

AN EMPIRICAL INVESTIGATION OF THE INFLUENCE OF ORGANIZATIONAL JUSTICE ON SAFETY CLIMATE

M. Kogilavani¹, Mohd-Yusoff Yusliza², Zakaria Siti Fatimah³

¹ Fujisash (Malaysia) Sdn. Bhd. 13600, Prai,

² Graduate School of Business, Universiti Sains Malaysia,

³ Universiti Teknologi MARA (UiTM) Selangor Darul Ehsan,
MALAYSIA.

¹ vanishan77@yahoo.com, ² yusliza1977@yahoo.com, ³ fatimah.zakaria88@gmail.com

ABSTRACT

This study investigates the impact of organizational justice on safety climate from the perspective of the manufacturing organization. A total of 120 employees were asked to complete survey questionnaires. Self administered questionnaires were distributed to the full-time employees who are currently working in manufacturing organizations. Findings of the study suggest that procedural justice, distributive justice and interpersonal justice have positive relationship with safety climate. Theoretically, this study was intended to contribute further to the field of research on employees' safety practices generally towards their leaders managing approaches specifically. Practically, it has been revealed that many studies have indicated support for the studies of safety climate in various sectors and various angles but the researcher found only a few empirical studies in this industry directly related to the organizational justice towards the safety climate. Thus, this research had contributed to the field of management research.

Keywords: Organizational justice, safety climate, manufacturing organization

INTRODUCTION

The manufacturing industry is now a vibrant and thriving element of the national economy, contributes about one-third of the gross domestic product (GDP). According to the department of statistics, it is shown that there is an upward trend of growth, which replicates the states' recital especially the manufacturing sector.

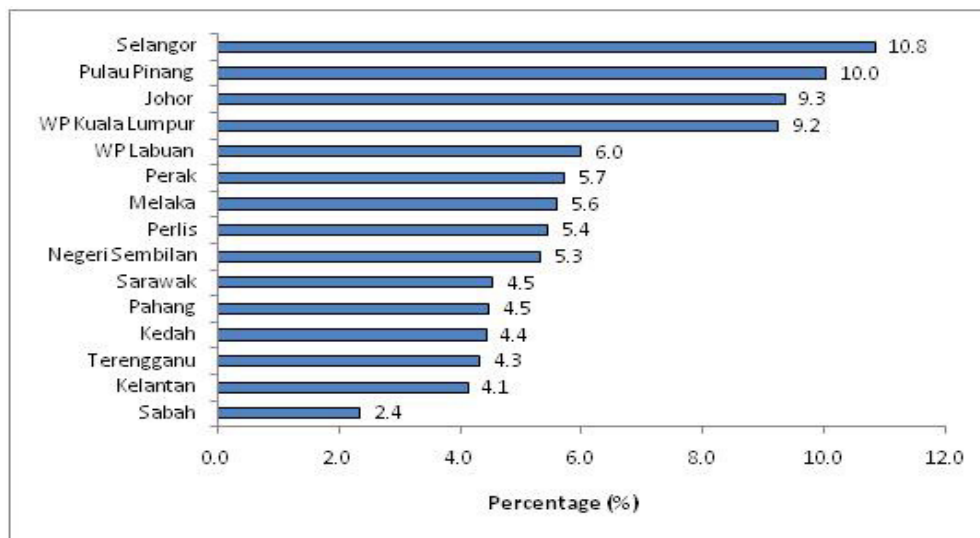


Figure 1. GDP Growth (%) by State at constant Price 2000 Year 2010

Source: MIDA statistics Report 2010

GDP for Penang state shows a very strong growth of 10.0 per cent in the year of 2009 due to the good performance in manufacturing sector. Thus, the better and bigger the manufacturing grows the more chances of the industrial accidents and occupational diseases occur if the organization failed to implement proper safety measures. SOCSO statistics on accidents by industry shows that the highest occupational accidents were reported in the manufacturing industry if compared to other industries as per below table:-

Table 1. Number of Accidents by Industry

Industry	2008			2009			2010		
	Cases	Per. Dis	Death	Cases	Per. Dis	Death	Cases	Per. Dis	Death
Agriculture, Forestry, Fishing	2,998	498	70	2,696	488	77	2,564	532	78
Mining and Quarrying	359	81	14	370	101	9	370	88	13
Manufacturing	18,280	4,733	238	17,206	4,733	212	17,573	5,005	245
Electricity, Gas, Water & Sanitary Services	254	149	11	544	174	12	648	195	10
Construction	3,758	900	100	4,108	977	116	4,667	1,110	137
Trading	9,689	2,012	192	9,197	2,131	178	9,437	2,248	185
Transportation	3,298	920	120	3,690	1,021	127	3,642	1,119	94
Financial Institution & Insurance	949	232	12	780	252	9	840	300	2
Services	4,403	1,106	114	10,072	2,449	297	11,270	2,785	276

Source: SOCSO Occupational Accidents and Diseases Statistics, June 2011

It is proven that manufacturing organizations is in high risk of industrial accidents, supported by the SOCSO data where about 17,573 accident cases and 245 death cases occurred in manufacturing organization for the year 2010 (Table 1). Gatien (2010) mention that organizational justice and safety climate might have a connection in between. The organization could emphasize on the safety awareness training in order to enhance the understanding of the safety requirements by the governmental body and also the manufacturing organization itself. Therefore, procedures and policies of safety requirements need to be implemented effectively in order to create a safer working environment.

