THE UNIVERSITY OF HULL

HULL UNIVERSITY BUSINESS SCHOOL

THESIS

The Relationship between Psychological Safety, Self-efficacy and Organisational

Performance: A case in Indonesian companies

By A.Abror
(PhD Marketing)

A Doctoral Thesis
Submitted in Partial Fulfilment of the Requirements
For the Degree of Doctor of Philosophy in Marketing from University of
Hull

January, 2017

ABSTRACT

Psychological safety (PsyS) is an evolving and emerging theoretical concept with a little and fragmented prior studies in the literature. Arguably, PsyS issues are paramount to lead a conducive work environment. However, PsyS is a challenging concern in an emerging economy such as Indonesia. Workplace environment may affect employees' safety physically and psychologically. Therefore, the employees' PsyS may also have an impact on employees' self-confidence to perform their job. In addition, some prior studies argue that this employees' psychological safety also relates to the organisational performance. According to the systematic literature review of 93 key articles, some authors have addressed employee's PsyS, self-efficacy and organisational performance in the previous studies. However, there is only a limited study which investigates these variables in a comprehensive way. Therefore, especially in the emerging countries (e.g., Indonesia), studies on these topics remain neglected. Hence, this study aims to examine how PsyS and self-efficacy relate to organisational performance in Indonesian listed companies. Furthermore, this study has expanded the PsyS dimensions beyond the established dimensions. For instance, this study explored another aspect of PsyS, which relates to employee's safety from discrimination, which is called as employment equity PsyS. Moreover, this study has conducted a pilot test to 80 respondents and then surveyed 502 employees of Indonesian listed companies in the primary study. This study got 230 responses (response rate 45.8%). Some preliminary tests have been applied in this study, such as non-response bias, reliability test with Cronbach's alpha ≥ 0.70 and normality test. Moreover, this study has a high goodness of fit. For example, the structural model has CMIN/DF = 1.20, CFI=0.99, TLI=0.98, GFI=0.98 and RMSEA=0.03. The results show that 25 out of 29 hypotheses are significant. Surprisingly, beside the direct relationship between variables, this study has also noticed three significant indirect relationships, such as the relationship between individual self-efficacy and company image through creative self-efficacy as a mediating variable. This study has contributed to the theoretical development and empirical practices as well. First, this study has introduced a new dimension of PsyS (employment equity psychological safety). Second, based on the systematic literature review, this study has addressed some new relationships which are failed to be addressed in the previous studies. For example, this study found some new significant relationships between PsyS, self-efficacy and organisational performance, which are extended from the prior studies. Third, this study suggests some inputs to the manager by giving more attention on psychological safety (i.e., energy and team PsyS) and self-efficacy dimensions (i.e., collective and creative self-efficacy) to increase organisational performance. Fourth, this study also gives an input to the government as a policy maker in creating a better regulation on workplace safety, which has an impact on employee's self-efficacy and organisational performance as a whole. However, there are some limitations of this study, such as lack of cultural context, lack of generalisation due to a single country study and it is a cross-sectional study which only portrays the phenomena at a single time. Accordingly, further study directions, such as conducting studies in various countries and considering the cultural context are widely open. Moreover, an opportunity for a longitudinal research with various sectors in the future study might also be considered.

RESEARCH NOTES

Parts of this thesis have been published in three conferences, including

1. Abror and R. K. Akamavi (2015). Psychological safety and organisational performance in Indonesian companies: Preliminary findings. Applied Psychology, World Scientific**:** 8-38.
2. Abror, R.K Akamavi and Neneh Akamavi (2016). Psychological safety and self-efficacy: A study in Indonesian companies. International Research Meeting in Business and Management (IRMBAM) 7th, Nice 11-12 July 2016.
3. Abror and R.K Akamavi (2016). The Relationship between Psychological Safety and Employee Well-being: A case of Listed Indonesian Firms. British Academy of Management (BAM) Conference. Newcastle 6-8 September 2016.

ACKNOWLEDGEMENTS

TABLE OF CONTENT

LIST OF TABLE

LIST OF FIGURE

CHAPTER 1 OVERVIEW OF STUDY

1.1 Introduction

In recent years, programmes related to a safe working environment in the workplace, particularly in emerging countries (e.g., Indonesia), have continued to be neglected (Bosak, Coetsee, & Cullinane, 2013). For instance, Indonesia as an emerging country has three primary issues regarding safety climate, including labour market problems, and issues related to the security and quality of the working environment, such as poorly paid employees, long working hours, accidents, etc. (OECD, 2014). In fact, Jamsostek (2013) reports that the number of work accidents in Indonesia increased by 1.76% per year (p.82). For example, in 2013 there were 103,285 accidents or 283 accidents per day with total claims reaching Rp. 563.44b, which is equivalent to US$ 56.344m (Jamsostek, 2013, p. 110). Moreover, Ketenagakerjaan (2015) asserted that the number of accidents rose to 110,285 cases in 2015. The total number of work insurance claims also increased in 2015 to Rp. 661b, which is equivalent to US$66.1m.

There are certain types of accidents which occur in the workplace Indonesia. These include workplace hazards, machine entanglements, falling object injuries, slipping/tripping, manual handling, electrical accidents, etc. (Ketenagakerjaan, 2015). For example, recently, 5 workers at a palm oil manufacturing company were injured by boiling hot water from a palm oil machine (Joni, 2016). In Figure 1.1, Ketenagakerjaan (2015) reveals details in connection with workplace accidents in 2015. These particular workplace accidents can be categorised as functional injury (e.g., blind), partial disability (e.g., deformed feet), total disability, death and healed accidents. Even though the number of healed accidents is the highest, the number of employees' who died is still high (530 cases in 2015). Thus, it demonstrates that accidents in the workplace remain a pressing issue in Indonesia. In addition, Bennington and Habir (2003, p. 380) also observed that

many employees in Indonesia work for more than 40 hours per week. Accordingly, the researcher argues that the working environment remains problematic in Indonesia.

Figure 1.1 Statistics Related to Workplace Accidents 2015

Number of Accidents

- Functional Injury, 1,166
- Partial Disability, 810
- Total Disability, 5
- Died, 530
- Healed, 107,7...
- Total, 110,285
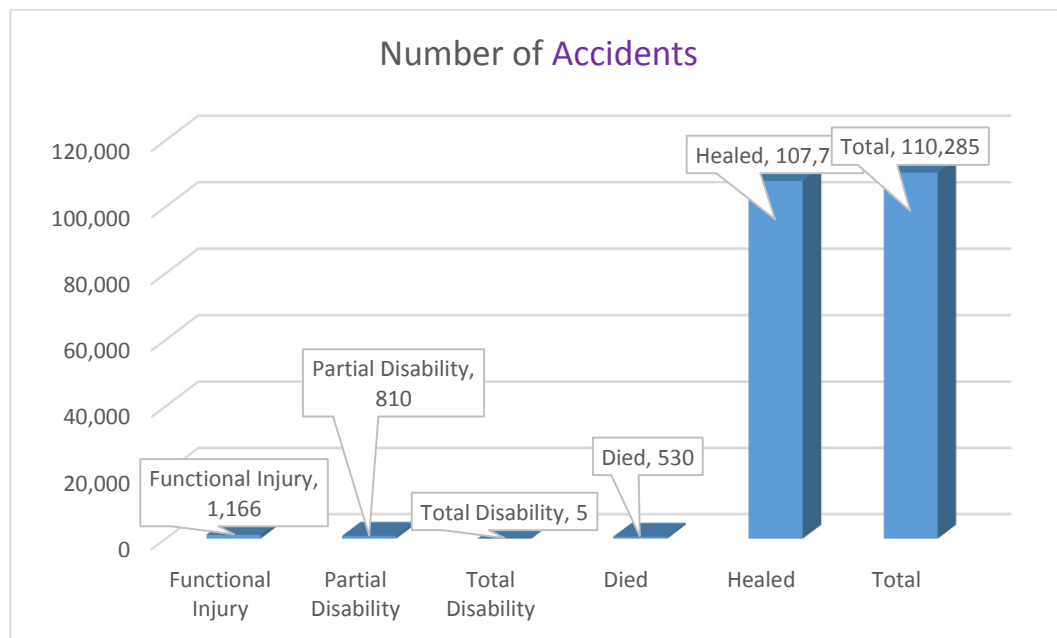
Source: Ketenagakerjaan (2015)

Conversely, Indonesia is an emerging country which has a positive outlook (OECD, 2015, 2016). An OECD report in 2016 stated that the economy in Indonesia has increased by 5% on average, over the last few years. This report also asserts that the GDP growth of Indonesia in 2017 will be 5.7%. The Indonesian government has just announced a series of reform packages to streamline investment. The latest package is known as the 'tax amnesty programme', which has encouraged investment from Indonesian companies and individuals based abroad (Qibthiyyah & Utomo, 2016). Accordingly, this situation will increase Indonesian economic activities in all sectors. However, Indonesia continues to have a problem with its working environment, which impacts upon employees' safety. Arguably, this affects their efficacy and moreover, could have an influence on companies' performances or national productivity (Bennington & Habir, 2003; Laaksonen, Pitkäniemi, Rahkonen, & Lahelma, 2010; Probst, 2015). In addition, studies regarding this issue are still limited from the context of Indonesia (Martini, Tjakraatmadja,

Anggoro, Pritasari, & Hutapea, 2012; Hendriani, Efni, & Siswanto, 2014; Tadjoeddin, 2016). Hence, a study on workplace issues is still required.

Several prior studies have noted that workplace environmental problems occur in various aspects (e.g., physical, psychological, emotional and cognitive aspects) (Kahn, 1990; Law, Dollard, Tuckey, & Dormann, 2011; Amponsah-Tawiah, Jain, Leka, Hollis, & Cox, 2013; Jones, Peddie, Gilrane, King, & Gray, 2016; Koopmann, Lanaj, Wang, Zhou, & Shi, 2016). A number of authors have asserted that such alarming working environments can physically, emotionally and cognitively affect employee engagement, sacrifice, satisfaction, efficiency and performance (Kahn, 1990; Spanjol, Tam, & Tam, 2015; Hartnell, Kinicki, Lambert, Fugate, & Doyle Corner, 2016; Kirk-Brown & Van Dijk, 2016). For example, Kirk-Brown and Van Dijk (2016) argue that the workplace environment will affect employees with regards to the development of an organisational climate. Moreover, Amponsah-Tawiah et al. (2013); Roussin, MacLean, and Rudolph (2016); Van den Broeck, Ferris, Chang, and Rosen (2016) noted that working conditions, such as the physical and psychosocial environment at work may have an impact on employee's health and safety. Hence, the researcher argues that working environments relate to the psychological safety of the employees (Law et al., 2011).

Psychological safety is an individual or team belief to be able to show and do something without fear of having a negative impact on an employee's self-image, status or career (Edmondson, 1999; Zhang, Fang, Wei, & Chen, 2010; Simonet, Narayan, & Nelson, 2015). Several previous studies have asserted that psychological safety has several dimensions, such as a physical safety dimension (Amponsah-Tawiah et al., 2013), inner psychological safety (Kahn, 1990), energy psychological safety (Probst, 2015) and team psychological safety (Edmondson, 1999). Hence, it indicates that an employee may

be concerned with his/her safety in relation to physical risk, psychological risk as an individual and furthermore, psychological risk as a team member.

Several prior studies have argued that environmental factors in the workplace (e.g., employee's safety) have an impact on employee's engagement, self-efficacy, organisational efficiency and also organisational performance (Kahn, 1990; Edmondson, 1999; Baer & Frese, 2003; Chen & Kao, 2011; Mathew, Ogbonna, & Harris, 2012; Van De Voorde, Paauwe, & Van Veldhoven, 2012; Tangirala, Kamdar, Venkataramani, & Parke, 2013; Boehm, Dwertmann, Bruch, & Shamir, 2015; Hernandez & Guarana, 2016; Huang, Krasikova, & Liu, 2016).

For example, Babin and Boles (1996) state that work environments, such as co-worker involvement and supervisor support have an impact on performance. Baer and Frese (2003) also argued that some organisational climates (e.g., climate for initiative, psychological safety and process innovations) can also affect companies' performances. Moreover, Tangirala et al. (2013) noted that psychological safety is an antecedent of employee's self-efficacy. Self-efficacy is an individual/collective belief concerning their ability to perform the job successfully (Bandura, 1997; Salanova, Rodríguez-Sánchez, Schaufeli, & Cifre, 2014; Tu & Lu, 2016). Bandura (2000) and Brown, Ganesan, and Challagalla (2001) also highlight the association between employee self-efficacy, for instance collective efficacy and organisational performance. In addition, Hernandez and Guarana (2016) also asserted that psychological safety, meaningfulness and availability are the antecedents of job engagement, performance, citizen behaviour, job satisfaction and organisational commitment. Accordingly, enhanced employee psychological safety in a company may lead to greater employee self-efficacy. Subsequently, it will also improve organisational performance. Hence, the researcher argues that organisational

climate (e.g., psychological safety) has a relationship with employee self-efficacy and organisational performance.

Although there has been increasing focus on studying "psychological safety and self-efficacy" (Christian, Bradley, Wallace, & Burke, 2009; Tangirala et al., 2013), "psychological safety and performance" (Kirkman, Cordery, Mathieu, Rosen, & Kukenberger, 2013; Haslam, O'Hara, Kazi, Twumasi, & Haslam, 2015) and "self-efficacy and performance" (Brown & Leigh, 1996; Raub & Liao, 2012), several questions concerning the relationship between them have not been addressed in previous studies. For instance, the researcher conducted a systematic literature review based on four databases from 1986 to 2016, including ABI-INFORM, Scopus, Science Direct and Web of Science (WoS). This systematic literature review analysed 93 key contributors regarding the connection between psychological safety, and self-efficacy and organisational performance, which were published in grade 3 and 4 ABS ranking journals. The results located only two articles that addressed these three variables in one study. Surprisingly, these two studies also failed to examine each dimension related to psychological safety. Furthermore, to the best of the researcher's knowledge, no single study has been conducted in an emerging country, such as Indonesia. Hence, the researcher argues that studies into these relationships are still being neglected. Consequently, an opportunity exists for a future study to be conducted.

1.2   Research Aim and Objectives

The principal research aim is to examine the relationship between psychological safety, self-efficacy and organisational performance in Indonesian companies. Moreover, the primary aim of this study is followed by the six objectives identified below:

1. To examine the relationship between psychological safety dimensions

2. To investigate the relationship between psychological safety and self-efficacy.

3. To investigate the relationship between self-efficacy dimensions.

4. To examine the relationship between psychological safety and organisational performance.

5. To analyse the relationship between self-efficacy and organisational performance.

6. To analyse the relationship within organisational performance dimensions.

1.3 Contributions of the study

This study makes a number of contributions, including contributions to theoretical development. Moreover, it contributes to the following managerial implications.

1. The systematic literature review indicates academic deficiencies in the literature. From 93 critical articles published in grade 3 and 4 ABS ranking journal between 1986 and 2016, there are only two articles which have examined the association between psychological safety, and self-efficacy and organisational performance in a study (Oldham & Cummings, 1996; Baer & Frese, 2003). Oldham and Cummings (1996) investigated the relationship between safety gained from supportive supervision, which is related to energy psychological safety, creativity and job performance. While, Baer and Frese (2003) examined the connection between climate in relation to psychological safety, climate for initiative (related to creative self-efficacy) and financial performance. However, these two articles also failed to address all possible dimensions regarding psychological safety (e.g., employment equity psychological safety). Accordingly, the researcher argues that a study which investigates the association between these three variables in a comprehensive way remains limited. Hence, this study has provided a further explanation concerning the relationship between these three concepts.

2. In terms of theoretical development, this study also advances knowledge of psychological safety dimensionality. This study introduces a new dimension of psychological safety which is known as employment equity psychological safety. This psychological safety aspect relates to employees' feeling of safety being rejected or discriminated against due to their gender, religious beliefs or ethnicity. Although previous studies have noted that discrimination in the workplace (e.g., gender, sexuality, and religious beliefs discrimination) relate to employee's feeling of safety, unfortunately, they failed to mention it as a dimension of psychological safety (Makin & Winder, 2008; Bell, Berry, Marquardt, & Tiffany Galvin, 2013; Ghumman, Ryan, & Park, 2016). Thus, this study proposes it as a new dimension with respect to psychological safety.

3. Based on an exhaustive review, this study designs research instruments to examine the possible effects of psychological safety dimensions, self-efficacy and organisational performance in the research model and it establishes several significant relationships between psychological safety, self-efficacy and organisational performance, which are extended from previous studies. For example, the association between physical risk psychological safety and individual self-efficacy, employment equity psychological safety and collective self-efficacy, employment equity and company image, collective self-efficacy and financial performance and furthermore, creative self-efficacy and company image which were overlooked in previous studies.

4. Most of the previous studies were conducted in developed countries (e.g., Simonet et al., 2015; Kirk-Brown & Van Dijk, 2016; Zhu, Wang, & Bart, 2016). However, studies on these topics have tended to be neglected in developing/emerging economies (e.g., Liang, C. Farh, & Farh, 2012; Koopmann et al., 2016). According to Van den Broeck et al. (2016), different cultures may give rise to individual

differences. They assert that collectivistic cultures in most developing countries might be different to individualistic cultures ascertained in developed countries. Moreover, Kortum, Leka, and Cox (2010, p. 225) also argued that "high concern was expressed regarding the need to address psychosocial risks and work-related stress in developing countries". Hence, the researcher argues that culture differentiation will affect their perception of psychological safety and self-efficacy. Thus, this study will provide a new insight in relation to Indonesia as a developing country. Moreover, this study has validated new scales for psychological safety dimensions as a guideline for Indonesian managers; however, other developing countries may use these scales with caution. In addition, this study recommends further research to investigate any potential difference which may appear in term of the generalisability of the current results.

5. Finally, this study provides managerial implications which offer some insights for managers and policy makers in creating better working conditions related to psychological safety issues. Thus, psychological safety aspects will have an impact on self-efficacy and organisational performance. Hence, a company has to pay more attention to employee's psychological safety dimensions to increase its employee's self-efficacy and organisational performance. For example, Indonesian companies have to provide regular training on safety issues, create non-discriminative regulations at work and conduct improved engagement programmes that make employees feel safe psychologically. Moreover, the government as the policy maker has also received some input into creating enhanced regulations pertaining to the relationships between companies and workers' (e.g., conflict resolution and employment equality rules at work), which arguably have an impact on national productivity.

1.4 Thesis Structure

This thesis comprises seven chapters as mentioned below:

Chapter 1 provides a brief introduction in relation to the background of the study, research aim and objectives, contributions of the study and the thesis structure.

Chapter 2 reviews the literature on psychological safety (e.g., Edmondson, 1999; Bradley, Postlethwaite, Klotz, Hamdani, & Brown, 2012), self-efficacy (e.g., Bandura, 1997; Stajkovic & Fred, 1998) and organisational performance (e.g., Neely, 2005; Truss, Shantz, Soane, Alfes, & Delbridge, 2013). This chapter provides several dimensions regarding psychological safety, self-efficacy and organisational performance. Moreover, this chapter also conducts a systematic literature review from primary key contributors.

Chapter 3 examines the literature review on the relationship between psychological safety, self-efficacy and organisational performance. This chapter also provides hypotheses development and a conceptual model in relation to the study.

Chapter 4 describes the research approach to this study. In this chapter, the researcher discusses the positivism research paradigm, the reason for choosing a quantitative approach, the process of measurement development, how to collect the data and the tools to analyse the result (i.e., CFA and SEM), which have been used in the data analysis.

Chapter 5 provides the data analysis and findings. This chapter describes the pilot study, principal study and preliminary analysis, descriptive statistics, exploratory factor analysis, confirmatory factor analysis and structural model. This chapter describes the primary findings of a number of significant relationships between psychological safety, self-efficacy and organisational performance.

Chapter 6 provides the discussion which addresses all the research objectives, including the connection between psychological safety dimensions (e.g., physical risk and energy

psychological safety, energy and employment equity psychological safety) and the relationship between psychological safety dimensions and self-efficacy dimensions (e.g., physical risk psychological safety and individual self-efficacy, employment equity and collective self-efficacy). This chapter also discusses the association between self-efficacy dimensions (e.g., individual self-efficacy and collective self-efficacy), the relationship between psychological safety dimensions and organisational performance dimensions (e.g., energy psychological safety and employee well-being, team psychological safety and financial performance) and the relationship between self-efficacy dimensions and organisational performance dimensions (e.g., individual self-efficacy and company image, creative self-efficacy and financial performance). Finally, this chapter elaborates on the relationship between organisational performance dimensions (e.g., employee well-being and company image, and company image and financial performance).

Chapter 7 summarises the principal conclusions and provides the research contributions, including theoretical contributions. For example, employment equity psychological safety as a new construct and some significant relationships between psychological safety's dimensions, self-efficacy dimensions and organisational performance dimensions. This chapter also summarises various managerial implications (e.g., a company's consideration of psychological safety programmes to increase employee self-efficacy and organisational performance) and discusses the limitations (e.g., lack of cultural factors, cross-sectional study and self-reported survey, and comprises a single country study). Furthermore, this chapter suggests a number of directions for future research, such as considering cultural factors and employee creativity, suggestions pertaining to a longitudinal study and multi countries study with the aim of obtaining a more valid and comprehensive result.

CHAPTER 2 LITERATURE REVIEW

2.1   Introduction

This chapter describes the theoretical construct of psychological safety, self-efficacy and organisational performance and focuses on the definition of each construct and its dimensions. Furthermore, this chapter develops a systematic literature review for each construct. This systematic literature review examines 93 key previous studies pertaining to psychological safety, self-efficacy and organisational performance from 1986 up to 2016, in several research databases (i.e., ABI-INFORM, Science Direct, Scopus and Web of Science). This study elaborates upon the concept of each construct and the dimensions of these variables based on a number of keywords (e.g., "psychological safety", "self-efficacy", "organisational performance", "psychological safety and organisational performance", "psychological safety and self-efficacy" and psychological safety, self-efficacy and organisational performance"). Finally, this study discusses various research gaps regarding the relationship between psychological safety, self-efficacy and organisational performance.

2.2   Psychological Safety

Psychological safety is an important influencing factor related to performance (Edmondson, 1999, Hirak et al., 2012, Koopmann et al., 2016). For instance, Huang et al. (2008) and Koopmann et al. (2016) asserted that psychological safety is a key antecedent of team learning and team performance. Moreover, Baer and Frese (2003) established that climate psychological safety has a significant impact on firm performance (e.g., financial performance with return on asset (ROA) as an indicator). Hence, to increase its performance, a company has to be concerned about its working conditions, such as employee psychological safety. Furthermore, psychological safety has several

dimensions. For example, Kahn (1990) remarked on individual level psychological safety, whilst, Edmondson (1999) introduced psychological safety at a team level. However, psychological safety is not only related to individual or team factors but also related to physical factors (Amponsah-Tawiah et al., 2013), support from supervisor and co-workers (Probst, 2015) and safety from discrimination in the workplace (Ghumman et al., 2016). Accordingly, this study categorises psychological safety into five dimensions, including physical risk, individual/inner, energy, and employment equity and team psychological safety. Hence, this chapter defines the theoretical concept of psychological safety, such as the definition and dimensions of psychological safety in the next part.

2.2.1   Definition of Psychological Safety

There are several definitions of psychological safety offered in previous studies. Table 2.1 explains that several authors state that psychological safety is the ability of an employee to be able to show and perform a task without fear of having a negative impact on his/her self-image, status or career (Kahn, 1990, Zhang et al., 2010, Simonet et al., 2015). Conversely, others argue that psychological safety is a shared belief among team members related to interpersonal risk taking (Edmondson, 1999, Brueller and Carmeli, 2011, Koopmann et al., 2016). Interpersonal risk taking in this context is about taking risk regarding not being rejected or punished by other members. Moreover, psychological safety also refers to the fundamental belief concerning how other people in an organisation respond to an individual member's choice, which may be risky for their organisation (Cannon and Edmondson, 2001, Kark and Carmeli, 2009). Thus, psychological safety is an employee's desire, as an individual or a group member, to be free from fear of negative impact (e.g., being rejected, embarrassed or punished by the team members) (Tynan, 2005, Nembhard and Edmondson, 2006, Zhang et al., 2010, Brueller and Carmeli, 2011, Koopmann et al., 2016).

Furthermore, Table 2.1 also illustrates that psychological safety relates to physical aspect (Probst, 2015), support from supervisors and co-workers (Probst, 2015) and safety from discrimination in the workplace (Jones et al., 2016). Accordingly, the researcher argues that an employee has to be psychologically safe both as an individual and as a team member, when he/she performs his/her job. Therefore, it assumes that psychological safety has several aspects, such as individual and team psychological safety.

.

Table 2.1 Definition of Psychological safety

Sources	Definition
Individual Level	
Kahn (1990, p. 708)	Psychological safety is the ability to demonstrate and employ one's self without fear of negative consequences to self-image, status, or career.
Tynan (2005, p. 229)	Self-psychological safety is defined as how emotionally safe an individual feels with another, whether he or she feels the other is likely to embarrass him or her, and how much he or she feels trusted and respected by the other.
Kark and Carmeli (2009, p. 787)	Psychological safety refers to an individual's perceptions of the consequences of taking interpersonal risks in their work environment.
Carmeli et al. (2009, p. 82)	A perception that people are comfortable being themselves and able to show and employ one's self without fear of negative consequences to self-image, status or career.
Zhang et al. (2010, p. 427)	It is an individual psychological state (rather than a personal trait) where people feel confident that the surrounding interpersonal context is not threatening, and they will not be embarrassed or punished for expressing themselves.
Simonet et al. (2015, p. 832)	The degree to which individuals perceive the environment is safe for interpersonal risk taking.
Team/group Level	
Edmondson (1999, p. 354)	A shared belief that the team is safe for interpersonal risk taking
Walumbwa and Schaubroeck (2009, p. 1276),	Psychological safety refers to shared beliefs among team members that it is safe for them to engage in interpersonal risk taking.
Dollard and Bakker (2010, p. 580)	Psychosocial safety is a shared belief held by a team that the team is safe regarding interpersonal risk taking.
Pearsall and Ellis (2011, p. 403)	A sense of confidence that other team members will not embarrass, reject or punish someone for speaking up and a shared belief by team members that the team is safe for interpersonal risk taking.
Brueller and Carmeli (2011, p. 456)	Psychological safety is a climate in which team members feel psychologically safe to speak up and express their views without fearing negative interpersonal consequences to their image and status at work.

Koopmann et al. (2016, p. 940)   Shared perceptions that the team is safe with respect to interpersonal risk taking.

Physical Aspect

Amponsah-Tawiah et al. (2013, p.   Physical factors, such as noise, physical hazards and accidents relate to employee's psychological safety.
75)

Energy

Probst (2015, p. 1903)   An employee will feel safe when he/she has support from his/her supervisor and co-workers.

Employment equity

Jones et al. (2016, p. 1598)   Discrimination at the workplace relates to employee's safety and mental/psychological health.

Psychological safety was defined as psychological safety climates in the wider context of an organisation (Baer and Frese, 2003, Cigularov et al., 2013, Probst, 2015). For example, Cigularov et al. (2013) identified four safety climate dimensions, including management commitment to safety, safety practices, in addition to support from a supervisor in relation to safety and pressure at work. In contrast, Huang et al. (2013) identified a further six dimensions of safety climate, which are classified into two levels of analysis: organisational and group level. For example, at an organisational level, there are three dimensions of safety climate: proactive practices, driver safety priority and supervisory care promotion. Group level also has three dimensions of safety climate, such as safety promotion, delivery limits and cell phone disapproval. Proactive practices refer to safety in physical procedures at work; driver safety priority refers to driver safety priority when he/she is doing his/her job and supervisory care promotion deals with appreciation of a supervisor who cares about safety. Additionally, at a group level, safety promotion refers to employee's safety to gain approval from the team leader. Delivery limits are related to employee safety pertaining to not being forced to do his/her job over their limit. Lastly, cell phone disapproval refers to a driver's safety related to not answering the phone while driving. Hence, safety climate may have different dimensions for different workplaces. Accordingly, the researcher argues that psychological safety can also be defined in a particular context.

Although a number of prior studies examined the components of psychological safety to a degree (Sparks et al., 2001, May et al., 2004, Gibson and Gibbs, 2006, Gong et al., 2012), these previous studies overlooked the link between psychological safety components. For example, Amponsah-Tawiah et al. (2013) examined physical risk factors, which are related to physical risk psychological safety, whilst Babin and Boles (1996) proposed co-workers' involvement and supervisor relationship. However, both Amponsah-Tawiah et al. (2013) and Babin and Boles (1996) failed to examine these

psychological safety dimensions in much detail. Hence, the researcher argues that the literature on psychological safety remains fragmented regarding theoretical dimensionality.

In short, based on the above discussion, the researcher argues that psychological safety has several dimensions. First, physical risk- psychological safety which refers to physical factors' safety (Laaksonen et al., 2010). This study employs psychological safety based on physical risk factors for the reason that several authors, such as Laaksonen et al. (2010), Amponsah-Tawiah et al. (2013), Probst (2015) noted that physical factors, such as noise, physical hazards and accidents relate to employee's psychological safety. For example, Amponsah-Tawiah et al. (2013) mentioned that physical factor is the primary factor in connection with employee psychological safety. Second, several previous studies mentioned psychological safety as an individual; thus, this study employs this individual psychological safety and identifies it as inner-psychological safety (Brown and Leigh, 1996, Kirk-Brown and Van Dijk, 2016). Third is energy-psychological safety, which comes from manager's and co-workers' support (Al-Refaie, 2013). Several previous studies have asserted that an employee will feel safe when he/she has obtained support from his/her supervisor and co-workers (Morrow et al., 2010, Probst, 2015). Hence, this support will enable an employee to feel safe psychologically. Fourth is employment equity psychological safety (Makin and Winder, 2008, Ghumman et al., 2016) which relates to protection from discrimination at work. Even though some previous studies have not mentioned employee discrimination as a psychological safety dimension, the researcher argues that discrimination at work will relate to employee psychological safety, which this study employs as a dimension of psychological safety. Finally, a number of prior studies emphasised team psychological safety (Edmondson, 1999). Accordingly, the researcher argues that psychological safety is not only concerned with individual and team psychological safety. Psychological safety has a broadening

concept, including physical aspect, feeling safe due to support from supervisor's and co-workers' and also safety from discrimination in the workplace. Therefore, the following part discusses the dimensions of psychological safety.

2.2.2   Physical Risk-Psychological Safety

Physical risk psychological safety refers to an employee feeling safe and deals with physical risk conditions, such as noise, physical hazard, etc. Several previous studies stated that physical factors may contribute to an employee's feelings of being safe (Sparks et al., 2001, Wallace and Chen, 2005, Walker and Hutton, 2006, Christian et al., 2009, Laaksonen et al., 2010, Amponsah-Tawiah et al., 2013, Probst, 2015). For example, Laaksonen et al. (2010) reported that a heavy physical workload and exposure to hazards are related to employee sickness and absence. Conversely, Walker and Hutton (2006) asserted several physical safety obligations that should be provided by employers for their employees. Their study ascertained 48 employer safety obligations (e.g., provides personal protective equipment, reward safe working behaviour, and investigates hazards and risks), and 36 employee safety obligation items, for instance use work equipment properly, reports safety incidents and follows safety rules. Accordingly, physical risk psychological safety is related to an employee's psychological safety from physical hazards, such as accidents, noise and exposure to hazards (Walker and Hutton, 2006, Probst, 2015).

Kahn (1990, p. 704) argued that physical factors and job insecurity are related to psychological availability, which refers to the sense of having physical and emotional resources to create personal engagement at work, while, Hajmohammad and Vachon (2013) mentioned that physical conditions at work also relate to a culture of safety. Furthermore, Beus et al. (2010) claimed that physical risk is one of the dimensions of safety climate. Hence, the researcher argues that physical environment at work relates to

an employee's safety issues. Although the physical factors related to the psychological health condition of the employees remain, most of the previous studies above simply defined physical factors at work as a part of safety climate. They failed to mention that safety from physical factors is a psychological safety dimension (Laaksonen et al., 2010, Amponsah-Tawiah et al., 2013, Idris et al., 2015). Accordingly, the researcher assumes that the physical safety elements relate to an employee's psychological safety. Thus, when an employee has a heavy physical workload or faces physical risk in the workplace, arguably the physical hazard affects his/her psychological safety.

Moreover, Christian et al. (2009) and Hammer et al. (2016) emphasised that psychological safety climate is related to safety outcomes, such as injuries and accidents. Conversely, Wallace and Chen (2005) suggested a validated workplace cognitive failure scale, related to physical safety climate measurement at work. Thus, a source of employee psychological safety is an employee's protection from injuries or accidents. Ford and Tetrick (2011) explored psychological empowerment and organisational identification in the context of occupational safety. They revealed that psychological empowerment is related to occupational hazard and physical demand. They asserted that psychological empowerment, which refers to active work role orientation is associated with a low accident rate. In addition, Witte (1999) also examined the psychological consequences of job insecurity. Witte declared that job insecurity is associated with psychological distress, which is related to psychological safety. Hence, the researcher argues that employee's safety from physical hazards has an association with employee psychological safety.

A number of authors, such as Neal and Griffin (2006), Idris et al. (2012), Idris et al. (2015) noted that physical safety climate is a part of psychosocial climate measurement. Neal and Griffin (2006), Dollard and Bakker (2010), Idris et al. (2015) pointed out that climate in physical conditions at work relates to employee's psychosocial

climate. In contrast, Makin and Winder (2008) ascertained that employee's occupational health safety is related to three workplace hazards: safe place, safe person and safe systems. Thus, this indicates that when an employee has improved conditions (e.g., physical environmental safety), he/she have enhanced occupational health. Hence, a company's concern about physical risk at work may relate to an employee's feeling of safety at work. Accordingly, the researcher assumes that a possible source of employee's psychological safety is employee's awareness of risks in the physical environment. Hence, the researcher posits physical safety as a dimension of psychological safety, which is known as physical risk psychological safety.

Physical risk psychological safety may relate to other dimensions of psychological safety. For example, Wachter and Yorio (2013) mentioned that a better safety system that relates to physical safety has a relationship with employee's psychological safety as an individual. Hence, it means that physical risk psychological safety relates to inner psychological safety. Moreover, Amponsah-Tawiah et al. (2013) noted that interpersonal and managerial support for safety is related to workplace injuries as a safety outcome. Accordingly, physical risk has a relationship with energy psychological safety. Kouabenan et al. (2015) also argued that accident frequency is also related to team safety climate. Thus, it signifies that physical risk psychological safety also relates to team psychological safety. Therefore, in the next part, this study will discuss inner psychological safety.

2.2.3   Inner- Psychological Safety

Inner-psychological safety refers to the emotional safety of an individual when he/she interacts with others (Brown and Leigh, 1996, May et al., 2004, Tynan, 2005, Kirk-Brown and Van Dijk, 2016). For example, Tynan (2005) defined psychological safety as the emotional safety beliefs of an individual when he/she interacts with other employees.

She argued that psychological safety deals with emotional feeling regarding how an employee as an individual feels trusted, respected and is not embarrassed by others. Several prior studies (e.g., Kahn, 1990, Edmondson, 1999, Carmeli et al., 2009) reveal that psychological safety may occur not only at the individual level but also at the team level. However, Zhang et al. (2010) emphasised that psychological safety is related more to an individual psychological state. Accordingly, inner psychological safety deals with an employee's feeling of safety with respect to undertaking his/her job due to his/her individual safety condition (e.g., self-motivation, physical condition). Moreover, inner psychological safety relates to their belief that they will not be punished for expressing themselves in the workplace. Hence, the researcher argues that an individual feels safe psychologically when he/she believes that he/she will not suffer for expressing his/her opinion at work.

Inner psychological safety also relates to employees' feelings concerning being able to speak to their manager or co-workers, and could be classified as personal motivation for safety behaviour (Williamson et al., 1997, Liang et al., 2012). Whilst, Tomas et al. (1999) highlighted inner psychological safety as a worker's attitude toward safety. Consequently, individual or inner psychological safety relates to an employee's feeling to speak up about conditions at work with his/her manager or other organisational members without fear of being rejected or punished by his/her manager or organisational members. Moreover, Halbesleben et al. (2013) asserted that psychological safety as an individual relates to an employee's feeling of potential negative consequences as a result of sharing beliefs honestly. While Hirak et al. (2012) stress that psychological safety as an individual may refer to employee's safety from the environment, which is perceived as a non-threatening situation in interpersonal relationships. Similarly, Liang et al. (2012) maintained that psychological safety, which relates to an individual's perception of his/her safety at work, relates to the voice behaviour of the employees. Accordingly, inner

psychological safety identifies with the psychological safety of an employee when he/she is speaking up or sharing his/her opinions in the workplace. Hence, the researcher argues that individual psychological safety can be classified as a dimension of psychological safety.

In addition, individual psychological safety comes inside an employee. Accordingly, this psychological safety is a motivation for an employee to be concerned about safety behaviour at work (Halbesleben et al., 2013). Similarly, Baer and Frese (2003) argued that in developing climates of psychological safety and climates for the initiative, employees need to feel comfortable and not be blamed by managers or co-workers. Thus, it means that the employees have to obtain enhanced individual psychological safety. Thus, in the context of inner psychological safety, it may be concluded that employees should feel safe and comfortable enough to be themselves, and they will express their opinions in the case of uncomfortable conditions at work. An employee with greater inner psychological safety will also acquire positive emotions from other organisational members, such as everyone pays attention to him/her (Hirak et al., 2012). However, to the best of the researcher's knowledge, up to now, this concept is still limited in the literature (May et al., 2004). Therefore, individual or inner-psychological safety, which is related to an employee's feelings of safety as an individual at work should be considered by the company, in order to create an improved safety climate at work (Tynan, 2005). Hence, this study proposes this safety climate as a dimension of psychological safety and defines it as inner psychological safety.

2.2.4   Energy-Psychological Safety

Energy-psychological safety refers to the safety-perceived feeling of employees which comes from the involvement and support of their co-workers and supervisor (Babin and Boles, 1996, May et al., 2004, Gibson and Gibbs, 2006, Al-Refaie, 2013, Probst,

2015). In other words, energy psychological safety relates to an employee's feelings of safety when he/she receives support from his/her managers and co-workers. Hence, this study defines energy psychological safety as an employee's feelings of safety with respect to not being rejected and receiving positive support from the managers and co-workers. Thus, support from managers and co-workers motivate the employee to do his/her job happily. The employee feels safe psychologically for the reason that he/she obtains positive encouragement from his/her managers and co-workers, which will arguably provide energy for the employee to engage with the job (Demerouti et al., 2010). Consequently, this study defines this psychological safety as energy psychological safety.

Babin and Boles (1996) asserted that employee will have better feelings of safety when he/she gains sufficient support from co-workers and supervisor. Accordingly, a supportive work environment (e.g., supervisor's and co-workers' support) may become an important factor in influencing subsequent employee work-related attitudes and perceptions which relate to the employee's safety. Hence, the researcher argues that an employee will have enhanced energy psychological safety when he/she receives sufficient support from managers and co-worker. Furthermore, Hayes et al. (1998) developed and validated a scale of perception in relation to workplace safety and revealed a workplace safety scale (WSS) with four predictors: co-worker safety, management safety, satisfaction with the safety programme and job safety. Conversely, May et al. (2004) asserted that co-workers' and supervisor's relationship with an employee are related to an employee's psychological safety. For instance, when a manager offers an employee an opportunity to share his/her opinions and to be actively involved in brainstorming without fear of rejection or punishment, it may lead to his/her having improved feelings of safety. Hence, the researcher argues that support from managers and co-workers relates to the employee's psychological safety.

Moreover, Burt et al. (2008) commented that co-workers and supervisory support are key issues in safety programmes. They determined this support played a key role in group cohesion. According to Owens et al. (2016), energy, such as support from managers and co-workers becomes a resource to increase an employee's motivation and capacity for action. However, the absence of this support may result in stress or disengagement. Hence, when an employee has sufficient support from co-workers and the supervisor, it will lead to his/her psychological safety, which arguably affects employee's engagement at work. In a similar manner, Dysvik and Kuvaas (2012) noted that perceived supervisor support may predict an employee's in-role and extra-role performance. Thus, it means that supervisor support has a connection with organisational performance. While Ng and Feldman (2012b) examined supervisor's and co-workers' support in the context of organisational embeddedness. They asserted that organisational embeddedness refers to three organisational factors (fit, links and sacrifices) that keep employees tied to their jobs. Hence, organisational embeddedness relates to employees' relationship with his/her job. They suggested that when an employee has support from colleagues or managers, it will affect his/her embeddedness to the organisation, which is related to his/her psychological safety. Hence, the researcher argues that a source of an employee's psychological safety is feelings safe when he/she has support from co-workers and the supervisor.

Energy psychological safety is related to the level of participation of group members, which can be seen in open communication, speaking up and interpersonal risk taking (Baer and Frese, 2003, Gibson and Gibbs, 2006, Walumbwa and Schaubroeck, 2009, Pearsall and Ellis, 2011). It means that a leader in an organisation, which has greater environmental safety, will actively communicate with employees without punishing employees as individuals or as a work unit. For instance, a manager offers employees a chance to share their opinions and to be actively involved in brainstorming. For example,

Probst and Estrada (2010) identified the moderating influence of psychological safety climate and supervisor's enforcement of safety practices. They also claimed that the number of unreported accidents is higher in a working environment with an inadequate organisational safety climate or where supervisor safety enforcement was inconsistent. Additionally, Flin et al. (2000) also recognised that the worksite or organisation's safety climate measurement is related to the management's attitudes and behaviours pertaining to safety. However, the above previous studies have neglected to mention this safety climate as a dimension of psychological safety. Hence, the researcher argues that support from management and co-workers are related to employee psychological safety.

In addition, Pearsall and Ellis (2011) suggested that psychological safety relates to unethical behaviour within a team. Their research wanted to uncover compositional and emergent influences on unethical behaviour by teams. They argued that unethical behaviour relates to employees' unfair behaviour within a team, such as cheating which has a relationship with interpersonal risk taking. Moreover, unethical behaviour also refers to the employee's concern with physical risk, such as using protective equipment which may affect other employees, a company's commitment to working hours and minimum pay. Hence, a team member who speaks up about these conditions may lose respect and might be punished by other team members. For that reason, when a member of a team speaks up about unethical behaviour within a team, it will affect his/her team psychological safety. Morrow et al. (2010) conducted research that aimed to confirm a relationship between employee perceptions of psychological safety climate and safety behaviour. Their research ascertained that psychological perceptions of work safety tension are more strongly related to safety behaviour than management perceptions or co-worker commitment to safety. Hence, even though previous studies have not mentioned this support as the psychological safety, the researcher argues that support from co-workers and supervisors will provide a feeling of a psychological safety to employees.

Accordingly, this study employs feelings of safety based on support from supervisors and co-workers as a dimension of psychological safety, which is known as energy psychological safety.

2.2.5 Employment Equity Psychological Safety

Employment equity psychological safety actually relates to employee psychological safety in specific contexts, such as discrimination based on religious belief, ethnicity or gender (Heslin et al., 2012, Ghumman et al., 2013, Dwertmann et al., 2016, Ghumman et al., 2016). According to Makin and Winder (2008), discrimination of gender, sexuality, religious beliefs and bullying (e.g., racial harassment) can be a source of hazards for people in an organisation (p. 937). When an employee experiences discrimination at work, it will relate to his/ her psychological safety. Hence, this study defines employment equity psychological safety as the psychological safety of an employee in relation to not being rejected and being treated equally by his/her co-workers and managers when he/she has different characteristics, (e.g., gender, religious beliefs or ethnicity). In other words, employment equity psychological safety is influenced by other organisational members' actions. For example, an employee will have superior employment equity psychological safety when his/her supervisor and co-workers treat him/her equally and without discrimination because of her/his different characteristics.

Moreover, Feild and Holley (1982) revealed that one of the sources of discrimination is discrimination by means of race, creed, sex, national origin, or age (p.394). In addition, Liu et al. (2016b) asserted that discrimination, for instance abusive supervision has an impact on employee's psychological safety. In the context of workplace/organisational justice, Braeken et al. (2013) claimed that workplace discrimination might happen in the form of the systematic denial of people's rights, such as gender, religious belief, ethnicity, age, sexual orientation, etc. Dwertmann et al. (2016)

also noted that diversity climate in the workplace, for example discrimination based on gender, ethnic minorities and other historically marginalised groups may relate to the employee's psychological safety and employee's creativity. Additionally, del Carmen Triana et al. (2011) asserted that perceived discrimination against minorities relates to citizenship behaviour toward minorities. They argued that discrimination against minorities is discrimination based on ethnicity, which arguably has an impact on employee's psychological safety and will lead to organisational outcomes, such as organisational performance. In other words, discrimination, such as gender, ethnicity and discrimination based on an individual's religious belief, may affect the employee's performance or discourages workers as it will influence employee's safety at work.

In addition, Hastings and Finegan (2011) maintained that workplace injustice, for example discrimination may lead to workplace deviance. Kirk-Brown and Van Dijk (2016) also argued that the prevention of toxic work behaviours, such as bullying and harassment are related to the promotion of a work environment that is psychologically safe. Moreover, Jones et al. (2016) remarked that discrimination in the workplace relates to individuals' work-related outcomes and attitudes, such as employee's safety and mental/psychological health. Accordingly, employee's protection from workplace justice, for instance security from bullying and discrimination is a major factor in relation to issues around employees' psychological safety. Hence, by means of the discussion above, the researcher argues that discrimination, such as ethnicity, religion or gender discrimination has a correlation with employee's psychological safety, seeing that it will affect employee's comfort in the workplace. For example, when an employee experiences discrimination based on gender, ethnicity, religious beliefs, etc., it will affect his/her psychological safety.

Moreover, Ghumman et al. (2013), Ghumman et al. (2016) argued that discrimination, such as religious harassment in the workplace occurs as a result of several factors, including legal ambiguities, the increasing variety of religious beliefs and the uniqueness of the religious nature. Arguably, when a worker is discriminated, against as a result of his/her religious belief, it will relate to his/her psychological condition at work. Therefore, the researcher argues that an employee's safety from religious discrimination may become a source of the employee's psychological safety. In addition, Wood et al. (2013) noted that there are four potential perpetrators of discrimination at work: managers, co-workers, patients and visitors. They also argued this discrimination will affect the well-being of an employee. Hence, it means that discrimination has an impact on an employee psychologically. Accordingly, safety from discrimination becomes the source of an employee's psychological safety.

According to prior studies (Ghumman et al., 2013, Wood et al., 2013), several indicators can be used in measuring this construct. For example, discrimination based on an employee's ethnicity (Makin and Winder, 2008) and religious belief (Ghumman et al., 2016). Although to the best of the author's knowledge, no single study has explored discrimination with regards to the psychological safety dimension. Therefore, the researcher argues this discrimination has an impact on an employee's feeling of psychological safety. From the above discussion, this study proposes a new dimension of psychological safety, which is defined as employment equity psychological safety. Furthermore, employment equity is different to energy psychological safety. Energy psychological safety refers to safety as a consequence of receiving support from supervisor's and co-workers,' which is related to the job in general, whilst, employment equity psychological safety is employee's safety regarding specific aspects, which is known as safety from discrimination.

2.2.6 Team-Psychological Safety

According to Edmondson (1999), team psychological safety is "a shared belief in relation to interpersonal risk taking among team members" (p. 354). He argued that interpersonal risk taking refers to a team members confidence will not affected by another member when he/she is doing his/her job. Accordingly, team psychological safety relates to an employee's feeling as a member of a team in relation to not being rejected, embarrassed or punished by other members of the team when he/she is speaking up (Carmeli et al., 2009, Schaubroeck et al., 2011, Liu et al., 2015). In addition, team psychological safety is similar to with inner psychological safety. The difference between a team and inner-psychological safety is the object of measurement. In inner-psychological safety, the object of measurement is an individual; however, the object of team psychological safety is a workgroup (Edmondson, 1999, van Ginkel and van Knippenberg, 2008, Bradley et al., 2012). Moreover, team psychological safety is a shared belief with respect to an individual's belief. It means that team psychological safety is a result of a common understanding between team members (Bradley et al., 2012). Hence, team in this context is a workgroup (Koopmann et al., 2016, Roussin et al., 2016).

However, team psychological safety is dissimilar to group cohesiveness, because it is not about engagement in the team, but about an employee feeling comfortable about engaging in a team. Team cohesiveness may be improved when the team has excellent team psychological safety (Schaubroeck et al., 2011). Although group cohesiveness and psychological safety are noticed, group cohesiveness relates to an affective level, whereas psychological safety refers to a cognitive level (Bradley et al., 2012). Thus, from this point of view, the researcher asserts that team psychological safety is the team members'

confidence in speaking up freely without any concern for interpersonal risk taking among team members, which comes from mutual respect and trust (Dollard and Bakker, 2010).

