychology*, 63, 1-18.

Damanpour, F., 1991. Organizational innovation: A meta-analysis of effects of determinants and moderators. *Academy of management journal*, 34(3), 555-590.

Dharma, Sunatrio., 2002. Human Resource Scorecard: Suatu Model Pengukuran Kinerja Sumber Daya Manusia, *Yogyakarta: Amara Books*.

Griffin, M. A., Neal, A., 2000. Perceptions of safety at work: a framework for linking safety climate to safety performance, knowledge, and motivation. *Journal of occupational health psychology*, 5(3), 347-358.

Kerlinger, Fred, N,. 2004. Asas-asas Penelitian Behavioral. Yogyakarta: Universitas Gadjahmada.

McAllister, D., J. 1995. Affect- and Cognition-Based Trust as Foundations for Interpersonal Cooperation in Organizations. *Academy of Management Journal*, 38: 24-59.

McCollum, S., 2009. Managing Resolution Conflict. *New York: Infobase Publishing*.

Mowday, R. T., Porter, L.W., Steers, R.M.,1982. Employee Organization Linkage: The Psychology of Commitment, Absenteeism and Reparation. New York: Academic Press.

Neal, A., Griffin, M. A., 2004. Safety climate and safety at work. Dalam the psychology of workplace safety. In *J. Barling & R.F. Michael (Eds.). Washington: American Psychological Association*.

Robbins, S. P., 2004. Organization Theory: Structure, Design and Applications, Terjemah Jusuf Udaya, Teori Organisasi: Struktur, Desain dan Aplikasi, Jakarta, Arcan.

Santoso, G., 2004. Manajemen keselamatan dan kesehatan kerja. *Prestasi Pustaka Publisher*.

Schneider, B., Wheeler, J. K., Cox, J. F., 1992. A passion for service: Using content analysis to explicate service climate themes. *Journal of applied psychology*, 77(5), 705.

Solimun., 2002. Structural Equation Modelling LISREL dan Amos, Fakultas MIPA Universitas Brawijaya, Malang.

Sopiah, 2008. Perilaku Organisasi. Yogyakarta: Andi.

Suma'mur, P. K., 2009. Higiene Perusahaan dan Kesehatan Kerja (Hiperkes). *Jakarta: CV*. Sagung Seto.

Umeokafor, N., Isaac, D., Jones, K., Umeadi, B.. 2014. Enforcement of occupational safety and health regulations in Nigeria: An exploration. *European Scientific Journal*, 3, 93-104.