PROBLEMS ON THE RUN

The existing scholarly literature contains very limited discussion on the relationship between organizational justice and safety climate. Manufacturing organizations are prone to accidents whether it is minor or major depends on the situations. According to the accident statistics provided by the Social Security Organization (SOCSO) Malaysia from year 2006 to 2010 in the manufacturing sector shows that this sector contributed the highest number of accidents, which was recorded as 17,573 report cases for the year of 2010.

It seems not easy to implement safety standards and procedure according to the safety regulation in the organizations. Even though these standards and procedures were implemented and practiced effectively but at times it is just written statements on the paper and notice boards. This is due to the unsafe acts and behavior of the employees who does not care about their safety in the work place and unsafe working condition provided by the organization. Thus, whenever there is an accident occurred in the workplace, there is under reporting circumstances occurred. This under reporting situation were influence by the fairness depends on how the organizations managed blame and punishment policies.

Moreover, the employees are influenced by the superior or management practices on the safety issues in the organization. If the superior strictly follows and enforce the safety procedures and policies, there were less accident cases, compared to the superior with just culture (Zohar & Luria, 2005). Therefore, this study will investigate the influence of organizational justice on safety climate.

CONCEPTUAL UNDERSTANDING

Safety Climate

According to Zohar (1980, 2000; Zohar & Luria, 2005), safety climate refers to attributions about procedures and policies, and priority of safety at work by the supervisory practices. Determinations on desirable behavior role by the employees while making sense of the workplace, they tend to focus on patterns of behavior over time, rather than specific incidents of behavior. As the immediate supervisor is the most adjacent representative of the organization to most employees, supervisor behavior's pattern will be observed quickly and leads to the employees perceptions of the relative importance of safety at work. It is proven that the safety climate is a practical management tool emphasized on safety before accident occurred (Seo, Torabi, Blair & Ellis, 2004).

According to Neal and Griffin (2006) safety climate, like organizational climate, could be viewed as an individual or group level variable. Safety climate in individual employee's perception of the work environment refers to the individual level variable while the group level refers to the shared perceptions of group of employees. It depends to the researcher views on climate as a group level or individual level variable. Studies conducted organizational or group level climate do not focus on individual perceptions and categorized it as shared perceptions (Zohar, 2000).

The employees' diligence of safety implementation and practices are based on the organization's procedures and policies effectiveness. Supervisors view on violation of safety procedures and policies are very important because it indirectly influences the perception and behaviors of employees towards accident and injuries occurrence (Nahrgang, Morgeson, Hofmann, 2007).

There have been an enormous number of researches recently examining safety climate either as independent variable (Fugas, Silva, & Melia, 2012; Idris, Dollard, Coward, & Dormann, 2012; Idris, Dollard, & Winefield, 2011; Law, Dollard, Tuckey, & Dormann, 2011; Lu & Yang, 2011; Xuesheng & Xintao, 2011; Bond, Morrow, McGonagle, Dove-Steinkamp, Walker Jr., Marmet, & Barnes-Farrell., 2010; Kath, Magley, & Marmet, 2010; Tuckey, & Dollard, 2010; Chi, Huang, & Chang, 2010; Torner, 2008), moderator variable (Kapp, 2012; Dollard, Tuckey, & Dormann, 2012; Law *et al.*, 2011; Naveh, Katz-Navon, & Stern, 2011; Bond *et al.*, 2010; Jiang, Yu, Li, & Li, 2010; Probst & Estrada, 2010; Baba, Tourigny, Wang, & Liu, 2009), or mediating variable (Wu, Chang, Shu, Chen, & Wang, 2011; Luria, 2010). In this study, safety climate is a dependent variable.

Past empirical studies on the antecedents of safety climate will be considered in the next section.

Safety Climate Antecedents

A limited number of studies have been studied recently on the antecedents of safety climate (Walston, Al-Omar, & Al-Mutari, 2010; Luria, 2010; Mearns, Hope, Ford, & Tetrick, 2010; Gyekye & Salminen, 2009; Baek, Bae, Ham, & Singh 2008; Wu, Liu, & Lu, 2007). For instance, Walston *et al.*, (2010) found that the patient safety climate is positively and significantly influenced by management support, organization's reporting system, and adequate resources. Mearns *et al.* (2010) provide support for a strong link between health investment practices and worksite safety and health climate. They also found a relationship between organizational commitment and health investment practices among employees. These results advocate that health investment practices are connected with climates and committed workforces that reflect a priority on health and safety.

Gyekye and Salminen (2009) indicated a positive relationship between safety perception and education. Higher-educated workers proofed the best perceptions on safety, were the most compliant with safety procedures and indicated the highest level of job satisfaction, recorded the lowest accident involvement rate. Baek *et al.* (2008) showed that high levels of safety climate awareness were practiced by both managers and workers. The major causal problems identified were inadequate safety procedures/rules, health pressure for production and rule breaking. The duration of employment was a significant contributing factor to the level of safety climate. In addition, workers showed generally high level of safety climate, and length of employment affected the differences in the level of safety climate.