There are three primary antecedents related to team psychological safety: trust, positive relations and familiarity (Edmondson, 1999, Burke et al., 2006, Gibson and Gibbs, 2006, Howorth et al., 2012, Koopmann et al., 2016). An employee will be safe psychologically when he/she trusts his/her team members. Indeed, it will let him/her build a more encouraging relationship with others and creates familiarity between them. Accordingly, the researcher argues that the psychological safety of the employees will be greater when they trust their team members. Hence, to increase team psychological safety, a company has to maintain its employee's trust. In other words, the company has to build an environment that is conducive, in order to make sure that employees have a positive relationship with other members, which is related to trust and familiarity.

According to Tynan (2005), team psychological safety relates to the behaviour of the team leader. Thus, in a team with high psychological safety, team members are confident that their team member will not reject or punish them because of their opinion (Huang et al., 2008). In other words, when an employee expects that his/her team members will treat him/her with respect, he/she will have enhanced team psychological safety (Schulte et al., 2010). Moreover, team psychological safety is related to positive and beneficial team interpersonal dynamics (Koopmann et al., 2016). Accordingly, to measure this feeling of safety, several indicators can be employed, such as my team members support each other (Edmondson, 1999, Carmeli, 2007). Therefore, in a strong team psychological safety climate, employees as team members feel safe in relation to how other members will respond to their behaviour. However, some authors, such as May et al. (2004) and Huang et al. (2008) argued that literature on team psychological safety and its antecedents are relatively limited in previous studies. Hence, this study employs team psychological safety as a dimension of psychological safety.

2.2.7   Systematic Literature Review (SLR) on Psychological Safety

This study has conducted a systematic literature review in connection with psychological safety in previous studies. Table 2.2 explains the number of articles which have been published from 1982 up to 2015. This SLR has employed psychological safety as abstract, keyword and title in four journal databases (i.e., ABI-INFORM, Science Direct, Scopus and WoS).

Table 2.2 Numbers of Published Articles on Psychological Safety in Databases from 1986-2016

ABI INFORM	SCIENCE DIRECT	SCOPUS	WOS	TOTAL
120	38	237	210	596

Figure 2.1 demonstrates that the SLR has conducted screening procedures to reduce the number of articles from 596 into 25 articles. These screening procedures use six criteria in exclusion processes, including only management and business topic, the article only, English language only, grade 3 and 4 ABS ranking journal only, relevant abstract and no duplication. This systematic literature review only addressed management and business topic because it focused on employees of listed companies as the respondents which relates to the area of management and business. However, in the development of the hypothesis, this study also used several articles from other related areas, such as applied psychology.

Figure 2.1 Systematic Literature Review Steps

```
┌──────────────┐  ┌──────────────┐  ┌──────────────┐  ┌──────────────┐
│  ABI Inform  │  │    Scopus    │  │Science Direct│  │     WoS      │
│     120      │  │     237      │  │      38      │  │     201      │
└──────────────┘  └──────────────┘  └──────────────┘  └──────────────┘
```

| Total 596 | → | Exclusion: Non-Business and management (340) |

| Business and Management only, Total= 256 | → | Exclusion: Non-article (55) |

| Article only, Total= 201 | → | Exclusion: Non-English Language (0) |

| English Language only Total= 201 | → | Exclusion: non-ABS Rank grade 3 & 4 (140) |

| ABS Rank grade 3 & 4 only, Total= 61 | → | Exclusion: Non-relevant abstract (16) |

| Relevant Abstract only: *Total= 45* | → | Exclusion: No duplication (20) |

| Article in Analysis 25 |

Table 2.3 illustrates the variable map of 25 articles included in the analysis. Most of the studies were conducted in the US. Based on data collection method, most studies employed surveys, including a mail survey, an online survey and a drop & collect survey method. Moreover, Table 2.3 demonstrates that previous studies have addressed psychological safety as a variable. However, no single study has addressed all dimensions

of psychological safety in one particular study. For example, Kahn (1990) focused on individual psychological safety and Tucker et al. (2007) only addressed team psychological safety. Accordingly, the researcher argues that studies pertaining to all dimensions of psychological safety remain neglected. Hence, the literature review has shown that empirical studies regarding all dimensions of psychological safety are still being overlooked. Moreover, all dimensions of psychological safety might be related to each other. However, only two studies have addressed several dimensions of psychological safety (Beus et al., 2010, Dollard and Bakker, 2010). Hence, an opportunity has been created for a future study to examine all dimensions of psychological safety.

In summary, the author concludes that:

1. No single study has addressed all psychological safety dimensions together. Even though well-known authors, such as Edmondson has addressed psychological safety, for instance team psychological safety, he failed to investigate other dimensions of psychological safety in his previous studies (e.g., employment equity psychological safety) (Edmondson, 1999) and Kahn (1990) only addressed psychological safety as an individual. Hence, the researcher argues that studies on all dimensions of psychological safety are still limited (Liang et al., 2012, Roussin et al., 2016). The researcher argues that a comprehensive study with regards to psychological safety will offer a better explanation concerning the relationship between psychological safety, self-efficacy and organisational performance. Accordingly, a more comprehensive study which addresses all dimensions of psychological safety might provide a better result in connection with psychological safety in the workplace.

2. Most studies have been conducted in the US and other developed countries (Singh et al., 2013, Simonet et al., 2015, Kirk-Brown and Van Dijk, 2016). While psychological safety is not only a problem in workplaces in developed countries, but also the primary concern of employees working in companies in emerging country

(Erkutlu and Chafra, 2016, Koopmann et al., 2016). For example, Koopmann et al. (2016) investigated psychological safety in China. They established that team psychological safety is related to team performance. However, research in developing countries is still inadequate and the culture differentiation between developed and developing countries may present a different result (Liang et al., 2012). Thus, a study on this topic is still required with the aim of gaining a new perspective from the point of view of an emerging country.

Table 2.3 Variable Map of Studies on Psychological Safety from 1982 to 2015

Author	Psychological Safety					Methodology					Journal Info			
	PR	I	E	T	EE	Country	Sample size	Method	Data analysis	GSNC	JCR Journal Title	ABS JR	IF 2013	Journal Starting Time
(Kahn, 1990)		●				India	32 participants (counsellors and employees	D, G	XII	2168	Acad Manage J	4*	4.974	1958
Wallace and Chen (2005)	●					US	Survey of 323 employees	C	IV, XI	84	J Occup Organ Psychol	4	2.480	1976
Nembhard and Edmondson (2006)	●					US, Canada	Interview: 23 employees, survey of 1440 employees	D, E	XIII	324	J Organ Behav	4	3.26	1981
Neal and Griffin (2006)	●					Australia	Survey of S1:430 S2:490 S3: 301 employees	E	VII	338	J Appl Psychol	4	4.367	1917
Burke et al. (2006)				●		#	#	TC	I	274	J Appl Psychol	4	4.367	1917
Tucker et al. (2007)				●		US	Survey to 1440 employees (response rate58%)	C	IV,VII	218	Manage Sci	4	2.52	1954

Study			Country	Method	Type	Topics	N	Journal	Q	IF	Code
Walumbwa and Schaubroeck (2009)		•	*US*	*Survey of 894 employees (response rate 69%, and 222 supervisor (rr 80%*	*E*	*XI,XIII*	*233*	*J Appl Psychol*	*4*	*4.367*	*1917*
Carmeli et al. (2009)		•	*Israel*	*Survey of 235 students (rr 90%)*	*E*	*IV,XI*	*91*	*Syst Res Behav Sci*	*3*	*#*	*1956*
Beus et al. (2010)	•	•	*#*	*#*	*TC*	*XIII*	*76*	*J Appl Psychol*	*4*	*4.367*	*1917*
Dollard and Bakker (2010)	•	•	*Australia*	*Survey of 209-288 employees 3 times*	*E*	*XIII*	*99*	*J Occup Organ Psychol*	*3*	*2.480*	*1976*
Pearsall and Ellis (2011)		•	US	Survey of 378 employees	E	VII	19	*J Appl Psychol*	*4*	*4.367*	*1917*
Raub and Liao (2012)	•		*Europe, Middle East, Africa, Asia*	*Survey of 900 supervisors and 2,358 employees*	*A*	*XI*	17	*J Appl Psychol*	*4*	*4.37*	1917

			Country	Method				Journal			
Liang et al. (2012)	•		China	Survey of 39 employees	E	XI	60	Acad Manage J	4*	4.974	1958
Howorth et al. (2012)		•	UK	Interviews with 25 managers	D	XII	9	Acad Manag Learn Edu	4	2.121	2002
Leroy et al. (2012)		•	Belgia	Survey of 588 nurses	E	XI	19	J Appl Psychol	4	4.37	1917
Bradley et al. (2012)		•	US	Survey of 117 students' teams (561 persons)	E	VII	38	J Appl Psychol	4	4.37	1917
Halbesleben et al. (2013)	•		US	Survey of 658 employees	C	I, XI	3	J Occup Health Psychol	4	2.178	1996
Kirkman et al. (2013)		•	US	Inteviews with 56 employees and 16 leaders	D	VII	16	Hum Relat	4	1.87	1947
Singh et al. (2013)	•		US	Survey of 165 matched pairs employee-supervisor	A	IV,VII	26	J Occup Organ Psychol	4	2.480	1976
Liu et al. (2014a)		•	China	Survey of 263 members from 50 teams	C	V, XI	18	Leadership Quart	4	2.938	1990
Simonet et al. (2015)		•	US	Interviews with 25 members and survey of 229 members of church units	D,E	XI	1	J Psychol	-	1.765	1935

Kirk-Brown and Van Dijk (2016)	•		*Australia*	*Survey* of *512 employees*	*D*	*XI*	*0*	*Int J Hum Resour Man*	*3*	*1.262*	*1990*
Roussin et al. (2016)	•	*#*	*#*		*TC*	*#*	*3*	*J Manage*	*4*	*6.862*	*1975*

Note: GSNC = Google Scholar Number of Citations; PR= Physical risk psychological safety; I = Inner-psychological safety ; E= Energy psychological safety   ; T=   Team psychological safety; # = Missing sample data; A = Self-administered mail survey; B= Personal interview; C= Self-administered online survey; D= Interviewer administered; E= On-site and drop & collect survey, F= Telephone interview; G= Observation ; H= Secondary data TC = Theoretical conceptualisation; I= Descriptive statistics; II= Chi-square test/s; III= T-test/s; IV= Factor analysis; V= Analysis of variance – ANOVA & post-hoc analysis; VI= Cluster analysis; VII=Regression; VIII = Correlation analysis; IX = Internal reliability- Cronbach's Alpha; X = Discriminant analysis; XI = Structural equation modelling; XII = Qualitative analysis techniques; XIII = Other analysis; JCR = Journal Citation Reports**;** ABSJR = ABS journal ranking; IF= Impact Factor

2.3   Self-Efficacy

Self-efficacy has become a popular topic within organisational behaviour and psychological literatures (Harrison et al., 1997, Fernandez-Ballesteros et al., 2002, Elias et al., 2013). Self-efficacy is an individual's perceptions of his/her ability to organise and execute the courses of action required to produce given attainment (Bandura, 1991, Bandura, 1997, Gully et al., 2002, Walumbwa et al., 2011, Beeftink et al., 2012). In addition, Karatepe et al. (2006) emphasised that self-efficacy is an individual's motivational construct. Hence, it argues that self-efficacy is the belief or perception of a person regarding his or her capabilities to achieve his or her goals.

Moreover, self-efficacy has several influencing factors, such as employee experience, psychological states, work environment and knowledge (Sherer et al., 1982, Bandura, 1997, Chen et al., 2001, Eden et al., 2010). For example, Al-Refaie (2013) argued that safety activities, which relate to psychological safety will produce employee's efficacy. Hence, when an employee has enhanced psychological safety, it will lead to his/her feeling comfortable enough to execute the job and moreover, relates to employee's self-confidence or efficacy. Furthermore, there are several definitions of self-efficacy presented in previous studies.

2.3.1   Definition of Self-Efficacy

Several previous scholars have defined the concept of self-efficacy. Table 2.4 displays certain definitions of self-efficacy from previous literature. For example, Bandura (1982, p. 122) stated that self-efficacy is concerned with judgment regarding how well one can execute the action required to deal with potential situations. He also argued that high self-precepts of efficacy may have an impact on performance as strong self-efficaciousness is essential for optimal performance. Moreover, Gist and Mitchell (1992) argued that self-efficacy is a person's estimation of his/her ability to orchestrate

performance on a particular task. Conversely, several authors (e.g., Gibson, 1999, Gully et al., 2002, Karatepe et al., 2006) defined self-efficacy as a group or team belief in their capabilities to perform jobs efficiently. Hence, the researcher argues that self-efficacy is not only at an individual level but also at a team level.

In addition, self-efficacy relates to workplace resilience (Bandura, 2000, Avey et al., 2009, Luthans et al., 2013, Cilliers and Flotman, 2016, King et al., 2016). For example, Bandura (2000, p. 75) noted that "perceived collective efficacy fosters groups' motivational commitment to their missions, resilience to adversity and performance accomplishments". Moreover, Avey et al. (2009) asserted that resilience and self-efficacy are the components of psychological capital. Resilience is an individual's capacity to cope with adversity (Avey et al., 2009, King et al., 2016). However, they argued that resilience is not the same as self-efficacy; however, self-efficacy is an antecedent of workplace resilience (King et al., 2016).Conversely, Karademas (2006) maintained that resilience is a dimension of self-efficacy, known as resilience self-efficacy expectations. Consequently, the researcher argues that resilience and self-efficacy are related. Furthermore, Grevenstein et al. (2016, p. 208) argued that "resilience emphasises aspects and characteristics that promote health and positive adaptation". Thus, resilience deals with how an employee manages stress and adversity and will relate to his/her efficacy and well-being. Liu et al. (2016a) also revealed that creative self-efficacy may lead to strong and sustainable resilience against failures and threats. Therefore, it argued that resilience is a concept related to self-efficacy. However, this study focuses on self-efficacy.

According to certain authors (e.g. Jones, 1986, Riggs and Knight, 1994, Elias et al., 2013, Wang et al., 2014), self-efficacy has several dimensions, including individual or personal self-efficacy, collective self-efficacy, and specific types of self-efficacy. A

number of authors, such as Bandura (1982), Biemann et al. (2015) and Tu and Lu (2016) mentioned that self-efficacy is an individual dimension. They focused on an individual's belief concerning his/her competence to perform a job successfully. Moreover, several studies have also described self-efficacy as collective or at a team level (Gully et al., 2002, Chen and Kao, 2011, Illia et al., 2011). For instance, Chen and Kao (2011) asserted that self-efficacy is a collective belief that the organisation or group can accomplish its tasks successfully. In addition, several authors also revealed an additional dimension of self-efficacy, known as creative self-efficacy (e.g., Tierney and Farmer, 2002, Ng and Feldman, 2012a, Wang et al., 2014, Huang et al., 2016). Creative self-efficacy alludes to an employee's belief in his/her ability to perform his/her job creatively (Tierney and Farmer, 2002, Ng and Feldman, 2012a). Accordingly, the researcher argues that self-efficacy can be divided into these three dimensions, including individual self-efficacy, collective self-efficacy and creative self-efficacy. Thus, this study employs these three dimensions of self-efficacy.

Table 2.4 Definition of Self-Efficacy

Author	Definition
Individual Self-efficacy	
Bandura (1982, p. 122)	Perceived self-efficacy is concerned with judgments related to how well one can execute the action required to deal with potential situations.
Jones (1986, p. 268)	People's expectations that they can successfully perform the behaviour required to produce the outcomes.
Fu et al. (2010, p. 65)	Sales people's perceptions of their ability to sell a new product or their belief that they possess the skills and resources necessary to succeed during the launch of a new product.
Walumbwa et al. (2011, p. 204)	Self-efficacy is defined as individuals' perceptions of their ability to undertake a specific task.
Beeftink et al. (2012, p. 73)	The extent to which a person feels confident to perform well on the design aspects of the job.
Smith and Woodworth (2012, p. 393)	People's beliefs in their capabilities to be motivated and furthermore, to use cognitive resources and the courses of action needed to exercise control over events in their lives.
Biemann et al. (2015)	A person's belief that he/she can attain high performance levels.
Tu and Lu (2016)	A person's belief concerning his/her competence and ability to execute activities successfully.
Collective Self-efficacy	
Riggs and Knight (1994, p. 755)	Judgments that individuals/teams make concerning their ability to do whatever is required to perform their work successfully.
Gibson (1999, p. 138)	A group's belief regarding its ability to perform effectively.
Gully et al. (2002, p. 820)	A shared belief to organise and complete courses of action.

Author	Definition
Chen and Kao (2011, p. 364)	A collective belief that the organisation or the group can accomplish the task.
Illia et al. (2011, p. 631)	Members' shared belief that they have sufficient ability to attain goals and accomplish desired tasks, as a group.

Creative Self-efficacy

Author	Definition
Tierney and Farmer (2002, p. 1138)	The belief one has the ability to produce creative outcomes.
Stetz et al. (2006, p. 50)	Refers to beliefs in one's capabilities to meet situational demands and successfully accomplish a given course of action.
Ng and Feldman (2012a, p. 1027)	Job self-efficacy generates individuals' confidence in their ability to perform well in relation to creative tasks.
Wang et al. (2014, p. 81)	The degree to which individuals believe in their ability to generate creative outcomes.

2.3.2 Individual Self-Efficacy

Individual self-efficacy is concerned with the perceived self-efficacy of an individual in managing his/her life circumstances (Judge and Bono, 2001, Fernandez-Ballesteros et al., 2002, Ahearne et al., 2005, Hecht and Allen, 2005, Biemann et al., 2015). In a different way, Riggs and Knight (1994) indicated that self-efficacy refers to individual judgments regarding the consequences that work performance is expected to produce (p.755). Similarly, Wood and Bandura (1989) defined self-efficacy as a belief in one's ability to be motivated and furthermore, to use the cognitive resources and courses of action required to meet given situational demands (p.408). In contrast, Chen et al. (2001) defined individual self-efficacy as general self-efficacy, which refers to an individuals' perception of their ability to perform across a variety different situations (p. 63). Furthermore, from a work context, individual self-efficacy also alludes to the general efficacy of an individual to undertake his/ her job in the workplace (Gupta et al., 2013, Tu and Lu, 2016). Accordingly, it denotes an employee's judgment with respect to his/her skills and abilities to perform a job properly. Hence, the researcher argues that individual self-efficacy is an individual's perception of his/her ability to perform a task effectively in different situations.

Moreover, Jones (1986) maintained that people's expectations concerning their ability to behave successfully may relate to individual self-efficacy. In addition, Bandura (2012) asserted that self-efficacy beliefs have an impact on human functioning quality by way of cognitive, motivational, affective and decision processes. For example, self-efficacy relates to how employees motivate themselves and solve difficulties at work. Conversely, Maurer (2001) explored an important and under-recognised factor; self-efficacy pertaining to career-relevant learning and the development of skills with age. Maurer reviewed various factors in an organisational setting, which might lead to reduced

self-efficacy in relation to learning. Accordingly, it might assume that individual self-efficacy can be seen in an employee's reaction toward certain challenges difficulties and deals with his/her beliefs in his/her ability to solve problems.

Judge and Bono (2001) in their meta-analysis study highlighted that self-efficacy, which is a part of core self-evaluation traits, may have a correlation with an employee's performance. They conducted this literature review of two journals produced over the past 40 years (1957-1997) and unpublished manuscripts. In this meta-analysis, they used 536 published studies and 224 unpublished doctoral dissertations. Judge and Bono defined individual self-efficacy as generalised self-efficacy, which alludes to an estimation of an individual's fundamental capabilities to cope and perform a job successfully. Similarly, Harrison et al. (1997) emphasised that self-efficacy refers to an individual's belief in his/her ability to perform a particular task. Additionally, Heslin et al. (2012) in their study asserted that in the context of individual self-efficacy, the degree of mastery or failure people experience in achieving their goal is a determinant of self-efficacy. Hence, the researcher defines individual self-efficacy as a person's belief regarding his/her ability to perform a particular job successfully.

Several indicators have been used to measure individual self-efficacy in previous studies (Chen et al., 2001, Bandura, 2012, Elias et al., 2013). For example, Jones (1986) and Ahearne et al. (2005) suggested that individual self-efficacy is measured in the context of an employee's expectations that he/she can perform the job successfully (i.e. employee's confidence in his/her ability to perform the job effectively). Thus, the researcher argues that individual self-efficacy relates to an employee's self-assurance in his/her ability to accomplish his/her job. However, self-efficacy is not only observed at an individual level but also at a collective or team level. Hence, the following part will discuss collective self-efficacy.

2.3.3   Collective Self-Efficacy

Collective self-efficacy refers to a shared belief among team members that they can ultimately perform (organise and execute) a specific job (Lindsley et al., 1995, Gibson, 1999, Gully et al., 2002, Choi and Chang, 2009, Wu et al., 2010, Schepers et al., 2011, Bandura, 2012, Salanova et al., 2014). For example, Bandura (2000), Goncalo et al. (2010), Salanova et al. (2014) defined collective efficacy as a shared belief in group members pertaining to their ability to complete a specific job effectively. Similarly, Lewis (2011) pointed out that collective efficacy is equivalent to team efficacy. Lewis identifies it as team collective efficacy. He noted that collective efficacy is based on group beliefs regarding the capability of the group, which is closely related to individual self-interest and linked to performance goals. However, according to Gully et al. (2002), collective efficacy differs from team efficacy in relation to focus. Collective efficacy is related to teams, departments, organisations or nations, while, team efficacy specifically refers to teams. Hence, this study preferred to use collective efficacy in contrast to team efficacy, given that it alludes to a collective belief in teamwork or organisations which can achieve their targets successfully. Moreover, Rose et al. (2014) stressed that collective efficacy is not only related to a team or group's perception, but also to the reciprocal aspects of group functioning in terms of the ability to complete a job successfully.

In a different way, Schaubroeck et al. (2000) asserted that collective efficacy is closely related to social identity theory. They argued that collective efficacy is an antecedent of the role of job control with regards to the demands of the job. Accordingly, high collective efficacy will affect job control for the reason that employees have the self-esteem required to complete their work successfully. In addition, Stajkovic et al. (2009) suggested that collective efficacy may relate to group potency and group performance.

They stated that when team members in a company have enhanced collective efficacy, in terms of the self-confidence to achieve their goals effectively, it may generate greater group performance. Hence, the researcher argues that collective efficacy is an essential factor with respect to organisational performance.

Collective efficacy is relatively similar to individual self-efficacy. However, collective efficacy refers to efficacy at a team/group level, whilst, individual self-efficacy relates to an employee's individual level. Hence, it assumes that the measurement of collective efficacy will be different in comparison to individual self-efficacy. In a similar way, Bandura (2000) stated that there are two approaches employed to measure collective efficacy: the aggregate of the individual method and the aggregate of the group's appraisal. The aggregate of the individual method mentions the appraisal of individual capabilities in executing a group task, whilst the aggregate of the group's appraisal means an evaluation of the group's capabilities as a whole in performing a specific task. Therefore, both of these methods might be applicable in measuring collective or team efficacy.

Riggs and Knight (1994) asserted a seven-item collective efficacy measurement that relates to the capabilities of the team in conducting a specific job. However, Salanova et al. (2014) maintained that although collective efficacy is a group level, the locus of collective efficacy measurement is the individual members. Hence, it could be argued that in measuring collective self-efficacy, the researcher may employ individual members' perceptions of group efficacy assessment as the collective efficacy measurement (individual method) or the aggregate method. Even though collective efficacy has been investigated in prior studies, studies in connection with collective efficacy remain limited (Goddard et al., 2004). Thus, this study aims to investigate self-efficacy and employ it as a dimension of self-efficacy.

2.3.4 Creative Self-Efficacy

Creative self-efficacy is a dimension of self-efficacy in a specific context (Tierney and Farmer, 2002). Even though several well-known authors, such as Bandura mentioned dimensions of self-efficacy (individual and collective self-efficacy), they did not address other potential self-efficacy dimensions, such as creative self-efficacy (Bandura, 2000, Bandura, 2012). Recently, particular authors argued that an additional potential dimension of self-efficacy is creative efficacy, in terms of an employee's belief that he/she can perform the job creatively (Tierney and Farmer, 2002, Mathisen, 2011, Huang et al., 2016). According to Tierney and Farmer (2002, p. 2001), "creative self-efficacy is the belief one has the ability to produce creative outcomes". Moreover, Amabile et al. (1996, p. 1155) claimed that "creativity is the production of novel and useful ideas in any domain". Thus, creative self-efficacy is an implementation of the self-efficacy concept in a specific area.

According to Huang et al. (2016), creative self-efficacy is related to creativity. Creativity should be concerned with how creative outcomes are produced via engagement in a creative way, regardless of whether the outcomes are useful or creative (Zhou and George, 2001, Ritter and Gemünden, 2003, Gilson and Shalley, 2004, Yang and Kang, 2008, Im et al., 2013, Wang et al., 2014). In addition, Oldham and Cummings (1996) stated that creative performance can be defined as products, ideas or procedures that meet the criteria, including novelty ideas or which are original and potentially relevant for, or valuable to an organisation. Accordingly, creativity is the act of an employee to perform his/her job in an innovative way, while creative self-efficacy is an individual belief concerning his/her ability to undertake the job creatively. Hence, an employee with high creative self-efficacy wants to experience more challenging activities that are comprised of new and creative practices (Carmeli and Schaubroeck, 2007).

Moreover, Baer and Frese (2003) stressed that creative team confidence relates to creative self-efficacy. In addition, Farmer and Tierney (2004) emphasised that creative self-efficacy may relate to creative performance. Similarly, Mathisen (2011) suggested that one of the antecedents of creative performance is creative self-efficacy. Mathisen argued that creative efficacy relates to employees confidence that they can achieve their target successfully. In contrast, Amabile and Conti (1999) maintained that creativity has an association with employee motivation, which relates to creative self-efficacy. For example, Tierney and Farmer (2002) suggested that creative self-efficacy is creativity-specific, which alludes to the belief that one can produce creative outcomes (p.2001), and moreover, might be measured by using certain indicators, such as " I spend considerable time in generating new ideas" (Zhang and Bartol, 2010). Accordingly, creative self-efficacy will motivate employees to perform their job in a creative way. Hence, creative self-efficacy refers to employees' belief or confidence related to his/her ability to perform work in a creative way.

Although as far as the researcher is aware, only limited studies have addressed creative self-efficacy as its construct (Tierney and Farmer, 2002, Baer and Frese, 2003), consequently, the researcher argues that creative self-efficacy is employee self-efficacy which relates to his/her perception on his/her creativity in performing a job. Moreover, creative self-efficacy is an antecedent of organisational performance, for instance creative performance (Tierney and Farmer, 2002, Mathisen, 2011). Hence, the researcher contends that creative self-efficacy as a dimension of self-efficacy has a relationship with organisational performance. Therefore, the researcher employs creative self-efficacy as a dimension of self-efficacy.

2.3.5   Systematic Literature Review on Self-efficacy

It should also be noted that this study has addressed the SLR of self-efficacy. Table 2.5 demonstrates the number of articles published between 1986 and 2016 in four databases.

Table 2.5 Numbers of Published Articles on Self-efficacy from 1986-2016

ABI INFORM	SCIENCE DIRECT	SCOPUS	WOS	TOTAL
1151	2098	8720	8926	20,895

Based on the inclusion and exclusion processes, Figure 2.2 illustrates that 17 articles have been included in the analysis. Table 2.6 has revealed that most of the previous studies on self-efficacy were conducted in developed countries and only limited studies have been addressed in developing countries such as Indonesia. Previous studies have also employed various data analysis tools, for instance structural equation modelling (SEM). Although studies related to self-efficacy have been conducted extensively in earlier research, surprisingly, of 17 studies in the analysis, only one study investigated the three dimensions of self-efficacy (Elias et al., 2013).

In their study, Elias et al. (2013) explored self-efficacy dimensions, including generalised self-efficacy, which is concerned with self-efficacy as an individual, work self-efficacy, which deals with efficiency and creative self-efficacy in a job, and learning as a team, which relates to collective self-efficacy. Moreover, Jones (1986) only investigated individual self-efficacy, whilst, Gibson (1999) only examined group efficacy. Albeit a well-known author, such as Bandura (2012) addressed individual and collective self-efficacy, he failed to examine other dimensions of self-efficacy (e.g., creative self-efficacy). Accordingly, the researcher argues that studies with respect to all elements of self-efficacy were overlooked in previous studies. Hence, an opportunity still exists in the

future to address all three self-efficacy dimensions and moreover the relationships within these three dimensions.

To sum up, the researcher argues that research on all dimensions of self-efficacy is still conceivable because:

1. To the best of the researcher's knowledge, only a limited number of studies have addressed all dimensions of self-efficacy. Surprisingly, renowned authors, such as Bandura only examined individual and collective self-efficacy, and failed to address other dimensions of self-efficacy, for instance creative self-efficacy.

2. Most studies were also conducted in developed countries. Hence, an insight into emerging countries, such as Indonesia continues to be overlooked.

Figure 2.2 Systematic Literature Review Steps

```
┌──────────────┐   ┌──────────────┐   ┌──────────────┐   ┌──────────────┐
│  ABI Inform  │   │    Scopus    │   │Science Direct│   │     WoS      │
│     1151     │   │     8720     │   │     2098     │   │     8926     │
└──────┬───────┘   └──────┬───────┘   └──────┬───────┘   └──────┬───────┘
       └──────────────────┴────────┬─────────┴──────────────────┘
                                    ▼
                        ┌────────────────────────┐
                        │         Total          │
                        │        20,895          │            ┌──────────────────────┐
                        └────────────────────────┘            │ Exclusion: Non-      │
                                    ▼ ◄──────────────────────  │ Business and         │
                                                               │ management (18417)   │
                        ┌────────────────────────┐             └──────────────────────┘
                        │ Business and Management│
                        │   only, Total= 2478    │             ┌──────────────────────┐
                        └────────────────────────┘             │ Exclusion: Non-      │
                                    ▼ ◄──────────────────────  │ article (279)        │
                        ┌────────────────────────┐             └──────────────────────┘
                        │ Article only, Total= 2199│
                        └────────────────────────┘             ┌──────────────────────┐
                                    ▼ ◄──────────────────────  │ Exclusion: Non-      │
                                                               │ English Language     │
                        ┌────────────────────────┐             │ (53)                 │
                        │English Language only,   │            └──────────────────────┘
                        │    Total= 2146          │
                        └────────────────────────┘             ┌──────────────────────┐
                                    ▼ ◄──────────────────────  │ Exclusion: non-      │
                                                               │ ABS Rank grade 3     │
                        ┌────────────────────────┐             │ & 4 (2085)           │
                        │ ABS Rank grade 3 & 4    │            └──────────────────────┘
                        │  only, Total= 61        │
                        └────────────────────────┘             ┌──────────────────────┐
                                    ▼ ◄──────────────────────  │ Exclusion: Non-      │
                                                               │ relevant abstract    │
                        ┌────────────────────────┐             │ (9)                  │
                        │ Relevant Abstract only: │            └──────────────────────┘
                        │    Total= 52            │
                        └────────────────────────┘             ┌──────────────────────┐
                                    ▼ ◄──────────────────────  │ Exclusion: No        │
                                                               │ duplication (35)     │
                        ┌────────────────────────┐             └──────────────────────┘
                        │ Article in Analysis     │
                        │        17               │
                        └────────────────────────┘
```

Table 2.6Variable map of Studies on Self-efficacy from 1982 to 2015

Author	Self-Efficacy			Methodology					Journal Info			
	In	Co	Cr	Country	Sample size	Method	Data analysis	GSNC	JCR Journal Title	ABS JR	IF 2013	Journal Starting Time
Jones (1986)	●			US	127 MBA students	E	VII	1225	Acad Manage J	4*	4.974	1958
Gibson (1999)		●		US,Hongkong, Indonesia	294 students, 71 teams in hospitals	D, E	VII	465	Acad Manage J	4*	4.974	1958
Chen et al. (2001)	●			US	S1=316 S2=323 employees	E	IV, IX	910	Organ Res Methods	3	3.525	1998
Ritter and Gemünden (2003)			●	Germany	Interviews with 308 managers	D	XI	558	J Bus Res	3	1.31	1973
Gilson and Shalley (2004)			●	UK	Survey of 144 employees	E	VI	256	J Manage	4	6.862	1975
Carmeli and Schaubro			●	Israel	Survey of 155 students	E	IV, VII	128	Leadership Quart	4	2.01	1990

				Country	Method				Journal			
eck (2007)												
Choi and Chang (2009)		●	●	Korea	Survey of 3694 employees	E	XI	53	J Appl Psychol	4	4.367	1917
Stajkovic et al. (2009)		●		#	Survey of 96 Studies	H	XIII	200	J Appl Psychol	4	4.367	1917
Fu et al. (2010)	●			US	Obsevation of 1 company, 457 days sales observations	G	XIII	82	JMarketing	4*	3.78	1936
Bandura (2012)	●	●		#	#	TC	XIII	470	J Manage	4	6.862	1975
Wu et al. (2010)	●	●		US	Survey of 70 leaders, 573 employees	C	IV,XI	110	Acad Manage J	4*	4.974	1958
Elias et al. (2013)	●	●	●	US	Personal interviews with 133 employees	B	XI	1	J Appl Psychol	4	4.367	1917
Wang et al. (2014)			●	Taiwan	Survey of 395 pairs of	A	XI	4	Tourist Manage	4	2.377	1982

			supervisors-employees							
Liu et al. (2014b)	•	*China*	*Survey of 133 students*	*C*	*XI*	*3*	*J Appl Psychol*	*4*	*4.367*	*1917*
Biemann et al. (2015)	•	*German*	*Survey of 2493 employees*	*C*	*XIII*	*4*	*Leadership Quart*	*4*	*2.938*	*1990*
Yoon and Christopher Kayes (2016)	•	*South Korea*	*1397 employees*	*E*	*XIII*	*0*	*J Organ Behav*	*4*	*3.26*	*1981*
Ng and Lucianetti (2016)	•	*Italy*	*303 employees*	*E*	*IV, XIII*	*1*	*J Appl Psychol*	*4*	*4.367*	*1917*

2.4   Organisational Performance

Psychological safety and self-efficacy relate to organisational performance (Oldham and Cummings, 1996, Baer and Frese, 2003, Stajkovic et al., 2009, Singh et al., 2013, Koopmann et al., 2016). For example, Gibson et al. (2007) established that team involvement in information sharing, which alludes to team psychological safety has an impact on financial performance. Moreover, Stajkovic et al. (2009) noted that collective efficacy relates to group performance. Consequently, organisational performance becomes an important concept in connection with managing a business (Neely, 1999). Traditionally, most business organisations have measured performance based on financial accounting performance methods (Wu and Chang, 2012, Hartnell et al., 2016, Hasan et al., 2016). These measurements are only related to the financial condition of an organisation, whilst the performance of an organisation can not only be measured by means of financial measurements, but also by using non-financial measurement (Carmeli and Tishler, 2004, Meglio and Risberg, 2011, Zhu et al., 2016a). Non-financial performance is performance measurement based on non-financial indicators (Dossi and Patelli, 2010, Wang et al., 2015), for example, customer satisfaction, employee turnover and organisational climate (Dossi and Patelli, 2010). Thus, this study attempts to capture organisational performance from both sides. Accordingly, this study employs both financial and non-financial measurements as organisational performance dimensions. The next part describes the definition and dimensions related to organisational performance.

2.4.1   Definition of Organisational Performance

Table 2.7 depicts several definitions of organisational performance in previous studies. Most authors have previously defined organisational performance as a multidimensional construct, which is categorised into two groups: financial and non-financial performance (Venkatraman and Ramanujam, 1986, Eccles, 1991, Aragón-

Correa et al., 2007, Meglio and Risberg, 2011, Stam et al., 2013, Oh et al., 2015, Zhu et al., 2016a). In a different way, certain researchers (e.g., Lee et al., 2011, Rosenbusch et al., 2011, Walumbwa et al., 2011) defined performance as market performance and financial performance. The researcher argues that there are three groups of organisational performance, including financial performance only, non-financial performance only and both financial and non-financial performance. Therefore, this study uses both financial performance and non-financial performance as the measurement of organisational performance.

Table 2.7 Definition of Organisational Performance

Author	Definition
Financial Performance	
Baer and Frese (2003, pp. 53-54)	There are two indicators with regards to company performance: achievement of company goals and return on assets. Achievement of company goals measures one aspect of performance, specifically, how well the company is doing with regard to its own goals and in comparison with its direct competitors.
Zhu et al. (2016a)	Performance can be measured by using financial indicators to compare industry performance.
Non-financial Performance	
Eccles (1991, pp. 132-133)	Performance can be measured not only by financial indicators but also by way of operation indicators and customer satisfaction.
Guest (1997, p. 266)	Performance is a company-dominated criterion while outcomes are potentially much broader. They may include environmental issues, job satisfaction, and contribution to community activities, so on and so forth.
Barringer and Bluedorn (1999, p. 426)	Performance based on control systems can be divided into financial control base performance (e.g., net income, return on equity, return on sales) and strategic control base performance (e.g., customer satisfaction, quality control and other operational criteria)
Smallman and John (2001, p. 230)	Company performance is not only based on financial perspectives but also in connection with internal social performance, such as corporate social performance
Neely (2005, p. 1265)	Market standing, innovation, productivity, physical and financial resources, profitability, manager performance and development, worker performance and attitude, and public responsibility" are appropriate performance criteria.
Aragón-Correa et al. (2007, p. 353)	Organisational performance can be measured by using financial indicators (e.g., return and growth) and non-financial performance, such as perception of competitors.
Kim and Kim (2009, p. 478)	Performance can be measured based on customer perspective, causal relationship, manifold perspectives, antecedent elements and perceptual factors (CRM scorecard).

De Clercq et al. (2010, p. 93)	Performance indicators are financial, operations and marketing indicators.
Meglio and Risberg (2011, p. 422)	Organisational performance can be divided into two domains: financial domain, including market performance and accounting performance, and non-financial domain including operational performance and overall performance.
Stam et al. (2013, p. 158)	Company performance is a multi-dimensional construct that has been measured using a variety of indicators: financial and non-financial indicators.
Hajmohammad and Vachon (2013, p. 1)	Company performance can be divided into three types of performance: financial, environmental and social performance.
Wang and Berens (2015)	Performance can be measured by using corporate social responsibility activities and financial performance.

2.4.2   Financial Performance

A well-known indicator commonly used in measuring organisational performance is the financial performance indicator (Eccles, 1991, Hasan et al., 2016). Financial performance is measured by financial indicators, such as sales growth and profitability (Junni et al., 2013, Shin et al., 2015), for example, sales volume and percentage of market share (Stam et al., 2013). Moreover, financial indicators can be reflected in particular ratios, such as return on investment (ROI), return on sales (ROS), return on Asset (ROA) (Stam et al., 2013, Hartnell et al., 2016), return on equity (ROE) (Baer and Frese, 2003) and Tobin's Q (Hasan et al., 2016). In addition, Eccles (1991) claimed that using only financial indicators as a measurement of performance can be debated, commonly, companies use financial indicators to describe their performance. These financial indicators are generally accepted by company stakeholders, such as shareholders and investors. In a similar way, Junni et al. (2013) argued that financial measurement, which focuses on growth and profitability, is an objective measurement. Consequently, most companies continue to rely on this measurement. Hence, the researcher assumes that financial performance has become the favourite indicator with regards to measuring company performance.

Moreover, several scholars (e.g. Eccles, 1991, Baron and Markman, 2003, Neely, 2005, Ameer and Othman, 2012) assumed that if a company demonstrates a respectable financial performance, people will see the company as a reliable and trustworthy company and *vice versa*. For example, Ameer and Othman (2012) employed financial performance as performance indicators in relation to sustainability and corporate performance. They noted that financial performance is an important indicator of the viability of a global company. Hence, it could be stated that financial performance indicators are appropriate indicators in connection with measuring organisational performance. Accordingly, it

could be more straightforward to measure the performance of an organisation by using financial measurements, such as the company's sales growth or profitability, percentage of return on investment (ROI) or return on equity (ROE). All of these indicators are presented in a company's financial report and recognised by stakeholder**s,** such as shareholders and investors. Hence, the stakeholders are concerned with financial indicators as they indicate whether a company is performing poorly or well.

However, financial performance indicators are not the best indicators of organisational performance (Venkatraman and Ramanujam, 1986, Neely, 2005, Hartnell et al., 2016, Hasan et al., 2016). For example, Neely (1999), Neely (2005) shows that financial performance has various weaknesses, including being a short-term indicator, lacks focus on a strategic level, lacks flexibility and only offer short-term targets for a manager rather than continuous improvement. Certain researchers (Aragón-Correa et al., 2007, Tsai and Hsieh, 2011) have tended to claim that there are several other indicators of organisational performance, such as customer satisfaction, technological performance, etc. In addition, Venkatraman and Ramanujam (1986) defined three domains of performance: financial performance, organisational performance (financial performance + operational performance), and organisational effectiveness.

According to Kunze et al. (2016), organisational effectiveness relates to the perception of a company, for example efficiency in business procedures, employee productivity and the timely production of goods and services compared to competitors. Hence, this indicator will relate to company image in contrast to others and it is also a non-financial indicator. Thus, both financial and non-financial performance measurements are a superior alternative with respect to measuring organisational performance (Dossi and Patelli, 2010). Hence, besides financial performance, this study

also employs non-financial performance as a measurement of organisational performance.

2.4.3 Non-Financial Performance

Financial performance is different to non-financial performance. For example, non-financial performance measurements, such as market share, customer satisfaction and innovation are more modest than financial performance measurements (Wu and Chang, 2012). Non-financial performance is a performance measurement using non-financial indicators, for instance customer satisfaction and employee perspective's performance (Dossi and Patelli, 2010). According to Eccles (1991), a company uses non-financial performance measurement due to the complexity of financial performance. The measurement of non-financial performance is not an objective measurement, or it is a subjective or perceptual measurement by comparing it with others, such as competitors (Junni et al., 2013). Although these indicators have a number of disadvantages, such as perceptual data that relates to subjective bias, the indicators above can be applied in organisational performance studies.

Moreover, Kaplan and Norton (2007) claimed that there are four perspectives pertaining to measuring company performance: financial, internal business processes, learning and growth, and the customer. This concept is known as the balanced scorecard. Additionally, Kaplan and Norton noted that the balanced scorecard can assist managers in the strategic management system. This concept enables managers to assess the performance of the company, not only from a financial perspective but also from other viewpoints (Neely, 2005, Wu and Chang, 2012, Hartnell et al., 2016, Hasan et al., 2016). For example, company performance can be measured based on perceived customer satisfaction. Hence, this concept may also assist managers to set the company's strategic planning. Conversely, Danna and Griffin (1999) and Hasan et al. (2016) highlighted that

an employee's well-being, such as anxiety, depression and stress are also related to organisational performance. Thus, it means that there are a number of non-financial indicators which can be used to measure organisational performance (e.g., customer satisfaction, employee well-being and company image).

Even though several previous studies have examined non-financial performance; however, research into non-financial performance variables, such as employee well-being is still essential (Wang and Berens, 2015, Zheng et al., 2015, Zhu et al., 2016a). The researcher argues that both company image and employee well-being are related to non-financial performance (Petkova et al., 2014, Zheng et al., 2015, Hasan et al., 2016); however, several previous studies have not addressed them as a part of non-financial performance. Conversely, company image and well-being have become interesting topics in recent studies and become a significant factor with regards to measuring the performance of company or organization (Lopez et al., 2011, Kwon and Rupp, 2013, Wang and Berens, 2015). Moreover, certain authors, such as Van De Voorde et al. (2012), Wang and Berens (2015) revealed that company image and employee well-being may relate to financial performance. Hence, this study employs these dimensions, including company image and employee well-being as non-financial performance variables. Accordingly, the following part discusses company image.

2.4.3.1   Company image

One indicator of organisational or company performance is in connection with the positive perception of people including its employees, regarding the company (Wu and Chang, 2012). According to Lopez et al. (2011), company image is the perception of workers with respect to their organisation. Moreover, company image refers to people's perception of a company's previous action and potential when compared with leading competitors (Kwon and Rupp, 2013, Petkova et al., 2014, Wang and Berens, 2015,

Baumann-Pauly et al., 2016, Pope and Wæraas, 2016). According to Wu and Chang (2012), company image is a part of non-financial performance, which a customer will use to analyse a company. From this perspective, people will compare a company's image with its competitors. In addition, Aragón-Correa et al. (2007) maintained that the use of scales to evaluate performance in relation to primary competitors is one of the practices of performance measurement (p. 353). Accordingly, the researcher contends that company image is a possible measurement of organisational performance. Therefore, a company will have a superior performance if it has a better image or reputation in contrast to other competitors.

According to Jha et al. (2013), company image relates to various associations and the meaning of the company in minds of its stakeholders (e.g., customer, employee and society). Moreover, Minkiewicz et al. (2011) asserted that corporate image is a multi-dimensional construct which is related to stakeholders' beliefs, perceptions or attitude toward a company. In a different way, Kim et al. (2012) stated that corporate image is related to company performance, which is reflected in customer satisfaction and customer loyalty. Hence, the researcher defines corporate image as a stakeholder's perception of the company, which arguably has a relation to organisational performance.

Moreover, Lopez et al. (2011) noted that corporate image is the perceptions of organisational members in connection with their organisation (p. 1602). In addition, Petkova et al. (2014) revealed that corporate reputation reflects stakeholders' perceptions of a company's ability to deliver value in conjunction with the key dimensions of performance (p.425). Additionally, Worcester (2009) emphasised that corporate image is an important indicator of a company's success or failure for the reason that it is the net result of all experiences, impressions, beliefs, feelings and knowledge regarding the company (p.578). Thus, it signifies that when a company has a superior company image,

it relates to a better performance. Thus, company image is a key factor with respect to a company's success. Accordingly, the researcher argues that the company image is a dimension of non-financial performance. Furthermore, besides company image, an additional non-financial performance's dimension in this study is employee well-being, which is described in the next part.

2.4.3.2 *Employee well-being*

Employee well-being at work has become a common topic in management issues and an indicator of organisational performance (Danna and Griffin, 1999). However, according to Maltin and Meyer (2010), employee well-being is an increasing concept. Their research noted that employee well-being is beyond the indices of physical illness and psychological strain, and it is included personal growth and related indices of optimal functioning. Conversely, Almudena (2013) asserts that there are three antecedents of health and well-being in the workplace: work setting (e.g., health, safety and other hazards), personality traits and occupational stress. Thus, general employee well-being in the workplace is not only related to physical/physiological dimensions but also mental/psychological dimensions. Due to that, a company has to be concerned with psychological dimensions in the workplace in addition to physical dimensions.

Table 2.8 describes a number of dimensions regarding employee well-being, for instance psychological well-being (Witte, 1999), subjective well-being (Diener, 2000) and affective well-being (Daniels et al., 2012). However, Plaud and Guillemot (2015) classified employee well-being into three dimensions: physical well-being, mental well-being and social well-being.

Table 2.8 Definitions of Employee Well-being

Category	Definition	Source
Psychological well-being	Individual's sense of emotional well-being and comfort	Repetti (1987); Sonnentag et al. (2010); (Witte, 1999)
Subjective well-being	People's evaluations both affective and cognitive of their lives	Diener (2000)
Affective well-being	Has components related to activated pleasant affect and activated unpleasant affect	Daniels et al. (2012)
Physical well-being	A good state of health and the absence of a physical disorder disease	Plaud and Guillemot (2015)
Mental well-being	The presence of happiness and life satisfaction.	Plaud and Guillemot (2015)
Social well-being	Equality of interaction with others	Plaud and Guillemot (2015)

Repetti (1987) defined psychological well-being as an individual's sense of emotional well-being and comfort. In addition, Sonnentag et al. (2010) argued that psychological well-being has two indicators: emotional exhaustion and psychosomatic complaints. In contrast, Zheng et al. (2015) stressed that psychological well-being is the improved state of psychological functions and the fulfilment of personal potential (p.623). They introduced six components pertaining to psychological well-being, including involving self-acceptance, personal growth, purpose in life, positive relations with others, environment mastery and autonomy. Hence, psychological well-being refers to employee's well-being from psychological aspects, such as emotion and moreover, relationships with others.

Subjective well-being is people's evaluations both affective and cognitive of their lives (Diener, 2000). According to Su et al. (2016), subjective well-being is related to

how people evaluate their lives and can be based on cognitive or affective bases (p.85). In addition, Plaud and Guillemot (2015) maintained that subjective well-being is an individual's evaluation of his or her life, including life satisfaction and the pursuit of personal goal objectives (p.245). Moreover, Monnot and Beehr (2014) employed affective components, such as arousal and pleasure or satisfaction as an indicator of subjective well-being. In a similar way, Uthayakumar et al. (2010) suggested that in measuring subjective well-being, researchers can use satisfaction with life scale, including affective and cognitive components (e.g., I am satisfied with my life). Hence, it noted that subjective well-being is a subjective evaluation undertaken by an individual, based on cognitive and affective aspects, such as his/her perceived life or job satisfaction.