In conclusion, the somewhat low number of relevant studies on the relationship between organizational justice and safety climate can be justified by the relative "newness" of the subject area. Therefore, more research is needed in order to better understand the other antecedent variables that influence safety climate. As highlighted by Gatien (2010), one possible antecedent variable that has yet to be explored within the safety climate literature is the possibility of organizational justice. The following section describes the independent variable of the study; organizational justice

Organizational Justice

For over 30 years, organizational justice has been a major interest of researchers (Amrose, 2002). Greenberg (1987) introduced organizational justice with regard to how an employee judges the behavior of the organization and their resulting attitude and behavior that comes from this. Organizational justice is generally considered to consist of four sub dimensions: distributive justice, procedural justice, interactional justice and informational justice. The four dimensions of organizational justice will be explained in the following section.

Procedural Justice

Procedural justice refers to fairness issues concerning the methods, mechanisms, and processes used to determine outcomes (Folger & Cropanzano, 1998). Procedural justice is one the most important resources in social exchange especially in the organizational context (Loi et.al. 2006). Previous research illustrates that procedural justice frequently predict a range of work attitudes as well as organizational commitment (Warner et.al. 2005). In strategy implementation, trust and dedication builds the voluntary cooperation which creates the commitment and trust through the appreciation of emotional and intellectual from the fair process itself (Cropanzano et.al, 2007).

Evaluation procedures which are used to determine ratings were focused on the fairness of the procedural justice perspective (Greenberg, 1986). Folger and Konovsky (1989) argued that opportunity for employees to express their feelings upon evaluation showed a measure of perceived fairness and accuracy of performance evaluation. Fair procedures makes employees feel they get an equal opportunity from the company and it indicates that they should perform well in future (Loi et.al. 2006). As past researcher suggested that normative commitment consists the function of socialization experiences which means familial or societal experience (Weiner, 1982). For reasons other than socialization, employees can develop a sense of obligation to their organization, such as the receipt of benefits that invoke a need for reciprocity (Meyer et.al. 2002). Therefore, the company should play a role in making sure that the employees are receiving a fair procedure in an organization.

Distributive Justice

Distributive justice referred to employee's perceptions of the fairness of the allocation of resources among themselves (Greenberg & Baron 2003). When efficiency and productivity involved, distributive justice affects performance (Cohen-Charash & Spector, 2001). Performance increases when perception of justice improved (Karriker & Williams, 2009). Three distribution rules that leads to distributive justice if applied accordingly includes equality, equity and needs (Cropanzano et.al., 2007). Cropanzano also stressed that distributive justice is concerned with the reality that not all workers are treated equally; the distribution of outcome is differentiated in workplace.

Past researchers found that employees desired to quit by looking for evidence proving that rewards are unfairly distributed (Dailey & Kirk, 1992). Moreover, distributive justice seems to play a significant role for employee in assessing their organization (Loi et.al, 2006). High loyalty could be seen on the employees if they could not acquire the same benefits in another organization (Lee et.al, 2007).

Interactional Justice

Interactional justice means that people are sensitive to the quality of interpersonal treatment they receive during the enactment of organizational procedures (Bies & Moag, 1986). Interactional justice is catered by respect, justification, politeness and truthfulness (Bies & Moag, 1986). Employees seek respect from their supervisors to share information and avoid rude remarks, since supervisors are the person who are near to them. Employees are very sensitive in a way they are treated (Cropanzano et.al., 2007), thus it builds trust in supervisor (Wat & Shaffer, 2005).

Interactional justice has been categorized as interpersonal justice, which is known as people who are treated with respect, dignity and politeness by others (Greenberg, 1990). Employees are motivated to build upon trust with the supervisors when they are being treated fairly and thus results in good performance (Schminke et al., 2000). Interactional justice helps the organization to build a stronger relationship between supervisors and employees.

Hence, supervisors play an important role in making sure that the employees are motivated to perform in a way that can help the organization to received trust among the employees in conducting their work.

Informational Justice

Informational justice is the level of access to information that an employee has in the organization. This is the transparency justice being practiced in the workplace such as supervisors being honest with employees essential to an employee's sense of justice in the workplace (Colquitt et al., 2001).

Previous research has been tested to show the significant positive relationship between agreeableness and the individual consideration. Because meticulous leaders are more punctual, organized and challenging in their work, they are expecting to provide timely, thorough justifications to their subordinates. Meticulous leaders need to have access to complete information in a timely manner because timely information regarding decisions impacts them. It is their responsibility to share the information with others. In addition, the meticulous leaders should ensure that the information they provide to subordinates is truthful in nature. In support of the relation between meticulous and informational justice, Sheppard and Lewicki (1987) found that meticulous leaders always communicate important news to their subordinates.

Organizational Justice Outcomes

There have been a number of empirical studies on organizational justice. However, this section only covers the most recent empirical research (between 2010 and 2012) on organizational justice particularly on the outcomes of organizational justice. The current study was identified by an electronic library databases. Databases only included Emerald and Science Direct. The searched begin for the terms “organizational justice” in article title.

Toledano *et al.* (2011) discovered that organizational justice negatively predicted cyberloafing behavior, though this relationship had ceased to be statistically significant after controlling for gender, age, and hours of internet use for work-related activities. In addition, self-control moderated this relationship. Specifically, there was a stronger negative relationship between perceived organizational justice and cyberloafing for employees with high as opposed to low levels of self-control.

Guangling (2011) showed sense of organizational justice has a positive prediction role on employees' organizational identification. Organizational identification positively promotes employees' organizational citizenship behavior and the organizational identification plays an intermediary role on relationship between organizational justice and organizational citizenship behavior.

Nasurdin and Khuan (2011) illustrated that distributive justice had a positive and significant relationship with task performance. In a similar element, procedural justice was found to be positively and significantly related to contextual performance. Age, however, did not moderate the justice-performance relationships.

Hassan and Hashim, (2011) analyzed the differences between national and expatriate academic staff perception of organizational justice in Malaysian institutions of higher learning. It also explores the role of organizational justice in shaping teaching faculties' attitude (job satisfaction and commitment) and behavioral intention (turnover intention). Except for job satisfaction, where Malaysians recorded significantly higher endorsement compared to expatriates, no significant difference was found between the two groups on perception of distributive, procedural, and interactional aspects of organizational justice, as well as organizational commitment and turnover intention. Different facets of organizational justice predicted work outcomes in the two groups. Whereas interactional and distributive justice promoted expatriates' organizational commitment and/or intention to stay with the organization, it was mainly procedural justice that contributed to local employees' job satisfaction, organizational commitment, and turnover intentions. Distributive justice also predicted turnover intentions of locals.

Palaiologos, Papazekos, and Panayotopoulou, (2011) showed that distributive, procedural, and interactional justice is related with different dimensions of performance appraisal.

Elements of satisfaction are sturdily related to all aspects of organizational justice. The performance appraisal criteria are related to procedural justice.

Fuchs (2011) studied on the impact of top management and manager identification on the relationship between change-oriented behavior and perceived organizational justice. They initiate that all types of justice predict pro-change behavior and that, in addition, interactional justice perceptions are negatively related to employees' anti-change behavior. Neither top management nor manager identification had a moderating effect on the relationship between organizational justice and pro-change behavior, but both moderated the relationship between anti-change behavior and distributive justice perceptions. Moreover, identification with top management moderated the relationship between procedural justice perceptions and anti-change behavior.

Of the three types of equity, Till and Karren (2011) found that individual equity was the most important factor on pay level satisfaction. Three other factors and the external equity were important for many individuals, and this was shown through the individual analyses.

Wang, Liao, Xia, and Chang, (2010) found that the relationship of organizational justice to work performance was mostly indirect, mediated by organizational commitment and LMX. Second, among the three kinds of organizational justice, interactional justice was the best predictor of performance.

Elanain (2010a) revealed that procedural justice was more strongly related to organizational commitment than distributive justice. The study also showed that procedural justice was more strongly related to job satisfaction than distributive justice. Moreover, job satisfaction was found to play a partial role in mediating the influence of organizational justice on organizational commitment and turnover intention. Also, organizational commitment was found to fully mediate the relationship between procedural justice and turnover intention. However, it partially mediated the relationship between distributive justice and turnover intentions. Finally, distributive justice was found to mediate some of the relationships between procedural justice and work outcomes.

McCain, Tsai, and Bellino (2010) discovered that casino employees' ethical behavior was positively influenced by both procedural and distributive justice, with the former a slightly stronger motivator. Of the three proposed determinants of casino employees' job satisfaction, distributive justice had the most strongly positive effect.

Zainalipour, Fini, and Mirkamali (2010) indicated significant positive relationships between organizational justice and job satisfaction. Correlation analysis for the three components of organizational justice showed that two dimensions of organizational justice namely, interactional and distributive justice had positive relations with four dimensions of job satisfaction namely pay, promotion, supervision and co-worker,. Procedural justice demonstrated a significant correlation for all dimensions of job satisfaction. Multiple regressions revealed significant impact of interactional justice and distributive justice with job satisfaction.

RESEARCH MODEL

Figure 2 shows the proposed research model that investigates the relationship between organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice) and safety climate.

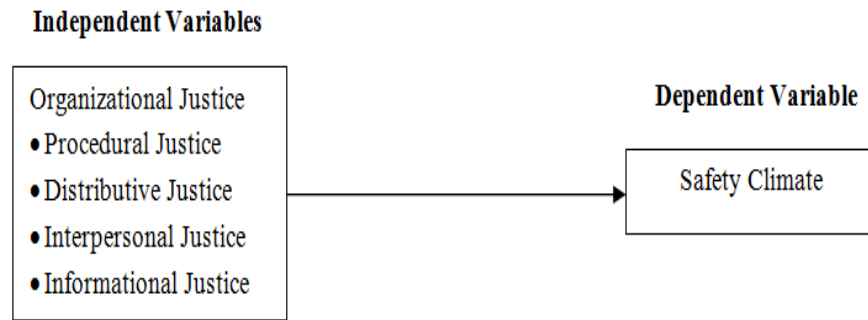


Figure 2. Research Model

Hypotheses Development

Organizational Justice and Safety Climate

The relationship between organizational justice and safety climate has been developed in Gatien's (2010) study on the relationship between perceptions of safety climate and organizational justice. A total of 342 employees from a large, privately owned Canadian construction-based company complete and returned the surveys. Gatien found that a significant relationship was found between distributive, procedural, and informational justice and safety climate perceptions. Thus, it is reasonable to make the following hypotheses:

H1: Organizational justice is related to safety climate.