Conversely, Wright and Huang (2012) stressed that well-being is related to several human aspects, including positive affect, negative affect, mental health, emotional exhaustion, life satisfaction, domain satisfaction, dispositional affect, and the psychological and emotional aspect of human lives. They claimed that well-being has three primary characteristics, including well-being as a phenomenological event, that well-being involves how people feel experience and that the process of emotions and well-being is a global judgment. Moreover, Van De Voorde et al. (2012) mentioned that employee well-being is congruent with organisational performance. Consequently, an organisation's leader should be concerned with the dimensions of well-being if he/she wants to achieve greater organisational performance. Accordingly, from the discussion above, this study states that employee well-being is the perceived well-being of an employee based on psychological and subjective well-being in the workplace, such as job satisfaction, stress and frustration (Rahimnia and Sharifirad, 2015, Mäkikangas et al., 2016).

In addition, financial and non-financial performance is related (Baptiste, 2008, Arendt and Brettel, 2010, Kwon and Rupp, 2013, Wang and Berens, 2015). For example, Baptiste (2008) argued that employee well-being may relate to financial performance. Moreover, Wang and Berens (2015) revealed that corporate reputation is an antecedent of a company's financial performance. As a result, the researcher argues that financial and non-financial performance has a close relationship.

Furthermore, to identify the gap in the literature, this study also conducts a systematic literature review as follows.

2.4.4   Systematic Literature Review on Organisational Performance

Table 2.8 explained the number of publications related to organisational performance from 1986 to 2016. Thus, 9,341 articles were published for 30 years. This study employed inclusion and exclusion criteria in filtering the published articles. This SLR focuses on journals in ABS ranking grade 3 and 4. Additionally, it also uses business and management databases; however, based on the ABS ranking journal, it also comprises particular psychology journals, such as the Journal of applied Psychology and Journal of Organisational Behaviour. Subsequently, the SLR on organisational performance scrutinised 11 articles which are included in the analysis (see Figure 2.3).

Table 2.9 Numbers of Published Articles on Organisational Performance in databases from 1982-2015

ABI INFORM	SCIENCE DIRECT	SCOPUS	WOS	TOTAL
3144	514	3273	2410	9,341

According to 21 critical articles, the researcher argues that studies pertaining to organisational performance were conducted extensively. However, most addressed financial performance as an indicator of organisational performance. Although several

previous studies also investigated non-financial performance indicators, the researcher argues that studies are still required with respect to organisational performance, which combines financial and non-financial performance (e.g., company image and employee well-being). Hence, the combination of financial and non-financial performance will present an improved picture of organisational performance (Kaplan and Norton, 2007).

Overall, although studies on organisational performance have been extensively conducted in previous researches, an opportunity exists for future studies to take place in relation to this topic, given that most have only examined financial performance and other non-financial performance dimensions; for example company image and employee well-being.

Figure 2.3 Systematic Literature Review Steps

```
┌──────────┐  ┌──────────┐  ┌──────────────┐  ┌──────────┐
│ABI Inform│  │ Scopus   │  │Science Direct│  │   WoS    │
│  3144    │  │  3273    │  │     514      │  │   2410   │
└────┬─────┘  └────┬─────┘  └──────┬───────┘  └────┬─────┘
     └───────────────────┬──────────────────────────┘
                         ▼
              ┌─────────────────────┐
              │       Total         │
              │       9341          │              ┌──────────────────────┐
              └──────────┬──────────┘              │ Exclusion: Non-      │
                         ◄───────────────────────  │ Business and         │
                         ▼                         │ management 3732)     │
              ┌─────────────────────┐              └──────────────────────┘
              │Business and Management│
              │  only, Total= 5609   │             ┌──────────────────────┐
              └──────────┬──────────┘              │ Exclusion: Non-      │
                         ◄───────────────────────  │ article (1432)       │
                         ▼                         └──────────────────────┘
              ┌─────────────────────┐
              │Article only, Total= 4177│
              └──────────┬──────────┘              ┌──────────────────────┐
                         ◄───────────────────────  │ Exclusion: Non-      │
                         ▼                         │ English Language     │
              ┌─────────────────────┐              │ (80)                 │
              │English Language only Total=│        └──────────────────────┘
              │       4097          │
              └──────────┬──────────┘              ┌──────────────────────┐
                         ◄───────────────────────  │ Exclusion: non-      │
                         ▼                         │ ABS Rank grade 3     │
              ┌─────────────────────┐              │ & 4 (3238)           │
              │ABS Rank grade 3 & 4 only,│          └──────────────────────┘
              │   Total= 859        │
              └──────────┬──────────┘              ┌──────────────────────┐
                         ◄───────────────────────  │ Exclusion: Non-      │
                         ▼                         │ relevant abstract    │
              ┌─────────────────────┐              │ (808)                │
              │Relevant Abstract only:│             └──────────────────────┘
              │   Total= 51         │
              └──────────┬──────────┘              ┌──────────────────────┐
                         ◄───────────────────────  │ Exclusion: No        │
                         ▼                         │ duplication (30)     │
              ┌─────────────────────┐              └──────────────────────┘
              │Article in Analysis  │
              │       21            │
              └─────────────────────┘
```

Table 2.10 Variable map of Studies on Organisational Performance from 1982 to 2015

Author	Organisational Performance			Methodology						Journal Info			
	FP	EWB	CI	Country	Sample size	Method	Data analysis	GSNC	JCR Journal Title	ABS JR	IF 2013	Journal Starting Time
Eccles (1991)	●	●		#	#	TC	#	1608	Harvard Bus Rev	4	1.831	1950
Neely (1999)	●	●		#	#	TC	#	905	Int J Oper Prod Man	3	1.518	1980
Baron and Markman (2003)	●			US	Survey of 230 employees	E	IV, VII	638	J Bus Venturing	4	3.26	1986
De Clercq and Sapienza (2006)	●			US	Survey of 298 respondents (response rate 24%)	C	IV,VII, XI	115	J Bus Venturing	4	3.265	1986
Yang and Kang (2008)	●			Taiwan	Survey of 516 companies	G	XI	16	Technovation.	4	2.704	1981

Author (year)			Country	Sample				Journal			
Erhemjamts et al. (2013)	●		US	17,516 company-year observations	H	VII	7	J Bus Ethics	3	1.552	1982
Kwon and Rupp (2013)	●		Korea	Survey of 155 companies and secondary data	H, A	XI	16	J Organ Behav	4	3.262	1981
Jha et al. (2013)		●	New Zealand	Survey of 872 customers	A	XI	10	J Service Res	3	2.143	1998
Truss et al. (2013)	●		#	#	TC	XIII	35	Int J Hum Resour Man	3	0.92	1990
Pillemer et al. (2014)	●		US	50 participants	G	IV,V	4	Leadership Quart	4	2.938	1990
Wei et al. (2014)	●		China	3960 respondents from 180 companies	E	XI	24	J Acad Market Sci	3	3.744	1973
Boehm et al. (2015)	●		German	282 employees	E	XI	16	Leadership Quart	4	2.938	1990

			of 150 companies							
Eisenbeis et al. (2015)	●	*German*	*145 employees of 32 companies*	*E*	*XI*	8	*J Bus Ethics*	*3*	*1.552*	*1982*
Jo et al. (2015)	●	*Multi countries*	*4924 company - year observations*	*H*	*VII*	0	*J Bus Ethics*	*3*	*1.552*	*1982*
Oh et al. (2015)	●	*South Korea*	*6709 managers from 71 companies*	*E*	*XIII*	2	*J Appl Psychol*	*4*	*4.367*	*1917*
Ruiz Jiménez et al. (2015)	●	*Spain*	*295 samples*	*E*	*IV,XI*	4	*J Bus Ethics*	*3*	*1.552*	*1982*
Shin et al. (2015)	●	*Korea*	*4231 employees of 147 companies*	*E*	*IV,XI*	12	*J Bus Ethics*	*3*	*1.552*	*1982*
Wang and Berens (2015)	●	*US*	*231 company - year*	*H*	*XI*	5	*J Bus Ethics*	*3*	*1.552*	*1982*

			observations							
Zheng et al. (2015)	●	*China*	*Survey and interviews with 310 practitioners, 340 employees*	*A,D*	*XII, IV, VII*	*1*	*J Organ Behav*	*4*	*3.262*	*1981*
Hasan et al. (2016)	●	*US*	*5516 company-year observations*	*H*	*V*	*1*	*J Bus Ethics*	*3*	*1.552*	*1982*
Zhu et al. (2016a)	●	*Canada*	*376 managers*	*E*	*XI*	*2*	*J Bus Ethics*	*3*	*1.552*	*1982*

Note: GSNC = Google Scholar Number of Citations; FP= Financial Performance; EWB= employee well-being; CI= Company image; # = Missing sample data; A = Self-administered mail survey; B= Personal interview; C= Self-administered online survey; D= Interviewer administered; E= On-site and drop & collect survey, F= Telephone interview; G= Observation ; H= Secondary data TC = Theoretical conceptualisation; I= Descriptive statistics; II= Chi-square test/s; III= T-test/s; IV= Factor analysis; V= Analysis of variance – ANOVA & post-hoc analysis; VI= Cluster analysis; VII=Regression; VIII = Correlation analysis; IX = Internal reliability-Cronbach's Alpha; X = Discriminant analysis; XI = Structural equation modelling; XII = Qualitative analysis techniques; XIII = Other analysis; JCR = Journal Citation Reports**;** ABSJR = ABS journal ranking; IF= Impact Factor

2.5 Psychological Safety, Self-efficacy and Organisational Performance in the Developing Countries

Several researchers have addressed psychological safety, self-efficacy and organisational performance issues in developing countries (e.g., Stajkovic et al., 2009, Raub and Liao, 2012, Liu et al., 2015, Koopmann et al., 2016). For example, Koopmann et al. (2016) investigated the association between team psychological safety and team performance in China. They asserted that team psychological safety climate has a significant effect on team member task performance in large companies in China. Moreover, Liu et al. (2015) also conducted their study in large companies in China. They argued that psychological safety is a mediating variable between authentic leadership and internal whistleblowing. They emphasised that an authentic leader is someone who has intellectual simulation, inspirational motivation, idealised influence and individualised consideration. Thus, an authentic leader generates employees' psychological safety and has an impact on employees being whistle blowers when something erroneous occurs in the workplace.

Ng and Feldman (2012b) also conducted a study pertaining to organisational embeddedness and conflict in the US and China. They established that differentiations in culture in the US, a developed country with an individualistic culture and China a developing country with a collectivist culture has an impact on how employees deal with embeddedness and conflict. Accordingly, embeddedness is related to psychological safety and self-efficacy, and arguably also presents a different result with regards to studies in developed and developing countries. Moreover, Walumbwa et al. (2011) investigated the association between LMX, self-efficacy and employee performance in China. They ascertained that self-efficacy has mediated the link between ethical leadership and employee performance. Luthans et al. (2006) explored the impact of self-efficacy on work attitudes across cultures. They conducted their study in the US and

countries in Southeast Asia. They determined that the relationship between self-efficacy and organisational commitment is stronger in the US than in the Southeast Asia. However, studies in developing countries are still being overlooked (Chen and Tjosvold, 2012). Hence, an opportunity exists for a future study to be conducted. Furthermore, to identify the theoretical gaps, this study has conducted a systematic literature review of all the variables.

2.6 Systematic Literature Review on Psychological Safety, Self-Efficacy and Organisational Performance

Some authors have mentioned that psychological safety, self-efficacy and organisational performance may have a correlation (Oldham and Cummings, 1996, Edmondson, 1999). However, these relationships are still neglected and deliberated upon in the literature. Consequently, more studies are needed to explore these relationships. Hence, to justify debate on these relationships, this study employs a systematic literature review (SLR) to explore previous studies in these particular areas. According to Tranfield, Denyer, and Smart (2003), the SLR method is a replicable, scientific and transparent methodology related to literature reviews. Thus, this method can justify the lack of knowledge on the relationships between those three concepts. In addition, the SLR employs numerous databases, such as ABI-INFORM, Scopus, Science Direct and Web of Science (WoS) from 1986-2016 with several searching keywords, including "psychological safety and organisational performance" (PS-OP), "psychological safety and self-efficacy" (PS-SE) and "psychological safety and self-efficacy and organisational performance" (PS-SE-OP).

Table 2.10 illustrates the number of articles on psychological safety, self-efficacy and organisational performance in four databases. The total number of articles is 593. In addition, there are several inclusion and exclusion criteria, which focus on topics in management and business only, relevant topics in the abstract, English language version

only, peer-reviewed articles based in journals, which are only published in top tier journals (e.g. Association of Business Schools (ABS) ranking 2010: Grade 3 and 4 journals) that reduced the hit results to 30 studies (see Figure 2.4). Thus, Table 2.11 summarises variable mapping obtained from 30 primary contributors on psychological safety, self-efficacy and organisational performance studies. Table 2.12 depicts the summary of those key articles.

Despite the fact that several prior studies have addressed psychological safety, self-efficacy and business performance; these studies failed to examine the relationship between those three topics, as a whole. Thus, the researcher argues that the previous studies examined psychological safety, self-efficacy and organisational performance in an incoherent manner. Consequently, realised that there is a glaring gap in the existing management and business literature provides an immense opportunity for future research (Nembhard and Edmondson, 2006). Hence, the current study attempts to fill this gap and treats the relationship of all variables in one study. Moreover, Tables 2.11 and 2.13 produce several new insights in the context of the literature review as follows.

Table 2.11 Numbers of Published articles in databases from 1986-2016

DATABASE/ KEYWORD	ABI INFORM	SCIENCE DIRECT	SCOPUS	WOS	TOTAL
PS-OP	23	17	152	101	293
PS-SE	4	20	241	25	290
PS-SE-OP	2	0	3	5	10
TOTAL	29	37	396	131	593

Note: PS= Psychological safety; SE= Self-efficacy; OP= Organisational performance

Figure 2.4 Systematic Literature Review Steps

ABI Inform 29	Scopus 396	Science Direct 37	WoS 131

Total
593

Exclusion: Non-Business and management (166)

Business and Management only, Total = 427

Exclusion: Non-article (80)

Article only, Total = 347

Exclusion: Non-English Language (16)

English Language only Total = 331

Exclusion: non-ABS Rank grade 3 & 4 (138)

ABS Rank grade 3 & 4 only, Total = 193

Exclusion: Non-relevant abstract (112)

Relevant Abstract only: Total = 81

Exclusion: No duplication (51)

Article in Analysis
30

First, Table 2.12 displays the number of publications based on constructs, including, psychological safety (PS), self-efficacy (SE), organisational performance (OP) and the relationships between PS, SE and OP. The findings show that most of the studies were conducted from 2011 and 2016 (93 articles). Hence, these topics are relatively new and the opportunity exists to explore them in the near future.

Table 2.12 Numbers of Key Published Articles by Year from 1986-2016

Year	PS	SE	OP	PS, SE, OP	Total
1986 -1990	1	1	0	0	2
1991 -1995	0	0	1	2	3
1996 -2000	0	1	1	6	8
2001 -2005	1	3	1	8	13
2006 -2010	8	5	2	4	19
2011 -2016	15	7	16	10	48
Total	25	17	21	30	93

Second, Figure 2.6 shows that from 30 key articles in the previous studies, the numbers of publications regarding the relationships between the constructs are comparatively varied. For example, seven articles such as Amabile et al. (1996), Edmondson (1999), Tynan (2005) addressed the link between psychological safety and self-efficacy. Moreover, Figure 2.6 and Table 2.11 illustrates that ten key contributors examined the association between psychological safety and organisational performance (e.g., Sparks et al., 2001, Brown and Ryan, 2003, van Ginkel and van Knippenberg, 2008). Although several prior studies highlighted psychological safety, self-efficacy and organisational performance, Figure 2.6 reveals that only two studies addressed the relationship between three main constructs (Oldham and Cummings, 1996, Baer and Frese, 2003). In addition, Table 2.11 explains that both these articles examined only two dimensions of psychological safety, such as energy psychological safety (Oldham and

Cummings, 1996) and team psychological safety (Baer and Frese, 2003), one dimension of self-efficacy, and two dimensions of organisational performance e.g., financial performance (Baer and Frese, 2003) and employee well-being (Oldham and Cummings, 1996). Hence, the researcher argues that previous authors overlooked the relationship between these three main constructs comprehensively.

Figure 2.5 Numbers of Published Articles by Topics from 1986-2016
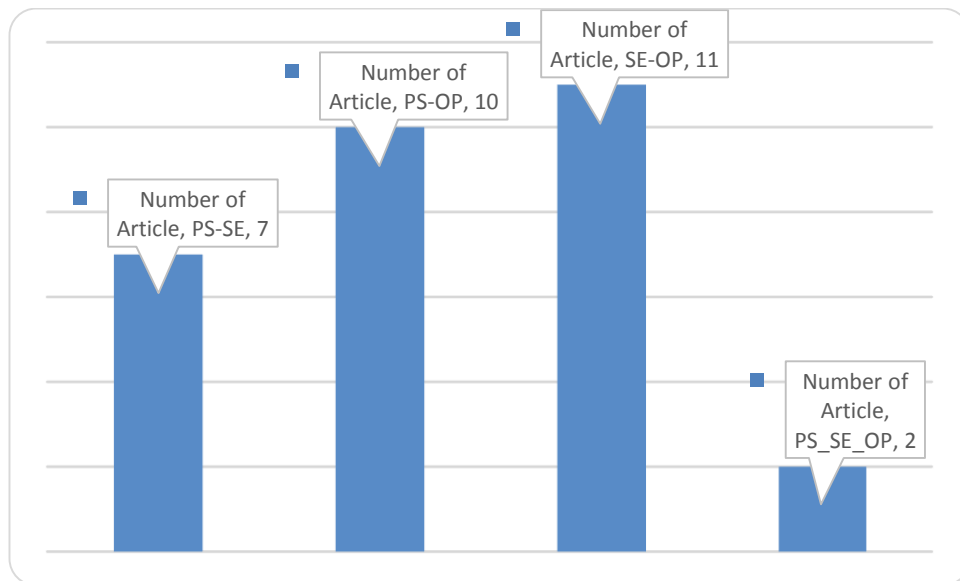
Note: PS= Psychological safety; SE= Self-efficacy; OP= Organisational performance

Third, Figure 2.7 reveals that most of the studies (10 studies), such as Riggs and Knight (1994), Scott and Bruce (1994), Babin and Boles (1996), Singh et al. (2013) were conducted in the US and that 4 key studies were conducted in Asia. However, most of them were conducted in China and Taiwan, e.g., Liu et al. (2014b), Wang et al. (2014), Zheng et al. (2015). Hence, the researcher could argue that research on psychological safety, self-efficacy and organisational performance remains neglected in other developing countries, such as Indonesia. Accordingly, the opportunity to undertake research on these topics remains open, principally in emerging countries, such as Indonesia.

Figure 2.6 Numbers of Published Articles by Country/Region from 1986 to 2016

Numbers of **Articles**

Series1, Israel, 1
Series1, Africa, 1
Series1, Canada, 2
Series1, Asia, 4
Series1, Europe, 5
Series1, US, 10
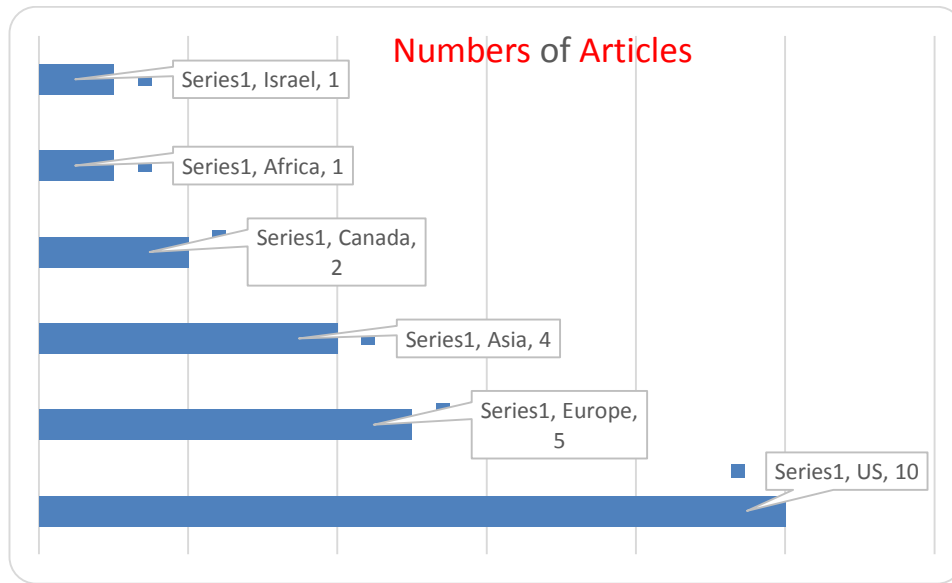
Based on the data collection method in Figure 2.8, most of the studies employed the "on the site drop & collect survey method", e.g., Walumbwa et al. (2011), Gong et al. (2012), Hirak et al. (2012), Leroy et al. (2012), while only four studies employed online surveys as the data collection method. Moreover, from 30 key contributors, four were theoretical conceptualisation articles. Thus, these articles are not empirical studies nonetheless, they focused on a systematic literature review and developed certain propositions for future studies, e.g., Neely (1999), Sparks et al. (2001), Burke et al. (2006). Although the "on site and drop & collect survey method" was commonly used in prior studies, this particular method is more time consuming. Hence, a different way, such as an online survey, which remains limited in use, might be more applicable in future research. The online survey has several advantages, such as being inexpensive, rapid, efficient, and comprises direct data entry and has an extensive geographical reach (Sue and Ritter, 2012, Bryman, 2016). Moreover, the researcher used an online survey to anticipate social desirability bias (De Vaus, 2014). Compared to using mail, an online survey is also more efficient regarding this study for the reason that respondents are

employees based in large companies and assumes they have internet access. Hence, a survey will provide a faster response and with a lower cost.

Figure 2.7Numbers of Published Articles by Data Collection Method from 1986 to 2016
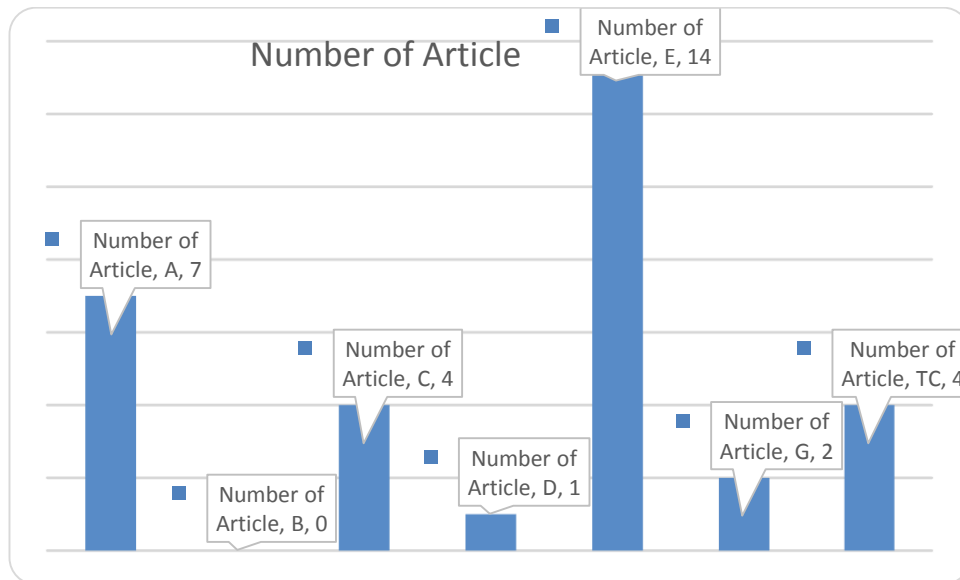
Note: A = Self-administered mail survey; B= Personal interview; C= Self-administered online survey; D= Interviewer-administered; E= On-site and drop & collect survey, G= Observation; H= secondary data; TC = Theoretical conceptualisation

Figure 2.9 explains the data analysis tools used in 30 key studies. This figure reveals that structural equation modelling is the most favourite tool regarding data analysis (15 studies), e.g., Riggs and Knight (1994), Amabile et al. (1996), Ritter and Gemünden (2003), Ahearne et al. (2005). However, these studies have still neglected to examine relationship between psychological safety, self-efficacy and organisational performance. Hence, it could be assumed that the opportunity exists to conduct comprehensive research related to these topics using structural equation modelling.

According to the limitations and future research of 30 key contributors in Table 2.12, the researcher argues that studies on these relationships continue to be neglected. For example, Eccles (1991) indicates that performance measurement in future studies will be more extensive and not only focus on financial performance. Moreover, Edmondson (1999) noted that psychological safety constructs should be explored in the future. In

addition, Kirkman et al. (2013) suggested that self-efficacy could be a mediator between psychological safety and performance and can be tested in future studies. Accordingly, an expanded study on these topics could possibly be conducted in the future.

Figure 2.8 Numbers of Published Articles by Data Analysis Tool from 1986 to 2016
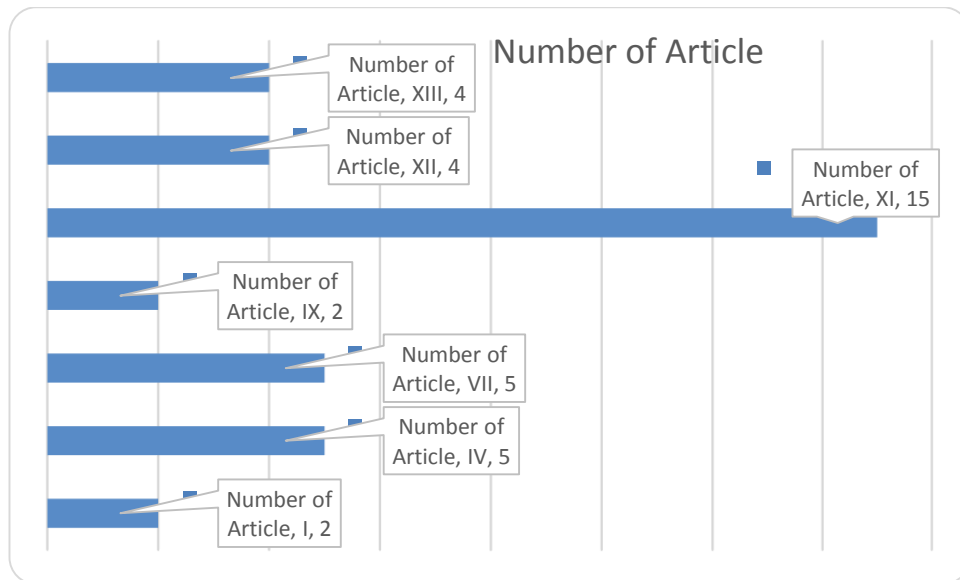
Note: I= Descriptive statistics; II= Chi-square test/s; IV= Factor analysis; VI= Cluster analysis; VII=Regression; VIII = Correlation analysis; IX = Internal reliability-Cronbach's Alpha; XI = Structural equation modelling; XII = Qualitative analysis techniques; XIII = other analysis

The systematic literature reviews in Tables 2.3, 2.6, 2.9, 2.11 and 2.12 reveal theoretical gaps in prior studies. For example, Table 2.3 illustrates that several previous studies only addressed certain psychological safety dimensions (Kahn, 1990, Baer and Frese, 2003, May et al., 2004, Wallace and Chen, 2005, Nembhard and Edmondson, 2006), Table 2.6 confirms that a number only examined self-efficacy constructs (Gibson, 1999, Ritter and Gemünden, 2003, Gilson and Shalley, 2004), whereas Table 2.9 demonstrates that a few only investigated organisational performance constructs (Neely, 1999, De Clercq and Sapienza, 2006, Yang and Kang, 2008). Moreover, Table 2.11 explains that only two studies addressed all three principal constructs (psychological safety, self-efficacy and organisational performance) (Oldham and Cummings, 1996, Baer and Frese, 2003). For example, Oldham and Cummings (1996) examined the link

between supportive supervision, which is related to energy psychological safety, creativity and job satisfaction as a performance indicator. Moreover, Baer and Frese (2003) explored the association between climate for psychological safety, climate for initiative (related to creative self-efficacy) and financial performance. Although these two studies examined psychological safety, self-efficacy and organisational performance, they still neglected to address every dimension pertaining to psychological safety, self-efficacy and organisational performance in a comprehensive way. Hence, the researcher argues that prior studies which addressed all these three principal constructs were limited. Accordingly, an opportunity exists for future research to take place.

In summary, based on the systematic literature review, there are two primary reasons why it is essential that this study is conducted. First, it is argued psychological safety, which is related to the workplace environment, has an impact on employee self-efficacy and indeed, may lead to organisational performance. However, studies on these topics continue to be overlooked, while previous studies were fragmented. Although several previous studies (Oldham and Cummings, 1996, Baer and Frese, 2003) have addressed these three variables; they unfortunately failed to examine all possible dimensions of psychological safety (e.g., employment equity psychological safety), self-efficacy (e.g., creative self-efficacy) and organisational performance (e.g., employee well-being) and their relationships in a single study.

Second, psychological safety is not only a problem in companies that are located in developed countries; it is also a problem for companies in emerging countries, such as Indonesia. Although a number of previous studies in developed countries have addressed the issue of psychological safety; however, the different cultures found in developed and developing countries may possibly provide different results (Mathew et al., 2012, Ogbonna and Mathew, 2012, Van den Broeck et al., 2016). For example, Van den Broeck

et al. (2016) noted that collectivistic cultures which are related more to developing countries may gain more satisfaction from there similarity to organisation members, compared to individualistic cultures which are commonly found in developed countries. Moreover, Koopmann et al. (2016) asserted that employees in collectivistic cultures, such as China are more tolerant in measuring their teams' psychological safety than employees in individualistic cultures. However, research on this topic remains neglected in emerging countries. Consequently, studies on this topic still need to gain new insights based on the perspective of an emerging country, such as Indonesia.

Moreover, from the literature review, this study determined that several research gaps exist (theoretical and industrial gaps):

1. Previous studies have mentioned that psychological safety, self-efficacy and organisational performance are related. However, only two studies have managed to address these constructs (Oldham and Cummings, 1996, Baer and Frese, 2003). For example, Oldham and Cummings (1996) examined the connection between supportive supervision, which is related to energy psychological safety, creativity and job satisfaction as a performance indicator. Furthermore, although both studies addressed some dimensions of psychological safety, self-efficacy and performance, to the best of the researcher's knowledge, no single study considered all dimensions of psychological safety, self-efficacy and organisational performance in one study. Hence, this study fills this gap by exploring five dimensions of psychological safety, three dimensions of self-efficacy and three dimensions of organisational performance.

2. Although a number of previous authors examined the dimensions of psychological safety, they only focused on individual (Kahn, 1990) and team psychological safety (Edmondson, 1999). Moreover, previous studies also investigated physical

safety (Amponsah-Tawiah et al., 2013); nevertheless, they did not address it as a part of psychological safety. Regarding employment equity psychological safety; no single study has investigated it as a dimension of psychological safety although some studies mentioned discrimination at work (Makin and Winder, 2008, Wood et al., 2013). Therefore, this study fills this gap by using five dimensions of psychological safety (physical risk, energy, inner, and team and employment equity psychological safety) and introducing employment equity psychological safety, which alludes to employee psychological safety from discrimination based on gender, ethnicity and religious beliefs, as a new dimension of psychological safety.

3. Even though Edmondson (1999) considered self-efficacy as an antecedent of performance, he used it as an antecedent of learning in conjunction with psychological safety, whilst psychological safety is an antecedent of self-efficacy (Kark and Carmeli, 2009). It means that self-efficacy has the potential to be a mediator of the relationship between psychological safety and organisational performance; hence, this study will attempt to complete this gap. Moreover, to the best of the researcher's knowledge, this is the first study which will use self-efficacy as a mediator between psychological safety and organisational performance.

4. Psychological safety was investigated in previous studies which focused on developed countries (Oldham and Cummings, 1996). However, studies on psychological safety in emerging countries, such as Indonesia remain restricted. Hence, this study deals with this gap.

5. In the context of Indonesia, working conditions in Indonesia are still problematic. For example, the number of accidents at work in 2013 was 103,285, which increased to 110,285 cases in 2015 (Jamsostek, 2013, Ketenagakerjaan, 2015).

Thus, it will affect employees' safety and arguably has an impact on organisational performance. However, to the best of the researcher's knowledge, no single study has considered this issue in previous studies. Hence, the researcher argues this study will fill this gap and offer a new insight from the perspective of Indonesia.

Further, the next chapter describes the conceptual model corresponding to the possible relationship between the three main constructs and a number of hypotheses.

Table 2.13 Variable map of Studies on Psychological safety, Self-efficacy and Organisational Performance from 1986 to 2016

Author	Psychological Safety					Self-Efficacy			Organisational Performance			Methodology					Journal Info			
	PR	I	E	T	EE	In	Co	Cr	FP	EWB	CI	Country	Sample size	Method	Data analysis	GSNC	JCR Journal Title	ABS JR	IF 2013	Journal Starting Time
Riggs and Knight (1994)						●	●			●		US	480 employees	E	XI	232	J Appl Psychol	4	4.36	1917
Lindsley et al. (1995)						●	●			●		#	#	TC	#	696	Acad Manage J	4*	4.97	1958
Brown and Leigh (1996)		●								●		US	Survey to 112 pairs employee-manager	A	XI	842	J Appl Psychol	4	4.36	1917
Babin and Boles (1996)			●							●		US	Survey to 261 employees	E	XI	439	J Retailing	4	1.19	1964
Amabile et al. (1996)			●	●				●				US	Survey: 3,708 Employees	A	I, XI		Acad Manage J	4*	4.97	1958

Author	Psychological Safety					Self-Efficacy			Organisational Performance			Methodology					Journal Info			
	PR	I	E	T	EE	In	Co	Cr	FP	EWB	CI	Country	Sample size	Method	Data analysis	GSNC	JCR Journal Title	ABS JR	IF 2013	Journal Starting Time
Oldham and Cummings (1996)			●					●		●		US	Survey 171 Employees	A	VII	1882	Acad Manage J	4*	4.97	1958
Danna and Griffin (1999)			●							●		#	#	TC	I	705	J Manage	4	6.86	1975
Edmondson (1999)					●		●					US	8 teams with interview, and survey of 496 employees	A, D, G	VII, XII	3159	Admin Sci Quart	4*	2.39	1956
Sparks et al. (2001)	●									●		#	#	TC	#	441	J Occup Organ Psychol	4	2.48	1976

Author	Psychological Safety					Self-Efficacy			Organisational Performance			Methodology				Journal Info				
	PR	I	E	T	EE	In	Co	Cr	FP	EWB	CI	Country	Sample size	Method	Data analysis	GSNC	JCR Journal Title	ABS JR	IF 2013	Journal Starting Time
Zhou and George (2001)			●					●				US	Survey to 146 employees	A	VII	780	Acad Manage J	4*	4.97	1958
Judge and Bono (2001)						●				●		#	135 studies	G	XIII	1578	J Appl Psychol	4	4.37	1578
Tierney and Farmer (2002)								●		●		#	Survey to 584 employees	A	IX, XI	647	Acad Manage J	4	4.97	1958
Baer and Frese (2003)					●			●	●			Germany	Survey to165 employees from 47 companies	A	IX, XI	638	J Organ Behav	4	3.26	1981

Author	Psychological Safety					Self-Efficacy			Organisational Performance		CI	Methodology					Journal Info			
	PR	I	E	T	EE	In	Co	Cr	FP	EWB	CI	Country	Sample size	Method	Data analysis	GSNC	JCR Journal Title	ABS JR	IF 2013	Journal Starting Time
Tynan (2005)		•		•		•						#	Survey to S1: 539 employees S2: 49 employees	E	IV, XI	33	J Appl Psychol	4	4.36	1917
Ahearne et al. (2005)						•				•		US	Survey to 231 sales rep, and 864 customers	E	XI	289	J Appl Psychol	4	4.36	1917
Hecht and Allen (2005)						•				•		Canada	Survey to 266 students, and 746 employees	E	VII	69	Organ Behav Human Dec	4	2.89	1985
Aragón-Correa et al. (2007)								•	•		•	Spain	Survey to 408 CEO (respons rate 48.33%	C	XII	239	Ind Market Manage	3	1.89	1971

Author	Psychological Safety					Self-Efficacy			Organisational Performance			Methodology					Journal Info			
	PR	I	E	T	EE	In	Co	Cr	FP	EWB	CI	Country	Sample size	Method	Data analysis	GSNC	JCR Journal Title	ABS JR	IF 2013	Journal Starting Time
van Ginkel and van Knippenberg (2008)				●						●		Dutch	Survey to 364 respondents	E	VII	112	Organ Behav Human Dec	4	2.89	1985
Kark and Carmeli (2009)				●		●						Israel	Survey to 128 employees	E	XI	74	J Organ Behav	4	3.26	1981
Gong, Huang, and Farh (2009)						●				●		Taiwan	Survey to 277 employees (rr 72%)	E	IV,XIII	327	Acad Manage J	4	4.974	1958
Lee et al. (2011)		●	●							●		North America	Survey to 179 managers	C	XI	20	J Prod Oper Manage	3	1.76	1992
Rosenbusch et al. (2011)						●	●	●				#	46 research articles	TC	XIII	226	J Bus Venturing	4	3.26	1986

Author	Psychological Safety					Self-Efficacy			Organisational Performance			Methodology					Journal Info			
	PR	I	E	T	EE	In	Co	Cr	FP	EWB	CI	Country	Sample size	Method	Data analysis	GSNC	JCR Journal Title	ABS JR	IF 2013	Journal Starting Time
Schaubroeck et al. (2011)				•						•		US, Hongkong	Survey to 999 employees	E	XI	85	J Appl Psychol	4	4.36	1917
Walumbwa et al. (2011)						•				•		China	Survey to 72 supervisors, 201 employees	E	XI	130	Organ Behav Human Dec	4	2.89	1985
Schepers et al. (2011)						•	•			•		Netherlands	Survey to 192 employees(response rate 59%)	E	IV,XIII	2	J Service Res	3	2.14	1998
Gong et al. (2012)				•				•				Taiwan	Survey to 375 employees	E	IV,XI	33	J Manage	4	6.86	1975
Hirak et al. (2012)				•						•		Israel	Survey to 255 respondents	E	XIII	13	Leadership Quart	4	2.01	

Author	Psychological Safety				Self-Efficacy			Organisational Performance			Methodology					Journal Info			
	PR	I	E	T	EE	In	Co	Cr	FP	EWB	CI	Country	Sample size	Method	Data analysis	GSNC	JCR Journal Title	ABS JR	IF 2013	Journal Starting Time
Hajmohammad and Vachon (2013)	●		●						●			Canada	Survey to 251 plant managers	C	IV,XI	2	J Bus Ethics	3	1.55	1982
Barrick, Thurgood, Smith, and Courtright (2015)							●		●			US	Survey to 83 firms	C	XI	29	Acad Manage J	4	4.97	1958
Liu et al. (2015)			●			●						China	Survey to 725 employees	E	XIII	2	J Bus Ethics	3	1.55	1982

Note: GSNC = Google Scholar Number of Citations; PR= Physical risk psychological safety; I = Inner-psychological safety ; E= Energy psychological safety ; T= Team psychological safety ; In= Individual SE; Co= Collective SE; Cr= Creative SE; FP= Financial Performance; EWB= employee well-being; CI= Company image ; # = Missing sample data; A = Self-administered mail survey; B= Personal interview; C= Self-administered online survey; D= Interviewer administered; E= On-site and drop & collect survey, F= Telephone interview; G= Observation ; H= Secondary data TC = Theoretical conceptualisation; I= Descriptive statistics; II= Chi-square test/s; III= T-test/s; IV= Factor analysis; V= Analysis of variance – ANOVA & post-hoc analysis; VI= Cluster analysis; VII=Regression; VIII = Correlation analysis; IX = Internal reliability- Cronbach's Alpha; X = Discriminant analysis; XI = Structural equation modelling; XII = Qualitative analysis techniques; XIII = Other analysis; JCR = Journal Citation Reports**;** ABSJR = ABS journal ranking; IF= Impact Factor

Table 2.14 Summary of 93 Key Contributors of Study from 1986-2016

Author/s	Research question/Aim	Construct	Methodological approach	Data analysis	Relevant findings	Limitations & Future Research
Jones (1986)	To investigate the relationship between the socialization tactics employed by organisations and a series of role and personal outcomes	- Socialisation tactics - Self-efficacy - Role orientation	Survey to MBA students from 2 classes in a major Midwestern university, 127 respondents from 282 populations, 102 of 107 respondents completed the survey (response rate 36%)	Factor Analysis, Canonical correlation,	Self-efficacy → + role orientation	Relied on self-reported measurement. Should be conducted across different firms
Kahn (1990)	To describe and illustrate three psychological conditions: meaningfulness, safety and availability	· Personal engagement/dis engagement · Psychological meaningfulness · Psychological safety · Psychological availability ·	· Observation for 6 weeks, · document analysis, · self-reflection, and · in-depth interview, 16 members and 16 counselors in West Indies	Qualitative data Analysis with manual way	- Psychological meaningfulness depends on : task characteristics, role characteristics and work interactions - Psychological safety affects by: interpersonal relationship, group and intergroup dynamics, management style and process, and organisational norms - Psychological availability antecedents: physical energy, emotional energy, individual insecurity and outside lives	This is only an exploratory research and the interaction of those three psychological conditions should be explored in the future research.

Author/s	Research question/Aim	Construct	Methodological approach	Data analysis	Relevant findings	Limitations & Future Research
Eccles (1991)	To discuss about what are the most important measures of performance?", "How do these measures relate to one another?" and "What measures truly predict long-term financial success in our businesses?	- Financial performance - Non-financial performance	Literature review	-	Performance measurement is not only domine of financial performance but also other aspects such as customer service, management information system and human resource management	Performance measurement in the future will be more broaden and not only focused on financial performance indicators
Riggs and Knight (1994)	To examine relationship among the constructs of perceived group success failure, individual and collective levels of job-specific efficacy and outcome expectancy, satisfaction, and organisational commitment	- Personal efficacy - Personal outcome expectancy - Collective efficacy - Collective outcome expectancy - Satisfaction - Organisational commitment	· Survey, 55, 91, and 334 employees	SEM, Chisquare =56.45 CFI=0.94, NFI= 0.80,	satisfaction → collective efficacy → organisational Commitment	- Self-report measurement - It would be implemented to correct a lack of faith within work groups that they have the ability necessary to complete work assignments successfully (collective-efficacy).

Author/s	Research question/Aim	Construct	Methodological approach	Data analysis	Relevant findings	Limitations & Future Research
Scott and Bruce (1994)	- To integrate a number of streams of research on the antecedents of innovation - To develop and test a model of individual innovative behaviour	- Leadership - Workgroup - Individual attributes - Psychological climate for innovation - Innovative behaviour	Interview to 22 respondents and Survey to 185 respondents by using questionnaire,	- Factor analysis and - SEM with Lisrel, - Chi square=23.99 - GFI=0.98, - AGFI=0.94, - RMSEA=0.036	- Support for innovation→innovative behavior (+) - LMX→innovative behavior (+) through support for innovation	- A cross sectional research, generalizability of the research. - The relationship between additional supports to innovative behaviour.
Lindsley et al. (1995)	This study explores the possibility of efficacy-performance spirals in individuals, groups, and organisations.	- Perceived efficacy - Collective efficacy - Performance: individual, group, organisation	Literature review	-	The interest in efficacy and its importance to the study of organisational behavior rests in its relationship to individual, group, and organisational performance.	The cyclic nature of the efficacy-performance relationship may be a critical link to understanding and managing the factors that have an impact on the performance of individuals, groups, and organisations, and, thus, their self-regulation.

Author/s	Research question/Aim	Construct	Methodological approach	Data analysis	Relevant findings	Limitations & Future Research
Brown and Leigh (1996)	To investigate the process by which employee perceptions of the organisational environment are related to job involvement, effort and performance	- Psychological climate - Job involvement - Effort - Performance	- Survey to 2 independent samples of sales people: - sample 1 sales representative from 3 different companies (77, 85 & 16 respondents) - Sample 2: 161 salespersons-managers (response rate 85%)	- SEM, CFA - Chi-square= 643.84, - GFI=0.781, - RMSR=0.141 - RMSEA=0.083	Psychological climate → performance through job involvement as mediating variable	- Psychological climate measurement is not comprehensively assessed environmental factors. - lower internal consistency Other processes by which perceptions of the organisational environment and employee involvement result should be explored in future research

Author/s	Research question/Aim	Construct	Methodological approach	Data analysis	Relevant findings	Limitations & Future Research
Babin and Boles (1996)	To describe the important of a supportive work environment in affecting subsequent employee work related attitudes and perceptions	- Work involvement - Supervisor support - Role stress - Performance - Job satisfaction	Survey to employees from full service restaurants located in a major southern metropolitan area 261 of 380 usable questionnaires (response rate 69%)	CFA; Chi square= 723.3 GFI=0.861, CFI=0.940 RMSR=0.054	-work involvement → Job satisfaction - supervisor support → job satisfaction	-The sample is regional - no replication using an additional sample is included - the choice of variables could be criticized Adding other constructs and conducting research in multiple settings or industries
Amabile et al. (1996)	To examine the psychological context of creativity -> the creative work	- Organisation encouragement - Supervisory encouragement - Workgroup support - Freedom - Sufficient resources - Challenging work - Workload pressure - Creativity	· Survey to 2,796 respondents from 21 different organisations from 1987-1995	- CFA with LISREL VII, - GFI=0.85, - Chi square= 17,305.48, - RMSR=0.056	- KEYS scale measurement - Work group support, challenging work, organisational encouragement, supervisory encouragement → creativity	- Memory biases. Idiosyncrasy biases, - Hallo effect - Five work environment dimensions are lack of attention and can be investigated in the future.

Author/s	Research question/Aim	Construct	Methodological approach	Data analysis	Relevant findings	Limitations & Future Research
Oldham and Cummings (1996)	To examine the independent and joint contributions of employees' creativity-relevant personal characteristics and three characteristics of the organisational context.	- Creative personality scale (CPS) - Employee creative performance - Motivating (MPS) potential score - Supervisory style	- Survey by questionnaire and - human resource data on performance, - 171employees (response rate 83%)	- Hierarchical Regression model, -	- CPS→ employee creative performance - MPS→ employee creative performance - CPS→ employee creative performance through MPS	- relatively low convergence among creativity measures - low internal consistency reliabilities for some of the measures included in the research - Cross sectional study - Future work is also needed to develop a refined and comprehensive set of objective creativity indicators. - need to further unravel the complex relations among personal characteristics, contextual factors, and a variety of creative out-comes

Author/s	Research question/Aim	Construct	Methodological approach	Data analysis	Relevant findings	Limitations & Future Research
Danna and Griffin (1999)	To review the literature that serves to define health and well-being	- Work setting - Personal traits - Occupational stress - Well-being at the workplace - Individual consequence - Organisation consequences	- Literature Review	Meta-analysis and qualitative analysis from literature reviews	- Three antecedent of wellbeing: work setting, personal traits, and occupational stress - Work setting : health, safety hazards - Wellbeing will affect individual and organisational consequences	- Model is not formal model of theory and it just for discussion guide - More research on that construct.
Edmondson (1999)	To investigate a model of team learning and tests it in a multi method field study	- Team leader coaching - Team psychological safety - Team efficacy - Team learning behaviour - Team performance - Internal motivation - Job involvement	- Qualitative and Quantitative method; - observation in eight team meetings, - Survey to all members of 53 teams (496 individuals), - response rate 86% with 51 teams, - Interview with seven teams.	- Qualitative data analysis, - Factor analyses (principal component, varimax rotation), - Regression analyses	- Psychological safety is associated with learning behaviour. - Learning behaviour mediates between psychological safety and team performance	- psychological safety construct still need to be refined - Psychological safety construct should be explored in the next research - only a cross-sectional survey design - only in single company - Can be developed with how team psychological safety develops over time

Author/s	Research question/Aim	Construct	Methodological approach	Data analysis	Relevant findings	Limitations & Future Research
Gibson (1999)	To examine that the effects of group to perform effectively and moderated by several contingency factors	- Group efficacy - Task characteristics - Context (cultural) characteristics - Group effectiveness	- Experimental design to 294 respondents, - interview with 30 supervisors and - Survey to 185 respondents.	Hierarchical Regression Analysis,	- When task uncertainty was high, team members worked independently, and collectivism was low, group efficacy was not related to group effectiveness. - In contrast, when task uncertainty was low, team members worked interdependently, and collectivism was high, the relationship between group efficacy and group effectiveness was positive	- The experimental design of the simulation permits some confidence in causal relationships involving the manipulated variable. - The lack of support for the hypothesis concerning field independence. It may be that aspects of psychological differentiation other than field independence impact group efficacy.
Neely (1999)	To investigate performance measurement	- Financial - Non-financial performance	· Literature review	Descriptive: in explaining types of performance measurement	- Some performance measurement: financial and non-financial	-
Sparks et al. (2001)	To discuss the impact of work contracts, work time scheduling on the nature of work.	- job insecurity - working hours - work control - managerial style - EWB	· Literature review	Descriptive: in explaining job insecurity, working hours and EWB	The changing of workplace affects employee's wellbeing. The growing of information technology will affect wellbeing, Cultural diversity can affect EWB	-

103

Author/s	Research question/Aim	Construct	Methodological approach	Data analysis	Relevant findings	Limitations & Future Research
Chen et al. (2001)	To develop general self-efficacy measurement	- General self-efficacy	- Survey to S1 =316 , S2=323 respondents in US	Factor analysis, validity and reliability	8 general self-efficacy measurement items	- Content deficiency - Relationship of GSE with other constructs
Zhou and George (2001)	To examine the link between job satisfaction and creativity	- Creativity - Co-worker help and support - Job dissatisfaction - Organisational support	Survey 149 employees in US	Hierarchical regression	Coworkers support→cretivity	- Cross sectional study
Judge and Bono (2001)	To examine the relationship between self-esteem, generalized self-efficacy, locus of control, and emotional stability, with job satisfaction and job performance	- Self-esteem - Generalized self-efficacy - Locus of control - Emotional stability - Job satisfaction - Job performance	Meta-analysis; literature search, PsychInfo database 1967-1997, electronic data search 1957-1997, electronic and manual search 1987-1997, 536 published studies and 224 unpublished doctoral dissertations.	Meta-Analysis procedures; calculated sample size weighted mean correlation, meta analytic estimates,	Correlation of self-efficacy and job performance	- Cannot address the validity of the core self-evaluations construct in predicting job satisfaction and job performance. - Investigate correlation between 4 traits, Job perf and Job Sat

Author/s	Research question/Aim	Construct	Methodological approach	Data analysis	Relevant findings	Limitations & Future Research
Tierney and Farmer (2002)	To investigate the link between creative self-efficacy and creative performance	- Creative self-efficacy - Job tennur - Job efficacy - Supervisor suppor - creativity	- Survey to 584 and 158 employees in US	- CFA - Hierarchical regression - CFI=0.97, IFI=0.97 RMSEA=0.08	- Supervisor support→creative self-efficacy - Job efficacy→creative self-efficacy - Creative self-efficacy→creativity	- Cross sectional study - creativity→perorma nce
Baer and Frese (2003)	To analyze the contingencies of process innovations by focusing on and introducing organisational level constructs of climate for initiative and psychological safety	- Process innovativeness - Climate for initiative - Climate for psychological safety - Firm performance	- Survey to 269 companies in German - 47 companies accomplished the questionnaire (response rate 17%):	- Regression - SEM - Chi square=69.69, - AGFI=0.92, - CFI=1.00, - IFI=1.00, - RMSEA=0.00	- Climate for initiative and psychological safety support the quality of the implementation process. - Initiative and psychological safety → organisational performance	- Was not able to test all causal hypotheses - Only focus on mid-size firms, - Need for more studies on the company level to assess generalizability.
Ritter and Gemünden (2003)	To examine the impact of network competence on a company's technological interweavement and its innovation success	- Degree of network competence - Degree of technological interweavement - Degree of innovation success	- Survey; 741 German companies, - 308 usable samples (response rate 43%)	- SEM with Lisrel 8, - $\chi2(139)=178.95$, - P=.013, - GFI=0.971, - AGFI=0.961, - NFI=0.946, - CFI= 0.987, - RMR= 0.055	- Network competence → the extent of inter organisational technological collaborations (+) and - Network competence → firm's product and process innovation success. - organisational antecedents → network competence (+)	- Only measure network competence from inside of company perspective - Further research: relationship between network competence and business performance.