H1a: *Procedural justice is positively related to safety climate.*

H1b: *Distributive justice is positively related to safety climate.*

H1c: *Interpersonal justice is positively related to safety climate.*

H1d: *Informational justice is positively related to safety climate.*

METHOD

Sample

The population of this study is based on the employees working in manufacturing sector in Northern Region of Malaysia. Manufacturing sector was selected as it is the main economic generator and growing drastically and it must retain employee's safety practices. Manufacturing employees are involved in various safety and health issues, and manufacturing sector is listed as one of the highest accident rates compared to other sectors (SOCISO, 2011).

Sampling Procedure and Sample Size

The sample sizes were determined based on the general rule where the minimum number of respondents needed must be at least five times of the number of variables to be analyzed. Thus, ten-to-one ratio would be more acceptable size to be used (Hair, Anderson, Tatham, and Black, 2010). The sample size determined to use in this present study will be 100. Total of 120 employees were asked to complete survey questionnaires. A total of 104 of those employees complete and returned the questionnaires (approximate participation rate is 86%).

Self administered questionnaires were distributed to fellow MBA students and colleagues who engaged in manufacturing organizations. The survey included measures of distributive, procedural, interpersonal and informational justice, safety climate.

Instrument

All items were rated on a 5-point Likert scale from 1= *Strongly Disagree* to 5= *Strongly Agree*.

Safety Climate

Five items were used to measure the safety climate (Zohar, 2000). Examples of the items are "Says a good word whenever he/she sees a job done according to safety rules." and "Seriously considers any worker's suggestions for improving safety".

Procedural Justice

Procedural justice was measured in terms of perception of justice toward the organization. A seven items scales developed by Colquitt (2001). Examples of these items are "I am able to influence the outcome of the procedures" and. "The procedures uphold ethical and moral standards".

Distributive Justice

Distributive justice was measured by using the scale developed by Colquitt (2001). Examples items of distributive justice include, "The rewards I receive reflect the effort I put into my work," and, "The rewards I receive are appropriate for the work I do."

Informational Justice

This scale was also developed by Colquitt (2001) and has four items. Examples of the items are "Be candid in communication with me" and "Give me reasonable explanations".

Interpersonal Justice

Four items were adapted based on the work by Colquitt (2001) in order to measure interpersonal justice (examples "Treat me in a polite manner" and "Treat me with respect").

RESULTS

Profiles of the Respondents

The profiles of the respondents in this study are presented in frequency and percentages to facilitate interpretation. Respondents consist of 69 (66.3%) females and 35 males (33.7%). Forty-nine (47.1%) are Malays, twenty-four (23.1%) are Chinese and the remaining thirty-one (29.8%) are Indians. Most of the respondents were in the age group of 20-30 years (54%). About 34% of the respondents were Certificate/Diploma holders. 38% of the respondents were holding lower management position and most (46%) of the respondents came from 100% foreign owned organization. About 60% of the respondents worked less than 5 years.

Goodness of Measures

In this study, factor analysis was used to validate whether the items in each section are loaded into the expected categories. In addition, Cronbach's alpha has also been used to assess the internal consistency or homogeneity among the items.

Factor Analysis

Factor analysis is performed on the independent and dependent variables. The independent variable for this study is organizational justice. It comprises of four dimensions namely procedural justice, distributive justice, interpersonal justice, and informational justice. Safety climate acted as the dependent variable for this study. The varimax rotation method is used to

determine any underlying components for each variable. Based on the results, three factor analyses with varimax rotation has been done to validate whether the respondents perceived the five constructs to be distinct variables. The criterion used by Snell and Dean (1992) to identify and interpret factors is to reduce the problem of cross loading. Item across factors which are less than .10 will be deleted.

Factor Analysis of Safety Climate

The 5-item measurement was subjected to principal components analysis with varimax rotation method. The result has shown one solution with eigenvalues greater than 1.0 and the total variance explained was 57.22 percent of the total variance. Table 2 shows the results of *factor analysis* confirming that this construct is one-dimensional and that all items used to measure safety climate is loaded on a single factor.

Table 2. Rotated Factor for Safety Climate Measure

No.	Items	Factor
		F1
SC_1	Says a good word whenever he/she sees a job done according to safety rules.	<u>0.81</u>
SC_2	Seriously considers any worker's suggestions for improving safety.	<u>0.79</u>
SC_3	Approaches workers during work to discuss safety issues.	<u>0.78</u>
SC_4	Gets annoyed with any worker ignoring safety rules, even minor rules.	<u>0.67</u>
SC_5	Watches more often when a worker has violated some safety rule.	<u>0.72</u>
Eigenvalue		2.86
Percentage of Variance		57.22
Total Variance Explained		57.22
KMO Measure of Sampling Adequacy		0.74
Approximate Chi-Square		189.09***

Note. N = 104. Items included for the respective factor is underlined and bold for identification.

*** p < .001

Factor Analysis of Organizational Justice

Factor analysis has also been performed on the independent variable which is organizational justice. On the first run, one item (item DJ_1) was dropped for further analysis due to cross-loading on other factor. Factor analysis was rerun on the remaining 18 organizational justice items. There are 4 factors extracted and total variance explained by this factor is 80.33 percent. Factor 1 included 8 items and it was labeled as "Procedural Justice". Factor 2 contained 4 items that reflected "Interpersonal Justice". Factor 3 included 3 items and it was named "Informational Justice". Finally, 3 items were loaded into Factor 4 and this factor reflected the "Distributive Justice". Table 3 shows the results of *factor analysis*.

Table 3. Rotated Factors and Factor Loadings for Organizational Justice Measure

No.	Items	Factors			
		<i>F1</i>	<i>F2</i>	<i>F3</i>	<i>F4</i>
PJ_1	I am able to express my views and feelings during those procedures.	<u>.72</u>	.41		.24
PJ_2	I am able to influence the outcome of the procedures.	<u>.82</u>	.30	.17	.26
PJ_3	The procedures are applied consistently.	<u>.80</u>	.18	.18	.34
PJ_4	The procedures are free of bias.	<u>.73</u>	.20	.41	.24
PJ_5	I can appeal the outcome of the procedures.	<u>.68</u>	.21	.31	.30
PJ_6	The procedures are based on accurate information.	<u>.78</u>	.23	.29	.22
PJ_7	The procedures uphold ethical and moral standards.	<u>.71</u>	.31	.29	.36
DJ_1	The rewards I receive reflect the effort I put into my work.	.36	.26	.26	<u>.74</u>
DJ_2	The rewards I receive are appropriate for the work I do.	.36	.21	.34	<u>.76</u>
DJ_3	The rewards I receive reflect what I have contributed to the organization.	.44	.27	.21	<u>.72</u>
IJ_1	Be candid in communication with me.	<u>.61</u>	.38	.41	.10
IJ_2	Give me reasonable explanations.	.32	.28	<u>.79</u>	.17
IJ_3	Communicate details to me in a timely manner.	.35	.27	<u>.78</u>	.19
IJ_4	Tailor communication to meet my needs.	.17	.12	<u>.82</u>	.31
INJ_1	Treat me in a polite manner.	.46	<u>.74</u>		.21
INJ_2	Treat me with dignity.	.21	<u>.82</u>	.26	.26
INJ_3	Treat me with respect.	.23	<u>.82</u>	.24	.17
INJ_4	Refrain from improper remarks or comments.	.26	<u>.84</u>	.19	.12
Eigenvalue		10.99	1.44	1.23	0.80
Percentage of Variance		61.06	8.02	6.82	4.43
Total Variance Explained		61.06	69.08	75.90	80.33
KMO Measure of Sampling Adequacy		.91			
Approximate Chi-Square			1870.05***		

Note. N = 104. Items included for the respective factor is underlined and bold for identification.

*** p < .001

Table 4. Reliability Coefficients of the Study Variables

<i>Variables</i>	<i>Total No. of Items</i>	<i>Items Deleted</i>	<i>Cronbach's Alpha</i>
Safety Climate	5	-	.81
Procedural Justice	7	-	.95
Distributive Justice	4	1	.90
Interpersonal Justice	4	-	.92
Informational Justice	4	1	.90

Table 5. Overall Descriptive Statistics of the Study Variables

<i>Variables</i>	<i>Mean</i>	<i>Standard Deviation</i>
Safety Climate	3.09	.95
Procedural Justice	2.94	1.10
Distributive Justice	2.99	1.21
Interpersonal Justice	3.23	1.18
Informational Justice	3.15	1.15

Hypotheses Testing

For the purpose of the present study, one main hypothesis will be tested. The main and sub-hypotheses are as follows:

H1: Organizational justice is related to safety climate.

H1a: Procedural justice is positively related to safety climate.

H1b: Distributive justice is positively related to safety climate.

H1c: Interpersonal justice is positively related to safety climate.

H1d: Informational justice is positively related to safety climate

Test for Hypothesis 1

Hypothesis 1 suggested that organizational justice (distributive justice, procedural justice, interpersonal justice, and informational justice) will be related to safety climate.

Table 6 displays the result of multiple regressions for safety climate. It can be observed that, out of four dimensions of organizational justice investigated, procedural justice ($\beta = .24, p < .10$), distributive justice ($\beta = .27, p < .05$), and interpersonal justice ($\beta = .34, p < .00$) showed a significant and positive relationship with safety climate. As such, H1a, H1b, and H1c are supported. However, informational justice did not show significant relationship with safety climate. The result provided partial support for Hypothesis 1.

Based on the beta-value, it can be said that interpersonal justice had the highest explanatory power, followed by distributive justice, and procedural justice. In all, the four dimensions of

organizational justice explained 44.0 percent ($R^2 = .44$) of the variance in safety climate. The proposed model is also adequate since the F-statistic is significant ($p = .00$). The Durbin-Watson index is at 2.23, which is within the acceptable range 1.5 to 2.5 (Coakes & Steed, 2003). It shows no auto-correlation problems detected in the model.