105

Author/s	Research question/Aim	Construct	Methodological approach	Data analysis	Relevant findings	Limitations & Future Research
Baron and Markman (2003)	To examine the relationship between entrepreneurs' social competence and their financial success	- social competence - financial success	- Survey: 159 from 248 independent sales contractors (response rate 69%) and 71 from 110 top executives in high tech entrepreneurial firms (response rate 64.5 %). Totally 230 individuals.	Exploratory Factor Analysis Confirmatory Factor analysis, $(183)=284.76$, $P<.001$, $RMSEA=.05$, $CFI=0.91$, $GFI=0.89$ - Multiple Regression Analysis, $R^2($ $\Delta R^2=.17$, $F=4.86$, $P<.005$	- <u>Greater Social competence</u>→ Greater Financial Success (+) significant	- several aspects of social competence are significantly link to financial success but no direct evidence on how social competence linked with financial success, - Validity of the measurement due to the sample size. - Future research should determine whether, and to what extent various social competencies influence entrepreneur's performance -

Author/s	Research question/Aim	Construct	Methodological approach	Data analysis	Relevant findings	Limitations & Future Research
May et al. (2004)	To examine the role that three psychological conditions play in employees' work engagement	- Psychological engagement - Psychological meaningfulness - Psychological safety - Psychological availability - Job enrichment - Work role fit - Rewarding co-worker relations - Supportive supervisor relations - Co-worker norm adherence - Resources - Self-consciousness - Outside activities	- Survey in a large insurance company in Midwestern USA, 270 respondents, - 213 respondents completed the survey with response rate 79%	- SEM by using LISREL 8.51, - Chi square=107.59, - GFI=0.92, - NNFI=0.71, - SRMR=0.07	Supportive Supervisor and rewarding co-worker relations→ psychological safety	- only cross sectional data with self-report questionnaire - limited sample - Need to explore this concept in other organisational settings

Author/s	Research question/Aim	Construct	Methodological approach	Data analysis	Relevant findings	Limitations & Future Research
Gilson and Shalley (2004)	To examine team's engagement in creative processes	- Team's creative processes - Task design, job creativity	Survey to 144 members of 11 teamworks in UK (response rate 95%)	Cluster analysis	- Job requires creativity→team's creative processes	- Only based on one SBU of a large company.
Tynan (2005)	To investigate the effects of threat sensitivity and face giving on dyadic psychological safety and upward communication	- Self-psychological safety - Other psychological safety - Communication of self-face threats - Communication of other face threats - Subordinate face giving - Perceived efficacy	Survey ; -Study 1: 539 undergraduate and graduate students - Study 2: 49 business students	CFA (confirmatory factor analysis	- Self-psychological safety positively correlated with supervisor face giving - Self-psychological safety positively correlated with other psychological safety	- supervisor face giving and threat sensitivity were judge by participant and it subject to the problem of common method variance - To measure the relationship between dyadic supervisor-subordinate psychological and team psychological safety.

Author/s	Research question/Aim	Construct	Methodological approach	Data analysis	Relevant findings	Limitations & Future Research
Ahearne et al. (2005)	To examine the impact of leadership empowerment behaviour on customer satisfaction and sales performance	- Empowering leader behaviours - Interaction term - Employee readiness - Self-efficacy - Adaptability - Service satisfaction - Job performance	- Survey to the customer, salespersons and archival job performance data from company records: - 231 Sales representatives, (response rate 91%), 864 customers (collected by external market research firm), and - Company record for sales representative's performance.	- Structural Equation Model (SEM) using AMOS 4.02; - Chi Square/df 28.63/8, p<0.001, - CFI=.83, - RMSEA=.11	- <u>Self-efficacy</u>→ adaptability, - self-efficacy→job performance are significant - Self-efficacy→ customer satisfaction, not significant.	- Sales representative who has little experience may not fully understand with empowering behaviour of a sales manager. - Self-efficacy and adaptability come from salesperson and it can raise bias in result. - The direct effect of self-efficacy toward job performance can be moderated by another variable. - Expand the scope of potential antecedents for self-efficacy such as the influence of teammates.

Author/s	Research question/Aim	Construct	Methodological approach	Data analysis	Relevant findings	Limitations & Future Research
Wallace and Chen (2005)	To develop and validate a work-specific measure of cognitive failure, the Workplace cognitive failure scale (WCFS).	- Workplace cognitive failure scale (WCFS) - Cognitive failure - Conscientious and neuroticism - On-task behaviours - Role overload - Safety related outcomes	· Survey, · 323 respondents	- CFA, - Chi-square=836.9 - CFI=0.86, - AGFI=0.83, - SRMR= 0.09, - RMSEA=0.09	- performance behaviours are more strongly related to memory failures, - attentional and action related failures are more likely related to outcomes (i.e. missed work days, accidents)	Self-reported research
Hecht and Allen (2005)	To investigate an individual preference for working on many things simultaneously (polichronicity)	- Self-efficacy	Survey to : Study 1: 266 students, Study 2: 746 employees	Regression	Self-efficacy→polichronicity	- Self-reported measurement - Future research should address the job performance.

Author/s	Research question/Aim	Construct	Methodological approach	Data analysis	Relevant findings	Limitations & Future Research
Nembhard and Edmondson (2006)	To investigate factors that promote engagement in quality improvement work when status differences are present in the teams	- Professional status - Leader inclusiveness - Unit team membership - Psychological safety - Engagement in quality improvement work	Interview and Survey; interview with 23 staff members of 4 from 44 NICUs, survey to 1440 health care professionals from 23 NICUs in US and Canada	Univariate general linear model (GLM) with 3 professional status; physicians, nurses, and respiratory therapists Regression	Status and interaction with unit team membership explain variance in psychological safety Leader inclusiveness →Psychological safety Psychological safety→engagement + Leadership inclusiveness→ engagement; mediated by Psychological safety	- Sample limitation; only for NICUs. - Imperfections of data - Relationship between employee engagement, and other organisational outcomes including customer satisfaction, productivity, profit and safety should be addressed in the future.

Author/s	Research question/Aim	Construct	Methodological approach	Data analysis	Relevant findings	Limitations & Future Research
Neal and Griffin (2006)	To examine the safety climate	- Safety climate - Safety motivation - Safety behaviour	Survey to : S1: 430 staffs, S2: 490 staffs, S3: 301 Staffs of Australian hospitals	Regression	Safety climate→ safety behaviour	- Common method bias issue
De Clercq and Sapienza (2006)	To examine the effect of relational capital and commitment on perceived performance	- Trust - Social interaction - Goal congruence - Commitment - Perceived performance	Survey; 298 from 1251 Venture Capital Firms (VCF) (response rate 24%)	Hierarchical regression analysis and Structural Equation Modelling through The CALIS procedure in SAS. GFI=.90, NFI= .93,	Relational capital (trust, social interaction, and goal congruence) → perceived performance (+), 2. commitment →- perceived performance(+),	- Bias toward individual's opinion, - Only cross sectional data. - The relationship between relational capital, commitment and business performance through learning and positive affect should be tested in the future.

Author/s	Research question/Aim	Construct	Methodological approach	Data analysis	Relevant findings	Limitations & Future Research
Burke et al. (2006)	To provide a multidisciplinary, multilevel and multiphasic conceptualisation of team adaptation	- Individual characteristic - Psychological safety - Adaptive cycle - Emergent states - Team learning	Theoretical conceptualisation	Descriptive: in explaining possible relationship between psychological safety and team learning	Proposition: Psychological safety → team larning	- Need for empirical study
Tucker et al. (2007)	To investigate specific learning activities undertaken by improvement project teams	- Perceived implementation success - Level of evidence - Learning activities - Psychological safety	- Interview with 23 project team members of NICU in US and Canada Hospital and - survey to 4 NICU's units from 44 NICUs (response rate 58%	- Qualitative data analysis, - Factor analysis, - Regression analysis	- Psychological safety, learn-how, and evidence based practices are vital to enabling project teams to help organisation.	- Only in one industry, - Should address not only team psychological safety but also organisational level psychological safety
Carmeli and Schaubroeck (2007)	To investigate how the perceived expectation of the leader, customers and family influence individuals' creative involvement at work	- Creative work involvement - Creative self-efficacy - Expectations for creativity	- Survey to 155 respondents in Israel (response rate 64.6%)	- CFA - Hierarchical Regression - CFI=0.92, NFI=0.91, SRMR=0.06	- Self-efficacy→individuals' creative work involvement	- Self-reported - Link between self-efficacy→individuals' creative achievement (performance)

Author/s	Research question/Aim	Construct	Methodological approach	Data analysis	Relevant findings	Limitations & Future Research
Aragón-Correa et al. (2007)	To examine the link between leadership , organisational learning, innovation and performance	- Transformational leadership - Organisational learning - Innovation - performance	- Survey to 408 CEO in Spain (response rate 48.33%) -	- SEM - NFI=0.93, GFI=0.95, CFI=0.94, AGFI=0.94	- innovation→ performance	- Self-reported, common method bias. - Cross sectional study - Future study may introduce organisational consequences such as staff satisfaction
van Ginkel and van Knippenberg (2008)	To analyse the use of distributed information in terms of shared task representations in understanding of group decision making.	Psychological safety Share task representations Information elaboration	Experimental; Preliminary study; 112 Dutch undergraduate students (28 four-person groups), the majority of participants are business administration students, The main study; 364 Dutch undergraduate students (79 four-person groups)	Descriptive statistic, Planned contrast test, Regression analyses, Sobel Test	Psychological safety partly explained the effects of shared task representations on group information elaboration and performance	- Only one type of group and task were examined. - The actual effect of the level of sharedness on psychological safety to knowledge can be assessed in the future

Author/s	Research question/Aim	Construct	Methodological approach	Data analysis	Relevant findings	Limitations & Future Research
Yang and Kang (2008)	To examine the effects of innovation capital and customer capital on firm performance	- Innovation capital - Customer capital - Firm performance	Secondary data: Innovation capital, customer capital =3 years value of each firm, Firm performance= ROA and Tobin's q ratio, 312 high tech manufacturing firm and 204 low tech manufacturing firms in Taiwan	SEM, GFI; Model M1, $\chi2$=49.56 p=0.00 Model M2, $\chi2$=56.79 p=0.00 Model M3, $\chi2$=73.48 p=0.00 Model M4, $\chi2$=69.12 p=0.00	A significant interaction effect only exists in the high technology manufacturing firm, the main effect of customer capital is lower among high technology manufacturing firms, The main effect of innovation capital is the same for both high and log technology manufacturing firms.	- The empirical result does not explain whether or not managers should support the capital development, - This research is conducted only in one industry. - Should consider other industries, such as financial services or other non-manufacturing industries.

Author/s	Research question/Aim	Construct	Methodological approach	Data analysis	Relevant findings	Limitations & Future Research
Walumbwa and Schaubroeck (2009)	To examine the antecedents and consequences of ethical leadership	- Leader agreeableness - Leader conscientiousness - Leader neuroticism - Ethical leadership - Psychological safety - Voice behaviour	- Survey; - From 894 employees (response rate 69%) and 222 immediate supervisors (response rate 80%) in a large financial institution in the south-western United States.	- HLM and SEM; - χ2(1007, N=222)=1,674, 47, - CFI=0.94, - RMR=0.03, - RMSEA=0.05	Psychological safety→ + employee voice behaviour	- Internal validity - Response rate is low - Psychological safety may be a part of a broader social exchange process that deserves more attention in the future research.
Carmeli et al. (2009)	To examine how the quality of work relationships facilities learning behaviours in organisations through the ways it contributes to psychological safety	- Capacity of high quality relationship - Experiences of high quality relationships - Psychological safety - Learning behaviour	- Survey; - 235 worked undergraduate and graduate students of academic institutions. Response rate 90%	- CFA and SEM, - χ2=374.6 df=168, - CFI=.88, - RMSEA=.07, alternative second order - χ2=427.7 df=167, - CFI=.85, - IFI=.85, - NFI=.78, - RFI=.72, - TLI=.81, - RMSEA=.09	- Capacities of high quality relationship → +psychological safety - Subjective experiences of high quality relationships → + psychological safety - Psychological safety fully mediated high quality relationship → learning behaviours - Psychological safety partially mediated experiences of high quality relationship → learning behaviours	- This research is still limited on how high quality relationships are created in organisations. - Potential bias and common method errors by collecting data at two time points - Future research could create high quality relationships and compare with other types of relational variables.

116

Author/s	Research question/Aim	Construct	Methodological approach	Data analysis	Relevant findings	Limitations & Future Research
Kark and Carmeli (2009)	To investigate how psychological safety affects vitality and involvement in creative work	- Psychology safety - Vitality - Involvement in creativity	- Survey to 128 respondents in Israel	- SEM - CFI=0.93, IFI= 0,93, TLI=0.91, RMSEA=0.07	- Psychological safety→creative work involvement	- Cross sectional study - Future research might be examined other work context apart of psychological safety - It might be addressed creativity in collective context.
Gong et al. (2009)	To examine the relationship between employee creativity and job performance	- Employee creativity - Employee job performance - Employee creative self-efficacy - Transformational leadership	- Focus Group Discussion and Survey: - FGD with 8 insurance agents, - Survey to 277 agents out of total of 554 insurance agents in Taiwan. - Response rate 72%	- Confirmatory factor analysis and HLM : - $\chi2$=236.68, df=43, - RMSR=.03, - CFI=.96, - IFI=.96, - NFI=.95, - TLI=.95	- Employee creative Self-efficacy is a mediator 0f employee learning orientation→ transformational leadership - employee learning orientation →employee creativity	- Measuring transformational leadership and employee self-efficacy at the same time - Employee creativity may already have been present when transformational leadership is measured. - This research was not measure employee performance orientation - Replicate in different culture.

Author/s	Research question/Aim	Construct	Methodological approach	Data analysis	Relevant findings	Limitations & Future Research
Choi and Chang (2009)	To integrate employee collective process, and innovation effectiveness	- Management support - Collective implementation efficacy - Collective innovation acceptance - Implementation effectiveness - Innovation effectiveness	- Survey 3694 employees (rr 26.7%) in Korea	SEM CFI=0.98, RMSEA=0.17, RMR=0.049	Collective implementation efficacy →collective innovation acceptance	- Too large of sample
Stajkovic et al. (2009)	To examine relationships among collective efficacy, group potency, and group performance.	- Collective efficacy -Group potency -Group performance	- Meta-analysis, 290 studies	Meta-analytic structural equation model	Collective efficacy → group performance	Unable to examine the variability in the discussion assessment
Fu et al. (2010)	To explore the relative influence of salespeople's attitudes toward selling a new product, perceptions of subjective norms, and self-efficacy on the development of selling intentions	- Subjective norm - Attitude - Self-efficacy - Selling intensions - performance	- survey to 308 sales people in 457 days	Individual growth curve analysis with SAS Regression R^2= 0.43	- self-efficacy→ selling intensions	- only one company - lack of generalisability

Author/s	Research question/Aim	Construct	Methodological approach	Data analysis	Relevant findings	Limitations & Future Research
Beus et al. (2010)	Meta-analytically address several theoretical and empirical issues regarding the relationship between safety climate and injuries	#	- Meta-analysis of literatures with key words: safety climate & injury, injuries, accident or accidents in PsycINFO, PubMed and dissertation database (2003-2009). 32 studies	Meta-Analytic approach	-Injuries have a greater predictive effect on safety climate.	- unavailability of data to test all of the proposed safety climate and injury relationship - dichotomization of workplace injuries - The reliance on SME ratings to assess safety climate content contamination and deficiency. - safety climate-injury relationship should be using mediating variable e.g, safety behaviour - specify theoretical reasons for studying organisational or psychological safety climate.

Author/s	Research question/Aim	Construct	Methodological approach	Data analysis	Relevant findings	Limitations & Future Research
Dollard and Bakker (2010)	To examine a model of workplace psychological safety climate	- Psychosocial safety climate - Demands - Resources - Engagement - Psychological health problems	- Survey; - participants are Australian Education Department employees; teachers, and administrator from 19 schools, - Number of participants is 288 at time 1 (response rate 21%), - 212 at time 2 and 209 at time 3	Hierarchical Linear Modelling,	- Psychological safety climate →- Psychological health problem through demand - PSC as moderator demand → Psychological health problem - PSC→ + work engagement through job resources	- Low response rate - Low internal consistency - Future research should explore the relationship between PSC and other resources and demands
Wu et al. (2010)	To examine how differentiated leadership affects group effectiveness	- Group focused transformational leadership - Differentiated individual focused transformational leadership - Collective efficacy - Self-efficacy - Group effectiveness	- Survey to 70 leaders and 573 members of organisations in US	CFA SEM CFI=0.99, IFI=0.99, RMSEA=0.03	- Self-efficacy→collective efficacy	- Need to generalise it to other work groups or organisations.

Author/s	Research question/Aim	Construct	Methodological approach	Data analysis	Relevant findings	Limitations & Future Research
Lee et al. (2011)	To examine the roles of three elements of intellectual capital in implementing process innovations	- MPI performance - Worker expertise - Information sharing quality - Team psychological safety	- Online Survey to mid to high level managers and engineers who participated for MPI implementation project. - 3492 contacts were identified, 2870 contacts are eligible and response rate= 13.1%	- CFA, SEM, - CFI=0.957, - GFI= 0.926, - NNFI= 0.945, - RMSEA=0.052, - $\chi2(6)=399.501$	- Team psychological safety $\rightarrow$ + technical performance in MPI projects - Psychological safety is a mediating variable between information sharing quality and MPI performance	- Only focus on technical performance - Sample size - Performance can be measured by financial and market performance - Need for a larger sample size
Pearsall and Ellis (2011)	To examine and identify determinants of unethical behaviour by teams	- Ethical orientation - Psychological safety - Unethical team behaviour	Survey, 378 undergraduate students from a United States university.	Logistic regression, Team cheating decision $\chi2(3)=17.74$, Behaviour $\chi2(3)=20.01$, $R^2=0.18$ for Decision and 0.22 for behaviour	The relationship between utilitarianism and unethical outcomes was moderated by the level of psychological safety within the team	- Focus on team for several months and the result will be different it only take for shorter time - Too small group (3 members per team) and the result will be different in larger group (8-10 members) - Did not measure member interaction within the teams.

Author/s	Research question/Aim	Construct	Methodological approach	Data analysis	Relevant findings	Limitations & Future Research
Rosenbusch et al. (2011)	To examine the relationship between innovation and performance in SMEs	- Innovation - Differences between innovation types - SME performance	- Meta-analysis: From databases; Business source elite, EconLit, ISI Web of Knowledge , ABI inform	- Meta-Analysis Procedures , - Meta Regression	- Innovation → SME performance (+)at the aggregate level, - Factors such as the age of the firm, the type of innovation, and the cultural context affect innovation → firm performance.	- Need to examine how firms achieve the benefits of innovation. - More research can be directed to identify other moderators innovation → firm performance
Schaubroeck et al. (2011)	- To investigate the link between leader behaviour, team psychological states and team performance	- Trust - Team potency - Team psychological safety - Transformational leadership - Servant leadership - Team performance	- Survey to 999 employees from Hongkong and US based company	- SEM - CFI=0.9, NFI=0.97, GFI=0.97, RMSR=0.04	Team PS→Team Performance	- Single company - Cross sectional study - Need more study in the future for generalisation
Walumbwa et al. (2011)	- To examine the link between ethical leadership and performance	- Ethical leadership - LMX - Self-efficacy - Employee performance	- Survey to 72 supervisors and 201 employees in China	- SEM - TLI=0.99, CFI=0.99, RMR=0.01, RMSEA=0.04	Self-efficacy → performance	- Cross sectional study

Author/s	Research question/Aim	Construct	Methodological approach	Data analysis	Relevant findings	Limitations & Future Research
Schepers et al. (2011)	- To examine the link between virtual team efficacy and service performance	- individual antecedents - group antecedents - team efficacy - service performance	- survey to 192 respondents (rr 59%) in Netherlands	- CFA - Multilevel analysis - TLI=0.92, CFI=0.93, RMSEA=0.06	Virtual team efficacy → innovative service performance Individual self-efficacy →service performance Individual self-efficacy →team efficacy	- Cross sectional study - Study in team level - Future research could be SBU or organisation level.
Raub and Liao (2012)	- To examine the relationship between initiative climate and proactive customer service performance	- Initiative climate - Aggregated proactive customer service performance - General self-efficacy - Individual proactive customer service - Customer service satisfaction	- Survey: 83 hotels from an international hotel chain headquartered in Europe, - Only 74 establishments are usable. - Number of employee questionnaires 2,358. - Response rate 83%, - Geographic regions: Northern Europe, Western Europe, Eastern Eurpoe, Middle East and Africa, Asia	- CFA: - discriminant validity, - CFI=.95, - IFI=.95, - SMSR=.047 - Cross Level RCM Analyses	General self-efficacy →individual PCSP positive significant (p<0.05)	- Possibility of common method's bias - Sample only from single organisation. - Need to investigate different environmental contexts and longitudinal approach, - Need to examine the antecedents of initiative climate - Examine the role of self-efficacy in proactivity

Author/s	Research question/Aim	Construct	Methodological approach	Data analysis	Relevant findings	Limitations & Future Research
Liang et al. (2012)	To examine how three psychological antecedents predict supervisory reports of promotive and prohibitive voice behaviour	- Promotive voice - Prohibitive voice - Psychological safety - Felt obligation for constructive change - Organisation based self-esteem	- Survey in a Chinese retail company ; - 239 subordinates and 106 their supervisors - response rate 70% for subordinates and 93% for supervisors	- Confirmatory Factor Analysis, - SEM, - $\chi2=6$, 45.68, df=526, - RMSEA= .032, - CFI= .96, - TLI= .95	- Felt obligation → subsequent promotive voice, - Psychological safety → subsequent prohibitive voice, - organisational based self-esteem ←> promotive voice	- Only use 3 dimensions of psychological antecedents, and - in the future, it can use individual differences in regulatory focus as an antecedent, - promotive voice might be related to innovation,
Howorth et al. (2012)	To develop reflective thinking and communities of practice to equip social entrepreneurs for their unique circumstances	- Social Learning - Social entrepreneurship education - Psychological safety	- Qualitative research - with researcher participants approach and interview / FGD (length of time more than 8 years), - Participants= 9 social entrepreneurs on the first cohort of the VP programme. -	In-depth analysis of interview result,	- Psychological safety and committed learning identities are essential for social learning of communities	- Small sample - Using experiment - Impact of psychological safety toward social learning in wide context need to be explored

124

Author/s	Research question/Aim	Construct	Methodological approach	Data analysis	Relevant findings	Limitations & Future Research
Gong et al. (2012)	To investigate the link between employee proactivity, information exchange, psychological safety (trust) and individual creativity	- Proactive personality - Information exchange - Trust - creativity	- Survey to 375 employees in Taiwan	CFA SEM	- Trust →creativity	- Conducted study in Taiwan which has relatively high collectivism
Hirak et al. (2012)	To examine how groups and organisations learn from failures	- Leader inclusiveness - Psychology safety - Learning from failures - Unit performance	- Survey 225 members of 55 Israel hospital divisions in 3 times.	HLM	- Psychological safety→ learning from failures →unit performance	- Cannot convince generalisability - Further research in different culture context
Leroy et al. (2012)	How leader behavioural integrity for safety helps solve followers double bind between adhering to safety protocols and speaking up about mistakes against protocols.	- Leader behavioural integrity for safety - Team priority of safety - Team psychological safety	Survey; stage 1, 580 nurses from four Belgian Hospitals (response rate 70%), stage 2 with the head nurses in the four hospitals.	SEM, $\chi2(167)=484.40$, $p=0.00$, SRMR=0.04, RMSEA=0.06, CFI=0.95	- Leader behavioural integrity for safety → team priority of safety integrity for safety → psychological safety. - Priority of safety and psychological safety mediated the relationship leader behavioural integrity for safety → reported treatment errors.	- Data is cross sectional and does not support causal claims, - has potential common method bias, - Only for hospital setting.

Author/s	Research question/Aim	Construct	Methodological approach	Data analysis	Relevant findings	Limitations & Future Research
Bradley et al. (2012)	To examine relationship between psychological safety climate, task conflict, and team performance	- Task conflict - Psychological safety climate - Team performance	- Survey; - 561 undergraduate students from a large business course at a Midwestern university (which are divided into 117 five-person teams	Hierarchical Regression Model	Psychological safety climate allows task conflict to improve team performance	- The Lagged of nature of the measurement increasing the possibility that the interaction between psychological safety and task conflict leads to team performance - Respondent is undergraduate students - Other characteristics should be further explored as contingency factors in the conflict and performance relationship

Author/s	Research question/Aim	Construct	Methodological approach	Data analysis	Relevant findings	Limitations & Future Research
Stiglbauer, Selenko, Batinic, and Jodlbauer (2012)	To investigate whether work involvement moderates the negative effect of job insecurity on general well-being,	- Job insecurity - Work involvement - General well-being - Turn over intension	- Survey to 735 employees in Germany companies.	Regression analysis, R^2=0.43, 0.46, 0.60	Job insecurity $\rightarrow$ general well-being	- The measurement errors are not accounted.
Daniels et al. (2012)	To examine the relationship between affective well-being and within-day beliefs concerning problem solving demands to work performance	- Affective well-being - Problem solving demands - Beliefs concerning problem solving demand's adverse impact on work performance.	- Survey to 68 participants from 2 oil and gas companies in UK with 878 observations, compliance rate 65%	- Regression analysis,	Belief about demand's impact on performance $\rightarrow$ affective well-being	- Only in 2 companies.

Author/s	Research question/Aim	Construct	Methodological approach	Data analysis	Relevant findings	Limitations & Future Research
Halbesleb en et al. (2013)	To investigate the relationship between the leader's behavioural integrity regarding safety and work-related injuries	- Behavioural integrity for safety - Psychological safety - Safety compliance - Occupational injuries	· Online Survey, · 658 nurses, · response rate 61%	- SEM, - Chi square=135.19 - CFI=0.97, - AGFI=0.97, - NFI= 0.97, - TLI=0.97 - RMSEA=0.037	- Behavioural integrity for high safety values → + occupational injuries. - The effects of behavioural integrity regarding safety can be better understood through the mediating mechanisms of safety compliance and psychological safety	- Self-reported measurement - Effect of psychosocial safety climate to safety outcomes should be tested in the future research
Hajmoham mad and Vachon (2013)	To investigate the benefits of strong safety culture	- Safety culture - Safety practice - Environmental practice - Safety performance - Environmental performance - Financial performance	- Survey to 251 plant managers in Canada	- CFA - PLS SEM - GFI=0.84, CFI=0.98, NFI=0.85, RMSEA=0.03	- Safety culture→financial performance - Safety performance → financial performance	- Common method bias issue - Limited range of industries
Elias et al. (2013)	To examine the link between generalised self-efficacy, specific self-efficacy and work outcomes	- Generalised self-efficacy - Work-self efficacy - LMX - Learning	- Survey to 133 employees in US	- SEM - TLI=0.99 CFI=1.00, RMSEA=0.01	- Generalised self-efficacy→work self-efficacy - Work self-efficacy→ LMX - Work self-efficacy →learning	- Cross sectional study - Single source data

Author/s	Research question/Aim	Construct	Methodological approach	Data analysis	Relevant findings	Limitations & Future Research
Kirkman et al. (2013)	To examine the moderating effect of psychological safety to OcoP Performance relationship	- Nationality diversity - Psychological safety - Extent of rich communication media use - OCoP performance	- Interview to 56 employees of Fortune 100 US based multinational mining and minerals companies - Online survey to 229 OcoP members	- Hierarchical Regression analysis - Total R^2= 0.23, 0.28, 0.42, 0.66	- Psychological safetyX national diversity → performance	- Further research, efficacy becomes a mediator between national identity and performance - Sample size limitation.
Kwon and Rupp (2013)	To examine the relationship between high performer turnover and firm performance	- High performer turnover - Firm performance - Firm reputation	- Survey to 190 firms in Korea	- CFA, Regression - R^2= 0.43	- Firm reputation → financial performance (p<0.10)	- Cross sectional study
Jha et al. (2013)	To investigate the link between corporate image and service loyalty	- Corporate image - Perceived value - Interaction quality - Customer satisfaction - Loyalty	- Survey to 872 bank customers in New Zealand	- CFA, SEM - RMSEA=0.03, GFI=1.00, CFI=1.00, NFI=1.00, NNFI=0.99	- CI → Loyalty	- Cross sectional study -
Truss et al. (2013)	To describe the link between employee engagement, organisational performance and individual well-being	- Engagement - Organisational performance - Individual well-being	- Theoretical conceptual	- Descriptive	- Engagement → well-being - Well-being →performance	- Need for empirical study

Author/s	Research question/Aim	Construct	Methodological approach	Data analysis	Relevant findings	Limitations & Future Research
Singh et al. (2013)	To examine psychological safety → employee performance	- Diversity climate - Psychological safety - Race - Employee performance	- Survey to 165 matched pair responses. US multiracial employees, response rate 33%	- CFA, the basic mediational model	- Diversity climate → psychological safety - Psychological safety → performance	- Cross sectional study - Single manufacturing company
Wang et al. (2014)	To examine the relationship between transformational leadership, creativity, and social cognitive theory	- Transformational Leadership - Creative role Identity - Job complexity - Creative self-efficacy - Creativity	- Survey , - 480 employees and 84 supervisors, - 395 pairs completed questionnaires. - Response rate 82%	- SEM with AMOS 17.0, - Chi square=1278.26 , - CFI=0.91, - IFI=0.91, - TLI=0.90, - SRMR=0.05, - RMSEA=0.05	- Creative role identity→creative self efficacy, - creative self efficacy→ creativity	- Employee's self-reported, - Theory based on western context which is different with Taiwan situations, - Need to obtain data from experimental and longitudinal research in different industry
Liu, Songqi et al. (2014)	To examine the link between employment self-efficacy and job search behaviour self-efficacy	- Job search behaviour self-efficacy - Employment self-efficacy - Job search behavior	- Survey to 133 students in China	- CFA, multi model analysis with |Mplus 6	- Job search self-efficacy → job search behavior - Employment self-efficacy → job search behavior	- Only in China - Students as the respondent

Author/s	Research question/Aim	Construct	Methodological approach	Data analysis	Relevant findings	Limitations & Future Research
Liu, Songbo et al. (2014)	To examine the link between shared leadership and learning in teams	- Shared leadership - Team psychological safety - Team learning - Individual learning - Job variety	- Survey to 263 work team's members in China	- SEM with Mplus 6	- Team PS → Team learning - Shared leadership → Team PS	- Cross sectional study - Common method bias - Add cultural value as a variable
Pillemer et al. (2014)	To analyse the link between CEO's appearance, gender and financial performance	- Facial appearance - Gender - Personal traits - Financial performance	- Experiment to 50 student participants in US	- PCA and correlation analysis	- Correlation between facial appearance, gender, perfsonal traits with financial performance	- Cross sectional study
Wei et al. (2014)	To examine the link between organic organisational cultures, market responsiveness, product strategy and firm performance	- Organic culture - Market responsiveness - Product strategy change - Financial performance	- Survey to 1150 employees of 180 firms in China	- CFA and SEM, - Chi square: 6003.32 - CFI=0.96 - IFI=0.96 - TLI=0.95 - RMSEA=0.04	- Organic culture → product strategy → Firm performance	- One country study - Cross sectional study
Barrick et al. (2015)	To investigate the link between motivational antecedents, strategic implementation and firm performance	- Collective organisational engagement - Motivating work design - Strategic implementation	- Survey to 83 CEO of SMEs in US	- Regression Model.	- Collective engagement → firm performance	- Cross sectional study - Only organisation level

Author/s	Research question/Aim	Construct	Methodological approach	Data analysis	Relevant findings	Limitations & Future Research
Biemann et al. (2015)	To investigate the impact of empowering leadership to manager's career perceptions	- Empowering leadership - Career self-efficacy - Career satisfaction	- Survey to 2493 employees in Germany's companies	- Regressions -	- Empowering leadership → SE	- Do not measure employee performance - Only one German organisation
Boehm et al. (2015)	To examine the link between CEO charisma and firm performance	- CEO charisma - TFL climate - Organisation identity - Performance	- Survey to 282 employees from 150 companies in German	- SEM - CFI=0.92 - TLI=0.91 - SRMR=0.05	- Organization identity strength → Firm performance	- Cross sectional study - Subjective performance indicators.
Eisenbeiss et al. (2015)	To investigate the relationship between CEO ethical leadership and firm performance	- CEO ethical leadership - Organisational ethical culture - Organisational ethical programme - Firm performance.	- 145 employees of 32 companies in German	- Hierarchical Regression - R2 = 0.45; 0.44	- CEO ethical Leadership → Organisational ethical cullture - Organisational ethical culture X Organisational ethical programme → Firm performance	- Cross sectional study - Small sample

Author/s	Research question/Aim	Construct	Methodological approach	Data analysis	Relevant findings	Limitations & Future Research
Jo et al. (2015)	To examine the impact of corporate environmental responsibility on firm performance	- Corporate environmental responsibility cost - Firm performance (ROA)	- 4924 firm-year observations in several countries	- Regression	- CER → Firm performance	- Direct and indirect environmental cost is not clear
Oh et al. (2015)	To investigate the link between personality based human capital and firm performance	- Personality - Job satisfaction - Firm performance	- 6709 managers from 71 firms in South Korea	- PROCESS METHOD	- Personality → Job satisfaction → firm performance	- Single item job satisfaction measurement - Common method variance problem
Ruiz Jiménez et al. (2015)	To examine the relationship between organisational harmony and firm performance	- Trust - Working climate - Participation - Group cohesion - Longevity - Profitability	- 295 samples	- CFA and SEM -	- Trust → profitability - Working climate → profitability	- Cross sectional study
Shin et al. (2015)	To investigate the link between top management ethical leadership and firm performance	- Top management ethical leadership - Ethical climate - Procedural justice climate - Firm level OCB - Financial performance	- 4231 employees of 147 companies in Korea	- CFA, SEM -	- Ethical climate → procedural justice - Ethical climate → financial performance - Procedural justice → financial performance	- Cross sectional study

Author/s	Research question/Aim	Construct	Methodological approach	Data analysis	Relevant findings	Limitations & Future Research
Simonet et al. (2015)	To investigate the indirect role of psychological safety on psychological empowerment	- Psychological safety - Authentic interactions - Perceived voice - Spiritual development - Extraversion - Psychological empowerment	- Survey to 229 member of a church in US	- Model 2 Preacher SPSS macro - CFA - CFI = 0.90 - RMSEA =0.06	- PS → Psychological empowerment through authentic interactions	- Cross sectional study - Did not fully used standardised measurement - Put team process as variable in the future research
Wang and Berens (2015)	To examine the link between CSP, corporate reputation and Financial performance	- CSP - Corporate reputation - Financial performance	- Secondary data	- PLS-SEM -	- Corporate reputation → financial performance	- Only use KLD as CSP indicators.
Zheng et al. (2015)	To examine theoretical and structural dimensions of employee well-being	- Life well-being - Workplace well-being - Psychological well-being	- Semi structure in-depth interview to 310 employees - Survey to 400 managers and employees - Survey to 340 employees of Chinese airline - Survey to 217 employees of a high tech company	- Qualitative analysis - EFA - CFA - Regression	- EWB → job performance	- Common method variance problem - Only in China

134

Author/s	Research question/Aim	Construct	Methodological approach	Data analysis	Relevant findings	Limitations & Future Research
Kirk-Brown and Van Dijk (2016)	To investigate the role of psychological safety on the relationship between job resources, affective commitment and turnover intentions	- Job resources - Psychological safety - Affective commitment - Turnover intentions.	- Survey to 55 chronical illness and 512 general employees in Australia	- SEM, - NFI= 0.97 - CFI = 0.98 - RMSEA = 0.06	- PS → affective commitment	- Common method bias - Cross sectional study - Future research can be a longitudinal study
Roussin et al. (2016)	To introduce a multilevel theory and model of psychological safety within work teams	- Ps microclimates	- Theoretical conceptualisation	#	- Proposition: PS density → multilevel learning and performance	- Binary informantion - Data more sensitive
Yoon and Christopher Kayes (2016)	To identify self-efficacy as the antecedent of individual learning	- Individual self-efficacy - Team learning behaviour - Individual learning	- Survey to 1397 employees in South Korea	- Hierarchical linear modelling, R square 0.38	- Individual self-efficacy → individual learning	- Cross sectional study
Ng and Lucianetti (2016)	To investigate the link between innovative behaviour, creative persuasion and self-efficacy	- Organisational trust - Creative self-efficacy - Psychological collectivism - Idea generation	- Survey to 303 employees in Italy	- Regression analysis	- Self-efficacy → innovative behaviour	- Convenience sampling - Cross sectional study

Author/s	Research question/Aim	Construct	Methodological approach	Data analysis	Relevant findings	Limitations & Future Research
Hasan et al. (2016)	To examine the link between CSR and financial performance with productivity as a mediator.	- CSP - Financial performance - Productivity	- Secondary data from US companies, 5516 firm year observations	- Regression	- CSP → financial performance	-
Zhu, H. et al. (2016)	To investigate the link between corporate governance on organisational performance	- Board processes - Board strategic involvement - Organisational performance	- Survey to 376 managers in Canada	- SEM,	- Board strategic involvement → organisational performance	- One employee for each company. - Cross sectional study

CHAPTER 3. CONCEPTUAL MODEL AND HYPOTHESIS

3.1 Introduction

This chapter aims to explore a conceptual model of the relationship between psychological safety, self-efficacy, and organisational performance. First, this chapter discusses the relationship between psychological safety dimensions. Second, it examines the relationship between psychological safety and self-efficacy. Third, it investigates the relationships between self-efficacy dimensions. Fourth, it examines the relationships between psychological safety and organizational performance. Fifth, it examines the relationships between self-efficacy and organisational performance. Finally, it looks at the relationships between organisational performance dimensions. Hence, this study develops 31 hypotheses from all possible relationships. Therefore, the following part starts with the relationships within psychological safety dimensions.

3.2 Relationships regarding Psychological Safety Dimensions

According to several prior studies, psychological safety dimensions may possibly be related each other (Kahn, 1990; Babin & Boles, 1996; Tynan, 2005; Beus et al., 2010; Morrow et al., 2010; Cigularov et al., 2013). For example, physical safety may relate to energy safety (Cigularov et al., 2013), while energy safety may have a connection to inner psychological safety (Probst & Estrada, 2010). Subsequently, inner psychological safety may be related to team psychological safety (Tynan, 2005) and energy safety may be related to employment equity psychological safety (Huang et al., 2008). Thus, the researcher argues that psychological safety dimensions might be related to each other. For instance, the researcher assumes that when an employee has enhanced psychological safety as a result of support from management and co-workers, it will have a positive impact on a better individual/inner psychological safety. Accordingly, the psychological

safety of an employee as a consequence of support from management and co-workers, which refers to energy psychological safety, has a relationship with inner psychological safety. Hence, this study proposes the following seven relationships between psychological safety dimensions.

3.2.1 Physical risk psychological safety and energy psychological safety

Physical risk psychological safety arguably relates to energy psychological safety (Walker & Hutton, 2006; Lu & Tsai, 2008; Wu, Chen, & Li, 2008; Cigularov et al., 2013; Probst, 2015; Weichbrodt, 2015). For example, Cigularov et al. (2013) asserted that management's commitment to safety and support from the supervisor (energy safety) are related to their perception of physical safety practices, such as safety training and site-specific safety information. Probst (2015) also noted that supervisor safety leadership and organisational safety climate have a relationship with unreported accidents. Furthermore, Lu and Tsai (2008) and Walker and Hutton (2006) examined the elements of physical risk (e.g., physical hazard) and energy safety, such as supervisor support in their studies. Furthermore, Amponsah-Tawiah et al. (2013) commented that interpersonal and managerial support regarding safety is an important factor to consider as it is associated with safety outcomes, such as workplace injuries (p.76). Thus, the physical security components, such as workplace injuries relate to employees' feeling of safety in obtaining support from their supervisor or co-workers (energy psychological safety). Consequently, the researcher assumes that when an employee feels psychologically safe from physical hazards, it may have an impact on his/her energy psychological safety.

Wu et al. (2008) noted that one component in safety climate is physical safety climate (e.g. safety equipment and accident investigation), which is related to physical risk psychological safety. Moreover, Weichbrodt (2015) asserts that safety rules, such as safety in the physical environment, may have an association with management's rules in

an organisation. Accordingly, the researcher argues that management's rules handle management's commitment and support of safety, which refers to energy psychological safety. Although both Wu et al. (2008) and Weichbrodt (2015) mentioned the manager's commitment to safety, they failed to define it as a psychological safety dimension. Hence, the researcher argues that physical risk psychological safety, which reflects on physical safety climate, has a relationship with energy psychological safety (e.g., management's support).

In addition Laaksonen et al. (2010) shed light on the correlation between physical working conditions and psychosocial working conditions, which is measured by means of social support, such as the possibility of getting help from co-workers and supervisors. Moreover, Cigularov et al. (2013) contended that management's commitment to safety and support from the supervisor (energy safety) are related to their perception of physical safety practices, such as safety training and site-specific safety information. Accordingly, when an employee acquires greater physical risk safety, it has an impact on his/her energy psychological safety, which refers to the feelings of safety an employee has in gaining support from his/her co-workers and supervisors/managers. Consequently, this study notes that physical risk psychological safety is an antecedent of energy psychological safety. Therefore, regarding the above discussion, this study posits the hypothesis that:

H1a. Physical risk psychological safety has a relationship with energy psychological safety

3.2.2   Physical risk psychological safety and inner psychological safety

Several prior studies argued that physical risk psychological safety relates to inner psychological safety (Lu & Tsai, 2008; Makin & Winder, 2008; Wachter & Yorio, 2013). For example, Kahn (1990) contended that physical factor relates to the psychological

availability of an employee. He claimed that psychological availability is the sense of having the physical, emotional or psychological resources to personally engage at a particular moment (p. 1989). Accordingly, the psychological availability relates to the psychological safety feeling of an employee to be involved with his/her job. In addition, Amponsah-Tawiah et al. (2013) examined the impact of physical risk factors on employee's safety experience. They remarked that hazards in the physical work environment have a significant impact on employee's safety experience. Hence, the researcher argues that physical risk psychological safety affects employee's psychological safety as an individual. Even though Kahn (1990) and Amponsah-Tawiah et al. (2013) failed to mention physical safety factors as a dimension of psychological safety, the researcher asserts that the physical safety climate is related to psychological safety. Arguably, physical safety affects the psychological safety of an employee as an individual.

Moreover, Walker and Hutton (2006) revealed that employers and employee have a number of obligations regarding safety climate. They stressed that the ability of a company to provide safety audits and training are essential factors in creating an enhanced safety climate pertaining to psychological contracts in the workplace. However, they failed to notice the relationship between safety climates, such as physical climate and an employee's psychological safety. Several authors (i.e. Lu & Tsai, 2008; Makin & Winder, 2008; Wachter & Yorio, 2013) argued that when a company has an enhanced safety climate or occupational health and safety system, it may possibly affect the employee's psychological safety as an individual. For example, Makin and Winder (2008) assert that failure to maintain physical workplace hazards relates to employee's occupational health and safety, which reflects on occupational health and safety management systems. Although no single study has addressed the association between physical risk psychological safety and inner psychological safety precisely, the researcher argues that

physical risk psychological safety is an antecedent of inner psychological safety. Hence, this study proposes the hypothesis that:

H1b. Physical risk psychological safety relates to inner psychological safety.

3.2.3 Physical risk psychological safety and team psychological safety

Several prior studies argued that physical safety relates to team safety climate (e.g. Silva, Lima, & Baptista, 2004; Idris et al., 2012; Kouabenan et al., 2015). In other words, an employee will arguably receive greater psychological safety as a team when she/he feels safe from physical hazards, such as the possibility of being injured in the workplace. For instance, Idris et al. (2012) investigated safety climate measures, for instance physical safety climate, team psychological safety and perceived organisational support. They contend that physical safety climate may relate to psychological safety. Moreover, Idris et al. (2015) also asserted that psychosocial safety climate which is related to team psychological safety has a strong relationship with physical climate. Conversely, Beus et al. (2010) examined several theoretical and empirical issues on the relationship between injuries and safety climate by using a meta-analytical method. They stressed that injury safety climate relates to psychological safety climate. Although both studies (Beus et al., 2010; Idris et al., 2012) noted that physical safety climate relates to an employee's psychological safety, they failed to define physical safety climate as a dimension of psychological safety.

Amponsah-Tawiah et al. (2013) asserted that physical risk factors, such as a hazardous environment and accidents may relate to employee psychological safety. Kouabenan et al. (2015) and Silva et al. (2004) emphasised that accident frequency relates to safety climate regarding teamwork. The low accident rate is related to physical risk psychological safety. Thus, low accident frequency could have a connection to safety

climate in relation to teamwork, which refers to team psychological safety. In addition, Kath, Magley, and Marmet (2010) argued that safety climate, for example physical climate may have an impact on teamwork trust, which is related to team psychological safety. Hence, the researcher argues that physical safety climate relates to team psychological safety. However, to the best of the researcher's knowledge, research on this relationship remains neglected. Therefore, the researcher proposes the hypothesis that:

H1c. Physical risk psychological safety has a relationship with team psychological safety

3.2.4 Energy psychological safety and inner psychological safety

Energy psychological safety has a relationship with inner psychological safety (Tomas et al., 1999; May et al., 2004; Probst & Estrada, 2010; Probst, 2015). For instance, Probst and Estrada (2010) investigated the moderating effect of psychological safety climate and supervisors' enforcement of safety practices. They asserted that supervisors' enforcement of safety practice relates to individual psychological safety climate. In addition, May et al. (2004) stated that an employee's relationship with a manager can have a huge impact on his/her perception of safety in the workplace. They also emphasised that interpersonal relationships between individuals will help to develop an employee's feelings of safety as an individual. Hence, support from the supervisor and interpersonal relationships between employees may relate to an employee's psychological safety. From this point of view, the researcher argues that an improved interpersonal relationship between supervisor/manager and employee or amongst employees has a relationship with individual psychological safety.