Table 6. Regression Results between Organizational Justice and Safety Climate

<i>Independent Variables</i>	<i>Standard Beta</i>
Procedural Justice	.24*
Distributive Justice	.27**
Informational Justice	-.14
Interpersonal Justice	.34***
R^2	.44
Adjusted R^2	.42
R^2 Change	.44
Sig. F Change	.00
Durbin Watson Index	2.23

Note. N = 104. * $p < .10$, ** $p < .05$, *** $p < .00$

DISCUSSION

Organizational Justice Is Related To Safety Climate

The result of this study shows that there is an important link between organizational justice and safety climate. According to Gatien (2010), the analysis showed that an individual's distributive, procedural, interpersonal and informational perception influences employee safety behaviors by first affecting their safety climate perceptions. The finding of the present study suggests that procedural justice, distributive justice and interpersonal justice help the organization to implement its safety procedures and policies effectively. It could also emphasize on enforcing the safety standards by creating more awareness among the employees on the safety issues, how important are the safe working condition and its impact on the employees and also the employer as well.

Limitations and Future Research

The interpretation of the research questions should consider one of the limitations of this study. Also, the scope of the organization (manufacturing) limits to get high volume of responds. This study provides an insight to the safety climate practices of the manufacturing organization which will help the management to identify and adjust their organizational justice approach and react accordingly. As for the future research, the researcher recommends that studies on safety performance can be included in order to determine the safety climate perceptions towards safe working environment. This would enable the employees to maintain and practice a safe work place and create accident free work environment. The slogan of "Safety First" should be practical not on notice board only.

Implications

The main concern on this research is on organizational justice and safety climate in manufacturing organization. It is also to understand more on the influences of the organizational justice towards safety climate in the workplace.

As for theoretical implications, this study was intended to contribute further to the field of research on the employees' safety practices generally towards their leaders managing approaches specifically. While as a practical implication, it has been revealed that many studies have indicated support for the studies of safety climate in various sectors and various angles but the researcher found only a few empirical studies in this industry directly related to the organizational justice towards the safety climate. Thus, this research had contributed to the field of manufacturing organizations.

CONCLUSION

The present study concludes that organizational justice has high impact on safety climate in manufacturing organization. It is highly recommended that manufacturing organization can make use of the results to improve their procedures and policies regarding the organizational justice and safety climate. Nevertheless, researchers can use the study's findings as their future reference on safety climate. As the result of this present study, the researcher found that there aren't any changes in the analysis. Therefore, the theoretical framework remains the same. As a conclusion, it is hoped that the results of the present study have contributed valuable information for future researchers.

REFERENCES

- [1] Baba, V. V., Tourigny, L., Wang, X. & Liu, W. (2009). Proactive personality and work performance: The moderating effects of emotional exhaustion and perceived safety climate. *Canadian Journal of Administrative Sciences*, 26(1), 23-38.
- [2] Baek, J-B., Bae, S., Ham, B-H. & Singh, K. P. (2008). Safety climate practice in Korean manufacturing industry. *Journal of Hazardous Materials*, 159(1), 49-52.
- [3] Bond, S. A., Tuckey, M. R. & Dollard, M. F. (2010). Psychosocial safety climate, workplace bullying, and symptoms of posttraumatic stress. *Organization Development Journal*, 28(1), 37-57.
- [4] Chi, S-C, S., Huang, C-Y. & Chang, A. (2010). Safety climate and relational conflict in the eyes of team members: Examining the role of need for closure. *Social Behavior and Personality*, 38(1), 103-115.
- [5] Cropanzano, R., Bowen, D.E. & Gilliland, S.W. 2007. The management of Organizational Justice. *Academy of Management Perspectives*, November, 34-48.
- [6] Dollard, M. F., Tuckey, M. R. & Dormann, C. (2012). Psychosocial safety climate moderates the job demand – resource interaction in predicting workgroup distress. *Accident Analysis & Prevention*, 45, 694-704.
- [7] Elanain, H. M. A. (2010a). Testing the direct and indirect relationship between organizational justice and work outcomes in a non-Western context of the UAE. *Journal of Management Development*, 29(1), 5-27.
- [8] Fuchs, S. (2011). The impact of manager and top management identification on the relationship between perceived organizational justice and change-oriented behavior. *Leadership & Organization Development Journal*, 32(6), 555-583.