Tomas et al. (1999) examined several organisational and psychological variables as the predictors of safety in the workplace. They revealed that supervisors, co-workers, and workers' attitudes relate to the safety behaviour of an employee. Moreover, Kahn

(1990) stressed that when an employee interacts with his/her colleagues in the correct way, it will relate to a dignity and self-appreciation, which has an impact on the employee's inner-psychological safety. Therefore, the researcher argues that motivation or support from managers and co-workers creates an energy safety feeling for the employees, which may possibly have an association with individual psychological safety. Thus, the researcher notes that energy (supervisors' and co-workers') psychological safety relates to inner-psychological safety. However, the study of this relationship remains limited. Hence, the researcher posits a hypothesis that:

H2a. Energy psychological safety is related to inner psychological safety

3.2.5   Energy psychological safety and employment equity psychological safety

Energy psychological safety, which originates from manager's and co-workers' support, may have a relationship with employment equity psychological safety. Previous studies contended that support from supervisors and co-workers may lead to employees feeling a climate of safety (Babin & Boles, 1996; Burt et al., 2008; Dysvik & Kuvaas, 2012; Zoghbi-manrique-de-lara & Suárez-acosta, 2014; Ghumman et al., 2016). For example, Babin and Boles (1996) examined the key aspects of employees' work environments (climate) and how employees' perceptions of these issues relate to work-related outcomes. Additionally, they argued that support from supervisor's and co-workers' relate to the role of conflict, which refers to unpleasant conditions at work due to a misunderstanding in relation to tasks. Moreover, Burt et al. (2008) explored potential variables which are related to a caring attitude with respect to co-worker's safety. They note that support from co-workers and supervisors encourages employees to take care each other. Accordingly, the role of conflict and employee's being caring about co-workers' safety relate to energy psychological safety. At the same time, Makin and

Winder (2008) maintained that one of the factors regarding safety climate is safety from discrimination, such as discrimination based on religion, gender or ethnicity which refers to employment equity psychological safety. Hence, the researcher argues that when an employee feels safe due to support from his/her co-workers or supervisor, it will lead to his/her safety from discrimination at work.

Wood et al. (2013) classified four perpetrators of discrimination in the mental health workplace, including managers/supervisors, co-workers, patients, and visitors. They stressed that managers and co-workers are potential sources of discrimination at work. Whilst, support from managers and co-workers is related to energy psychological safety. Hence, the researcher argues that energy psychological safety has a connection to discrimination at work, which is related to employment equity psychological safety. Additionally, Ghumman et al. (2013) in their systematic literature review revealed that one specific discriminatory practice undertaken at work by managers or co-workers is religious discrimination. They noted that religious harassment may occur when employees face a hostile or offensive work environment due to their religion. Ghumman et al. (2016) also asserted that managers or co-workers may become perpetrators when they treat an employee differently due to his/her religion. Thus, it could be assumed that support from managers or co-workers that is related to energy psychological safety has a relationship with regards to an employee feeling safe from discrimination (employment equity psychological safety). However, research concerning this relationship continues to be overlooked. Regarding the above discussion, this study hypothesises that:

H2b. Energy psychological safety has a relationship with employment equity psychological safety.

3.2.6   Energy psychological safety and team psychological safety

Energy psychological safety relates to team psychological safety (Tucker et al., 2007; Walumbwa & Schaubroeck, 2009; Morrow et al., 2010; Hirak et al., 2012). For example, Tucker et al. (2007) commented that managerial and organisational support enables team psychological safety theoretically. In contrast, Morrow et al. (2010) studied the connection between employee's psychological safety climate and safety behaviour. They noted that psychological perceptions of work safety tension as a team is more strongly related to safety behaviour than perceptions of management or co-workers commitment to safety. Arguably, psychological safety as a team is not strongly related to energy psychological safety; however, it depends on individual behaviour which is related to inner factors. The researcher argues that energy safety has a relationship with team psychological safety. For instance, when an employee has better energy safety in terms of sufficient support from his/her supervisor or co-workers, it will generate trust and commitment regarding the team, which is related to team psychological safety. Accordingly, the researcher argues that energy psychological safety is an antecedent of team psychological safety.

Walumbwa and Schaubroeck (2009) investigated the mediating roles of ethical leadership and work group psychological safety on leader personality traits-employee voice behaviour. They ascertain that support from the leader of an organisation, such as ethical leadership, affects team psychological safety. Conversely, Lee et al. (2011) examined the association between the roles of worker expertise, the quality of information sharing and psychological safety in manufacturing process innovation. They commented that information sharing from members of the organisation, such as managers and co-workers, has a positive impact on team psychological safety. Additionally, Hirak et al. (2012) examined the relationship between leader inclusiveness, which is related to energy safety and psychological safety. They asserted that leader inclusiveness is significantly

and positively associated with employee's psychological safety. Thus, it means that supervisor and co-worker relationships will develop team confidence regarding work and moreover, that it will affect team psychological safety. Although a number of prior studies looked at supervisor and co-worker's support, in addition to team psychological safety, there have been limited studies in connection with this association. Accordingly, from his point of view, the researcher assumes that energy psychological safety relates to team psychological safety. Hence, this study proposes the hypothesis that:

H2c. Energy psychological safety is related to team psychological safety

3.2.7 Inner psychological safety and team psychological safety

Finally, inner psychological safety is arguably related to team psychological safety (Baer & Frese, 2003; Tynan, 2005; Burt et al., 2008; Idris et al., 2012). For instance, Tynan (2005) examined the impact of threat sensitivity and face giving on psychological safety and communication. She emphasised that self-psychological safety is related to other psychological safety dimensions, such as team psychological safety. In addition, Burt et al. (2008) explored variables linked to employee's caring attitude towards co-worker's safety in a team. They contended that when an employee feels safe as an individual, he/she will participate as a team. They also noted that an employee's caring attitude correlates with team tenure. Therefore, the researcher assumes that individual or inner-psychological safety is an antecedent of team psychological safety. So far, however, there has been little discussion on the subject of this relationship. Consequently, more studies are required to confirm that particular relationship.

Baer and Frese (2003) argued that in developing a climate of psychological safety and climate of initiative, an employee might have to feel comfortable and not be blamed by others. Hence, it might be assumed that employees should be safe and feel comfortable to be themselves, not only as individuals but also as part of a team. Arguably, employees

146

want to express their opinions at work if they feel safe psychologically. Moreover, Idris et al. (2012) claimed that psychosocial safety climate (e.g., individual psychological safety) relates to team psychological safety. Thus, it means that the inner-psychological safety may affect the psychological safety of an employee when he/she becomes a team member (Edmondson, 1999; Baer & Frese, 2003; Idris et al., 2012). For this reason, the researcher asserts that inner-psychological safety is an antecedent of team psychological safety. Consequently, the reasoning above produces the following hypothesis:

H3a. Inner-psychological safety relates to team psychological safety

3.3 Psychological Safety and Self-Efficacy

Several prior studies revealed that psychological safety dimensions may relate to self-efficacy. For example, physical risk psychological safety has an impact on individual self-efficacy (Al-Refaie, 2013), team psychological safety relates to collective efficacy (Edmondson, 1999) and team psychological safety has a connection to creative self-efficacy (Amabile et al., 1996). Moreover, Ng and Lucianetti (2016) asserted that organisational trust and perceived respect which is related to psychological safety, have a relationship with self-efficacy (e.g., creative self-efficacy). For that reason, greater employee psychological safety may generate enhanced employee self-efficacy. Hence, this study examines psychological safety and self-efficacy relationships as follows.

3.3.1 Physical risk psychological safety and individual self-efficacy

Physical safety climate may relate to the self-confidence of an employee (Christian et al., 2009; Dollard & Bakker, 2010; Al-Refaie, 2013; Chen & Chen, 2014). Accordingly, the self-confidence of an employee will be higher when he/she is safe from physical hazards, such as the possibility of being injured when he/she is performing the job. Al-Refaie (2013) examined the effects of organisational safety management,

workgroup level factors on safety self-efficacy, awareness and safety behaviour. He suggested that management of physical safety climate, such as conducting safety audit affects the safety self-efficacy of an employee. Moreover, Dollard and Bakker (2010) investigated psychosocial safety climate as an antecedent of a work environment that is conducive, psychological health problems and employee engagement. They emphasised that physical safety climate is related to the psychological health problems of an employee. As a result, employee's physical safety climate will have an impact on employee self-efficacy concerning his/her beliefs on his/her capabilities to perform the job effectively. In addition, Tangirala et al. (2013) proclaimed that self-efficacy and psychological safety have moderated the association between duty and achievement orientations on employees' voices. Hence, from the above discussion, the researcher argues that psychological safety and self-efficacy are related.

Christian et al. (2009) elucidated on the correlation between self-efficacy and work safety climate with regards to increasing the safety motivation of the employee. They observed the roles of a person and situation factors in a meta-analysis study. In a different way, Chen and Chen (2014) noted that self-efficacy affects the safety behaviour of an employee. However, to the best of the researcher's knowledge, studies on this relationship continue to be disregarded, principally on the connection between physical safety and self-efficacy. Even though Christian et.al mentioned safety climate and self-efficacy, they failed to explore the direct relationship between physical safety climate and self-efficacy. As a result, the researcher assumes that physical safety climate and self-efficacy are related. Therefore, the researcher notes that physical risk psychological safety has an impact on individual self-efficacy. Hence, this study posits a hypothesis that:

H1d. Physical risk psychological safety is related to individual self-efficacy.

3.3.2 Physical risk psychological safety and collective self-efficacy

Physical risk psychological safety, which deals with physical safety climate, is also related to collective self-efficacy (Bandura, 1991, 2001; Bluyssen, Janssen, van den Brink, & de Kluizenaar, 2011; Chen & Kao, 2011; Ford & Tetrick, 2011; Haslam et al., 2015). In an example, Chen and Kao (2011) examined the relationships between work characteristics, self-efficacy, collective efficacy and OCB. Work characteristics in their study refer to contextual characteristics, such as physical environment and social characteristics. They contended that work characteristics, such as physical environment may relate to job performance with self-efficacy as the mediator. In addition, Ford and Tetrick (2011) also stressed that occupational safety, which refers to physical safety at work, may have an association to work generalised self-efficacy. Although, both Chen and Kao (2011) and Ford and Tetrick (2011) failed to mention the physical environment in contextual characteristics, as a dimension of psychological safety, the researcher argues that this physical environment relates to physical risk psychological safety. Hence, physical risk psychological safety may be an antecedent of self-efficacy.

Moreover, Bandura (2002) emphasised that the physiological conditions of an employee, such as fatigue, aches and pains, in addition to stress are indicators of physical inefficacy. Consequently, when an employee is not safe from physical risk, it will lead to his/her self-efficacy as a team member. Furthermore, Schaubroeck et al. (2000) examined how cultural differences and efficacy perceptions influence the role of job control (p.512). They commented that psychological health symptom, which is related to physical risk psychological safety, has a relation to job efficacy and collective efficacy. Accordingly, from this point of view, the researcher argues that physical risk psychological safety has an impact on collective self-efficacy. For example, when an employee feels safe from physical risk/hazard, it will lead to his/her belief concerning his/her capabilities to

undertake a job as a member of the team. From the above discussion, the researcher proposes the hypothesis that:

H1e. Physical risk psychological safety has a relationship with collective self-efficacy.

3.3.3 Inner psychological safety and individual self-efficacy

Several prior studies have argued that inner psychological safety may possibly be related to individual self-efficacy (Tynan, 2005; Zhang et al., 2010; Schaubroeck et al., 2011; Chen & Hou, 2016; Tu & Lu, 2016). For example, Tynan (2005) remarked that psychological safety leads to the communication of other threats with self-efficacy as the mediator. Moreover, Zhang et al. (2010) explored the connection between trust, psychological safety and intention to continue sharing knowledge with knowledge self-efficacy as the control variable. They stated that psychological safety and self-efficacy significantly affect intention to continue sharing knowledge. Tu and Lu (2016) asserted that intrinsic motivation, for instance psychological safety has moderated the relationship between ethical leadership and employee's self-efficacy. Arguably, psychological safety could have a direct relationship with self-efficacy. In addition, Simonet et al. (2015) also mentioned that individual psychological safety has an impact on employee's psychological empowerment, such as self-efficacy. Therefore, an employee's improved psychological safety as an individual may have an impact on his/her enhanced self-efficacy. Hence, the researcher argues that inner psychological safety has an impact on the self-confidence of an employee when he/she is performing his/her job (individual self-efficacy).

Moreover, Kirkman et al. (2013) investigated the relationship between national diversity, psychological safety and organisational performance. They claimed that self-efficacy could be employed as the mediating variable between psychological safety and

150

organisational performance. Thus, it means that psychological safety is an antecedent of self-efficacy. In contrast, Christian et al. (2009) argued that extraversion, which is related to self-efficacy is an antecedent of safety knowledge and motivation of the individual. This safety motivation and knowledge relates to psychological safety. Accordingly, it means that self-efficacy is an antecedent of psychological safety. Although the debate has occurred regarding this relationship, many authors, such as Edmondson (1999) stated that psychological safety is more plausible as an antecedent of self-efficacy. Hence, from the above discussion, the researcher hypothesises that:

H3b. Inner-psychological safety has a significant relationship with individual self-efficacy.

3.3.4 Inner psychological safety and collective self-efficacy

According to Tu and Lu (2016), psychological safety which relates to employee's feeling comfortable, less anxiety and less insecurity may affect his/her self-efficacy as a group member. Moreover, Simonet et al. (2015) also asserted that individual psychological safety may provide a safety net which creates an employee's self-efficacy. In this context, they remarked that psychological safety can reduce an employee's self-doubt in relation to his/her competences in executing a task. In addition, Ng and Lucianetti (2016) noted that self-efficacy relates to employee's trust and respect in the workplace. Employees will have enhanced confidence as a result of not being rejected or punished by other organisational members. Thus, it is related to psychological safety (Edmondson, 1999). Although the previous studies above have not exactly mentioned the connection between inner psychological safety and collective efficacy, the researcher argues that psychological safety as an individual, relates to an employee's self-efficacy as a member of a team. For this reason, this study proposes a hypothesis that:

H3c. Inner psychological safety has a relationship with collective self-efficacy.

3.3.5   Employment equity psychological safety and individual self-efficacy

According to several scholars (Dollard & Bakker, 2010; Heslin et al., 2012; Al-Refaie, 2013), employment equity psychological safety might have an impact on the individual self-efficacy of the employee. For instance, Al-Refaie (2013) commented that the harmonious interrelationship between employees has an impact on self-efficacy. Harmonious interrelationship refers to how employees communicate with each other and also with supervisors or managers. This relationship will be harmonious when they have equality with no rejection caused by any differences, such as gender, religious belief and ethnicity. Moreover, Morgan, Walker, Hebl, and King (2013) remarked that discrimination toward employees has an impact on employee's efficacy. In addition, discrimination at work is related to workplace justice. According to He, Zhu, and Zheng (2014), workplace procedural justice is a significant motivator of employee work attitude and performance (p.681). Accordingly, non-discriminative procedural justice at work has an impact on employees' attitudes at work, for instance employee self-efficacy. Although Morgan et al. (2013) and He et al. (2014) did not address discrimination based on gender, ethnicity and religion, the researcher assumes that protection from discrimination (e.g., gender, ethnicity and religious belief discrimination) is related to employee's self-efficacy.

Stevens, Bavetta, and Gist (1993) considered the role of self-efficacy in the relationship between gender differences and negotiation skills. They asserted that different treatment based on gender, which is related to employment equity psychological safety, has a connection to employees' self-efficacy. In addition, Bauer, Maertz, Dolen, and Campion (1998) examined the association between employee's procedural justice perceptions and employee's self-efficacy. They stressed that procedural justice perceptions, which relate to employee's perception of discrimination at work, positively

152

relate to the general test-taking self-efficacy of an employee. Hence, the researcher assumes that employment equity psychological safety is an antecedent of self-efficacy. However, previous studies continue to overlook this relationship. Accordingly, the researcher proposes the hypothesis that:

H4a. Employment equity is significantly related to individual self-efficacy.

3.3.6 Employment equity psychological safety and collective self-efficacy

Employment equity is also related to collective efficacy. Several previous studies, such as May et al. (2004) and Schepers et al. (2011) asserted that psychological safety feelings of an employee, such as a lack of discrimination and being treated equally relate to the employee's confidence to perform the job as part of a group. For instance, May et al. (2004) remarked that psychological availability, which refers to the confidence individuals have regarding their abilities (cognitively, physically and emotionally) to perform their job in the best way. In addition, Schepers et al. (2011) investigated the relationship between a number of individuals and group level antecedents and perceived-virtual team efficacy and the connection between team efficacy and employee service performance. They noted that encouragement from supervisors and peers has an impact on team efficacy. Even though Schepers et al. (2011) did not mention encouragement from supervisors and peers (e.g., support for anti-discrimination) as a dimension of psychological safety, the researcher argues that encouragement from supervisors and peers may come from how they deal with concerns on the topic of equality. Hence, concerns regarding equality relates to employment equity psychological safety.

According to Zoghbi-manrique-de-lara and Suárez-acosta (2014), interactional justice toward others, such as interactional justice from a supervisor to his/her employee is one of organisational justice. They argued that interactional justice in the workplace will affect employee's organisation citizenships behaviour (OCBs). Interactional justice

153

has a correlation with the employee's feelings of safety based on the supervisor's support. Additionally, Chen and Kao (2011) commented that OCB is related to employee's self-efficacy. Accordingly, the researcher argues that interactional justice, which refers to employment equity psychological safety, is related to employee's self-efficacy. Hence, to increase employee's self-efficacy, the company's manager or supervisor has to make sure that he/she deals with interactional justice, which has a connection with employees' psychological safety from discrimination or prejudice.

Lin, Baruch, and Shih (2012) examined the impact of three dimensions of perceived corporate citizenship on team performance by way of team efficacy and team esteem, as the mediators. They commented that serious discrimination in a workplace as a part of legal citizenship is positively related to team efficacy (p.171). They also asserted that discrimination toward employees in the workplace will discourage them and as a consequence, employee's team efficacy and team self-esteem will be affected. In addition, Bell et al. (2013) introduced a proposition in relation to discriminatory job loss and self-efficacy relationship. They argued that unfair job loss, which refers to employee's job loss due to non-performance factors (e.g., discrimination), may relate to employee's self-efficacy as individual or collective. For that reason, the researcher argues this discrimination relates to employee's psychological safety and leads to self-efficacy. For instance, when an employee experiences discrimination (e.g., discrimination based on gender, ethnicity, religious belief or other factors), it may affect his/her feelings of psychological safety and lead to his/her self-efficacy. Thus, the researcher assumes that employment equity psychological safety relates to collective self-efficacy. Hence, this study proposes the hypothesis that:

H4b. Employment equity has a significant relationship with collective self-efficacy.

3.3.7 Team psychological safety and collective self-efficacy

Several prior studies stated that collective self-efficacy might be related to team psychological safety (Edmondson, 1999; May et al., 2004; Lent, Schmidt, & Schmidt, 2006; Lewis, 2011; Luciano, DeChurch, & Mathieu, 2015; Roussin et al., 2016). For example, Edmondson (1999) examined the association between team psychological safety, team efficacy, team learning and team performance. He stressed that team psychological safety together with team efficacy creates team learning behaviour. However, Edmondson did not address the link between team psychological safety and team efficacy in his study. Roussin et al. (2016) commented that team psychological safety microclimates are very important with respect to team behaviour, such as team learning and performance outcomes. Accordingly, team psychological safety relates to team efficacy which reflects on team learning and team performance. Moreover, May et al. (2004) and Hernandez and Guarana (2016) considered the relationship between psychological safety, meaningfulness, availability and employee's engagement at work. They noted that psychological safety and psychological availability, which refers to self-efficacy relate to employee's engagement. Even though Edmondson (1999), May et al. (2004), Roussin et al. (2016) and Hernandez and Guarana (2016) did not exactly address the relationship between team psychological safety and collective efficacy, the researcher argues that team psychological safety relates to collective self-efficacy.

Lent et al. (2006) explored the relationship between team cohesion, personal efficacy, collective efficacy and team performance. They highlighted that team cohesion, which reflects members' commitment and involvement in the team, has a positive impact on collective efficacy. In contrast, team commitment and involvement may relate to team psychological safety. Moreover, Luciano et al. (2015) maintained that team psychological safety may possibly be related to collaborative interactions across the team. Collaborative

interaction is related to collective self-efficacy. Accordingly, team psychological safety may identify with collective self-efficacy. In addition, Parker (1994) asserted that collective efficacy is concerned with judgments that people make about a group's level of competency (p.43). Whilst, Salanova et al. (2014) argued that collective efficacy relates to collective flow experience. They stressed that collective flow experience refers to group task enjoyment when undertaking their work. Group task enjoyment may occur when the team feels safe psychologically. For instance, when an employee feels safe psychologically as a team member (e.g., as a result of not being rejected or punished by other team members), it will lead to an increase in his/her confidence to accomplish the job as a part of the team (collective self-efficacy). Thus, the researcher argues that team psychological safety might be an antecedent of collective efficacy. From the above discussion, this study proposes the hypothesis that:

H5a. Team psychological safety has a relationship with collective self-efficacy.

3.3.8 Team psychological safety and creative self-efficacy

Team psychological safety refers to the employees' safety to speak up freely. It could be argued that when team members have greater team psychological safety, it will allow them to share the best way to complete their job creatively (Hirak et al., 2012; Liang et al., 2012; Chen & Hou, 2016). For example, Hirak et al. (2012) remarked that team psychological safety is an antecedent of learning from failure, which is measured by using several measurement items, such as "a better way to address a problem". Thus, this item relates to creativity in the context of creating an innovative way to solve a problem. Indeed, the researcher argues that the item relates to creative self-efficacy. Conversely, Chen and Hou (2016) stated that voice behaviour, which is related to psychological safety, is an antecedent of employee creativity. Moreover, Kessel, Kratzer, and Schultz (2012) also looked at the relationship between psychological safety, knowledge sharing and

creative performance. They argued that team psychological safety has a positive impact on employee creativity, whilst employee creativity is closely related to creative self-efficacy. Accordingly, the researcher notes that team psychological safety may have a correlation with creative self-efficacy.

Moreover, Liang et al. (2012) considered the link between three psychological antecedents (i.e., psychological safety, felt an obligation for constructive change and organisation based self-esteem) and voice behaviour of the employee. They noted that psychological safety facilitates the voice behaviour of the employee. Moreover, Gilson and Shalley (2004) claimed a link between a team's engagement in creative processes. Thus, they contended that an improved team climate, which is related to team psychological safety, is significantly related to team creativity. In addition, Zhu, H. et al. (2016) commented that work team climate, which relates to team psychological safety is an antecedent of employee's creativity, whereas employees' creativity is closely related to employees' creative self-efficacy. Consequently, team psychological safety could be related to creative self-efficacy. Hence, the researcher argues that enhanced team psychological safety may contribute to superior employee creative self-efficacy. For example, when an employee has better team psychological safety, it will arguably generate greater creative self-efficacy. Thus, he/she has more confidence in his/her ability to do the job properly and to develop an innovative way to accomplish his/her job. However, previous studies have paid little or no attention to this relationship (Carmeli et al., 2009; Kark & Carmeli, 2009). Hence, this study proposes the following hypothesis:

H5b. Team psychological safety is significantly related to creative self-efficacy.

3.3.9 Team psychological safety and Individual self-efficacy

Several authors, such as Yoon and Christopher Kayes (2016) noted that psychological safety as a team may relate to employee self-efficacy as an individual. Tu

and Lu (2016) maintained that ethical leadership will have an impact on employee psychological safety, which refers to an employee's ability to feel comfortable in a group, more secure and less uncertain, can be associated with individual or general self-efficacy. Accordingly, they remarked that employee psychological safety as a group member has a relationship with individual self-efficacy. In addition, Bell et al. (2013) indicated that discriminatory job loss, which relates to employee psychological safety, has a relationship with psychological consequences, for instance employee self-efficacy. Even though the above prior studies did not address the correlation between employee psychological safety as a team member and his/her individual self-efficacy, the researcher argues that the psychological safety of an employee as a team member also relates to his/her individual self-efficacy. Hence, the researcher posits the hypothesis that:

H5c. Team psychological safety has a relationship with individual self-efficacy.

3.4 Self-Efficacy Dimensions' Relationships

A number of authors have argued that self-efficacy dimensions may well be related to each other (Oldham & Cummings, 1996; Zhou & George, 2001; Fernandez-Ballesteros et al., 2002; Gilson & Shalley, 2004; Chen & Kao, 2011; Cheng & Yang, 2014). For example, individual self-efficacy leads to collective self-efficacy (Fernandez-Ballesteros et al., 2002), individual self-efficacy relates to creative self-efficacy (Oldham & Cummings, 1996) and collective self-efficacy has an association to creative self-efficacy (Gilson & Shalley, 2004). Hence, the following section explores these relationships.

3.4.1 Individual self-efficacy and collective self-efficacy

Individual self-efficacy may relate to collective self-efficacy; thus, several authors have asserted that individual self-efficacy is an antecedent of collective self-efficacy (Fernandez-Ballesteros et al., 2002; Wu et al., 2010; Chen & Kao, 2011). For example, Fernandez-Ballesteros et al. (2002) maintained that individual self-efficacy, which is

divided into personal and individual social efficacy, has a significant relationship with collective social efficacy. Moreover, Wu et al. (2010) also asserted that self-efficacy divergence produces collective self-efficacy. In addition, Lent et al. (2006); Goncalo et al. (2010) also declared that individual self-efficacy may lead to collective self-efficacy. For that reason, individual self-efficacy might be related to collective self-efficacy. Hence, to increase an employee's collective efficacy, a company has to pay more attention to the individual self-efficacy of its employees.

In contrast, Chen and Kao (2011) revealed that collective self-efficacy affects individual self-efficacy. They examined the impacts of social characteristics, contextual characteristics and knowledge characteristics on OCB by means of individual self-efficacy and collective efficacy as mediating variables. Additionally, Parker (1994) and Nielsen, Yarker, Randall, and Munir (2009) perceived individual and collective efficacy as an independent construct in influence performance. Accordingly, there are three views on the relationship between individual self-efficacy and collective self-efficacy. However, although there are three concepts pertaining to the relationship between individual self-efficacy and collective self-efficacy, the researcher asserts that individual self-efficacy is an antecedent of collective self-efficacy. The researcher argues that when an employee has improved self-efficacy as an individual, he/she will have a greater confidence to perform his/her job effectively. Thus, the researcher assumes that his individual self-efficacy affects his/her confidence to perform his/her job as a team member. Considerably, enhanced individual self-efficacy generates better collective self-efficacy. Hence, this study posits the hypothesis that:

H6a. Individual self-efficacy is significantly related to collective self-efficacy.

3.4.2   Individual self-efficacy and creative self-efficacy

Individual self-efficacy may not only relate to collective self-efficacy, but also to creative self-efficacy. According to a variety of prior studies, individual self-efficacy is an influencing factor regarding creative self-efficacy (Oldham & Cummings, 1996; Tierney & Farmer, 2002; Elias et al., 2013). For instance, Tierney and Farmer (2002) explored the antecedents of creative self-efficacy and the connection between creative self-efficacy and creative performance. They emphasised that individual job efficacy has a significant impact on creative self-efficacy. Moreover, Rego, Sousa, Marques, and Cunha (2012) examined the relationship between retail employees' self-efficacy, hope, positive affect and creativity. They suggested that self-efficacy is an antecedent of creativity. Therefore, the researcher argues that creativity may relate to creative self-efficacy (Gong et al., 2009).

Oldham and Cummings (1996) also investigated the link between employees' creativity-relevant personal characteristics, organisational context characteristics and employees' creative performance. They revealed that self-confidence as one of the personal characteristics of employees relates positively and consistently with creative performance. Conversely, Elias et al. (2013) examined the correlation between generalised self-efficacy, domain-specific self-efficacy and work-related outcomes. They noted that general self-efficacy has an impact on work efficacy as domain-specific self-efficacy, which is related to creative self-efficacy. In addition, Scott and Bruce (1994) considered the association between antecedents of innovation and individual innovative behaviour. They demonstrated that an individual intuitive problem-solving style, which is related to individual self-efficacy, has a relationship with employee's innovative behaviour. Accordingly, innovative behaviour may identify with creative self-efficacy. Hence, the researcher assumes that individual self-efficacy affects employee's creative self-efficacy. Therefore, when an employee has greater individual self-efficacy, it has an

impact on his/her beliefs concerning his/her capabilities to execute the job creatively. Regarding the above discussion, the researcher predicts that:

H6b. Individual self-efficacy has a significant relationship with creative self-efficacy.

3.4.3 Collective self-efficacy and creative self-efficacy

Finally, several authors commented that collective self-efficacy may have a relationship with creative self-efficacy (Gilson & Shalley, 2004; Baer, Oldham, Jacobsohn, & Hollingshead, 2008; Choi & Chang, 2009; Schepers et al., 2011). For example, Choi and Chang (2009) examined innovation effectiveness via collective implementation efficacy and collective innovation acceptance. They maintained that collective implementation efficacy has an impact on the collective acceptance of the innovation, which is related to creative self-efficacy. Moreover, Gilson and Shalley (2004), who studied the link between three psychological conditions (e.g., psychological safety, employee engagement and creativity), asserted that when a team member has a high level of shared goals, which refers to collective efficacy, it will lead to team engagement in creative processes that refers to creative self-efficacy. From the above discussion, the researcher posits that collective self-efficacy is an antecedent of creative self-efficacy.

Moreover, Schepers et al. (2011) stressed that perceived virtual team efficacy has a positive impact on extra role innovative performance, which is related to creative self-efficacy. Cheng and Yang (2014) also claimed that collective efficacy relates to creative self-efficacy. They studied the link between collective creative efficacy and software system development. Although Cheng and Yang argued that collective efficacy and creative efficacy is related, this relationship continues to be disregarded in prior studies. Accordingly, the discussion above gives an understanding that collective self-efficacy has

an impact on creative self-efficacy. In other words, when teamwork has a better collective self-efficacy it will encourage team members to produce new ideas creatively. In addition, Liao, Liu, and Loi (2010) also investigated the correlation between team efficacy, which is related to collective efficacy and team creativity. They suggested that team creativity is significantly related to creativity. Hence, the researcher proposes the following hypothesis:

H7a. Collective self-efficacy has a significant relationship with creative self-efficacy.

3.5 Psychological Safety and Organisational Performance

There are two arguments with reference to the relationship between psychological safety and organisational performance. First, psychological safety has a direct effect on organisational performance (Baer & Frese, 2003; van Ginkel & van Knippenberg, 2008; Lee et al., 2011; Bradley et al., 2012). In contrast, several researchers argued that psychological safety does not have a direct relationship with organisational performance, and it should be mediated by other variables, such as self-efficacy (Edmondson, 1999; May et al., 2004; Carmeli & Gittell, 2009; Faraj & Aimin, 2009). The researcher argues that besides the indirect relationships, psychological safety dimensions have direct relationships with organisational performance dimensions. For example, energy psychological safety may identify with employee well-being (Brown & Leigh, 1996) and employment equity psychological safety may have a link with company image (Makin & Winder, 2008), whereas team psychological safety could be related to financial performance (Baer & Frese, 2003). However, far too little attention has been paid to these direct relationships (Nembhard & Edmondson, 2006). Hence, this study explores these direct relationships as follows.

3.5.1   Energy psychological safety and employee well-being

Energy psychological safety may have a correlation with employee well-being. Several prior studies have revealed that one of the antecedents of employee well-being is the feeling of safety an employee has when she/he receives sufficient support from his/her manager or co-workers (Babin & Boles, 1996; Brown & Leigh, 1996; Danna & Griffin, 1999; Sparks et al., 2001; Eatough et al., 2016; Good et al., 2016; Van den Broeck et al., 2016). For example, Brown and Leigh (1996) explored whether the process of employee perceptions regarding the organisational environment are linked to job involvement, effort and performance. They stressed that a psychological safety climate, such as management support lead to employee well-being, as a part of performance indicators. Van den Broeck et al. (2016) asserted that employee's psychological needs, such as the need for safety relate to job satisfaction and employee well-being. Furthermore, Sparks et al. (2001) also considered the impact of workplace transitions, such as managerial style on employee well-being, in a literature review study. They suggested that an employee's perception of support from his/her supervisor and co-workers may have a relationship with job satisfaction and the role of stress as indicators of employee well-being. In addition, Eatough et al. (2016) maintained that illegitimate tasks from a supervisor may have an impact on employee well-being. The illegitimate task is related to supervisor support at work. For that reason, when an employee has enhanced psychologically support from his/her supervisor or co-workers, it may affect his/her well-being in the workplace. Consequently, the researcher argues that support from supervisors and co-workers which relate to energy psychological safety identifies with employee well-being.

Danna and Griffin (1999) suggested that relationships with supervisors and colleagues have also been identified as potential stressors (p.373). Accordingly, employee's psychological safety, which comes from the support of supervisors and co-workers, is an antecedent of employee well-being. When an employee has improved support from his/her supervisors or co-workers, it may produce greater employee well-

being. Xu, Loi, and Ngo (2016) examined the association between ethical leadership and distributive justice. They argued that the ethical leadership of a manager, which is related to energy psychological safety, has a significant impact on distributive justice by way of organisational trust as a mediator. Distributive justice may be related to employee well-being. Therefore, it assumes that energy psychological safety relates to employee well-being. Moreover, Good et al. (2016) maintained that psychological safety in the workplace could have a relationship with employee well-being in the context of employee's mindfulness. In addition, Ivancevich, Matteson, and Preston (1982) stated that there are four factors that potentially affect job and organisational stressors, comprising job context work activities, supervisory style, interpersonal pattern and the structure of the job role characteristics. Job and organisational stressors relate to employee well-being. Thus, these factors (e.g., supervisory style and interpersonal patterns) will potentially affect employee well-being. Accordingly, supervisory style and interpersonal patterns are related to energy psychological safety. Hence, the researcher asserts that energy psychological safety relates to employee well-being. As a consequence of the above discussion, this study proposes the following hypothesis.

H2d. Energy psychological safety has a significant relationship with employee well-being.

3.5.2 Employment equity and company image

Employment equity psychological safety arguably relates to company image. For example, Jones et al. (2016) implied that discrimination at work, such as discrimination of gender and ethnic minorities is related to employee work-related outcomes, employee's performance and organisational performance. They contended that when an employee has been treated unequally at work, it will affect organisational performance. Company image is a dimension of organisational performance; thus, safety from discrimination, which

relates to employment equity psychological safety, may possibly be related to company image. Moreover, Makin and Winder (2008) proposed a conceptual framework of occupational health and safety management systems (OHM MS). They contended that employees' feeling of being safe from discrimination, such as gender, religious belief and ethnicity discrimination may relate to his/her psychological safety. Accordingly, employees' feelings of being safe from discrimination relates to employment equity psychological safety in this study. Additionally, Edmondson (1999) commented that psychological safety may have an impact on performance. One dimension regarding organisational performance is company image. Hence, the researcher notes that employment equity psychological safety could be related to company image. In addition, Arendt and Brettel (2010) and Wang and Berens (2015) explored the effect of corporate social responsibility (CSR) on corporate identity, image and firm performance. They asserted that CSR is a trigger pertaining to the corporate image building process. Nevertheless, according to Cornelius, Wallace, and Tassabehji (2007), one component of corporate social responsibility is reducing discrimination at work, such as gender or religious based discrimination. Hence, discrimination at work, which is related to employment equity psychological safety, has a relationship with company image. However, the study of this relationship was overlooked in previous research.

Furthermore, Fuentes-garcía, Núñez-tabales, and Veroz-herradón (2008) and Wang (2013) considered the applicability of corporate social responsibility (CSR) to human resource management. They suggested that one of the primary motives of CSR is strengthening the company's image. Accordingly, one of the components in CSR measurement is the elimination of discrimination and abuse in the workplace. Therefore, safety from discrimination in the workplace is a part of psychological safety (i.e., employment equity psychological safety). Hence, the researcher argues that enhanced employment equity psychological safety will lead to a superior company image. In

addition Hart (2010) also maintained that equality in the workplace is a part of CSR. Thus, the robust implementation of CSR, such as equality and non-discriminatory behaviour in the workplace will generate a better corporate image. Hence, equality which is related to employment equity psychological safety relates to a company's image. Although prior studies above failed to mention employees' safety from discrimination as a dimension of psychological safety, the researcher assumes that employment equity psychological safety is an antecedent of a company's image. From the above discussion, this study proposes the following hypothesis.

H4c. Employment equity is related to company image

3.5.3 Team psychological safety and financial performance

According to previous studies, team psychological safety has a correlation to organisational performance (Baer & Frese, 2003; van Ginkel & van Knippenberg, 2008; Fernández-Muñiz, Montes-Peón, & Vázquez-Ordás, 2009; Hajmohammad & Vachon, 2013). For example, Bradley et al. (2012) explored the link between team psychological safety and team performance and therefore, asserted that team psychological safety has a significant impact on team performance. In addition, Brueller and Carmeli (2011) also investigated the association between intra-team and external high-quality relationships on learning processes and performance. They noted that psychological safety as a team relates to team learning and organisational performance. Accordingly, when a company has a advanced team psychological safety, it will lead to improved organisational performance.

Although a number of prior studies have examined the connection between team psychological safety and organisational performance, the link between team psychological safety and financial performance is limited in previous studies. To the best of the researcher's knowledge only Baer and Frese (2003) conducted a study on this

relationship. They suggested that the climate of psychological safety, which refers to team psychological safety, is positively related to financial performance. In addition, van Ginkel and van Knippenberg (2008) and Hajmohammad and Vachon (2013) employed non-financial performance to measure organisational performance. Both studies established that team psychological safety has a relationship with performance. Even though van Ginkel and van Knippenberg (2008) and Hajmohammad and Vachon (2013) did not address financial performance as an indicator of organisational performance, the researcher argues that team psychological safety is related to financial performance. Hence, the researcher proposes the following hypothesis.

H5c. Team psychological safety has a significant relationship with financial performance

3.6 Self-Efficacy and Organisational Performance

Several previous studies have suggested that self-efficacy dimensions could be related to organisational performance (Riggs & Knight, 1994; Lindsley et al., 1995; Brown et al., 2001; Sue-Chan & Ong, 2002; Baron & Markman, 2003; Aragón-Correa et al., 2007; Eden et al., 2010; Walumbwa et al., 2011; Hannah, Schaubroeck, & Peng, 2016; Yoon & Christopher Kayes, 2016). For example, creative self-efficacy may relate to company image (Aragón-Correa et al., 2007), individual self-efficacy might be related to a company image (Eden et al., 2010), collective efficacy may have an association with employee well-being (Lindsley et al., 1995) and collective self-efficacy may have a connection with financial performance (Baron & Markman, 2003). In addition, Hannah et al. (2016) claimed that self-efficacy has a positive and significant relationship with task performance. Yoon and Christopher Kayes (2016) also contended the impact of self-efficacy on individual learning as a part of performance. Consequently, the researcher

asserts that self-efficacy is an antecedent of performance. Hence, the detailed relationship between self-efficacy and organisational performance is described as follows.

3.6.1 Individual self-efficacy and company image

According to several previous studies, self-efficacy may have a relationship with organisational performance (McDonald & Siegall, 1992; Parker, 1994; Lindsley et al., 1995; Ahearne et al., 2005; Walumbwa et al., 2011). For example, Walumbwa et al. (2011) suggested that self-efficacy relates to organisational identification. They revealed that organisational identification refers to a feeling of oneness or belongingness to a particular group or institution (p.204). This organisational identification arguably relates to company image. One possible source regarding company image is the employee's sense of belonging to the organisation (Lopez et al., 2011). In addition, Lindsley et al. (1995) argued that self-efficacy and collective efficacy may lead to individual and collective performance. Moreover, they also claimed that individual and collective performance may relate to social image. For example, when a company has improved employee individual self-efficacy, it may lead to an individual or collective performance that can be the basis of the company's image as a reputable company, for instance excellent services. Hence, the researcher argues that individual self-efficacy is identifies with social or company image.

Eden et al. (2010) investigated the correlation between self-efficacy and performance. They maintained that self-efficacy may improve organisational performance. Accordingly, one dimension of organisational performance is with respect to company image. Hence, self-efficacy could be related to company image. In a similar way, Raub and Liao (2012) explored the connection between initiative climate, self-efficacy and customer service performance. They emphasised that general self-efficacy has a positive impact on individual proactive customer service performance. For that

reason, individual proactive customer service performance as a performance indicator may relate to company image. When a company has provided superior customer service, it will arguably improve the company's reputation or image. Although previous studies failed to address the association between individual self-efficacy and company image directly, from the above discussion, the researcher states that self-efficacy may have an impact on company image. Regarding the above explanation, this study proposes the following hypothesis:

H6c. Individual self-efficacy is significantly related to company image.

3.6.2 Collective self-efficacy and employee well-being

Collective efficacy, which refers to the belief that a group can perform the job properly may also relate to employee well-being (Lindsley et al., 1995; Ahearne et al., 2005; Nguyen, Groth, & Johnson, 2016). In examples, Lindsley et al. (1995) proposed that collective self-efficacy has a relationship with an employee's performance as an individual, group or organisation. Additionally, one of the organisational performance indicators is employee well-being, which refers to the perceived well-being of an employee in the workplace (e.g., stress and hazards) (Danna & Griffin, 1999). Moreover, Nguyen et al. (2016) stressed that surface acting self-efficacy has a significant impact on employee absenteeism. In contrast, employee absenteeism is closely related to employee well-being.

When an employee has greater well-being, it is argued that he/she will have a lower absenteeism rate. Accordingly, self-efficacy may have a relationship with employee well-being. In addition, Goncalo et al. (2010) and Stajkovic et al. (2009) asserted that collective efficacy relates significantly to group performance, whilst Sonnentag et al. (2010) investigated the relationship between job demands, psychological detachment, psychological well-being and work engagement. They observed that group performance,

such as psychological detachment, is related to the psychological well-being of the employee. Accordingly, psychological detachment, which refers to disengagement at work, may relate to employees' self-efficacy as teamwork. Although prior studies failed to mention the direct relationship between collective efficacy and employee well-being, the researcher argues that one of the antecedents of employee well-being is collective efficacy. For example, when employees have advanced collective efficacy, they believe that they can perform their job effectively, which will improve well-being.

Moreover, Stetz et al. (2006) studied how self-efficacy moderates the relationship between social support regarding stressors and strains. They maintained that self-efficacy individuals' social support, which refers to collective self-efficacy, will cushion the stressor-strain relationship (p.51), whilst stress is an indicator of employee well-being (Hershcovis & Barling, 2010). Hence, when an employee has stress, it will relate to his/her well-being. Accordingly, self-efficacy is related to employee well-being. Furthermore, Tasa and Sears (2011) looked at the relationship between collective efficacy and interpersonal teamwork behaviour. They claimed that collective efficacy is an antecedent of interpersonal teamwork behaviour. Additionally, Pugh, Groth, and Hennig-Thurau (2011) noted that emotional dissonance, which is related to teamwork behaviour, has a link to employee well-being. therefore, the researcher assumes that collective self-efficacy is related to employee well-being. Regarding the above discussion, the researcher hypothesises that:

H7b. Collective self-efficacy is significantly related to employee wellbeing.

3.6.3   Collective self-efficacy and company image

Besides individual self-efficacy, collective self-efficacy may also relate to company image (Riggs & Knight, 1994; Gibson, 1999; Lent et al., 2006; Tasa, Taggar, & Seijts, 2007; Stajkovic et al., 2009; Goncalo et al., 2010). For instance, Tasa et al. (2007) implied

that collective efficacy has a significant effect on team performance. In addition, Goncalo et al. (2010) argued that collective self-efficacy has a significant relationship with group performance. They proposed that a group with a strong collective efficacy, sets more challenging goals, persists in the face of difficulty and has more opportunities to achieve success (p.13). Arguably, when teamwork in the company is good, it will lead to an improved company image. People will notice that the company has a better reputation because it has excellent teamwork with respect to undertaking jobs.

Lin et al. (2012) examined the connection between team-efficacy, team self-esteem, team performance and corporate social responsibility with organisational trust as the control variable. They stated that team efficacy and organisational trust are related to team performance. As a result, team efficacy may relate to organisational trust, which refers to the outcome of the company's image. Moreover, Bandura (2000) argued that collective efficacy affects employee motivation and commitment to performance accomplishment. In addition, Kunze et al. (2016) noted that collective focus leadership, which is related to collective efficacy may have an impact on organisational effectiveness. Accordingly, organisational effectiveness may possibly be related to organisational image. Hence, when employees have enhanced collective efficacy, it will produce a better company image. Conversely, Gibson et al. (2007) studied the differential relationship between specific practices and organisational performance (e.g., financial performance, customer service and quality). They shed light on the significant relationship between team enabling practices and quality. Team enabling practices may relate to collective efficacy. Although Gibson et al. failed to address company image as an organisational performance dimension, they mentioned in previous studies that company image is a common indicator of performance. By way of the above discussion, the researcher argues that collective efficacy has a relationship with company image. Regarding the above discussion, this study proposes the following hypothesis.

H7c. Collective self-efficacy has a significant relationship with company image.

3.6.4 Collective self-efficacy and financial performance

Financial performance as an organisational performance indicator might be influenced by collective self-efficacy (Bandura, 1982; Gibson et al., 2007; Tasa et al., 2007; Chi Kin, Kimmy Wa, & Lam, 2012). For example, Gibson et al. (2007) stressed that team enabling practices may relate to financial performance, such as ROA. Accordingly, team enabling practices relates to how confident team members are with regards to their capability to perform a job, which may refer to collective efficacy. Hence, collective efficacy has an association with financial performance.

Moreover, Bandura (1982) maintains that high self-precepts of efficacy may affect preparatory and performance effort differently (p.123). In addition, Tasa and Sears (2011) considered the link between an individual's personality, their behaviour within a team and performance management teamwork behaviour. They determined that collective self-efficacy has a relationship with team performance. Furthermore, Lent et al. (2006) examined the link between collective efficacy with organisational performance, such as team performance. They stated that collective efficacy is significantly related to team performance. In addition, Stajkovic et al. (2009) also investigated the correlation between collective efficacy, group potency and group performance. By using meta-analysis, he ascertained that one of the antecedents of group performance is collective efficacy. Although several previous studies have looked at the association between collective self-efficacy and performance, such as team performance, the link between collective self-efficacy and financial performance is still missing. Thus, as a part of organisational performance indicators, the researcher argues that financial performance also relates to collective self-efficacy. Hence, this study posits the hypothesis that:

H7d. Collective self-efficacy is significantly related to financial performance.

3.6.5   Creative self-efficacy and company image

Creative self-efficacy, which refers to the employee's beliefs about his/her ability to perform the job creatively, may relate to the company image (Aragón-Correa et al., 2007; Gong et al., 2009; Wang & Lin, 2012). For instance, Aragón-Correa et al. (2007) explored the relationship between leadership and organisational learning's role in innovation and performance. They asserted that company innovation has a positive impact on organisational performance. Consequently, organisational learning's role in innovation may relate to creative self-efficacy, which refers to an employee's ability to perform the job in innovative ways, whereas one of organisational performance indicators is company image. Hence, the researcher assumes that creative efficacy may lead to company image. Moreover, Wang and Lin (2012) examined the antecedents of innovation performance and revealed that innovation self-efficacy leads to innovation performance. Accordingly, innovation performance may relate to organisational performance. Arguably, creative efficacy also has an impact on company image. For example, when a company has superior employee creative self-efficacy, its employees will perform their job creatively. Moreover, it argues that the outcomes of creative self-efficacy relate to the company's reputation or image.

In addition, Gong et al. (2009) studied the relationship between employee creativity and job performance. They noted that employee creative self-efficacy has a correlation with employee job performance, with employee creativity as the mediator. Moreover, McDonald and Siegall (1992) examined the impact of self-efficacy on the performance and attitudes. They explained that technological self-efficacy, which is related to creative self-efficacy, has a significant relationship with an employee's performance. Accordingly, an employee's performance may relate to company image. Although these above studies did not examine company image as a performance dimension, there is no single study that has directly addressed the relationship between

creative self-efficacy and company image. From the discussion above, the researcher notes that the creative self-efficacy has a correlation with company image. Hence, this study posits the following hypothesis.

H8a. Creative self-efficacy has a significant relationship with company image.

3.6.6 Creative self-efficacy and financial performance

Baer and Frese (2003) explored that climate for initiative relates to company performance. They employed financial performance as the indicators of company performance, such as return on assets and firm profitability. They emphasised that self-efficacy is significantly related to company performance. Moreover, Tierney and Farmer (2002) investigated the relationship between creative self-efficacy and creative performance. They asserted that creative self-efficacy is an antecedent of creative performance. Although Baer and Frese (2003) failed to employ creative self-efficacy as self-efficacy variable and Tierney and Farmer (2002) did not use financial performance as the organisational performance dimension, the researcher argues that creative self-efficacy relates to financial performance.

Edmondson (1999) claimed that self-efficacy, such as team efficacy is an antecedent of organisational performance. In addition, Perry-Smith and Shalley (2003) proposed the association between the context of social relationships and individual creativity in a literature review. They noted that self-efficacy may have a relationship with performance and is like a spiral that can start, stop or modify the spiral. Accordingly, a dimension of self-efficacy is creative self-efficacy. Hence, creative self-efficacy has a relationship with organisational performance. Although the above studies have addressed the connection between self-efficacy and organisational performance, to the best of the researcher's knowledge, there is no single study that has directly addressed the link between creative self-efficacy and financial performance. Therefore, the researcher

assumes that creative self-efficacy is also related to financial performance. From the above discussions, this study proposes the following hypothesis:

H8b. Creative self-efficacy is significantly related to financial performance.

3.7   Relationships related to Organisational Performance Dimensions'

This study employs three types of organisational performance, including financial performance and two constructs of non-financial performance (i.e., employee well-being and company image). In addition the relationship between psychological safety, self-efficacy and organisational performance, this study also proposes several relationships between organisational performance constructs, including employee well-being and company image, employee well-being and financial performance and company image and financial performance as follows.

3.7.1   Employee well-being and company image

Prior studies maintained that employee well-being may relate to other organisational performance dimensions (Neely, 2005; Van De Voorde et al., 2012; Truss et al., 2013). For example, Van De Voorde et al. (2012) examined the link between employee well-being and organisational performance in a systematic literature review. They noted that employee well-being relates to other organisational performance indicators, such as productivity and quality. Van De Voorde et al. also established that employee well-being regarding happiness is congruent with organisational performance (p.391). Furthermore, Ameer and Othman (2012) and Wang and Berens (2015) investigated the link between corporate social responsibility, reputation and corporate financial performance. They argued that one stakeholder in corporate social responsibility is the employee. Hence, employee well-being is one of the concerns in relation to corporate social responsibility. Moreover, Hart (2010) emphasised that corporate social

responsibility may enhance corporate image and reduce a company's reputational risk. Accordingly, as one of the components of corporate social responsibility is employee well-being, and furthermore that corporate social responsibility has a link to company image, the researcher argues that employee well-being affects company image. For example, when a company has enhanced employee well-being, it will lead to a positive image.

Moreover, Truss et al. (2013) examined the link between employee engagement, organisational performance and individual well-being in their literature review. They emphasised that employee well-being relates to organisational performance based on employee's individual performance. In addition, Haslam et al. (2015) argued that employee well-being relates to perceived organisational support which reflects on the company's reputation. Accordingly, employee well-being has an association with the company's reputation or company image. To the best of the researcher's knowledge, although research on the link between employee well-being and company image is still limited, from the discussion above the researcher argues that employee well-being is an antecedent of company image. Hence, to create a better company's image, a manager may have to pay more attention to employee well-being. Accordingly, regarding the above discussion, this study posits the hypothesis as follows.

H9a. Employee wellbeing has a significant relationship with company image.

3.7.2 Employee well-being and financial performance

One of the organisational performance dimensions is financial performance. According to a number of previous studies, employee well-being may relate to performance (e.g., financial performance) (Neely, 2005; Van De Voorde et al., 2012; Prottas, 2013; Truss et al., 2013; Hasan et al., 2016). Thus, besides the link between employee well-being and company image, employee well-being arguably has a

correlation with financial performance. For example, Prottas (2013) observed that employee attitude relates to organisational performance, such as financial performance. Therefore, employee attitude is related to his/her well-being at work. Arguably, when an employee has improved well-being, it will enhance his/her attitude and/or productivity at work, and arguably it will have an impact on financial performance.

Moreover, Ameer and Othman (2012); Hasan et al. (2016) and Wang and Berens (2015) stated that corporate social responsibility has a significant relationship with corporate financial performance. They also stressed that one component in corporate social responsibility is the employee. In addition, Oh et al. (2015) also claimed that job satisfaction as an indicator of employee well-being has a significant impact on financial performance. Arguably, a company has a responsibility to provide greater well-being for its employees, so as to increase a company's financial performance. Hence, employee well-being as an outcome of corporate social responsibility has a link to financial performance. Thus, financial performance may possibly be increased when employee well-being is increased.

Baptiste (2008) examined the link between employee well-being at work and performance as a new dimension of HRM. He asserted that employee well-being at work has a positive relationship with performance. In addition, Hershcovis and Barling (2010) explored the relationship between affective well-being and work performance. They argued that the affective well-being of an employee may relate to performance. Accordingly, one of the organisational performance dimensions is financial performance. Thus, employee well-being relates to financial performance. However, to the best of the researcher's knowledge, research on this relationship is neglected in the previous studies. Hence, regarding the above discussion, the researcher proposes the hypothesis that:

H9b. Employee wellbeing is significantly related to financial performance.

3.7.3 Company image and financial performance

Company image and financial performance are closely related. Several prior studies have mentioned that company image might have an impact on a company's financial performance (Neely, 2005; Aragón-Correa et al., 2007; Kim & Kim, 2009; González-Benito & Suárez-González, 2010; Kwon & Rupp, 2013; Wang & Berens, 2015). For example, Kwon and Rupp (2013) examined the relationship between employee turnover and company performance, with human capital investment and company reputation as the moderating variables. They suggested that company reputation correlates to financial performance, such ROA and ROE. Moreover, the key finding of their study was that company reputation moderates the relationship between employee turnover and company performance. In addition, González-Benito and Suárez-González (2010) investigated the link between business strategy and business performance and stated that business strategy has an impact on financial performance. González-Benito and Suárez-González also contended that one sort of business strategy is differentiation strategy, and one indicator of differentiation strategy is an increase in a company's reputation. Accordingly, a company's reputation relates to business performance, such as financial performance. Hence, the researcher argues that company image or reputation is an antecedent of financial performance.

Molina-Azorín, Claver-Cortés, López-Gamero, and Tarí (2009) examined the relationship between green management and financial performance. They remarked that corporate image, such as implementing green management may affect a company's financial performance. Molina-Azorín et al. also argued that company image means that a customer will have a positive impression of the company. Hence, company image will create customer bonding, and may have an impact on a company's financial performance. In addition, Hammond and Slocum (1996) and Wang and Berens (2015) analysed the link between corporate image and financial performance in the context of corporate social

responsibility. They remarked that corporate reputation is significantly related to financial performance. Hence, corporate image has an association with financial performance. Accordingly, from the above discussion, this study posits the following hypothesis:

H10. Company image has a significant relationship with financial performance.

In summary, this study has emphasised 31 relationships between psychological safety, self-efficacy and organisational performance dimensions. Accordingly, this study presents those 31 relationships in Figure 3.1.

Figure 3.1 Research Model

180
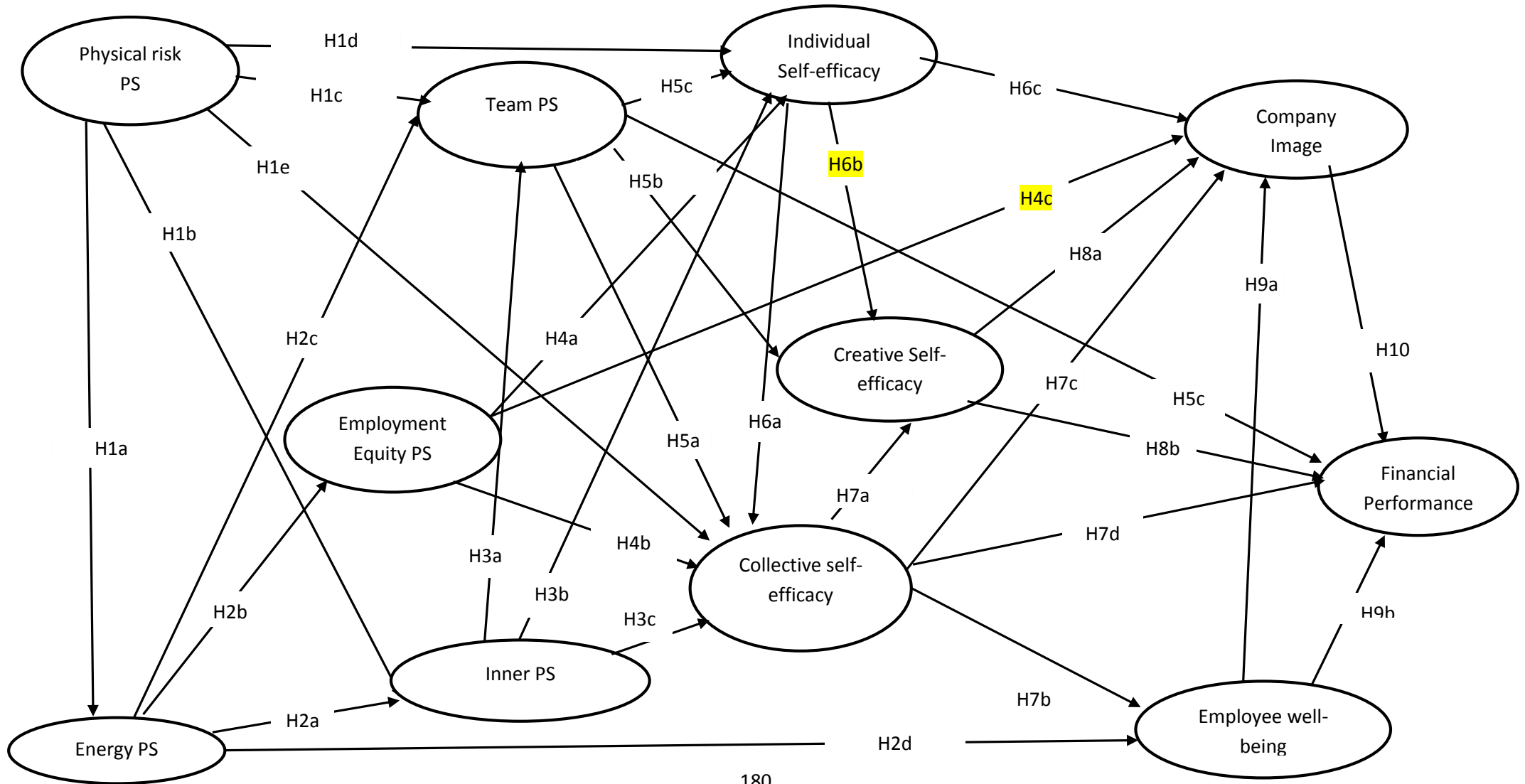
CHAPTER 4 RESEARCH METHOD

4.1 Introduction

The objective of this chapter is to describe the research methodology applied in this study. This chapter consists of the research philosophy, research approach, measurement development, data collection and data analysis. Accordingly, this chapter provides an explanation regarding the research philosophy and research approach of the current study. Moreover, this chapter also describes how to develop the measurement, data collection (e.g., instrument, population and sample, questionnaire administration and ethical considerations), in addition to the procedures employed in data analysis, such as data preparation, validity and reliability and using structural equation modelling (SEM), as the data analysis tool. Hence, this chapter starts with research philosophy in the following part.

4.2 Research Philosophy

Research philosophy relates to the development of knowledge and the nature of that knowledge (Saunders, Lewis, & Thornhill, 2012). Understanding the research philosophy is essential with regards to gaining an insight and selecting an appropriate research approach, design and tactic. According to Saunders et al. (2012), there are five primary research philosophies, including positivism, critical realism, interpretivism, postmodernism and pragmatism. First, positivism assumes that the social world exists externally and an objective method must be used to measure its elements (Easterby-Smith, Thorpe, & Jackson, 2012a). It means that an objective reality exists that is free from human behaviour (Crossan, 2003). Second, critical realism refers to the explanation of what we see and how we experience the reality. Third, interpretivism notes that humans are not the same with physical phenomena for the reason that they create meanings.

Fourth, postmodernism emphasises the role of language and power relations. Finally, pragmatism states that concepts are only relevant where they support action.

The research philosophy related to this study is positivism. This study assumes that phenomena regarding psychological safety, self-efficacy and organisational performance is an objective reality, which must be measured by an objective method. Hence, by using positivism research philosophy, this study will examine the association between psychological safety, self-efficacy and organisational performance objectively and more accurately. Moreover, this study is consistent with several previous studies, which also used positivism as their research philosophy (Edmondson, 1999; Owens et al., 2016; Yoon & Christopher Kayes, 2016; Zhong, Wayne, & Liden, 2016; Zhu, Gardner, & Chen, 2016).

According to Saunders et al. (2012), research philosophy relates to three concepts, including ontology, epistemology and axiology. A different research philosophy has a different ontology; epistemology and axiology (see Table 4.1). Ontology relates to the nature of reality and existence (Hay, 2002; Holden & Lynch, 2004; Easterby-Smith et al., 2012a; Saunders et al., 2012). The ontology of this study is the reality which exists corresponding to the relationship between psychological safety, self-efficacy and organisational performance. This study also focuses on causality based on phenomena and the previous study (epistemology). Epistemology is a common set of assumptions concerned with the most appropriate ways to enquire into the nature of the world (Hay, 2002; Easterby-Smith et al., 2012a). Put simply, epistemology is the theory of knowledge; involving principles and rules decided by the researcher concerning how to ascertain the social phenomena and to demonstrate knowledge (Mason, 2002). Moreover, this research is a value-free study where the researcher is independent and maintains an objective stance (axiology). Axiology is a researcher's view or assumption regarding the role of value in research (Saunders et al., 2012). Thus, it indicates that this study assumes that

the researcher is independent and upholds an objective stance. Furthermore, this chapter also describes the research approach in the next part.

Table 4.1 Dimensions of Research Philosophy

Dimension of Research Philosophy	Definition	Research philosophy position			Implementation
		Positivism	**Realism/ Relativism**	**Interpretivism/ Subjectivism/ constructivism**	
Ontology	Researcher's view or assumptions regarding the nature of reality and existence	Reality exists, External, objective	Reality exists but is obscured; therefore, interpreted through social conditioning or depends researcher's viewpoint	Reality does not exist, only human creation, socially constructed, subjective.	This study is positivism ontology which assumes that reality exists and is objective
Epistemology	Researcher's view or assumptions regarding acceptable knowledge or theory of knowledge	Observable phenomena, focus on causality, law-like generalisation	Observable phenomena provide credible facts. Insufficient data means inaccuracies in sensation. Alternatively phenomena create sensations which are open to misinterpretation. Focus on explaining within a context or context	Subjective meaning and social phenomena, focus on detailed situations, details of specifics	This study examines observable phenomena which show causality in the link between psychological safety, self-efficacy and organisational performance
Axiology	Researcher's view or assumptions regarding the role of value in research	Value free: researcher is independent and maintains an objective stance	Research is value-laden: researcher prejudiced by world views, cultural experiences and upbringing	Value bond: researcher is part of what is being researched and will be subjective	This study is a value free study. The researcher is independent and interprets the results objectively.

Source: Adapted from Easterby-Smith et al. (2012a); Saunders et al. (2012)

4.3   Research Approach

The research approach relates to principal orientation regarding the role of theory in research (Bryman & Bell, 2011). There are three principal research approaches; deduction, induction and abduction (Saunders et al., 2012). Deduction approach reasoning prevails when the conclusion come from a set of premises in a logical manner. Deduction approach begins with theory, and subsequently designs the research strategy to test the theory (Bryman & Bell, 2011; Saunders et al., 2012). In contrast, the induction approach begins with collecting data to explore a phenomenon, in order to build or generate theory; usually in the form of a conceptual framework (Bryman & Bell, 2011; Saunders et al., 2012). Abduction approach is a research approach which begins with a data collection process to explore a phenomenon, identify the themes and explain patterns, to generate a new or modify an existing theory that will subsequently be tested by way of additional data collection (Saunders et al., 2012). It moves back and forth from data and theory, effectively combining deduction and induction (Saunders et al., 2012). This study employed the deduction approach for the reason that it aims to test the theory concerning the relationship between psychological safety, self-efficacy and organisational performance, revealed in previous studies. Consequently, this study begins with hypothesis development from theory noted in previous studies and creates a conceptual model.

Moreover, this chapter also describes the methodological approach applied in this study. The methodological approach is the way in which the research is conducted (Quinlan, 2011). It means that the research methodology should be supported by philosophical assumptions that underpin the study. Quinlan (2011) categorises two types of research based on data which is used in the study: quantitative and qualitative research. The current study applies quantitative research and is suitable for quantitative research that uses quantitative data from a questionnaire to investigate the relationship between

psychological safety, self-efficacy and organisational performance. Quantitative research is research which uses quantitative data in the form of numbers or is numeric. Conversely, qualitative research is research which uses data that represents feelings, thoughts, ideas, understanding or non-numeric data (Saunders et al., 2012). Furthermore, as this study is a quantitative study, it deals with measurement development related to data collection. Hence, the next part discusses measurement development.

4.4   Measurement Development

Measurement development is an important step in quantitative research, given that this stage will assist the researcher to collect the data required for analysis. The current study develops measurement items for the constructs, whereas, the items are generated from the literature review of the previous relevant studies. According to various authors, such as Gupta et al. (2013); Zheng et al. (2015), the different characteristics of Western and Eastern countries or developed and developing countries may have an impact on the measurement of the variable. Hence, the current study develops the variable operationalisation and items to measure each variable, including psychological safety, self-efficacy and organisational performance which are suitable from the context of Indonesia. The items have been taken from previous studies and piloted for validity and reliability. This study has also predicted a number of possible problems, such as measurement errors (Phillips, 1981) and social desirability bias (De Vaus, 2014; Bryman, 2016). For example, social desirability problems will have a greater chance of occurring when the researcher meets the respondent face to face. Hence, to anticipate this problem, the researcher used an online survey and also guaranteed the anonymity of the respondents in the covering letter (De Vaus, 2014). Moreover, the researcher promised that company information would not be revealed at any stage of this study. Furthermore,

this study discusses variable operationalisation. Thus, operationalisation of the variable will be valuable with regards to creating the questionnaire.

4.4.1   Psychological Safety

The psychological safety variable in this study has been divided into five constructs, including physical risk psychological safety, energy psychological safety and inner psychological safety, in addition to employment equity psychological safety and team psychological safety (see Table 4.2).

First, *physical-risk psychological safety* is the psychological safety of an employee based on monitoring the physical risk possibilities of a company, such as conducting safety audits regularly, and taking action on employees' unsafe working practices (Wu et al., 2008; Dollard & Bakker, 2010; Probst & Estrada, 2010; Bluyssen et al., 2011; Al-Refaie, 2013; Amponsah-Tawiah et al., 2013). This research adapts these prior studies and develops 12 measurement items to measure physical risk psychological safety. For example, "my company provides safety audits regularly".

Second, *energy psychological safety* is the psychological safety of an employee, which comes from the support of the company and co-workers (Babin & Boles, 1996; Pearsall & Ellis, 2011). In other words, it calls for energy psychological safety. Fourteen items were adapted from several prior studies, for instance Wu et al. (2008) and Al-Refaie (2013). For example, one of the items is "my company helps me to solve my personal conflict with other team members".

Third, **inner-psychological safety** is the psychological safety of an employee based on emotional factors, which are part of the employee (Tynan, 2005; Walker & Hutton, 2006; Dollard & Bakker, 2010; Probst & Estrada, 2010; Huang et al., 2013). Nine measurement items have been adopted from the above studies. An example of the items

is "I am confident with my ability in controlling my emotion at work (e.g., angry, sad, etc.)".

Fourth, *employment equity psychological safety* is the psychological safety of an employee based on the employee's feelings that he/she will not be rejected as a result of their gender, religious belief and ethnicity differences (Feild & Holley, 1982; Makin & Winder, 2008). An example, "my company do not treat me differently because of my religion".

Fifth, *team psychological safety* is an employee's feelings of being safe from interpersonal risk taking among team members (Edmondson, 1999; Kark & Carmeli, 2009; Howorth et al., 2012). Based on the above prior studies, this construct is measured by means of seven measurement items. For example, "my team members support each other."

4.4.2 Self-Efficacy

Self-efficacy in this study stems from three constructs, including collective self-efficacy, individual self-efficacy and creative self-efficacy.

Collective efficacy is the self-efficacy of an employee based on the employee's efficacy as a team or collective (Riggs & Knight, 1994; Bandura, 2000; Gully et al., 2002; Lewis, 2011). This study uses 11 measurement items which are equivalent to extant studies undertaken by Gilson and Shalley (2004) and Baer et al. (2008). An example of the questions is "my team always meets its deadlines."

Individual self-efficacy's construct is the self-efficacy of an employee based on his/her capabilities related to performing a job (Karatepe et al., 2006; Chen & Chen, 2014). This construct has 12 measurement items adapted from previous studies, such as Hecht and Allen (2005), Walumbwa et al. (2011), Chen et al. (2001) and Ryan and Frederick (1997). For example, "I remain calm when dealing with difficulties".

Creative self-efficacy is the self-efficacy of the employee which demonstrates the capability of the employee to create new ideas creatively (Gong et al., 2009; Wang et al., 2014). This study uses 13 measurement items for this construct adapted from previous studies, for instance Baer and Oldham (2006), Tierney and Farmer (2002), Amabile et al. (1996) and Gong et al. (2009). An example is, "I spend considerable time in generating new ideas."

4.4.3   Organisational Performance

This study categorises organisational performance into two constructs, including financial performance and non-financial performance. Non-financial performance is a performance measurement based on the company's reputation or image and employee well-being. Accordingly, this study employs two constructs pertaining to non-financial performance (e.g., company image and employee well-being).

Company image refers to non-financial performance measurement based on a company's reputation or image compared to competitors (De Clercq, Dimov, & Thongpapanl, 2010; Eccles, 1991; González-Benito & Suárez-González, 2010; Wu & Chang, 2012). This construct has 11 measurement items. For instance, "The corporate reputation of my company is superior to its competitors' "

Employee well-being is a non-financial performance measurement based on an employee's assessment of his/her well-being, such as stress, frustration and job satisfaction (Bartholomew, Ntoumanis, Ryan, Bosch, & Thøgersen-Ntoumani, 2011; Judge, Heller, & Mount, 2002; Maltin & Meyer, 2010). This construct consists of six measurement items. For example, "I never feel stressed about performing my job in this company".

Financial Performance is an organisational performance based on financial indicators, for example sales, net income, market share and operational efficiency (De

Clercq et al., 2010; Hajmohammad & Vachon, 2013; Hmieleski & Baron, 2009; Stam et al., 2013). This construct has adapted four measurement items from the previous studies above. An example is, "my company achieved high sales revenues over the last year". This study employed those particular four subjective measurements for the reason that employees will be more familiar with them. Additionally, according to Dess and Robinson (1984) there is no difference between objective and subjective performance measurement. Hence, in the next stage, this chapter discusses data collection.

Table 4.2 Operationalisation of Constructs

Constructs	Sub Constructs	Items	Sources
Psychological Safety	Physical Risk Psychological Safety	I keep my working area clean during my working hours.	Hayes et al. (1998), Beus et al. (2010), Wu et al. (2008)
		I keep my working area tidy during my working hours.	Hayes et al. (1998), Bosak et al. (2013)
		My company provides safety audits regularly.	Wu et al. (2008)
		My company takes actions for unsafe working behaviours of his/her employees.	Probst and Estrada (2010), Leroy et al. (2012)
		I get a formal safety training from my company before starting my job.	Lu and Tsai (2008), Christian et al. (2009)
		My company has work safety procedures to be followed by its employees.	Probst and Estrada (2010), Dollard and Bakker (2010)
		My company never forces me to do an overtime job.	Sparks et al. (2001), Bluyssen et al. (2011)
		I never get pressure to put production before safety.	Bosak et al. (2013), Dollard and Bakker (2010)
		I employ correct safety procedures for carrying out my job.	Wallace and Chen (2005)

	My company provides good health care programmes for the employees.	Bluyssen et al. (2011), Ford and Tetrick (2011)
	My company provides a comfortable room for working.	Bluyssen et al. (2011), Ford, 2011 #1418@@author-year}
	My company provides good air circulation and lighting in my working area.	Bluyssen et al. (2011), Laaksonen et al. (2010)
Inner-Psychological safety	I am confident to be myself at work.	May et al. (2004). Liang et al. (2012), Zhang et al. (2010), Kahn (1990)
	I am confident to give some opinions about the job to my co-workers.	Williamson et al. (1997), Brown and Leigh (1996)
	I am confident to give some opinions about the job to my line manager.	Halbesleben et al. (2013),Tynan (2005)
	I believe that my company will respect my abilities.	Huang et al. (2013), Baer and Frese (2003)
	I believe that my company reacts quickly to my concerns regarding safety.	Walker and Hutton (2006), Idris et al. (2012), Lu and Tsai (2008)
	I am confident in my ability to control my emotion at work (e.g., angry, sad, etc.).	May et al. (2004), Christian et al. (2009)

	I am confident that I have good physical conditions for my job (e.g., health condition).	Al-Refaie (2013), Zanko and Dawson (2012)
	I feel that I can express myself and add value to projects.	Edmondson (1999), (Pierce, et al., 2001)
Energy Psychological Safety	My company helps me to solve my personal conflict with other team members.	Edmondson (1999)
	My company tends to talk down to me and other employees.	Al-Refaie (2013), Burt et al. (2008)
	My company praises my safety work behaviour.	Al-Refaie (2013), Williamson et al. (1997)
	My company encourages me to develop new skills.	May et al. (2004),Törner (2011)
	My company encourages me and other employees to participate in important decisions.	Huang et al. (2013), Bosak et al. (2013)
	My company gives more attention on employee's safety than productivity.	Tomas et al. (1999),Cigularov et al. (2013), Huang et al. (2013)
	My supervisor serves as a good model for me.	Amabile et al. (1996)
	My co-workers help me to solve my work problems.	Wachter and Yorio (2013), Danna and Griffin (1999)
	I can communicate freely/openly within my teamwork.	Morrow et al. (2010), Probst and Estrada (2010)

	My co-workers value my inputs.	Lu and Tsai (2008), Huang et al. (2008)
	My co-workers encourage me to improve my skills.	Probst and Estrada (2010),Jung Young, Swink, and Pandejpong (2011)
	I feel a real kinship with my co-workers.	Al-Refaie (2013), May et al. (2004)
	My company supports me to create new ideas.	Al-Refaie (2013)
	My company gives me reward when I found an innovative way.	Probst and Estrada (2010)
Employment equity	My company never treat me differently because of my gender.	Makin and Winder (2008), Feild and Holley (1982), Laaksonen et al. (2010)
	My company never treat me differently because of my religion.	Makin and Winder (2008), Feild and Holley (1982)
	My company never treat me differently because of my ethnicity.	Makin and Winder (2008), Feild and Holley (1982)
Team-Psychological Safety	My team members have never blamed me when I made a mistake at work.	Edmondson (1999), Hirak et al. (2012),
	My team members are able to solve the job related problems.	Edmondson (1999), Walumbwa and Schaubroeck (2009)

		I will not be rejected by my team when being different.	Baer and Frese (2003), Liang et al. (2012), Edmondson (1999)
		My team members support my decision that is related to my job.	Edmondson (1999), Schaubroeck et al. (2011)
		My team members support each other.	Edmondson (1999)
		I have not received any threatening behaviour from my team members.	Kark and Carmeli (2009), Edmondson (1999)
		My team members appreciate every unique skills and talents.	Howorth et al. (2012), Burke et al., 2006, Edmondson (1999)
Self-Efficacy	Individual Self-efficacy	My job abilities are similar to my job requirements.	Jones (1986), Riggs and Knight (1994), Walumbwa et al. (2011), Ahearne et al. (2005)
		I always try to learn new things in my job even though they look seem to be difficult for me.	Sherer et al. (1982)
		I am confident with my skills and abilities compare to my colleagues.	Hecht and Allen (2005), Chen et al. (2001)
		I can handle all of my job effectively.	Walumbwa et al. (2011), Chen et al. (2001)
		I am capable of handling more challenging job than my current job	Jones (1986), Ng, T. W. and Feldman, D. C. (2012)

	I am able to mobilize available resources so I can perform my individual tasks well.	(Wu et al., 2010), Hecht and Allen (2005)
	I remain calm when dealing with difficulties.	Chen and Chen (2014)
	I can overcome many challenges successfully.	Chen et al. (2001)
	I feel very energetic during my working hours.	Ryan and Frederick (1997), Demerouti et al. (2010)
	I have energy and spirit to work hard.	Ryan and Frederick (1997), Ryan and Frederick (1997)
	I always find new and interesting aspects in my job.	(Hall, et al., 2010) (Jaworek, et al., 2010)
	I am happy when I work intensely.	Ryan, Bernstein, and Brown (2010), (Weigl, et al., 2010) (Dutton, 2009)
Collective efficacy	My team has a better ability in executing a job than other teams.	Bandura (2000), Gibson (1999)
	My team members have good skills to complete our projects successfully.	Choi and Chang (2009)
	My team members are committed to get punishment when make a mistake in doing our job.	Hornsey et al. (2006), Illia et al. (2011)
	My team always meets the deadlines of the job.	Schaubroeck et al. (2000)
	All my team members do our job effectively.	Riggs and Knight (1994)
	My team is capable to solve more challenging problems in our project.	Illia et al. (2011)

196

	My team is able to allocate and integrate available resources (e.g., skills and networks) to perform the tasks well.	(Wu et al., 2010), Schepers et al. (2011)
	My team can resolve crises without having negative after effects.	Chen and Kao (2011), (Wang & Netemeyer, 2002) (Nyberg, 2009)
	The overall goals are more important for my team than our personal ones.	Chen and Kao (2011), (Nyberg, 2009) (Krishman, et al., 2002)
	My team generated better ideas than I could have on my own.	Baer et al. (2008)
	People in my team are particularly good at realizing ideas.	Baer and Frese (2003)
Creative Self-Efficacy	I am confident with my creative abilities to perform my job successfully.	Tierney and Farmer (2002), Amabile et al. (1996),
	I am capable of handling more challenging job creatively	Mathisen (2011), Wang et al. (2014), Hecht and Allen (2005),
	I am confident to solve my problems creatively.	Carmeli and Schaubroeck (2007),Gilson and Shalley (2004)
	I try to find an innovative way to perform my job.	Ng, T. W. and Feldman, D. C. (2012),
	I am easy to adapt new ideas.	Gong et al. (2009)
	Compared to other people, I can do most tasks very creatively.	Maurer (2001)
	I demonstrate new way in my job.	Yan, Davison, and Mo (2013)

		I develop adequate plans and schedules to implement new ideas.	Scott and Bruce (1994)
		I suggest innovative ideas to my manager.	Zhou and George (2001), Zhang and Bartol (2010)
		I get excited by new ideas.	Baer and Oldham (2006)
		I spend considerable time in generating new ideas.	Zhang and Bartol (2010)
		I have fresh perspectives on old problems.	Zhang and Bartol (2010)
		I improve methods for solving a problem when an answer is not apparent.	Mainemelis (2010)
Organisational Performance	Financial Business Performance	My company has got high sales revenue in the last year.	Poon, Ainuddin, and Junit (2006)
		My company has got high net income in the last year.	Han, Kim, and Srivastava (1998)
		My company has got high market share in the last year.	Eccles (1991)
		Overall efficiency of operations in my company is better than competitors'.	(De Clercq et al., 2010), Filer and Golbe (2003), Stam et al. (2013)
	Company Image	My company has got high customer satisfaction in the last year.	Fernández-Muñiz et al. (2009), Van de Ven, Rogers, Bechara, and Kangyong (2008), Cannon and Edmondson (2001), Garbarino and Johnson (1999),

My company has got lower customer complaint rate in the last year.	(Guest, 1997), Kim and Kim (2009) Smallman and John (2001)
My company has got good corporate image.	(Wu & Chang, 2012), González-Benito and Suárez-González (2010)
My company's corporate reputation is better than the competitors'.	De Clercq et al. (2010)
My company is more adaptive to new market threats than the competitors.	Alpkan, Yilmaz, and Kaya (2007)
My company tries out new ideas and approaches to problems.	Tierney and Farmer (2002)
This year, my productivity is better than the last year's.	(Stam et al., 2013). Brueller and Carmeli (2011), Van De Voorde et al. (2012)
This year, my absenteeism rate is lower than the last year.	(Brown & Leigh, 1996), (Guest, 1997)
This year, the total company's work accidents is lower than the last year's.	Fernández-Muñiz et al. (2009)
This year, the total of company's medical cost is lower than the last year's.	Fernández-Muñiz et al. (2009)
This year, my company's labour turnover is lower than last year's.	Fernández-Muñiz et al. (2009)

Employee well-being	I am satisfied with my financial conditions.	Ryan et al. (2010),Diener, Suh, Lucas, and Smith (1999),Diener (2000)
	I never feel stressed to do my job in this company.	Maltin and Meyer (2010),
	I try out new ideas and approaches to solve my work problems.	Tierney and Farmer (2002)
	I will not quit from this company.	Wright and Huang (2012), Prottas (2013), Repetti (1987), Kohan and O'Connor (2002), Witte (1999). Kath et al. (2010)
	I am not frustrated with my job in this company.	Bartholomew, Ntoumanis, Ryan, Bosch, and Thøgersen-Ntoumani (2011)
	Overall, I am satisfied with my job.	Repetti (1987)

4.5   Data Collection

According to Ghauri and Grṇhaug (2010), data collection can be divided into two groups: qualitative and quantitative data collection methods. This study employed the quantitative data collection method. Accordingly, a survey that employs a questionnaire has been adopted for this study. The primary difference between qualitative and quantitative data collection is the procedure with regards to data collection. Quantitative data collection is data collection by which the researcher employs measurement as the data collection procedure (Ghauri & Grṇhaug, 2010). Conversely, in qualitative data collection, the results or findings are not produced by quantitative or statistical procedures. The qualitative method employs several ways in relation to data collection (e.g., interviews and observations), while the quantitative method also applies several methods, such as surveys and experiments (Ghauri & Grṇhaug, 2010). Furthermore, seeing that this study employed the quantitative method regarding data collection, the following part explains the data collection instrument.

4.5.1   Instrument

A survey is a standard and trusted way of collecting data concerning the opinions and behaviours of large amounts of people by way of capturing cause and effect relationships (Ghauri & Grṇhaug, 2010; Easterby-Smith, Thorpe, & Jackson, 2012b). There are several tools that researchers can use in a survey (e.g., questionnaires and structured interviews) (Craig & Douglas, 2000; Oppenheim, 2000). Questionnaires can be divided into two forms, including self-completion questionnaires and interviewer-administered questionnaires. Moreover, to measure the research variables, this study uses the five-point Likert scale from *strongly disagree*=1 and *strongly agree*=5 as the answer to the questionnaire questions. The Likert scale has been increasingly employed by market researchers over the past 70 years (Edmondson, Edwards, & Boyer, 2012) and

mostly used in five order categories (Dittrich, Francis, Hatzinger, & Katzenbeisser, 2007; Ng, T. W. H. & Feldman, D. C., 2012). This scale also has a number of advantages, such as being straightforward to answer (Dittrich et al., 2007; De Vaus, 2014).

4.5.2 Research Context

This research was conducted in Indonesia. There are various reasons for choosing Indonesia as the place of study. First, the majority of previous studies have been conducted in developed countries (e.g., Simonet et al., 2015; Kirk-Brown & Van Dijk, 2016; Zhu, H. et al., 2016) and only limited studies have been conducted in emerging countries, such as Indonesia. Accordingly, it will offer a new insight from the perspective of an emerging country. Second, Indonesia is an emerging country which has an improved economic perspective, with economic growth at approximately 5% a year on average (OECD, 2016). Accordingly, industrial development in Indonesia has increased. This development relates to the working environment; however, according to Ketenagakerjaan (2015), the number of accidents in the workplace remains high. Hence, a study on working environment factors, such as psychological safety and self-efficacy is required. Third, Indonesia as an emerging country also has a different culture in comparison to Western or developed countries (Luthans et al., 2006). Indonesia is a country with a collectivistic culture, while, most developed countries are countries with an individualistic culture. Accordingly, this study will provide a new perspective regarding the relationship between psychological safety, self-efficacy and organisational performance, which might be different when compared to previous findings. Last but not least, the researcher argues that the study will make a contribution to economic development in Indonesia, the researcher's own country. Moreover, as a requirement of the sponsorship, this study should be beneficial in relation to economic development in

Indonesia and provide the Indonesian government with a valuable tool that will assist it to make significant and pertinent decisions.

4.5.3 Population and Sample

The study population is employees of 502 companies listed on the Indonesian Stock Exchange. This study employed the census method with respect to data collection. The census is a method of data collection from every single member of population (De Vaus, 2014). This research used the census method for the reason that the population is not too large and accessible. The researcher has the database of every company and a contact person within each company. In addition, they can be contacted by email. Seeing that all members of the population become the sample, the result will be more accurate than sampling alone (De Vaus, 2014; Milkman, Akinola, & Chugh, 2015; Bryman, 2016; Olsen & Martins, 2016).

This study examines the psychological safety of employees. The researcher argues that listed companies are large companies, which have workplace safety procedures. Moreover, based on government regulations, listed companies must be concerned with employees and workplace safety (Jamsostek, 2013). Accordingly, these reasons become a rationale for using employees from companies listed on the Indonesian Stock Exchange as respondents. Moreover, respondents in this research should be employees with a minimum two years' work experience in their current company. The rationale for this criterion is that the researcher assumes that with a minimum of two years' experience, respondents can offer their assessment on psychological safety and self-efficacy. Furthermore, this study only employed one respondent from each company to anticipate respondent bias due to random subjects nested in treatments (Snow & Hrebiniak, 1980; Phillips, 1981), whereas the majority of previous studies in leading journals used single respondents (Bowman & Ambrosini, 1997; Allen, Peltokorpi, & Rubenstein, 2016;

Avery, McKay, & Volpone, 2016; Ritter, Matthews, Ford, & Henderson, 2016). In addition, given that this study employed structural equation modelling as the analysis tool, accordingly, several authors, such as Hair, Black, Babin, and Anderson (2010), Byrne (2010)and Kline (2011), argue that the number of samples regarding structural equation modelling should be 200 or more cases.

4.5.4   Administrative Procedures of the Questionnaire

There are six steps pertaining to questionnaire administrative procedures in this study (Craig & Douglas, 2000; Quinlan, 2011). The first stage of data collection is the development of the questionnaire. Second, after the process of developing the questionnaire, the questionnaire was pre-tested by five academics and five professionals. This process aimed to test the content, wording and layout of the questionnaire. Third, after the pre-test, the questionnaire was scrutinised by two senior academics. Fourth, the revised questionnaire was translated into *Bahasa Indonesia* by using back-translation procedures (Sekaran and Bougie, 2013). In this procedure, the questionnaire was examined by three senior Indonesian academics who graduated from universities in the UK with PhDs in different areas of study. This study followed three procedural steps: (i) one Indonesian academic checked the translation from the English language to *Bahasa Indonesia,* (ii) one academic verified the translation from *Bahasa Indonesia* to English while (iii) another validated both results. Hence, examination of the translated questionnaire not only reduced measurement errors and bias but also increased the content validity. Moreover, the researcher also developed a covering letter with respect to the questionnaire. This covering letter explains the purpose, contribution of the study, the anonymity of the respondent and also provides an opportunity for the company to receive the summary of the results. Hence, this covering letter assists participants to gain a better

understanding in connection with the study, and furthermore, the researcher argues that this covering letter will increase the response rate.

The fifth stage is the pilot test. For the pilot test, this study used 80 responses from employees of large companies based in Padang Indonesia. This research employed convenience sampling for the pilot test with the following criteria, such as respondents should have a minimum of two years experience in his/her current company. This study used convenience sampling for the pilot test in large companies in Padang due to the similarity with the real sample taken from employees of listed companies and the time limitation. The results from the pilot test were analysed by means of exploratory factor analysis (EFA), in addition to validity and reliability tests.

Finally, after the pilot test and the analysis of the pilot test findings, this study conducted the principal survey by using the Questback online survey platform. This study used an online survey seeing that it is an inexpensive method, which is fast, efficient, enables direct data entry and has an extensive geographical reach (Sue & Ritter, 2012; Bryman, 2016). However, this method also has several disadvantages, such as a low response rate, requires motivation and is restricted to the online population (Bryman, 2016). This method is suitable for this study, given that the listed companies are geographically dispersed. To anticipate disadvantages regarding the online survey, the researcher communicated with the contact person in each company numerous times to ask for their help. Moreover, the researcher also used employees of listed companies which are categorised as large companies and assumed that they had the ability to access the online survey. The questionnaire was conveyed to the corporate secretaries of 502 companies listed on Indonesian Stock Exchange. The corporate secretary is a contact person in the company, whose email is available on the company website. Accordingly, this is the reason why the researcher transmitted an email to each corporate secretary

asking for the company to participate in this study. The researcher asked the corporate secretary of the listed companies to distribute the questionnaire to an employee in the company, who has a minimum of two years experience. However, this study required more than one phase of data collection. The questionnaire was conveyed in two phases. The data collection process with regards to the primary study was conducted over a period of three months, from October 2014 to January 2015.

For the first phase, the researcher transmitted the questionnaire to 502 listed companies. After three weeks, the researcher sent a polite reminder (Craig & Douglas, 2000). By the sixth week the researcher had received 96 responses. Hence, the researcher had to extend the second phase. In the second phase, the questionnaire was delivered to 406 companies. After three weeks, the researcher sent a polite reminder again and endeavoured to find another way, such as contacting the companies via their Facebook fans pages and asked them to distribute the questionnaire to one of their employees who have a minimum two years experience in that particular company.

In the second phase, the researcher obtained a slightly higher response (134 responses). In total this study received 230 out of 502 questionnaires. The data collection stage was the hardest stage in this study. The researcher had a number of rejections from companies, while several did not respond to the email. However, the researcher also received some positive feedback, such as a few companies are interested in the upcoming result and requesting a summary of the findings. Although this study does not deal with physical treatment or something like research in medical science the researcher was still concerned about the ethical consideration. Thus, the next part describes the ethical considerations in relation to this study.

4.5.5 Ethical Considerations

In order to deal with ethical considerations, this study gained approval from Hull University's ethics commission, as the institutional review board. Moreover, this study was concerned with six considerations related to ethical issues (Craig & Douglas, 2000; Saunders et al., 2012; Sekaran & Bougie, 2013). First, in the covering letter, the researcher informed participants about the objective and contribution of the study and provided detailed information concerning the researcher. Second, the questionnaire in this research is anonymous. Thus, there was no individual risk pertaining to participating in this study (no risk of harm) (Sekaran & Bougie, 2013). Third, the researcher also informed companies that the organisation's name would not be revealed at any stage of the study due to confidentiality. Fourth, in choosing a respondent, this study dealt with the voluntary participation of the respondent. Fifth, in terms of the content of the questionnaire, this study also anticipated misleading questions. Finally, the researcher also offered an opportunity for the company to gain access to the summary of the study results. Consequently, this study followed a code of conduct or expected societal norms of behaviour, which are common in academic research (Sekaran & Bougie, 2013). Hence, the researcher argues that the current study met the minimum requirements regarding ethical considerations.

4.6   Data Analysis

This study employed quantitative data analysis. There were two types of data analysis in this study: descriptive and inferential statistical analysis (Sekaran & Bougie, 2013). Descriptive statistics was employed to calculate the average, frequency, and percentage distribution. Accordingly, by using descriptive statistics, this study describes the profile of respondents. Moreover, two inferential statistics were utilised, including factor analysis and structural equation models (SEM). This research used exploratory factor

analysis (EFA) to summarise and reduce unrelated items. EFA also helped to validate the constructs. In addition, confirmatory factor analysis (CFA) was applied in analysing the measurement model. Finally, SEM was used in assessing 29 hypotheses regarding relationships between variables (Easterby-Smith et al., 2012b). Furthermore, this research conducted five stages in the data analysis, as follows:

4.6.1 Exploratory Factor Analysis (EFA)

According to Hair et al. (2010), there are two types of factor analysis, including exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). CFA is a technique for testing the hypothesis with regards to the degree to which the data meets the hypothesised factor. Conversely, Exploratory Factor Analysis (EFA) is a data reduction technique (Pallant, 2013). In other words, EFA is a multivariate statistical method to summarise and reduce unrelated items (Hair et al., 2010). EFA is different to other techniques, such as regression and analysis of variance. This technique is an interdependent technique which is not categorised as dependent and independent variables. Furthermore, there are three key procedures in conducting EFA in this research (Pallant, 2013).

First, this study assesses the suitability of the data for factor analysis. In this stage, the number of samples is crucial. Moreover, Barlett's test of sphericity and Kaiser Meyer Olkin's (KMO) measure of sampling adequacy significance was conducted to perceive the sample adequacy with a significant value which should be less than 0.05 (Pallant, 2013). Second, factor extraction is the next criterion for EFA. Several approaches can be used for factor extraction, including principal component, principal factors, image factoring, maximum likelihood, alpha factoring, unweighted least squares and general least squares (Pallant, 2013). Hence, this study employs maximum likelihood as the extraction method as it is suitable with SEM with maximum likelihood. Moreover, this

study used Kaiser's criterion, well known as the eigenvalue rule greater than one (EGO) (Hair et al., 2010) for factor extraction criterion. Accordingly, the eigenvalue of a factor explains the total variance of that factor (Pallant, 2013).

Third, the subsequent procedure is factor rotation and interpretation. There are two principal approaches pertaining to factor rotation; orthogonal (uncorrelated) or Oblique (correlated) factor solutions (Pallant, 2013). Orthogonal rotation has several techniques, such as varimax, equimax and quartimax rotation. Oblique rotation has a number of methods including, oblimin, promax and orthoblique (Hair et al., 2010). Orthogonal rotation results are more straightforward to interpret and to report. The most common orthogonal approach is varimax rotation (Pallant, 2013). Moreover, the orthogonal approach is more frequently used because oblique rotations are not extensively developed and still subject to considerable controversy (Hair et al., 2010). Hence, the researcher decided to use the orthogonal rotation method with the varimax rotation technique in this study. Moreover, even though a loading factor ≥ 0.3 is an adequate amount, this study prefers to use a loading factor of 0.60 as the cutoff point, so as to achieve an improved result (Pallant, 2013).

4.6.2 Preliminary analysis of the primary study

This study employed six preliminary analyses, such as response rate, non-response bias analysis and missing data analysis.

4.6.2.1 *Response rate and non-response bias*

The response rate is commonly the principal concern in survey research. According to Baruch and Holtom (2008), the average response rate for a survey of organisations is 35.7%, with a standard deviation of 18.8%. Thus, this study has to meet the minimum requirement concerning response rates. Consequently, to increase the response rate, this study employed two procedures; a gentle reminder after three weeks

and also sending the questionnaire in two phases. Moreover, besides the response rate issue, the non-response bias problem is a common issue in survey research, as a consequence of using self-reporting measures (Baer & Frese, 2003). Non-response bias is a situation where the respondent refuses to answer or complete the questionnaire and moreover, is also unable to provide the necessary information for the study. To anticipate this bias, this study employed statistical analysis by way of an independent sample t-test. This test verifies the difference between early and late responses (Agresti & Finlay, 2009). These two groups should not be significantly different, or the t-test value should be greater than 0.05 (Pallant, 2013). Consequently, when the t-test value is greater than 0.05, there is no non-response bias.

4.6.2.2 Missing value analysis

Missing value analysis is one requirement of confirmatory factor analysis (CFA) in SEM (Hair et al., 2010). Hence, this study employed three alternatives in anticipating the missing value problem. First, in the online survey, this study used mandatory questions which anticipate the possibility of missing value when the respondents complete the questionnaire. Second, this research employed missing value analysis. Third, this study also used exploratory factor analysis (EFA) with pair-wise or list-wise missing value exclusion (Pallant, 2013).

4.6.2.3 Test of Outliers

The data should be free from an outlier problem in conducting SEM (Hair et al., 2010). This study applied two ways to analyse the outlier problem, including univariate outlier and multivariate outlier. In univariate outlier, this study employed boxplot tests in SPSS (Pallant, 2013). Accordingly, when the analysis results determined the extreme points, indicated with an asterisk*, it signifies that respondents with the asterisk * sign are the outliers. Whilst, for the multivariate outlier, this study used Mahalanobis distance

statistic (Kline, 2011). Hence, when the Mahalanobis distance statistic significant value is 0.000, it means this value indicates the possibility of an outlier.

4.6.3   Description of respondent profiles

Descriptive statistics is statistics analysis to describe the characteristics of the respondents (Pallant, 2013). This study employed descriptive statistical analysis which gives a value of the mean, median and standard deviation of the respondents based on several indicators, such as sex/gender, educational level, position at work and income of the respondents. By using these indicators, the researcher described the profile of the respondents. Hence, it can provide valuable information on the subject of the respondents. Furthermore, descriptive statistics are not enough to answer the research questions and it should be followed by other analysis tools, for instance exploratory factor analysis (EFA), confirmatory factor analysis (CFA) and structural equation modelling (SEM).

4.6.4   Test of Normality

When using SEM with the Maximum likelihood method, the data should be normal. For the normality test, this study applied Kurtosis value ± 3 as the cut-off point for the univariate normality test (DeCarlo, 1997). Accordingly, when the kurtosis value is equal or less than three, it means that the data is normal. For multivariate normality, this study employed Mardia's kurtosis value. According to Mardia (1974), the kurtosis value should be ≤ 10.