- [9] Fugas, C. S., Silva, S. A. & Melia, J. L. (2012). Another look at safety climate and safety behavior: Deepening the cognitive and social mediator mechanisms. *Accident Analysis & Prevention*, 45, 468-477.
- [10] Gatien, B. (2010). *An Investigation into the Relationship between Perceptions of Safety Climate and Organizational Justice*. Doctor of Philosophy in Industrial / Organizational Psychology, Saint Mary's University, Halifax, Nova Scotia.
- [11] Guangling, W. (2011). The study on relationship between employees' sense of organizational justice and organizational citizenship behavior in private enterprises. *Energy Procedia*, 5, 2030-2034.
- [12] Greenberg, J. (1990). Employee theft as a reaction to underpayment inequity: The hidden cost of plus cuts. *Journal of Applied Psychology*, 75(5), 561-568.
- [13] Gyekye, S. A. & Salminen, S. (2009). Educational status and organizational safety climate: Does educational attainment influence workers' perceptions of workplace safety? *Safety Science*, 47(1), 20-28.
- [14] Hassan, A. & Hashim, J. (2011). Role of organizational justice in determining work outcomes of national and expatriate academic staff in Malaysia. *International Journal of Commerce and Management*, 21(1), 82 – 93.
- [15] Idris, M. A., Dollard, M. F., Coward, J. & Dormann, C. (2012). Psychosocial safety climate: Conceptual distinctiveness and effect on job demands and worker psychological health. *Safety Science*, 50(1), 19-28.
- [16] Idris, M. A., Dollard, M. F. & Winefield, A. H. (2011). Integrating psychosocial safety climate in the JD-R model: A study amongst Malaysia workers. *SA Journal of Industrial Psychology*, 37(2), 1-12.
- [17] Jiang, L., Yu, G., Li, Y. & Li, F. (2010). Perceived colleagues' safety knowledge/behavior and safety performance: Safety climate as a moderator in a multilevel study. *Accident Analysis & Prevention*, 42(5), 1468-1476.
- [18] 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.
- [19] Kath, L. M., Magley, V. J. & Marmet, M. (2010). The role of organizational trust in safety climate's influence on organizational outcomes. *Accident Analysis & Prevention*, 42(5), 1488-1497.
- [20] Law, R., Dollard, M. F., Tuckey, M. R. & Dormann, C. (2011). Psychosocial safety climate as a lead indicator of work [lace bullying and harassment, job resources, psychological health and employee engagement. *Accident Analysis & Prevention*, 43(5), 1782-1793.
- [21] Lu, C. S. & Yang, C. S. (2011). Safety climate and safety behavior in the passenger ferry context. *Accident Analysis & Prevention*, 43(1), 329-341.
- [22] Luria, G. (2010). The social aspects of safety management: Trust and safety climate. *Accident Analysis & Prevention*, 42(4), 1288-1295.
- [23] Mearns, K., Hope, L., Ford, M. T. & Lois E. Tetrick, L. E. (2010) Investment in workforce health: Exploring the implications for workforce safety climate and commitment *Accident Analysis & Prevention*, 42(5), 1445-1454.

- [24] McCain, S-L, C., Tsai, H. & Bellino, N. (2010). Organizational justice, employees' ethical behavior, and job satisfaction in the casino industry. *International Journal of Contemporary Hospitality Management*, 22(7), 992 – 1009.
- [25] Nasurdin, A. M. & Khuan, S. L. (2011). Organizational justice, age, and performance connection in Malaysia. *International Journal of Commerce and Management*, 21(3), 273 – 290.
- [26] Naveh, E., Katz-Navon, T. & Stern, Z. (2011). The effect of safety management systems on continuous improvement of patient safety: The moderating role of safety climate and autonomy. *The Quality Management Journal*, 18(1), 54-68.
- [27] Nahrgang, Morgeson, & Hofmann, (2007). Predicting Safety Performance: A Meta-analysis of Safety and Organizational Constructs Poster session presented at the 22nd Annual Conference of the Society for Industrial and Organizational Psychology, New York, NY.
- [28] Palaialogos, A., Papazekos, P. & Panayotopoulou, L. (2011). Organizational justice and employee satisfaction in performance appraisal. *Journal of European Industrial Training*, 35(8), 826 – 840.
- [29] Probst, T. M. & Estrada, A. X. (2010). Accident under-reporting among employees: Testing the moderating influence of psychological safety climate and supervisor enforcement of safety practices. *Accident Analysis & Prevention*, 42(5), 1438-1444.
- [30] Till, R. E. & Karren, R. (2011). Organizational justice perceptions and pay level satisfaction. *Journal of Managerial Psychology*, 26(1), 42 – 57.
- [31] Torner, M. (2008). Safety climate in a broad context-what is it, how does it work, and can it be managed. *Scandinavian Journal of Work, Environment & Health, Sjweh Supplements*(5), 5-9.
- [32] Walston, S. L., Al-Omar, B. A. & Al-Mutari, F. A. (2010). Factors affecting the climate of hospital patient safety: A study of hospitals in Saudi Arabia. *International Journal of Health Care Quality Assurance*, 23(1), 35-50.
- [33] Wang, X., Liao, J., Xia, D. & Chang, T. (2010). The impact of organizational justice on work performance: Mediating effects of organizational commitment and leader-member exchange. *International Journal of Manpower*, 31(6), 660 – 677.
- [34] Wat, D. & dan Shaffer, M.A. (2005). Equity and relationship quality influences on organizational citizenship behavior. *Personnel Review*, 34(4), 406-422.
- [35] Wu, T. C., Chang, S. H., Shu, C. M., Chen, C. T. & Wang, C. P. (2011). Safety leadership and safety performance in petrochemical industries: The mediating role of safety climate. *Journal of Loss Prevention in the Process Industries*, 24(6), 716-721.
- [36] Wu, T. C., Liu, C. W. & Lu, M. C. (2007). Safety climate in university and college laboratories: Impact of organizational and individual factors. *Journal of Safety Research*, 38(1), 91-102.
- [37] Xuesheng, D. & Xintao, Z. (2011). An empirical investigation of the influence of safety climate on safety citizenship behavior in coal mine. *Procedia Engineering*, 26, 2173-2180.
- [38] Zainalipour, H., Fini, A. A. S. & Mirkamali, S. M. (2010). A study of relationship between organizational justice and job satisfaction among teachers in Bandar Abbas middle school. *Procedia – Social and Behavioral Sciences*, 5, 1986-1990.