4.6.5   Test of Multicollinearity

"Multicollinearity arises from the situation where two or more variables are so highly correlated and essentially represent the same underlying construct" (Byrne, 2010, p. 168). This problem affects the structural equation modelling (SEM) result. Hence, this study checked the multicollinearity problem by using the Variance Inflation Factors score

(VIF). If VIF scores greater than 10, it means that the data has a multicollinearity problem (Hair et al., 2010). Moreover, if the data has a multicollinearity problem, the researcher needs to transform or delete the data to solve the issue.

4.6.6   Test of Homogeneity of Variance/ Heteroscedasticity

"The sample must be homogeneous with respect to the underlying factor structure" (Ho, 2006, p. 208). To test the homogeneity of variance, various tests can be employed, such as Levene's test of homogeneity of variance or Glejser test (Glejser, 1969; Hair et al., 2010). This study used the Glejser test with absolute residual as the dependent variable. The cut-off point in relation to this test is that p-value of the independent variables should be > 0.05. If the significance p-value > 0.05, it means that the data has met the homogeneity of variance criterion.

4.6.7   Confirmatory Factor Analysis for the measurement model

"The measurement model depicting the links between the latent variables and their observed measures" (Byrne, 2010, p. 7). In addition, Byrne notes that the measurement model defines the relationship between latent and observed variables. Hence, accordingly, the measurement model should be valid for the analysis. Consequently, the measurement model has to meet the minimum requirement for goodness of fit and construct validity. Therefore, this study used confirmatory factor analysis (CFA) to test the goodness of fit of the data.

Validity and reliability of the measurement are significant when conducting a survey. Validity is associated with the accuracy of the measurement and reliability is dealing with the consistency of the measurement (Hair, 2011). According to Hair, the validity of the measurement can be assessed by means of several criteria, such as face validity (content validity), construct validity (convergent and discriminant validity) and criterion validity (concurrent and predictive validity). Moreover, the reliability of the

measurement can be tested by using test-retest reliability, alternative-form reliability and internal consistency reliability.

Face validity or content validity is a subjective assessment from typical respondents or experts regarding the suitability of the indicators to represent the construct (Hair, 2011). This research employed two senior academics to scrutinise the measurement as the face validity. Moreover, the construct validity deals with an assessment of the items which are correlated with the construct. This study applied the correlation coefficient based on the EFA loading factors for convergent validity and uses correlation matrix for all constructs with respect to discriminant validity. The cutoff point for construct validity is the correlation coefficient ≥ 0.50. Further, for the discriminant validity, this study adopted Fornell-Larcker criterion with the square root of average variance extracted (AVE) as the criterion (Hair, Hult, Ringle, & Sarstedt, 2013). The cut-off point for discriminant validity is that the correlation coefficient should be lower than the square root of the AVE in the diagonal. In addition, besides the validity test, this research also employed a reliability test. The reliability test in this study was conducted by using internal consistency reliability. There are two methods in internal consistency reliability, including split-half reliability and coefficient alpha or Cronbach's alpha. This study used Cronbach's alpha (cut-off point α value ≥ 0.70) as the reliability test method (Kline, 2011). Hence, this study only employed a construct with Cronbach's alpha ≥ 0.70.

In addition, this research is a cross-sectional study with a single group of respondents and self-reported measures. Consequently, common method bias is a concern for the analysis (Conway and Lance, 2010, MacKenzie and Podsakoff, 2012, Podsakoff et al., 2003). According to Podsakoff, MacKenzie, Lee, and Podsakoff (2003), a study which uses a single source of data collection will be affected by common method bias. Hence, to solve this problem, several methods can be applied (Conway and Lance, 2010,

MacKenzie and Podsakoff, 2012, Podsakoff et al., 2003). This study employed Harman's single factor test which is commonly used to handle common method bias (Podsakoff et al., 2003). The cut-off point is that he total variance explained for a single factor solution should be less than 40% (Wong, Boon-itt, & Wong, 2011). If the total variance explained is more than 40%, it means that the data have a common method bias problem. Additionally, this study also used single factor solution confirmatory factor analysis (CFA) (Pugh et al., 2011). When the data has low good fit criteria, it means that the data has no serious common method bias problem.

4.6.8 Structural Equation Modelling (SEM)

4.6.8.1 Structural Model

Structural equation modelling (SEM) tests the hypotheses and the goodness of fit of the model. Structural equation modelling is a statistical methodology in hypothesis testing that takes a confirmatory approach to the analysis of structural theory related to several phenomena (Byrne, 2010, p. 3). Furthermore, there are two types of structural equation model: covariance-based SEM (CB-SEM) and partial least square based SEM or PLS-SEM (Becker, Klein, & Wetzels, 2012; Hair, Sarstedt, Pieper, & Ringle, 2012; Rigdon, 2012). Both of these methods have advantages and disadvantages (Becker et al., 2012; Hair, Ringle, & Sarstedt, 2012). Therefore, this study applied CB-SEM as the analysis tool. There are a number of advantages of using CB_SEM, such as it can confirm or reject a theory and/or to analyse the model fit (Hair et al., 2013). In addition, CB_SEM has various assumptions that should be met, including multivariate normality, remove outlier, missing data and sample adequacy (Hair et al., 2010). According to Kline (2011), the number of samples for SEM should be 200 or more cases. Thus, this study tested all the assumptions prior to running the analysis.

Furthermore, according to some authors (e.g., Byrne, 2010; Hair et al., 2010; Kline, 2011), some software packages for SEM, such as AMOS, Mplus, EQS and LISREL. This

study employed IBM AMOS 22 as the software package to analyse the model. The researcher used IBM AMOS 22 given that this programme is a powerful, friendly to use programme (Hair et al., 2010) that is available in the university's software packages. For example, compared to LISREL, AMOS is easier to use, and the researcher only needs an easy way to run the analysis. In addition, this study employed parcel item in conducting the structural model. "A parcel items is a total/average score across a set of homogeneous items each with a Likert-type scale" (Kline, 2011, p. 179). Parcel items are common in conducting analysis of the structural model (Byrne, 2010). Byrne emphasised that parcelling the items for a construct will affect goodness of fit. Moreover, Byrne argued that it will offer a better goodness of fit of the model. Therefore, this study used parcelling items, seeing as it can be assumed that the items of each factor are homogeneous and the Maximum Likelihood method is applicable to this model (Kline, 2011)

4.6.8.2 *Multivariate Normality*

This research not only examined the univariate normality of data but also investigated the multivariate normality. This study employed Mardia's multivariate kurtosis value ≤ 10 as the cut-off point (Mardia, 1974). However, when the data did not meet the multivariate normality cut-off point, this study solved this setback by using the bootstrapping method in structural equation modelling (SEM) with 5000 re-samples (Hair , Sarstedt, Hopkins, & G. Kuppelwieser, 2014) and tested the result based on Bollen-Stine p statistics (Bollen & Stine, 1992). The cut-off point regarding the normality test using the Bollen-Stine test is that the p value should be greater than 0.05. Accordingly, when the significant value is greater than 0.05, the data is multivariate normal.

4.6.8.3 *Model fit Indicators*

Moreover, in assessing the identification of the model, this study was concerned about the goodness of fit of the model. Thus, the goodness of fit criteria will be discussed below

(Hair et al., 2010). First, the significance of Chi-square value with the cut-off point should be greater than 0.05. Second, this study used absolute indices, including chi-square, Goodness of Fit Index (GFI), Root Mean Square Error of Approximation (RMSEA), Standardised Root Mean Square Residual (SRMR) and Normed Chi-square (CMIN/DF). Third, this research also employed incremental fit indices, including Normed Fit Index (NFI), Tucker-Lewis Index (TLI), Comparative Fit Index (CFI) and Relative Non-centrality Index (RNI). Finally, parsimony indices, such as Adjusted Goodness of Fit Index (AGFI) and Parsimony Normed Fit Index (PNFI) were also used in this study. Consequently, this research used four groups in connection with the goodness of fit criteria in analysing the structural model.

This study followed the rule of thumb from Bentler and Bonett (1980) and Akamavi, Mohamed, Pellmann, and Xu (2015) who stated that a fit model ≥ 0.90 for GFI, TLI, CFI, NFI and value ≤ 0.08 for SRMR and RMSEA are acceptable. However, Hair et al. (2010) argued that with the number of observed variables between 12 and 30 and number of samples less than 250, the goodness of fit values, including CFI, TLI and GFI should be > 0.95, AGFI should be > 0.80, SRMR should be < 0.08 and RMSEA should be < 0.08. Moreover, for the reason that this research also used parcel items for each construct in the structural model, it will provide a better goodness of fit (Byrne, 2010; Kline, 2011).

4.6.8.4 *Hypothesis Testing*

This study applied two significant values as the indicator of supported hypothesis (Hair et al., 2010). These values are <0.01 and <0.05. Thus, when the significant value of the hypothetical relationship was less than 0.01 or less than 0.05, it signifies that the hypothesis was accepted, whereas if the significant value was greater than 0.05, the hypothesis was rejected.

4.6.8.5 *Indirect Relationship*

Besides the direct relationship between each variable, this research also examined the indirect relationship of several variables. Consequently, to test those relationships, this study required more analysis. According to Baron and Kenny (1986), there are two indirect relationships between variables, including moderating effect and mediating effect. Particularly to test the mediating effect of a variable, they argue it can be tested by using Sobel's test. Therefore, this study used Sobel's test to examine the indirect relationship between variables. The cut-off point regarding Sobel's test is the significant value < 0.05. Accordingly, when the significant value of Sobel's test is less than 0.05, it means that the indirect relationship between variables is significant.

CHAPTER 5 DATA ANALYSIS AND FINDINGS

5.1 Introduction

This chapter outlines the results of the pilot study, preliminary analysis of the principal study, descriptions of the respondents' profiles, results from the exploratory factor analysis (EFA), confirmatory factor analysis findings (CFA) and furthermore, the structural equation model (SEM) results. Thus, this chapter begins with the findings obtained from the pilot study.

5.2 Pilot Study

The researcher has conducted a pilot study comprising 80 employees from Indonesian companies prior to the principal study. Although this pilot test uses convenience sampling, respondents were selected from several large Indonesian companies which employ more than 300 workers (Hayashi, 2002). Additionally, this study employs a minimum of two years' experience as the respondent's criterion. Table 5.1 explains the profiles of the respondents' who participated in the pilot study.

Table 5.1 The pilot test respondents' profiles

Category	Sub-category	Frequency	Percentage
Gender	Male	41	51
	Female	39	49
Education	Bachelor	71	89
	Master	9	11
Working Experience	2 – 5 Years	48	60
	6 – 10 Years	15	19
	> 10 Years	17	21
Age	< 30 Years	49	61
	30 - 40 Years	18	23
	41 – 50 Years	13	16

According to Table 5.1, the proportion of respondents involved in the pilot test is relatively equal between males and females. Most of the respondents graduated with a

bachelor's degree. Two respondents had up to five years' experience with most under the age of thirty. Furthermore, Exploratory Factor Analysis (EFA) and Cronbach's alpha reliability test were used to analyse the validity and reliability of the measurement.

The EFA results regarding the pilot test determined that there are five constructs related to psychological safety, with Cronbach's alpha demonstrating 0.76, 0.91, 0.79, 0.83 and 0.91 respectively. Moreover, self-efficacy has five constructs with regards to Cronbach's alpha, which are 0.86, 0.88, 0.82, 0.92 and 0.84 respectively. Finally, this pilot study ascertained three constructs regarding organisational performance. Those particular organisational performance constructs comprise Cronbach's alpha of 0.86, 0.79 and 0.87 respectively. Hence, all of the constructs are reliable.

5.3   Exploratory Factor Analysis (EFA) for the Main Study

The following analysis is an examination of the principal study. The first stage in the inferential statistics in this study is pertaining to exploratory factor analysis (EFA). Exploratory factor analysis was employed to test the validity of measurement items. This analysis determines how and to what extent the measurement items are related to the underlying factors (Byrne, 2010). Additionally, exploratory factor analysis was employed with each construct: psychological safety, self-efficacy and organisational performance. The first step in exploratory factor analysis is the test of the adequacy of the samples; the second step is factor the extraction procedure, whilst finally, EFA determined the factor loading.

5.3.1   KMO Barlett's Test of Sphericity

By using Kaiser Meyer Olkin (KMO), together with Barlett's test of sphericity regarding all the measurement items, this study established that KMO = 0.811 and Barlett's test of sphericity had a significant value that is = 0.000. According to Hair et al.

(2010), the KMO value has several intervals, including 0.80 or above = meritorious, 0.70 or above = middling, 0.60 or above = mediocre, 0.50 or above = miserable and below 0.50 = unacceptable. However, Tabachnick and Fidell (2013) note that KMO should be more than 0.50 for all items. Thus, it means that the study has an adequate number of samples, as it has a KMO of more than 0.50. This study also conducted exploratory factor analysis for each construct (multidimensional) for the reason that it will provide a better factor solution (see Table 5.9).

5.3.2   Factor Loadings

The factor loadings in Table 5.2 reveals the factor loadings for all constructs by using cut-off point 0.6, KMO > 0.50 and Barlett's test of sphericity significant value $\leq$ 0.05 (Akamavi et al., 2015). This study employed Maximum Likelihood as a method of extraction given that it fits with SEM by using the Maximum Likelihood method, which was used as the analysis tool (Kline, 2011). Moreover, to obtain an enhanced result, this study used rotation in conjunction with varimax rotation for the factor loadings, and factor criteria with eigenvalues greater than one (EGO) (Hair et al., 2010). Additionally, this study ascertained five dimensions of psychological safety, comprising physical risk psychological safety, energy psychological safety, inner psychological safety, team psychological safety and employment equity. Self-efficacy was divided into three dimensions, consisting of individual self-efficacy, collective self-efficacy and creative self-efficacy. Finally, organisational performance was grouped into three dimensions, including financial performance, employee wellbeing and company image.

Physical risk psychological safety has four items, including "my company provides safety audits regularly", "My company takes actions for unsafe working behaviours of his/her employees", "I get a formal safety training from my company before starting my job" and "My company has work safety procedures to be followed by its employees".

The loading factors of physical risk psychological safety items are between 0.60 and 0.83. Energy psychological safety consists of three items, including "my company helps me to solve my personal conflict with other team members", "my company tends to talk down to me and other employees" and "my company praises my safety work behaviours". Energy psychological safety has item's loading factors between 0.63 and 0.81. Inner psychological safety has two measurement items with loading factors 0.66 and 0.95. The items are "I am confident with my ability in controlling my emotion at work" and "I am confident that I have good health conditions to perform my job". Team psychological safety was developed by way of three items, such as "my team members support each other", with loading factors between 0.64 and 0.89. Finally, employment equity has two items, for instance "my company never treats me differently because of my religion". This dimension has loading factors between 0.74 and 0.84. Hence, it can be concluded that all psychological safety dimensions have high item's loading factors (>0.60).

Self-efficacy has three dimensions, including individual, collective and creative self-efficacy. Individual self-efficacy has two measurement items, for instance "I remain calm when dealing with difficulties". The loading factors in relation to individual self-efficacy items are between 0.69 and 0.94. Moreover, collective efficacy has four measurement items, for example, "my team members have good skills to complete our projects successfully". Moreover, collective self-efficacy items have loading factors between 0.70 and 0.85. Finally, creative self-efficacy consists of three items, such as "I spend considerable time generating new ideas", with loading factors between 0.62 and 0.84. Therefore, all dimensions of self-efficacy also have a high loading factor.

Organisational performance has three dimensions, including financial performance, employee well-being and company image. Financial performance has three items, such as "my company achieved a high net income in the last year". The loading factor of

financial performance items is between 0.90 and 0.96. In addition, non-financial performance dimensions, including employee well-being and company image also have several items. For example, employee well-being has three items, for instance "overall, I am satisfied with my job". Finally, company image has three items, for example "my company has a good corporate image". Both non-financial performance dimensions also have high loading factors (between 0.64 and 0.98). Hence, this research has employed 11 constructs, including the five dimensions of psychological safety, three dimensions of self-efficacy and three dimensions organisational performance.

Table 5.2 Variable's Factor Loadings

Variable	Number of Items	Factor Loading	KMO	Barlett's test of Sphericity sig
Physical risk PS	4	0.60 – 0.83	0.756	0.000
Energy PS	3	0.63 – 0.81	0.845	0.000
Employment Equity PS	2	0.74 – 0.84	0.845	0.000
Inner PS	2	0.66 – 0.95	0.832	0.000
Team PS	3	0.64 – 0.89	0.836	0.000
Collective SE	4	0.70 – 0.85	0.882	0.000
Individual SE	2	0.69 – 0.94	0.780	0.000
Creative SE	3	0.62 – 0.84	0.870	0.000
Company Image	3	0.78 – 0.85	0.828	0.000
Employee well-being	3	0.64 – 0.98	0.828	0.000
Financial Performance	3	0.90 – 0.96	0.823	0.000

KMO > 0.50 and Barlett's test of sphericity significant value ≤ 0.05 (Akamavi et al., 2015)

5.4   Descriptive of Respondent's Profile

Table 5.3 reveals the characteristics of the respondents in this primary study based on gender, education, working experience, age, and monthly income, in addition to the age of the company and industrial classification of the company.

5.4.1   Gender

Table 5.3 illustrates that this research comprises 48% male and 52% female respondents. Thus, the researcher argues the participation of female employees is slightly higher than males in this study.

Table 5.3 Characteristics of Respondents

Variable		Frequency	Percent
Gender	Male	107	48.2
	Female	115	51.8
Education	Under Graduate	204	91.9
	Master Degree	18	8.1
Working Experience	2-5 Years	115	51.8
	6-10 Years	47	21.2
	More than 10 Years	60	27.0
Age	Less than 30 Years	125	56.3
	30 – 40 Years	58	26.1
	41 – 50 Years	39	17.6
Monthly Income (Rupiah)	Less than 5 M	64	28.8
	5 – 10 M	93	41.9
	10.1 -15 M	22	9.9
	More than 15 M	43	19.4
Company's Age	5 – 10 years	7	3.2
	11 -15 Years	23	10.4
	More than 15 Years	192	86.4
Industrial Classification*	Primary Industry	16	7.2
	Manufacture	32	14.4
	Service	174	78.4

5.4.2 Education

Table 5.3 reveals that respondents involved in this study mostly graduated with a bachelor's degree (91.9%), although only 8.1% of the respondents have a master's degree. Consequently, it might be concluded that all of the respondents are educated people and were able to answer all of the questions independently.

5.4.3 Working Experience

Based on working experience, Table 5.3 explains that more than half of the respondents have 2-5 years' experience (51.8%), whereas 27.0% of the respondents have more than ten years' experience. Hence, it can be assumed that all of the respondents have knowledge regarding the company's situations, and that they are eligible to provide an opinion in relation to the company.

5.4.4 Age

Table 5.3, demonstrates that respondents in this research are mostly young people as 56.3% are less than 30 years old, 26.13% of the respondents are between 30 and 40 years old, and only 17.6% of respondents are between 41 and 50 years old. Thus, it means that most of the respondents are productive young people.

5.4.5 Monthly Income

Table 5.3 reveals that the respondents have four groups of income, 41.9% of respondents have an income between 5 and 10 million rupiahs per month. The second group is respondents with an income of less than 5 million or lower (28.8%). The third group is respondents with an income of more than 15 million or higher (19.4%), while the last group is respondents with an income between 10.1 and 15 million a month. Hence, it can be concluded that most of the respondents have a moderate income.

5.4.6 Company's Age

Based on the age of the company, Table 5.3 explains that most companies have been established for more than 15 years (86.4%), whilst only 3.2% of the companies have been operating between 5 to 10 years.

5.4.7 Industry Classification

Table 5.3 illustrates that most of the respondents are employees of service companies (78.4%). Furthermore, 14.4% of the respondents come from manufacturing companies and only 7.2% of respondents are employees of primary industries, such as agriculture and mining. Hence, it is congruent with the proportion of industries observed on the Indonesian Stock Exchange, which confirm that the service industry consists of the highest percentage of stock exchange members.

In summary, these characteristics are representative of Indonesian companies. For example, BPS (2016) revealed that the number of female workers in Indonesia is slightly higher than male workers. In addition, based on industry classification, this study established that most of the respondents are employees of service companies and is also similar with the proportion of service companies on the Indonesian Stock Exchange (IDX, 2015). Consequently, the researcher argues that the sample in this study is representative of Indonesian companies.

5.5 Response Rate and Non-Response Bias Test

The principal study was conducted with regards to 502 companies listed on the Indonesian Stock Exchange. This study received 96 responses in the first phase and 134 responses in the second phase, with a total of 230 responses. Thus, the response rate pertaining to this study is 45.8%. According to Baruch and Holtom (2008), the minimum average response rate for data collection from the organisation is 35.7%. Hence, this study

has met the minimum requirement. However, as this data collection was conducted on two separate occasions and self-reported, non-response bias was tested in this study (Pallant, 2013). The non-response bias test using an independent sample t-test established that there is no non-response bias. Table 5.3 reveals the mean and standard deviation in relation to early and late responses. Table 5.4 illustrates that the significant value regarding the t-test was higher than 0.05. Therefore, it means that there is no response bias problem.

Table 5.4 Group Statistics

Variables	Group	N	Mean	Std. Deviation	Std. Error Mean
PhysicalRisk_PS	early	96	4.07	0.71	0.07
	late	126	4.05	0.73	0.06
Employment_equity	early	96	4.68	0.46	0.05
	late	126	4.65	0.49	0.04
Energy_PS	early	96	4.11	0.63	0.06
	late	126	4.04	0.63	0.06
Inner_PS	early	96	4.27	0.61	0.06
	late	126	4.18	0.64	0.06
Team_PS	early	96	4.09	0.70	0.07
	late	126	4.05	0.73	0.06
Creative_SE	early	96	4.05	0.68	0.07
	late	126	4.02	0.70	0.06
Individual_SE	early	96	4.10	0.72	0.07
	late	126	3.92	0.66	0.06
collective_SE	early	96	4.10	0.64	0.07
	late	126	4.04	0.69	0.06
financialPerformance	early	96	3.73	0.95	0.10
	late	126	3.81	0.94	0.08
Company_Image	early	96	4.08	0.71	0.07
	late	126	4.19	0.74	0.07
Employee_wellbeing	early	96	3.99	0.81	0.08
	late	126	3.92	0.88	0.08

Table 5.5 Group Statistic for Non Response Bias Test

Variable	t	df	Sig. (2-tailed)
PhysicalRisk_PS	0.21	220.00	0.84
Employment_equity	0.55	220.00	0.58
Energy_PS	0.92	220.00	0.36
Inner_PS	1.03	220.00	0.30
Team_PS	0.44	220.00	0.66
Creative_SE	0.30	220.00	0.76
Individual_SE	1.87	220.00	0.06
Collective_SE	0.66	220.00	0.51
FinancialPerformance	-0.68	220.00	0.50
Company_Image	-1.10	220.00	0.27
Employee_wellbeing	0.60	220.00	0.55

5.6 Missing Value

The questionnaire in this study employed a mandatory scheme for each page, which meant that the respondents could not progress to the next page if they missed a question. Thus, there is no missing value in this study.

5.7 Outlier Test

This study also confirmed the outliers by using boxplots tests. The outlier may affect the normality of the data. Hence, based on the boxplots test, eight respondents were excluded from the analysis (respondents 86, 134, 210, 125, 206, 204, 147 and 139) for the reason that they were detected as outliers. Thus, after this test, the data is free from univariate outliers. The next step is the normality test.

5.8 Normality Test

The normality of the data was tested by using the univariate normality test. In the first stage, this study employed kurtosis value ±3 as the indicator (DeCarlo, 1997). Table 5.5 demonstrates that the kurtosis value of the variables in this study was in the -3 and +3 range. For this reason, it means that there was no normality problem. Moreover, given

that this study used a large sample (>30), according to the central limit theorem, the data is also approximate to normal (Hair et al., 2010). The normality of the data can also be tested by using the Kolmogorov-Smirnov test. According to the results of the Kolmogorov-Smirnov test in Table 5.6, the researcher argues that the data is not normal with a significant level < 0.05. However, it is common in data that are large in size (Pallant, 2013).

5.9   Multicollinearity Test

This study tested the multicollinearity problem, which is one of the requirements of structural equation modelling (SEM). The data should be free from multicollinearity. According to Hair et al. (2010), this test can be conducted by using variance inflation factors (VIF) values. The VIF should not be greater than 10. Table 5.7 confirms that this study had a VIF value between 1.168 and 1.819 in relation to all variables. Thus, it means that the data is free from multicollinearity.

Table 5.6 Normality Test with Kurtosis

Variable	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
PhysicalRisk_PS	222	1.25	5	4.06	0.72	-0.47	0.16	0.15	0.33
Employment_equity	222	3	5	4.66	0.47	-1.08	0.16	0.24	0.33
Energy_PS	222	2.5	5	4.07	0.63	0.02	0.16	-0.68	0.33
Inner_PS	222	2.5	5	4.22	0.62	-0.11	0.16	-0.98	0.33
Team_PS	222	2.5	5	4.07	0.71	-0.09	0.16	-1.20	0.33
Creative_SE	222	2	5	4.04	0.69	-0.19	0.16	-0.70	0.33
Individual_SE	222	1	5	4.00	0.69	-0.10	0.16	0.50	0.33
Collective_SE	222	2	5	4.07	0.67	-0.21	0.16	-0.44	0.33
FinancialPerformance	222	1	5	3.77	0.94	-0.23	0.16	-0.67	0.33
Company_Image	222	2	5	4.14	0.73	-0.61	0.16	0.11	0.33
Employee_wellbeing	222	1	5	3.95	0.85	-0.94	0.16	1.12	0.33

Table 5.7 Normality Test with Kolmogorov-Smirnov

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	Df	Sig.
PhysicalRisk_PS	.117	222	.000	.922	222	.000
Employment_equity	.384	222	.000	.681	222	.000
Energy_PS	.215	222	.000	.901	222	.000
Inner_PS	.221	222	.000	.872	222	.000
Team_PS	.165	222	.000	.888	222	.000
Creative_SE	.182	222	.000	.906	222	.000
Individual_SE	.203	222	.000	.869	222	.000
Collective_SE	.210	222	.000	.900	222	.000
FinancialPerformance	.155	222	.000	.910	222	.000
Company_Image	.199	222	.000	.878	222	.000
Employee_wellbeing	.258	222	.000	.875	222	.000

a. Lilliefors Significance Correction

Table 5.8 Multicollinearity Test

	Unstandardised Coefficients		Standardised Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	-0.35	0.60		-0.60	0.55		
PhysicalRisk_PS	0.04	0.09	0.03	0.48	0.64	0.62	1.62
Emplment_equity	-0.12	0.11	-0.06	-1.04	0.30	0.86	1.17
Energy_PS	0.03	0.10	0.02	0.32	0.75	0.62	1.61
Inner_PS	-0.21	0.10	-0.14	-1.99	0.05	0.58	1.72
Team_PS	0.44	0.09	0.33	4.67	0.00	0.55	1.82
Creative_SE	-0.01	0.09	-0.01	-0.14	0.89	0.68	1.47
Individual_SE	0.16	0.08	0.12	1.95	0.05	0.73	1.38
Collective_SE	0.32	0.10	0.23	3.37	0.00	0.61	1.63
Company_Image	0.38	0.08	0.29	4.68	0.00	0.71	1.40
Employee_wellbeing	0.00	0.07	0.00	-0.03	0.98	0.78	1.28

5.10 Heteroscedasticity/ Homogeneity of Variance Test

This study has also tested the homogeneity of variance and moreover, applied the

Glejser test for homogeneity of variance (Glejser, 1969). By using absolute residual as

the dependent variable, Table 5.8 reveals that the significant value of each independent

variable in this study is more than 0.05. Therefore, the researcher argues that the data is

free from heteroscedasticity, or it has homogeneity of variance.

Table 5.9 Heteroscedasticity Test

	Unstandardised Coefficients		Standardised Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	0.84	0.37		2.30	0.02		
PhysicalRisk_ PS	0.09	0.05	0.13	1.56	0.12	0.62	1.62
Employment_e quity	-0.07	0.07	-0.07	-0.97	0.34	0.86	1.17
Energy_PS	-0.11	0.06	-0.15	-1.76	0.08	0.62	1.61
Inner_PS	0.01	0.06	0.02	0.22	0.83	0.58	1.72
Team_PS	-0.04	0.06	-0.07	-0.74	0.46	0.55	1.82
Creative_SE	-0.05	0.05	-0.08	-0.93	0.36	0.68	1.47
Individual_ SE	0.08	0.05	0.12	1.48	0.14	0.73	1.38
Collective_SE	0.03	0.06	0.04	0.48	0.63	0.61	1.63
Company_ Image	0.05	0.05	0.07	0.93	0.35	0.71	1.40
Employee_ wellbeing	-0.04	0.04	-0.08	-1.07	0.28	0.78	1.28

ABSRES = absolute residual as dependent variable

5.11 Confirmatory Factor Analysis (CFA) in relation to the Measurement model

After exploratory factor analysis, this research conducted confirmatory factor

analysis (CFA) to confirm the goodness of fit, the validity and reliability of the

measurement model. Figure 5.1 demonstrates the measurement model and the model fit.

5.11.1 Model fit indicators

Model fit indicators for the measurement model can be assessed by means of several

indicators, including absolute indices, incremental fit indices and parsimony indices. This

research employed Normed Chi-square (CMIN/DF), Goodness of Fit Index (GFI) and

RMSEA as the absolute indices. This study determined that CMIN/DF = 1.464 ($\leq$3), GFI

= 0.87 (>0.90) and RMSEA =0.05 ($\leq$ 0.08). Thus, based on absolute indices, the data has

a good fit even though GFI is a slightly less than the minimum standard 0.90 (Bentler & Bonett, 1980).

Moreover, based on incremental fit Indices, this study ascertained that the Tucker-Lewis Index (TLI) = 0.95 (>0.90) and the Comparative Fit Index (CFI) = 0.96 (>0.90). Hence, this study is also has a good fit data based on incremental fit indices. Finally, based on parsimony indices, such as Adjusted Goodness of Fit Index (AGFI), this study verified that the AGFI =0.82 (>0.80). It means that the data is fit for the reason that it has an AGFI value greater than 0.80. In conclusion, overall, the measurement model has a high goodness of fit (Bentler & Bonett, 1980; Akamavi et al., 2015).

Figure 5.1 Measurement Model
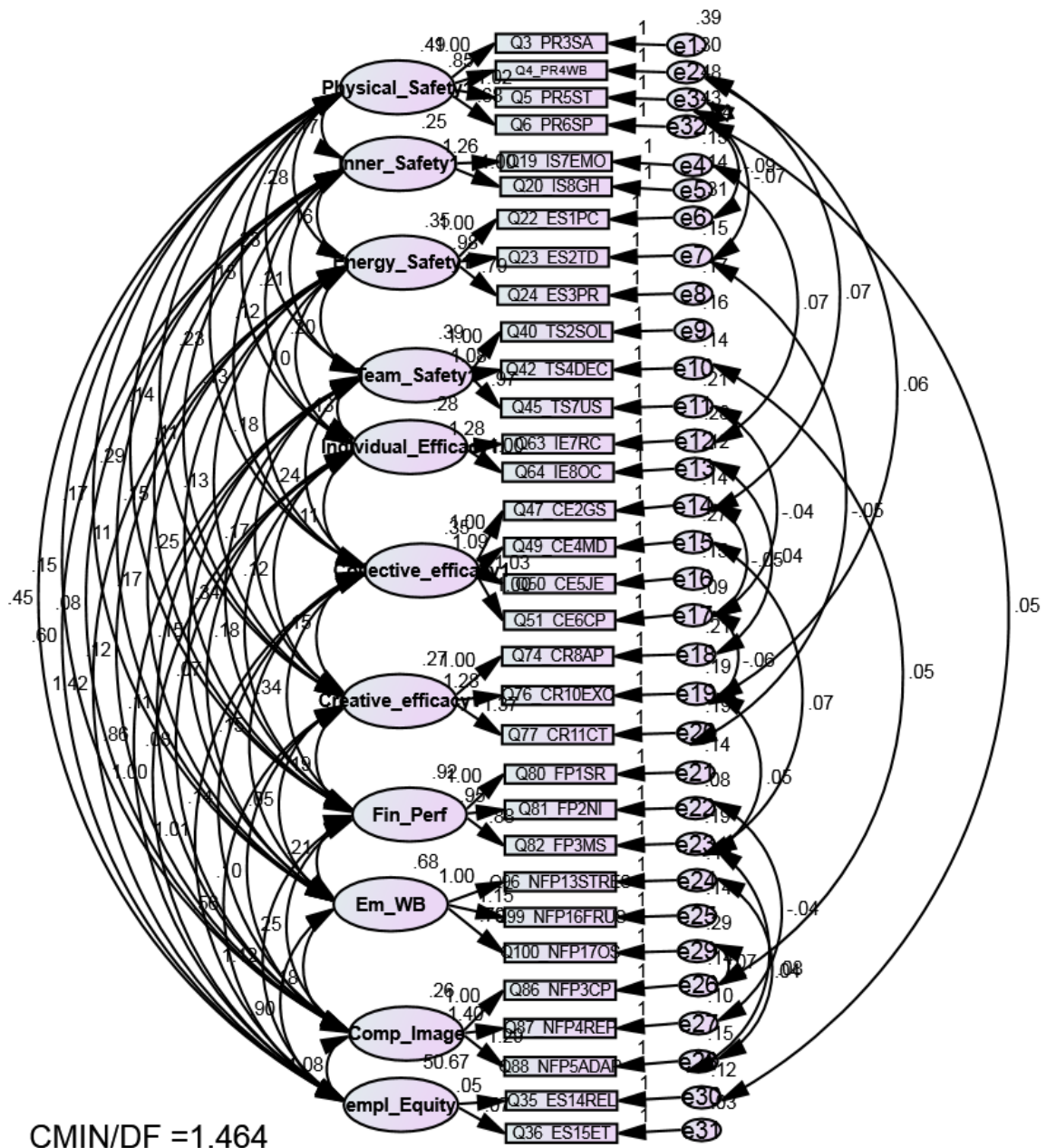
CMIN/DF =1.464
CFI =.960
TLI =.950
RMSEA =.046

5.11.2 Model Reliability

Table 5.10 demonstrates the reliability of the constructs in the measurement model, including Cronbach's alpha for internal reliability, the construct reliability (CR) and average variance extracted (AVE). As the cut-off point, Cronbach's alpha should be the same or greater than 0.70, and this cut-off point is also the same for the construct reliability (CR) (Hair et al., 2014). In addition, the AVE value should be 0.50 or above, as the indicator of a reliable construct. This study ascertained that all of the constructs have Cronbach's alpha (**α),** and a CR value of 0.70 or above and moreover, the AVE for all constructs is also 0.50 or above (Pugh et al., 2011). For example, physical risk psychological safety has Cronbach's alpha = 0.81, CR= 0.79 and AVE = 0.50. Employment equity psychological safety has Cronbach's alpha = 0.82, CR= 0.77 and AV= 0.63. Accordingly, all values are greater than the minimum requirements or cut-off points. Thus, all constructs in this study are reliable and eligible to be analysed.

Table 5.10 Reliability Test for measurement model (11 Constructs).

Constructs	Items	Mean	Std. Dev	Loading	CITC	α ID	α	CR	AVE
Psychological Safety									
Physical Risk PS	My company provides safety audits regularly	3.97	0.94	0.69	0.64	0.77	0.81	0.79	0.50
	My company takes actions for unsafe working behaviours of his/her employees	4.20	0.82	0.67	0.59	0.79			
	I get a formal safety training from my company before starting my job	3.78	1.01	0.83	0.71	0.73			
	My company has work safety procedures to be followed by its employees	4.27	0.81	0.60	0.61	0.78			
Energy PS	My company helps me to solve my personal conflict with other team members	3.94	0.81	0.69	0.65	0.76	0.81	0.76	0.51
	My company tends to talk down to me and other employees	4.12	0.69	0.81	0.73	0.66			
	My company praises my safety work behaviours	4.20	0.63	0.63	0.62	0.78			
Employment equity	My company never treat me differently because of my religion	4.67	0.52	0.74	0.69	-	0.82	0.77	0.63
	My company never treat me differently because of my ethnicity.	4.65	0.51	0.84	0.69	-			
Inner PS	I am confident with my ability in controlling my emotion at work	4.11	0.74	0.95	0.68	-	0.80	0.80	0.67
	I am confident that I have good health conditions to perform my job	4.32	0.63	0.66	0.68	-			
Team PS	My team members are able to solve the job related problems	4.02	0.74	0.68	0.75	0.84	0.88	0.79	0.56
	My team members support my decision that is related to my job.	3.96	0.78	0.89	0.80	0.79			
	My team members support each other	4.29	0.63	0.64	0.74	0.85			
Self-efficacy									

Collective Self-efficacy	My team members have good skills to complete our projects successfully	4.08	0.71	0.75	0.74	0.88	0.90	0.85	0.59
	My team always meets the deadlines of the job	3.95	0.83	0.70	0.75	0.88			
	All my team members do our job effectively	4.05	0.73	0.85	0.83	0.85			
	My team is capable to solve more challenging problems in our project	4.08	0.68	0.77	0.80	0.86			
Individual Self-efficacy	I remain calm when dealing with difficulties	3.83	0.87	0.69	0.67	-	0.78	0.81	0.68
	I can overcome many challenges successfully	4.17	0.64	0.94	0.67	-			
Creative Self-efficacy	I spend considerable time generating new ideas	3.99	0.83	0.79	0.65	0.73	0.85	0.80	0.57
	I get excited by new ideas	4.23	0.80	0.84	0.74	0.77			
	I develop adequate plans and schedules to implement new ideas.	4.09	0.70	0.62	0.65	0.85			

Organisational Performance

Company's Image	My company has got good corporate image	4.32	0.64	0.79	0.77	0.88	0.89	0.85	0.65
	My company's reputation is better than the competitors'	4.17	0.77	0.85	0.83	0.81			
	My company is more adaptive to new market threats than the	4.11	0.77	0.78	0.80	0.85			
Employee's well-being	I never feel stressed to do my job in this company	3.58	1.08	0.66	0.68	0.81	0.84	0.81	0.60
	I am not frustrated with my job in this company	3.81	1.03	0.98	0.81	0.67			
	Overall, I am satisfied with my job	4.09	0.81	0.64	0.66	0.83			
Financial Performance	My company has got high sales revenue in the last year	3.76	1.03	0.93	0.89	0.92	0.95	0.95	0.87

My company achieved a high net income in the last year	3.80	0.97	0.96	0.91	0.91
My company has got high market share in the last year	3.76	0.96	0.90	0.87	0.94

Note: Std. Dev = Standard deviation; CITC= corrected item total correlation; α= Cronbach's alpha; CR = composite reliability; AVE= average variance extracted, α ID = α if item deleted

5.11.3 Model Validity

Besides the reliability of the constructs, this study also tested the validity of the model. Table 5.11 explains the regression weight of the measurement model which relates to the validity of the constructs. There are two ways to verify the validity of the model. First, this study examines the validity of the model based on the regression weight of each item. Accordingly, all constructs have a good construct validity with p significant value <0.05. Finally, Table 5.12 demonstrates the discriminant validity based on Fornell-Larcker criterion with the square root of the average variance extracted (AVE) as the criterion (Hair et al., 2013). This study established that all of the constructs are valid because the correlation coefficients are lower than the square root of the AVE in the diagonal.

5.11.4 Multivariate Normality

The next step prior to the structural model analysis is how to make sure the data is normal. Even though, based on the univariate normality test using kurtosis value $\pm$ 3, the data is normal; based on multivariate kurtosis, it ascertained that the multivariate kurtosis = 281.98. According to Mardia (1974), the multivariate kurtosis value should be no more than ten. Thus, it was not normal. Hence, to solve this problem, this study used the bootstrapping method with 5000 re-sample data and the Bollen-Stine test (Bollen & Stine, 1992). Accordingly, based on bootstrapping, this study discovered that the data is normal, with the Bollen-Stine significant value 0.206 or greater than 0.05. Consequently, the data is free from a normality problem.

Table 5.11 Regression weights of Measurement Model

Criterion	Predictor	Estimate	S.E.	C.R.	Sig
Physical Risk PS	Q3_PR3SA	1			
	Q4_PR4WB	0.85	0.09	9.98	***
	Q5_PR5ST	1.02	0.11	9.49	***
	Q6_PR6SP	0.68	0.09	7.86	***
Inner PS	Q19_IS7EMO	1.26	0.12	11.00	***
	Q20_IS8GH	1.00			
Energy PS	Q22_ES1PC	1.00			
	Q23_ES2TD	0.98	0.09	11.17	***
	Q24_ES3PR	0.79	0.08	10.42	***
Team PS	Q40_TS2SOL	1.00			
	Q42_TS4DEC	1.08	0.07	16.14	***
	Q45_TS7US	0.97	0.07	14.08	***
Individual SE	Q63_IE7RC	1.28	0.16	8.20	***
	Q64_IE8OC	1.00			
collective SE	Q47_CE2GS	1.00			
	Q49_CE4MD	1.09	0.08	13.65	***
	Q50_CE5JE	1.03	0.07	15.12	***
	Q51_CE6CP	1.00	0.07	14.47	***
Creative SE	Q74_CR8AP	1.00			
	Q76_CR10EXC	1.28	0.10	12.32	***
	Q77_CR11CT	1.37	0.11	12.51	***
Financial Performance	Q80_FP1SR	1.00			
	Q81_FP2NI	0.95	0.04	27.37	***
	Q82_FP3MS	0.88	0.04	22.87	***
Employee WB	Q96_NFP13STRES	1.00			
	Q99_NFP16FRUS	1.15	0.09	12.67	***
	Q100_NFP17OS	0.71	0.06	11.52	***
Company Image	Q86_NFP3CP	1.00			
	Q87_NFP4REP	1.40	0.09	16.45	***
	Q88_NFP5ADAP	1.29	0.08	15.82	***
Equal Opportunity PS	Q35_ES14REL	0.05	0.02	2.99	***
	Q36_ES15ET	0.07	0.02	3.24	***

Note: Sig = Significance level; S.E = Standard Error; C.R = Critical ratio; *** = p<0.01

Table 5.12 Discriminant Validity

	Mean	S.D	1	2	3	4	5	6	7	8	9	10	11
Employment equity	4.66	0.47	**0.82**										
Energy PS	4.07	0.63	0.27**	**0.71**									
Inner PS	4,22	0.62	0.15*	0.40**	**0.82**								
Team PS	4.07	0.71	0.21**	0.43**	0.57**	**0.75**							
Creative SE	4.04	0.69	0.15*	0.30**	0.36**	0.42**	**0.75**						
Individual SE	4.00	0.69	0.23**	0.25**	0.42**	0.34**	0.38**	**0.82**					
Collective SE	4.06	0.67	0.22**	0.40**	0.40**	0.48**	0.40**	0.26**	**0.77**				
Financial performance	3.77	0.94	0.14*	0.32**	0.27**	0.49**	0.33**	0.30**	0.48**	**0.93**			
Company Image	4.14	0.73	0.24**	0.30**	0.23**	0.27**	0.36**	0.23**	0.38**	0.46**	**0.81**		
Employee WB	3.95	0.85	0.16*	0.31**	0.28**	0.29**	0.15*	0.18**	0.29**	0.26**	0.37**	**0.77**	
Physical risk PS	4.06	0.72	0.10	0.50	0.36**	0.40**	0.35**	0.31**	0.46**	0.35**	0.31**	0.29**	**0.71**

Diagonal (**in bold**) = Square root of AVE; for discriminant validity criterion, value of the square root of AVE should be greater than off-diagonal elements; ** correlation is significant at the 0.01 level (2- tailed); * correlation is significant at the 0.05 level (2- tailed)

5.11.5 Common Method Bias

This study is a cross-sectional study, which uses a single group of respondents as the sample. Therefore, this study deals with the common method bias problem, and is a key source of measurement errors (Podsakoff et al., 2003). This study employed Harman's single factor test by using exploratory factor analysis for all items in anticipating this problem. The cut-off point in relation to this test is no more than 40% for a single factor (Wong et al., 2011). Table 5.13 reveals that the variance explained for one factor is 11.23 % or less than 40%. Accordingly, this study has no serious common method bias problem. Moreover, an additional way to test the common method bias problem is by using CFA with a single solution. Figure 5.2 presents the CFA for a single solution of 11 factors. This single factor solution determined that the model does not fit the data with CMIN/DF = 6.17 ($\leq$3), GFI = 0.54 (>0.90), RMSEA = 0.15 ($\leq$ 0.08), TLI = 0.43 (>0.90) and CFI = 0.47 (>0.90). Accordingly, the data has a low goodness of fit. Consequently, the researcher argues that this study is free from the common method bias problem (Pugh et al., 2011).

Table 5.13 Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	10.737	33.555	33.555	9.769	30.529	30.529	3.595	11.234	11.234
2	2.494	7.793	41.347	1.969	6.153	36.682	2.911	9.096	20.330
3	2.120	6.626	47.974	1.929	6.028	42.710	2.715	8.483	28.813
4	1.835	5.733	53.707	1.827	5.711	48.421	2.285	7.139	35.952
5	1.680	5.249	58.955	1.370	4.281	52.702	2.252	7.038	42.990
6	1.570	4.907	63.862	1.367	4.272	56.973	2.158	6.744	49.734
7	1.454	4.545	68.407	1.197	3.740	60.714	2.086	6.519	56.253
8	1.232	3.850	72.257	1.018	3.182	63.895	1.822	5.693	61.946
9	1.072	3.351	75.608	.974	3.042	66.938	1.597	4.992	66.938
10	.992	3.100	78.708						
11	.710	2.217	80.925						
12	.590	1.844	82.769						
13	.546	1.706	84.475						
14	.479	1.497	85.972						
15	.444	1.387	87.359						
16	.416	1.299	88.658						
17	.377	1.179	89.837						
18	.339	1.060	90.898						
19	.326	1.018	91.915						
20	.317	.990	92.906						

Extraction Method: Maximum Likelihood.

Figure 5.2 Common Method Bias Test with Single Factor

Note: CLF = Common latent factor
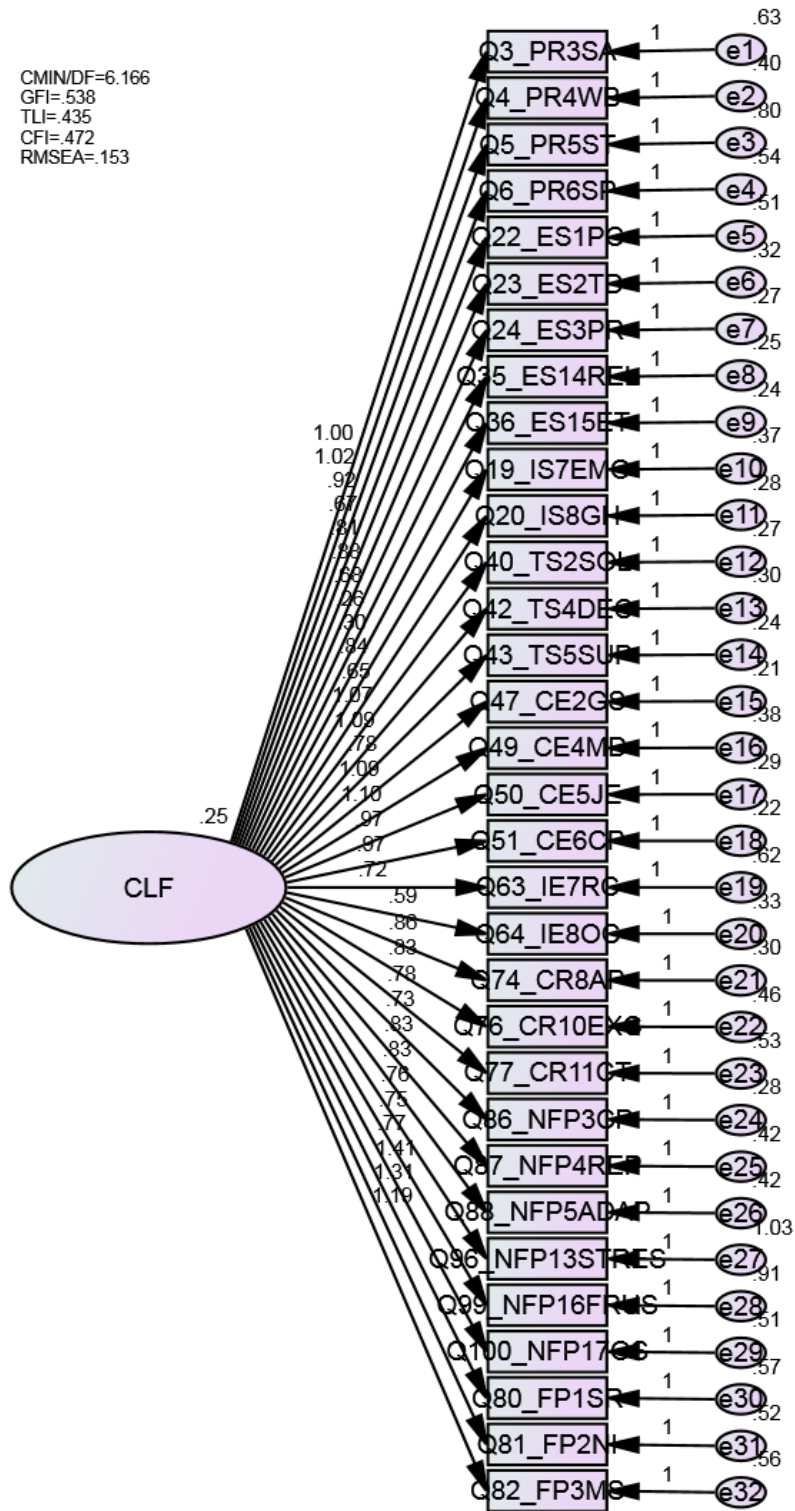
5.12 Structural Equation Modelling

5.12.1 Structural model

The structural model using parcelling items, as can be seen in Figure 5.3 illustrates 29 out of 31 hypotheses with reference to the relationships between dimensions of psychological safety, self-efficacy and organisational performance. However, one requirement of the structural model is multivariate normality. Thus, this study has confirmed the multivariate normality of the data prior to hypothesis testing.

5.12.2 Multivariate Normality of the Structural Model

Based on the multivariate normality of the structural model, it discovered that the multivariate kurtosis value is 33.1 (cut- off point ≤ 10). Accordingly, it was not normal; thus, it was solved by using bootstrapping with 5000 resamples of the data and Bollen-Stein test. This research established that the Bollen-Stein test significant value is 0.294 or greater than 0.05, as the cut-off point (Bollen & Stine, 1992). Hence, the researcher concluded that the data was normal.

5.12.3 Model Fit Indicators

Model fit indicators for the structural model were examined by using absolute indices, incremental fit indices and parsimony indices (Hair et al., 2010). In addition, to obtain a better goodness of fit pertaining to the structural model, this study excluded two insignificant relationships (H3c and H5c). For example, Normed Chi-square (CMIN/DF), Goodness of Fit Index (GFI) and Root Mean Square Error of Approximation (RMSEA) were conducted to measure the absolute model fit. This study ascertained that CMIN/DF = 1.20 (≤ 3), GFI = 0.98 (>0.90). SRMR = 0.04 (<0.08) and RMSEA =0.03 (≤ 0.08). Hence, based on absolute indices, the data has a good fit and meets the minimum requirement value of 0.90 (Akamavi et al., 2015). Based on the incremental model fit,

this study determined that TLI = 0.98 (>0.90) and CFI = 0.99 (>0.90). Thus, this study also has good fit data based on incremental fit indices. Finally, based on parsimony indices, such as AGFI, this research established that AGFI =0.94 (>0.80). In summary, the structural model has a high goodness of fit according to all criteria (Bentler & Bonett, 1980).

5.12.4 Hypothesis Testing

Table 5.14 illustrates the hypothesis testing related to the model. From 29 hypotheses, this study determined that 25 hypotheses are significant and four hypotheses are not significant. Physical risk psychological safety has significant relationships with a number of factors. For example, it has a significant relationship with energy psychological safety (H1a), inner psychological safety (H1b), team psychological safety (H1c), individual self-efficacy (H1d) and collective self-efficacy (H1e). Energy psychological safety also has a significant relationship with inner psychological safety (H2a), employment equity psychological safety (H2b), team psychological safety (H2c) and employee well-being (H2d). Moreover, inner psychological safety has a significant relationship with team psychological safety (H3a) and individual self-efficacy (H3b). Employment equity psychological safety has a significant relationship with individual self-efficacy (H4a), collective self-efficacy (H4b) and company image (H4c). This study also established that team psychological safety has a significant relationship with collective self-efficacy (H5a), creative self-efficacy (H5b) and financial performance (H5c).

Additionally, this study discovered that individual self-efficacy has a significant relationship with creative self-efficacy (H6b). Collective self-efficacy has a significant relationship with creative self-efficacy (H7a), employee well-being (H7b), company image (H7c) and financial performance (H7d). Creative self-efficacy has a significant

relationship with company image ((H8a). Furthermore, employee well-being has a significant relationship with company image (H9a). Finally, company image also has a significant relationship with financial performance (H10). Conversely, this study ascertained four hypotheses that were not significant, including the association between individual self-efficacy and collective self-efficacy (H6a), individual self-efficacy and company image (H6c), creative self-efficacy and financial performance (H8b) and the relationship between employee well-being and financial performance (H9a). Therefore, the structural model regarding this study is presented in Figure 5.3.

.

Table 5.14 Hypothesis Testing

No	Variable		S.E	C.R	Standardised Path Coefficient	Hypothesised Relationship
	Predictor	Criterion				
H1a	**Physical Risk PS**	Energy PS	0.05	9.35	0.51**	Support
H1b		Inner PS	0.06	3.14	0.21**	Support
H1c		Team PS	0.06	2.36	0.15*	Support
H1d		Individual SE	0.06	2.59	0.17**	Support
H1e		Collective SE	0.05	5.29	0.31**	Support
H2a	**Energy PS**	Inner PS	0.07	3.97	0.29**	Support
H2b		Employment equity PS	0.05	4.21	0.27**	Support
H2c		Team PS	0.07	2.72	0.18**	Support
H2d		Employee well-being	0.09	3.47	0.23**	Support
H3a	**Inner PS**	Team PS	0.07	7.51	0.44**	Support
H3b		Individual SE	0.07	5.31	0.34**	Support
H4a	**Employment equity**	Individual SE	0.09	2.77	0.16**	Support
H4b		Collective SE	0.08	2.13	0.11*	Support
H4c		Company Image	0.09	2.01	0.12*	Support
H5a	**Team PS**	Collective SE	0.06	5.21	0.32**	Support
H5b		Creative SE	0.06	3.49	0.23**	Support
H5c		Financial Performance	0.08	4.83	0.30**	Support

			S.E	C.R		
H6a	**Individual SE**	Collective SE	0.06	0.53	0.03ns	Not Supported
H6b		Creative SE	0.06	4	0.24**	Support
H6c		Company Image	0.07	0.38	0.02ns	Not Supported
H7a	**Collective SE**	Creative SE	0.07	3.41	0.22**	Support
H7b		Employee well-being	0.09	2.92	0.20**	Support
H7c		Company Image	0.07	2.93	0.19**	Support
H7d		Financial Performance	0.09	3.46	0.22**	Support
H8a	**Creative SE**	Company Image	0.07	3.33	0.22**	Support
H8b		Financial Performance	0.08	0.19	0.01ns	Not Supported
H9a	**Employee well-being**	Company Image	0.05	4.3	0.26**	Support
H9b		Financial Performance	0.06	-0.1	-0.01ns	Not Supported
H10	**Company Image**	Financial Performance	0.08	4.83	0.30**	Support

Note: ** $p < 0.01$; * $p < 0.05$; ns= not significant; S.E = Standard Error; C.R= Critical Ratio

Figure 5.3 Structural Model:

** p<0.01; *p<0.05; ns= not significant

250
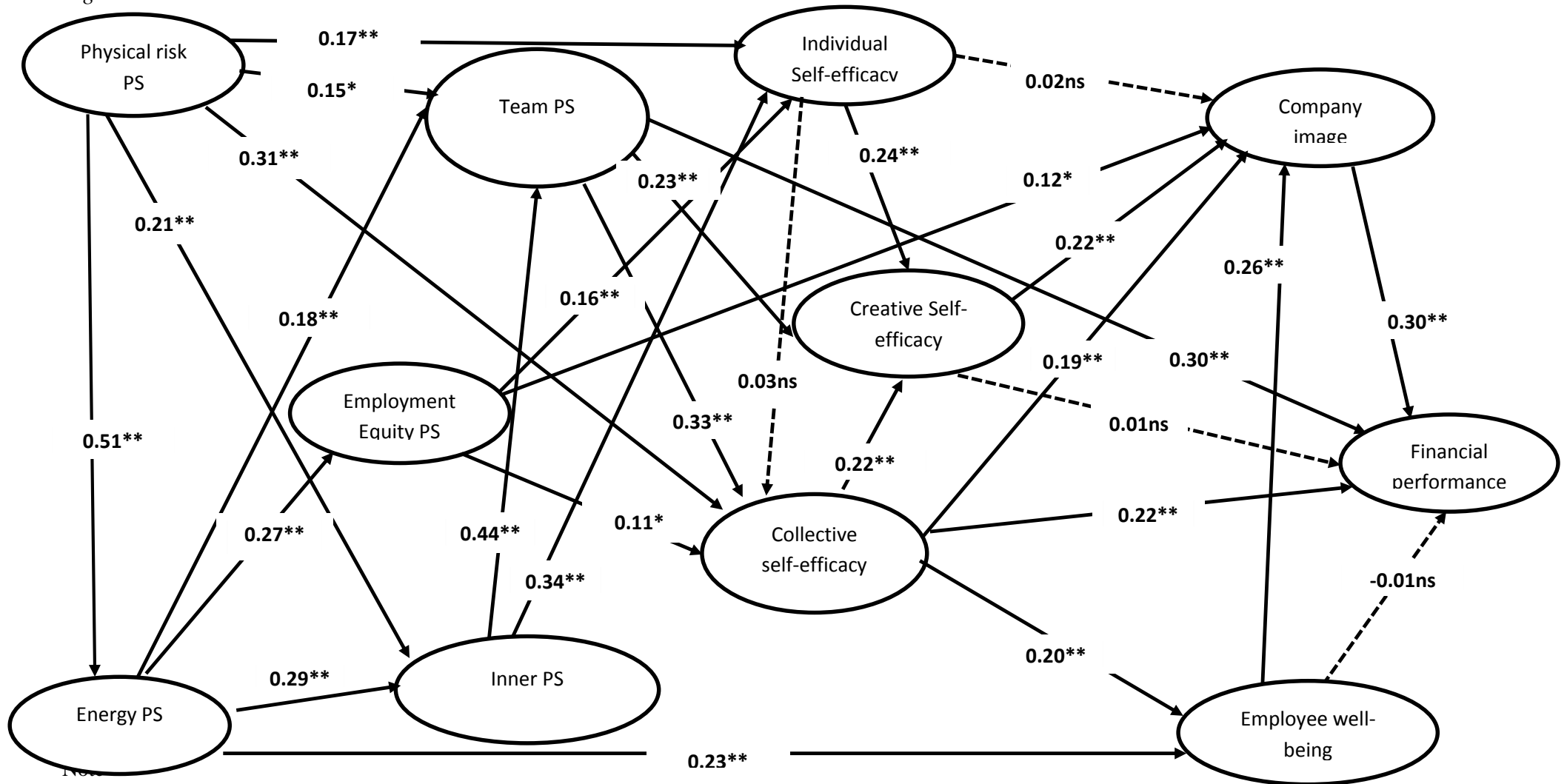
5.12.5 Indirect Relationship

Beside the direct relationships, this study also examined the indirect relationship between variables. Table 5.15 reveals the direct and indirect relationship pertaining to the variables. Surprisingly, from four insignificant relationships, this study established that three of them have significant indirect relationships by using Sobel's test (Baron & Kenny, 1986). First, individual self-efficacy has no significant relationship with company image (H6c), although it has a significant indirect relationship by means of creative self-efficacy as the mediator. Second, creative self-efficacy has no significant direct relationship with financial performance (H8b). However, it has a significant indirect relationship with respect to company image. Finally, employee well-being has no significant direct relationship with financial performance (H9b); however, it has a significant indirect relationship related to company image as a mediating variable. Accordingly, the researcher argues these three relationships are fully mediated by the mediating variables (i.e. creative self-efficacy and company image).

Table 5.15 Direct Effect, Indirect Effect and Total Effect

Predictor Variable	Mediator Variable	Criterion Variable	Direct Effect	Indirect Effect	Total Effect
Physical risk PS	Energy PS	Inner PS	0.21	0.15**	0.36
Physical risk PS	Energy PS	Team PS	0.15	0.09*	0.24
Physical risk PS	Team PS	Collective SE	0.31	0.05*	0.36
Energy PS	Inner PS	Team PS	0.18	0.13**	0.31
Employment Equity	Collective SE	Company image	0.12	0.02^{ns}	0.14
Team PS	Collective SE	Creative SE	0.23	0.07**	0.30
Team PS	Collective SE	Financial Perf	0.30	0.07**	0.37
Team PS	Creative SE	Financial Perf	0.30	0.00^{ns}	0.30
Individual SE	Creative SE	Company image	0.02	0.05*	0.07
Collective SE	Creative SE	Company image	0.19	0.05*	0.24
Collective SE	EWB	Company image	0.19	0.05*	0.24
Collective SE	Company image	Financial Perf	0.22	0.06*	0.28
Collective SE	EWB	Financial Perf	0.22	-0.00^{ns}	0.22
Creative SE	Company image	Financial Perf	0.01	0.07*	0.08
EWB	Company image	Financial Perf	-0.01	0.08**	0.07

Note: ** = Sobel's test with the 0.01 significance level; *= Sobel's test with the 0.05 significance level; ns= not significant

CHAPTER 6 DISCUSSION

6.1 Introduction

The objective of this chapter is to discuss the research findings based on the previous studies. This chapter emphasises one principal research aim, which is divided into six objectives. The primary research aim is to examine the relationship between employees' psychological safety, self-efficacy and organisational performance. The objectives of this study include, (1) Investigating the relationship within psychological safety dimensions (2) Examining the relationship between psychological safety and self-efficacy (3) Investigating the relationship within self-efficacy dimensions (4) Analysing the relationship between psychological safety dimensions and organisational performance? (5) Investigating the relationship between self-efficacy and business performance? And, (6) examining the relationship within organisational performance dimensions. Hence, this chapter starts with the association between psychological safety dimensions.

6.2 Psychological Safety Dimensions' Relationships

This study examines seven hypotheses on the relationship between psychological safety dimensions. First, the researcher proposes that physical risk psychological safety has a relationship with energy psychological safety (H1a). This study established that physical risk psychological safety has a positive and significant relationship with energy psychological safety. This finding supports several prior studies, such as Beus et al. (2010); Laaksonen et al. (2010); Cigularov et al. (2013) and Weichbrodt (2015). For example, Weichbrodt (2015) stressed that physical safety in an organisation relates to employee's perception of management support. Cigularov et al. (2013) noted that management commitment and supervisor support toward safety concern relate to the perception of an employee in relation to physical safety practices. In addition, Laaksonen

et al. (2010) also asserted that psychosocial working conditions, such as feeling comfortable enough to ask for help from a manager or co-workers, is influenced by physical conditions (e.g., physical hazards). Arguably, when an employee feels safe from physical risk, it will lead to his/her feeling safe regarding his/her management support. Accordingly, an employee's feelings of safety toward management support or co-workers (energy psychological safety) will be increased when he/she feels safe psychologically from physical environment risk. Hence, the researcher asserts that physical risk psychological safety is an influencing factor of energy psychological safety.

Second, this study proposes that physical risk psychological safety is related to inner psychological safety (H1b). The results discovered that physical risk psychological safety has a positive and significant relationship with inner psychological safety. The finding is consistent with several previous studies, such as Walker and Hutton (2006); Lu and Tsai (2008); Wachter and Yorio (2013) and Makin and Winder (2008). For instance, Wachter and Yorio (2013) and Makin and Winder (2008) emphasised that the occupational health safety, which relates to physical safety affects employee psychological safety as an individual. Moreover, Amponsah-Tawiah et al. (2013) noted that the physical work environment positively affects employee's safety experience. Accordingly, physical risk psychological safety is an antecedent of inner psychological safety. Therefore, the researcher assumes that in order to increase an employee's inner psychological safety; the company has to pay more attention to physical risks, which affect the employee's psychologically.

Third, physical risk psychological safety is related to team psychological safety hypothetically (H1c). This research determined that physical risk psychological safety has a significant and positive relationship with team psychological safety. This result is in line with several studies (Silva et al., 2004; Beus et al., 2010; Idris et al., 2012;

Kouabenan et al., 2015). For instance, Kouabenan et al. (2015) and Silva et al. (2004) noted that low accident, which refers to physical safety relates to team safety climate. Moreover, Idris et al. (2012) asserted that team psychological safety at work will be influenced by physical climates, such as injury, hazard or other physical risks. Accordingly, the researcher argues that physical risk psychological safety is an antecedent of team psychological safety. Hence, it means that to increase team psychological safety, a company needs to prepare for an enhanced employee physical risk psychological safety. For example, a company prepares for a physical hazard management programme and conducts a physical risk audit on a regular basis.

Fourth, this study proposed that energy psychological safety has a relationship with inner psychological safety (H2a). Based on the findings, this research discovered that energy psychological safety has a significant relationship with inner psychological safety. This finding confirms several earlier studies, including Tomas et al. (1999); May et al. (2004); Probst and Estrada (2010); Probst (2015) and Kahn (1990). For example, Tomas et al. (1999) revealed that supervisor's, co-worker's and worker's attitudes relate to employees' safety behaviour. Moreover, this finding is also relatively similar to the study conducted by Kahn (1990), who emphasised that interaction between employees and their co-workers will create dignity and self-appreciation, which is related to inner psychological safety. Thus, it can be concluded that energy psychological safety produces inner psychological safety. Therefore, to increase inner psychological safety, a company has to be concerned about its employee's energy psychological safety.

Fifth, energy psychological safety is also related to employment equity (H2b). This study established that energy psychological safety has a significant relationship with employment equity psychological safety. This finding is congruent with a number of prior studies (Babin & Boles, 1996; Burt et al., 2008; Dysvik & Kuvaas, 2012; Ghumman et

al., 2016). For example, Burt et al. (2008) assert that support from co-workers and supervisors is associated to employee's caring about each other. Moreover, Makin and Winder (2008) argued that unsafe conditions come from individual psychological, biological or socio cultural factors or a combination of these factors, for example discrimination by gender, sex orientation, religion, pregnancy, disability or family care requirements. Thus, when an employee has good energy psychological safety in the context of support from co-workers and his/her supervisor, it will lead him/her to feel safe enough that he/she will not be rejected by others because of his/her gender, religion or ethnicity. Arguably, an improved energy psychological safety will produce a greater employment equity psychological safety.

Sixth, H2c states that energy psychological safety is related to team psychological safety. The analysis result reveals that energy psychological safety is significantly related to team psychological safety. This finding is in agreement with several previous studies (Tucker et al., 2007; Walumbwa & Schaubroeck, 2009; Morrow et al., 2010). For instance, Walumbwa and Schaubroeck (2009) stressed that support from the leader of an organisation can affect team psychological safety. Moreover, Lee et al. (2011) highlighted that information sharing by managers and co-workers creates positive team psychological safety. Accordingly, the researcher notes that energy psychological safety is an influencing factor of team psychological safety. Consequently, it means that support from managers/supervisors and co-workers encourage greater team psychological safety, which reflects on team confidence.

Finally, this study proposes that inner psychological safety has a relationship with team psychological safety (H3a), as data analysis established that inner psychological safety has a positive and significant relationship with team psychological safety. In agreement with the present result, several prior studies (May et al., 2004; Tynan, 2005;

Burt et al., 2008; Zhang et al., 2010) discovered that inner psychological safety is an antecedent of team psychological safety. For example, Burt et al. (2008) argue that when an employee feels safe as an individual, it will lead to his/her psychological safety as part of a team. Moreover, Baer and Frese (2003) emphasised that in the context of the climate of psychological safety, an employee has to be safe and feel comfortable to be him/herself, which will ensure that he/she will feel part of a team. Therefore, it can be concluded that inner psychological safety is an antecedent of team psychological safety. From the discussion above, it argues that all of the psychological safety dimensions are related to each other. Hence, to increase employees' psychological safety, a company has to pay more attention to all psychological safety dimensions rather than focus on one single dimension.

6.3 Psychological Safety and Self-efficacy

Psychological safety dimensions are also related to self-efficacy. First, this research proposes that physical risk psychological safety relates to individual self-efficacy (H1d). The finding confirms that physical risk psychological safety has a significant relationship with individual self-efficacy. This finding is parallel with several prior studies, such as Christian et al. (2009), Dollard and Bakker (2010); Al-Refaie (2013); Chen and Chen (2014). For example, Al-Refaie (2013) argued that the management of physical safety climate has an impact on employee self-efficacy. In addition, Christian et al. (2009) note that self-efficacy relates to work safety climate. Accordingly, the researcher argues that physical risk psychological safety is positively related to individual self-efficacy. Hence, to increase individual self-efficacy, a company has to deal with the employee's physical safety. Thus, when an employee feels safe from physical risk, it will increase his/her self-confidence to perform his/her job more effectively.

Second, this study determined that physical risk psychological safety has a significant relationship with collective self-efficacy (H1e). This finding is congruent with several authors, such as Bandura (1982), Chen and Kao (2011); Haslam et al. (2015). For instance, Bandura (1982) claimed that the physiological conditions of an employee relate to employee physical inefficacy. In addition, Chen and Kao (2011) argued that safety management at work will affect employee's self-efficacy. Accordingly, the researcher asserts that physical risk psychological safety is also related to employee's self-efficacy as a group. Therefore, when an employee in a work group has improved physical risk psychological safety, he/she may possibly expect greater self-efficacy as a team member. Third, this study proposes that inner psychological safety is related to individual self-efficacy (H3b). The findings reveal that inner psychological safety has a significant relationship with individual self-efficacy. The result is in line with earlier literature that discovered inner psychological safety is related to individual self-efficacy (Tynan, 2005; Zhang et al., 2010; Schaubroeck et al., 2011; Simonet et al., 2015). As an example, Tynan (2005) noted that self-efficacy mediates the relationship between psychological safety and communication of other threats. Accordingly, psychological safety is an antecedent of self-efficacy. When an employee has improved inner psychological safety, it will produce a better individual self-efficacy. Thus, if a company wants to increase its employee self-efficacy, it needs to pay more attention to inner psychological safety.

Fourth, this study also posits that employment equity psychological safety has a relationship with individual self-efficacy (H4a). Surprisingly, the finding provides evidence that employment equity psychological safety is significantly related to individual self-efficacy. Even though several prior studies, such as Al-Refaie (2013) and Dollard and Bakker (2010) did not exactly address this relationship, the author might argue that the finding is congruent with prior studies. For example, Al-Refaie (2013) emphasised that self-efficacy has an association with good interrelationships between

employees. Hence, it argues that when interrelationship between employees is harmony, it means that an employee has a feeling of safety, such as safe from being rejected because of his/her religious view, gender or ethnicity which refer to employment equity psychological safety. Accordingly, this finding confirms that employment equity psychological safety is an antecedent of individual self-efficacy.

Fifth, this study also proposes that employment equity has a correlation with collective self-efficacy (H4b). The result proves that there is a significant relationship between employment equity and collective self-efficacy. This finding corroborates the ideas of several previous studies, which argue that employment equity psychological safety relates to self-efficacy as a team (May et al., 2004; Schepers et al., 2011; Zoghbi-manrique-de-lara & Suárez-acosta, 2014). For instance, Schepers et al. (2011) asserted that encouragement from supervisor's and peer's is related to team efficacy. In addition, May et al. (2004) noted that an employee's confidence in relation to performing a job relates to employee's engagement with others, such as his/her supervisor and co-workers. Although the previous two studies did not mention employment equity as a construct, they argued that a positive aspect is related to an employee's feelings of being safe from discrimination with regards to his/her religious belief, ethnicity or gender. Hence, the finding demonstrates that employment equity psychological safety is an antecedent of collective self-efficacy.

Sixth, this study examines the relationship between team psychological safety and collective self-efficacy (H5a). The finding indicates that team psychological safety relates significantly to collective self-efficacy. This finding is in agreement with several prior authors who established that team psychological safety relates to collective self-efficacy (Edmondson, 1999; May et al., 2004; Lewis, 2011; Salanova et al., 2014). According to Edmondson (1999), team psychological safety and team efficacy are antecedents of team

learning behaviour. Moreover, Lent et al. (2006) stated that one of the antecedents of collective self-efficacy is a group process and environmental factor. Accordingly, team psychological safety, as a part of a group process, has an impact on collective efficacy. Based on the finding, the author argues that when a company has achieved enhanced team psychological safety regarding its employees will produce greater group self-confidence, which will help the team to perform their jobs effectively.

Finally, this study posits that team psychological safety is significantly related to creative self-efficacy (H5b). This hypothesis is accepted; thus, the finding confirms that team psychological safety has a significant relationship with creative self-efficacy. This finding supports several previous studies which argue that team psychological safety relates to creative self-efficacy (Hirak et al., 2012; Kessel et al., 2012). For example, Kessel et al. (2012) noted that team psychological safety has a positive impact on employee creativity. Moreover, Edmondson (1999) emphasised that team psychological safety has an impact on team learning behaviour, while team learning behaviour relates to the creativity of the employee as a team. Hence, to increase employee's creative self-efficacy, a manager of a company has to make sure that his/her employees have excellent team psychological safety.

6.4 Self-Efficacy Dimensions' Relationship

Self-efficacy in this context is a belief or perception of a person concerning his or her capabilities to achieve his or her goals. This study ascertained three dimensions of self-efficacy, including individual self-efficacy, collective self-efficacy and creative self-efficacy. Based on the relationships among those three dimensions, this research proposes three hypotheses. First, individual self-efficacy has a relationship with collective self-efficacy (H6a). The results determined that individual self-efficacy is not significantly related to collective self-efficacy. This finding is not similar with a number of prior

studies, such as Fernandez-Ballesteros et al. (2002); Wu et al. (2010) and Elias et al. (2013). For example, Fernandez-Ballesteros et al. (2002) commented that individual self-efficacy has a significant direct relationship with collective self-efficacy to improve societal life conditions. In addition, Wu et al. (2010) stressed that individual self-efficacy divergence has a significant impact on collective efficacy. The plausible explanation for this finding is that individual self-efficacy is an individual context and might be different to self-efficacy as a team or collectively.

Second, the researcher hypothesises that individual self-efficacy also has a relationship with creative self-efficacy (H6b). Based on the findings, this study established that individual self-efficacy is significantly related to creative self-efficacy. This finding confirms several previous studies, such as Tierney and Farmer (2002); Walumbwa et al. (2011) and Elias et al. (2013). For instance, Elias et al. (2013) stated that self-efficacy is related to an employee's work-related performance, such as knowledge creation. Moreover, Tierney and Farmer (2002) emphasised that strong self-efficacy is an important condition pertaining to employee creative productivity. Hence, it can be concluded that individual self-efficacy is an antecedent of creative self-efficacy. Therefore, to increase employee creative self-efficacy, a company has to pay more attention to individual self-efficacy.

Third, this study also proposes that collective self-efficacy is related to creative self-efficacy (H7a). The research finding illustrates that collective self-efficacy has a positive and significant relationship with creative self-efficacy. In agreement with the present result, several prior studies, such as Zhou and George (2001); Gilson and Shalley (2004); Baer et al. (2008); Cheng and Yang (2014) claimed that collective self-efficacy is an antecedent of creative self-efficacy. For example, Gilson and Shalley (2004) revealed that when a team member has a high level of shared goals, which refers to

collective efficacy, it will generate team engagement in creative processes. Hence, to increase creative self-efficacy, an employee should have good collective self-efficacy. Therefore, it can be assumed that the creative self-efficacy of an employee will be affected by his/her efficacy as a team member (collective self-efficacy). Additionally, the discussion above assumes that the dimensions of self-efficacy are related to each other. Therefore, to increase employee self-efficacy, a company should be dealing with the efficacy's dimensions of each employee.

6.5 Psychological Safety and Organisational Performance

This study proposes three hypotheses on the relationship between psychological safety and organisational performance. First, this study posits that energy psychological safety relates to employee well-being (H2d). The finding depicts that energy psychological safety is significantly related to employee well-being. This finding is similar to several previous studies (Babin & Boles, 1996; Brown & Leigh, 1996; Danna & Griffin, 1999; Eatough et al., 2016). For example, Brown and Leigh (1996) noted that psychological climates, such as management support have an impact on employee well-being. In addition, Babin and Boles (1996) emphasised that the support of supervisor's and co-workers' generates employee well-being. Hence, to increase employee well-being, a company may possibly be expected to pay more attention to energy psychological safety.

Second, it is hypothesised that employment equity psychological safety has a relationship with company image (H4c). This study established that employment equity is significantly related to company image. Although to the best of the author's knowledge, no single research addressed this relationship precisely; however, Edmondson (1999) stressed that psychological safety relates to organisational performance. In addition, Wang and Berens (2015) revealed that employee equality as a component of corporate social responsibility has an impact on a company's reputation. Arguably, for the reason

that employment equity is a dimension of psychological safety and company image is a dimension of organisational performance, the researcher asserts that employment equity is related to company image. Accordingly, this finding supports Edmondson's finding that psychological safety leads to organisational performance.

Finally, this study hypothesises that team psychological safety relates to financial performance (H5c). The result explains that team psychological safety is significantly related to financial performance. This finding supports the study undertaken by Baer and Frese (2003) who ascertained that team psychological climate has a significant impact on financial performance. In addition, although van Ginkel and van Knippenberg (2008) did not employ financial performance as performance indicators, they also determined that team psychological safety significantly relates to organisational performance. Accordingly, this study emphasises that team psychological safety is an antecedent of financial performance. Hence, to increase the financial performance of a company, that company needs to be concerned about the psychological safety of its team.

6.6   Self-Efficacy and Organisational Performance

With respect to the correlation between self-efficacy dimensions and organisational performance dimensions, this study proposes six hypotheses. First, individual self-efficacy has a relationship with company image (H6c). The result confirms that individual self-efficacy is not significantly related to company image. This finding is not congruent with Eden et al. (2010) who emphasise that self-efficacy is significantly related to performance indicators, such as company image. Surprisingly, it has a significant indirect impact on company image by way of creative self-efficacy as the mediator. One plausible explanation is that self-efficacy is not directly related to company image; however, it will produce an individual proactive customer service performance (creative self-efficacy),

and subsequently, creative self-efficacy affects company image (Aragón-Correa et al., 2007; Raub & Liao, 2012).

Second, it is proposed that collective self-efficacy is related to employee well-being (H7b). This study determined that collective self-efficacy is significantly related to employee well-being. This finding mirrors several previous studies, such as Ahearne et al. (2005) and Lindsley et al. (1995) who asserted that collective self-efficacy has a an association with organisational performance. In addition, this finding is reasonably similar with Stetz et al. (2006) study, who discovered that self-efficacy individual social support relates to stress-strain relationship which relates to employee well-being. Accordingly, this research emphasises that collective self-efficacy is an antecedent of employee well-being.

Third, hypothetically, collective self-efficacy has a relationship with company image (H7c). The result reveals that collective self-efficacy is significantly related to company image. This finding is relatively similar with Tasa et al. (2007) and Goncalo et al. (2010), who established a significant relationship between collective self-efficacy and group performance. Although both prior studies did not address company image, the researcher argues that company image and group performance are a part of organisational performance. Hence, this finding reflects that collective self-efficacy is an influencing factor of company image. Consequently, to increase company image, a company should pay more attention to employee's collective self-efficacy.

Fourth, collective self-efficacy hypothetically relates to financial performance (H7d). This research ascertained a significant relationship between collective self-efficacy and financial performance. This finding is quite in line with prior studies (Bandura, 1982; Tasa et al., 2007; Chi Kin et al., 2012). For instance, Bandura (1982) emphasised that self-efficacy, which is grouped into individual and collective self-

efficacy may relate differently to preparatory and performance. Moreover, Tasa and Sears (2011) argued that collective self-efficacy has a connection with team performance. Accordingly, although prior studies did not associate collective self-efficacy and financial performance directly, this finding proves that collective self-efficacy is an antecedent of financial performance. For this reason, the author argues that an increase in collective self-efficacy will affect the company's financial performance.

Fifth, creative self-efficacy is hypothetically related to company image (H8a). This study established that creative self-efficacy is significantly related to company image. This finding is congruent with a number of prior studies (Aragón-Correa et al., 2007; Gong et al., 2009; Wang & Lin, 2012). For instance, Aragón-Correa et al. (2007) noted that company innovation has a significant impact on organisational performance. In addition, Wang and Lin (2012) argued that innovation self-efficacy in an antecedent of innovation performance. Accordingly, the finding confirms that creative self-efficacy is an antecedent of company image as a dimension of organisational performance. Hence, when employees have the self-confidence to work creatively, it will arguably affect the reputation of the company, as a whole.

Finally, this study proposes that creative self-efficacy relates to financial performance (H8b). The result confirms that creative self-efficacy is not significantly related to financial performance. This finding does not correspond with several prior studies, such as Baer and Frese (2003) and Tierney and Farmer (2002). In their examples, Baer and Frese (2003) noted that the climate of initiative is significantly related to financial performance. Surprisingly, however, this study established that creative self-efficacy has a positive and significant indirect relationship with financial performance by means of company image as the mediating variable. In other words, creative self-efficacy will increase company image, which in turn will produce a superior financial

performance. Hence, to increase financial performance, a company needs to increase creative self-efficacy, which has a significant effect on company image, which may possibly lead to a greater financial performance.

6.7 Organisational Performance Dimensions' Relationship

This study also proposes three hypotheses regarding the correlation between organisational performance dimensions. First, employee well-being has a connection to company image (H9a). The result demonstrates that employee well-being is significantly related to company image. The result supports several previous studies (Van De Voorde et al., 2012; Haslam et al., 2015). For example, Van De Voorde et al. (2012) claimed that employee well-being is related to other company performances. Whilst, Haslam et al. (2015) noted that employee well-being is related to perceived organisational support, which reflects on company reputation. Accordingly, the finding reveals that employee well-being is an antecedent of company image. Hence, a company needs to pay more attention to employee well-being to increase company image.

Second, employee well-being is also hypothetically related to financial performance (H9b). However, the result determined that there is no significant relationship between employee well-being and financial performance. This finding is not similar to Prottas (2013) who argued that employee attitudes, which reflect well-being have an association with organisational performance indicators, such as financial performance. One of the possible reasons for this finding is that employee well-being is not the antecedent of financial performance. However, this study ascertained that employee well-being affects financial performance indirectly and significantly via company image, as the mediating variable. Hence, the researcher argues that a company also has to be concerned with creative self-efficacy, seeing as it will have an impact on company image as an antecedent of financial performance. Finally, this study posits that company image has a connection

with financial performance (H10). The result proves a significant relationship between company image and financial performance. This finding supports the study conducted by Kwon and Rupp (2013), who established that company reputation is significantly related to financial performance indicators, such as ROA and ROE. Accordingly, this study reveals that one of the antecedents of financial performance is company image. Therefore, when a company wants to increase its financial performance, it must be concerned with its image and create better programmes, such as employee innovation, in order to increase the reputation of the company.

6.8   Summary

Overall, this study has identified that psychological safety, self-efficacy and organisational performance is closely related. Moreover, this research has confirmed that psychological safety problem is not only a workplace problem in developed countries (Kirk-Brown & Van Dijk, 2016; Owens et al., 2016), but also in developing countries (Kortum et al., 2010; Koopmann et al., 2016). Consequently, this study has a contribution to make related to the development of the concept of psychological safety and its association with self-efficacy and organisational performance in a developing country. Although several previous studies (Nguyen et al., 2016; Noort, Reader, Shorrock, & Kirwan, 2016; Owens et al., 2016) have discovered that psychological safety remains a problem in the workplace in both developed (e.g., US) and developing countries (e.g., Turkey and China), the researcher argues that the different cultures found in developed and developing countries affect employee's psychological safety. Thus, cultural factors can be considered for future studies. Accordingly, the findings of this study will be valuable for companies in developing countries and enable them to increase their organisational performance by dealing with psychological safety and the self-efficacy of their employees.

CHAPTER 7 CONCLUSION

7.1 Introduction

This chapter presents a summary of the key findings of the study, research contributions: theoretical contributions and managerial implications, several limitations regarding the research and also directions for future study. Hence, the next part describes a summary of the findings.

7.2 Summary of Findings

There are a number of key findings related to this study. First, dealing with the first research objective in relation to the relationships within psychological safety, this study reveals five dimensions of psychological safety (i.e., physical risk psychological safety, energy psychological safety, inner psychological safety, employment equity psychological safety and team psychological safety). This study emphasises employment equity psychological safety as a new dimension of psychological safety which was not identified in previous studies. In addition, this study determined that the dimensions of psychological safety are related to each other, although they were limited in previous studies (Baer & Frese, 2003). For example, physical risk psychological safety has a significant impact on energy psychological safety ($\beta= 0.51$, $p \leq 0.01$) and energy psychological safety has an association with inner psychological safety ($\beta= 0.29$, $p \leq 0.01$). Furthermore, energy psychological safety is related to employment equity ($\beta= 0.27$, $p \leq 0.01$) and inner psychological safety affects team psychological safety ($\beta= 0.44$, $p \leq 0.01$). Accordingly, this study provides further understanding with regards to the relationship between psychological dimensions.

Second, this study examines the relationship between psychological safety and self-efficacy (Research Objective 2). Additionally, this study reveals that psychological safety

dimensions are the antecedents of self-efficacy. For instance, physical risk psychological safety significantly relates to individual self-efficacy (β=0.17, p$\leq$0.01), employment equity psychological safety has a significant impact on individual self-efficacy (β=0.16, p$\leq$0.01) and team psychological safety is significantly related to creative self-efficacy (β=0.23, p$\leq$0.01). Accordingly, the author argues that psychological safety is related to self-efficacy. Hence, to increase employee self-efficacy, a company needs to develop a good programme to increase the psychological safety of its employees.

Third, this study addresses the relationships within self-efficacy dimensions (Research Objective 3). The results reveal that the dimensions of self-efficacy, including individual, collective and creative self-efficacy have inter-relationships. For instance, individual self-efficacy relates significantly to creative self-efficacy (β= 0.24, p$\leq$0.01) and collective self-efficacy is significantly related to creative self-efficacy (β= 0.22, p$\leq$0.01). However, individual self-efficacy has no significant relationship with collective self-efficacy. The possible explanation for this finding is that individual self-efficacy is an individual level, which the researcher argues will not significantly affect self-efficacy in a group or at a team level. Overall, the researcher argues that self-efficacy dimensions are related to each other.

Fourth, in addressing the research objective concerning the association between psychological safety and organisational performance (Research Objective 4), this study ascertained that several of the psychological safety dimensions have a relationship with organisational performance. For example, energy psychological safety is an antecedent of employee well-being (β=0.23, p$\leq$0.01); employment equity has a significant relationship with company image (β=0.12, p$\leq$0.05) and team psychological safety relates significantly to financial performance (β=0.30, p$\leq$0.01). Hence, the researcher notes that psychological safety is an antecedent of organisational performance. Accordingly, to

enhance organisational performance, a company needs to pay more attention to psychological safety dimensions, such as employment equity and team psychological safety.

Fifth, Research Objective 5 addresses the connection between self-efficacy and organisational performance. The results established that self-efficacy dimensions have a relationship with organisational performance. For example, collective self-efficacy is significantly related to employee well-being (β=0.20, p≤0.01); collective self-efficacy has a significant relationship with company image (β=0.19, p≤0.01); collective self-efficacy relates to financial performance (β=0.22, p≤0.01) and creative self-efficacy is significantly related to company image (β=0.22, p≤0.01). However, individual self-efficacy has no significant relationship with company image, and moreover, creative self-efficacy is not significantly related to financial performance. Surprisingly, although both relationships are not directly significant, they have a significant indirect relationship by means of a mediating variable. Hence, this study concludes that self-efficacy is an antecedent of organisational performance.

Finally, in addressing the relationship within organisational performance dimensions (Research Objective 6), the researcher argues that all organisational performance dimensions are related. For example, employee well-being is an antecedent of company image (β=0.26, p≤0.01) and company image is significantly related to financial performance (β=0.30, p≤0.01). Moreover, even though employee well-being has no significant direct relationship with financial performance, it has an indirect relationship by way of company image as the mediator. Accordingly, the researcher asserts that organisational performance dimensions are related to each other.

7.3   Research Contribution

This study examines the relationship between psychological safety, self-efficacy and organisational performance. Accordingly, this study presents ten contributions which can be divided into two types of contribution, including seven theoretical contributions and three managerial contributions or implications.

7.3.1   Theoretical Contributions

There are seven theoretical contributions with respect to this study:

1. This study provides a theoretical contribution by addressing a new dimension of psychological safety which is known as employment equity psychological safety. This psychological safety relates to employees' feelings of safety being rejected or discriminated due to their gender, religious beliefs or ethnicity. Although previous studies, such as Makin and Winder (2008), Feild and Holley (1982) and Wood et al. (2013) have noted that discrimination as a result of gender, sexuality, religious beliefs and bullying will affect people's feelings of safety, unfortunately, they did not mention it as a dimension of psychological safety. Hence, this study has contributed in proposing it as a new dimension of psychological safety.

2. Several previous studies have examined the dimensions of psychological safety. For example, previous studies have mentioned individual psychological safety (Brown & Leigh, 1996; May et al., 2004; Carmeli et al., 2009) and the team psychological safety (Edmondson, 1999; Schaubroeck et al., 2011; Bradley et al., 2012). However, to the best of the author's knowledge, only limited studies have proposed the correlation between psychological safety dimensions (e.g., Tynan, 2005; Probst, 2015; Ghumman et al., 2016). Accordingly, this study has contributed to exploring other significant relationships within the psychological

safety dimension. For instance, this study ascertained that physical risk psychological safety is significantly related to energy psychological safety, and that physical risk psychological safety has a significant relationship with inner psychological safety. This study also determined that energy psychological safety is significantly related to inner psychological safety and employment equity, and moreover, that inner psychological safety is significantly related to team psychological safety. Hence, the researcher argues that this study has contributed to the theoretical concept of psychological safety dimensionality.

3. This study has also contributed to the relationship between psychological safety dimensions and self-efficacy dimensions. Even though a number of prior studies have emphasised the relationship between psychological safety and self-efficacy, this study established several new significant relationships. For example, this study discovered the correlation between physical risk psychological safety and individual self-efficacy, between physical risk psychological safety and collective self-efficacy, employment equity and individual self-efficacy and the association between employment equity and collective self-efficacy. Hence, the researcher asserts that the current study has contributed to the new insight regarding the relationship between psychological safety and self-efficacy, which is limited in previous studies.

4. The organisational performance dimensions in this research have been expanded from previous studies. Most of the authors in the previous studies employed financial and non-financial performance as the dimensions of organisational performance (Eccles, 1991; Baer & Frese, 2003; Stam et al., 2013). However, this study employs financial performance and two dimensions of non-financial performance: company image and employee well-being. Accordingly, non-financial performance in this study is not a one-dimensional construct as prior

studies revealed (Venkatraman & Ramanujam, 1986; Stam et al., 2013). In fact, this study offers a new insight with two different organisational performance constructs.

5. Several previous studies have revealed the relationship between psychological safety and organisational performance (Edmondson, 1999; Baer & Frese, 2003; Carmeli & Gittell, 2009). However, most studies have only addressed the connection between team psychological safety and financial performance (Fernández-Muñiz et al., 2009; Hajmohammad & Vachon, 2013). Surprisingly, this study ascertained two other significant relationships, including the association between energy psychological safety and employee well-being, and the relationship between employment equity and company image. Accordingly, this study has contributed to expanding the understanding of the connection between psychological safety dimensions and organisational performance.

6. This study also discovered that self-efficacy dimensions are significantly related to organisational performance, which is expanded from previous studies (Baron & Markman, 2003; Aragón-Correa et al., 2007; Eden et al., 2010). For example, the correlation between collective self-efficacy and employee well-being, and the relationship between collective self-efficacy and company image. This study also determined that the relationship between collective self-efficacy and financial performance, and the connection between creative self-efficacy and company image. Although individual self-efficacy has no significant direct relationship with company image, surprisingly, it has a significant indirect relationship by way of creative self-efficacy as the mediator. Moreover, the relationship between creative self-efficacy and financial performance is also significantly mediated by company image. Accordingly, the researcher argues that self-efficacy dimensions are the antecedent of organisational performance.

7. This study has also contributed to the psychological safety measurement. Even though previous studies, such as Edmondson (1999) discovered team psychological safety measurement and Kahn (1990) mentioned individual psychological safety measurement, this study has introduced several new measurements. For example, this study has revealed two items of employment equity psychological safety measurement.

8. Finally, most of the previous studies were conducted in developed countries, such as the United States, the United Kingdom, Canada and Australia. Surprisingly, this study offers a new insight in the context of Indonesia as a developing country.

7.3.2 Managerial implications

This study does not only provide a number of contributions to theoretical development, but also to managerial implications. Hence, there are three contributions from this study with regards to managerial practices:

1. This study established that the dimensions of psychological safety are related to each other (Tomas et al., 1999; Walker & Hutton, 2006). Hence, a company has to concentrate more on all of the psychological safety dimensions, in order to increase employee psychological safety. For example, this study determined that physical risk psychological safety is related to team psychological safety, energy and inner psychological safety. Hence, the company also has a need to develop certain programmes to increase inner, energy and team psychological safety (Idris et al., 2012; Cigularov et al., 2013). For example, Indonesian companies have to conduct safety training regularly to minimise accidents or physical hazards in the workplace. Arguably, it will affect other dimensions of psychological safety, such as team psychological safety.

2. This study has constructed several items in measuring psychological safety dimensions. For example, "my company never treat me differently because of my religion" is an item for measuring employment equity psychological safety. Hence, the company's manager can use these items to measure that the employees are safe psychologically.

3. This study has revealed that psychological safety dimensions are related to self-efficacy dimensions. Arguably, when a manager wants to increase his/her employee's self-efficacy, he/she has to create an improved programme, so as to increase the employee's psychological safety, for instance safety from the physical hazards and how to make sure that his/her employees have robust support from supervisors and co-workers (Morgan et al., 2013; Chen & Chen, 2014). For example, managers and/or companies needs to create enhanced company regulations, such as a non-discrimination rule at work. Arguably, more robust regulations on non-discriminative behaviour at work will affect an employee's self-confidence and enable him/her to perform his/her job effectively. Moreover, improved rules also provide managers with clear guidelines in relation to maintaining their relationships with their employees.

4. An important objective of a company is superior organisational performance. According to the findings of this study, organisational performance dimensions, such as financial performance, company image and employee well-being are related to the psychological safety and self-efficacy of the employees. Hence, a manager needs to address employee's psychological safety and self-efficacy issues to increase the performance of the company. For example, a manager has to provide a supportive atmosphere to allow employees to speaking up without risk of being rejected or punished by other members. Thus, it will enable an employee to feel more confident and allow him/her to finish the job properly,

which in turn produces a superior performance (van Ginkel & van Knippenberg, 2008; Tasa & Sears, 2011). Consequently, this study provides managers with input in relation to constructing potential programmes based on psychological safety and the efficacy of the employees to increase company performance.

7.3.3 Implication for Policy Makers

The researcher argues that the current study has two valuable contributions for policy makers, such as the government. First, this study has determined that the psychological safety of the employees is a critical factor in relation to an enhanced business performance. Whilst, psychological safety is related to the workplace environment. For this reason, to develop superior psychological safety for employees, the government has to pay more attention to business regulations, such as the law of non-discriminative behaviour at work. Hence, employees will feel psychologically safe from discrimination, and it will have a positive effect on business performance. Second, of employees' safety concerns is related to physical safety. The government may create enhanced regulations concerning safety procedures at work or rules with respect to occupational health and safety. These regulations might have an impact on employee's psychological safety and subsequently, it will lead to employee's self-efficacy and performance. Accordingly, organisational performance also has an impact on the country's productivity, which is a concern for the country's government.

7.4 Limitations and Future Research

Besides a number of new insights, this study also has several limitations. First, this study was conducted in only one developing country (Indonesia). Indeed, it deals with the problem of the generalisability of the findings. Even though this study employed the total population of listed companies in the Indonesia Stock Exchange, this study only examined the relationship between psychological safety, self-efficacy and organisational

performance in Indonesia. The researcher cannot justify it as a generalisation for all developing countries (Singh et al., 2013; Liu, Songqi et al., 2014). In addition, although Schaubroeck et al. (2011) mentioned that there is no difference between two different cultures (individualistic in the developed countries and collectivism in the developing countries); the researcher argues that the findings have a different insight compared to developed countries, which have different cultures and characteristics (Hartnell et al., 2016). Moreover, this study failed to address the cultural issue which might affect safety conditions regarding employees (Noort et al., 2016; Zhong et al., 2016). Second, this study also failed to address employee creativity as the consequence of self-efficacy (Zhu, H. et al., 2016). Third, target respondents were employees of the listed companies with a minimum of two years' experience. It means that this study used a single group of respondents and self-reported measurement which is related to the common method bias (Wang et al., 2014; Zheng et al., 2015). Although common method bias has been anticipated by using anonymous respondents, only one respondent from each company was tested by using Harman's Single Factor Test, the results will be better when this study employs multiple groups of respondents, such as employees and managers. Fourth, due to time and cost limitations, this study used a cross-sectional study. Hence, this study only portrays the phenomena in a single time period and it will not be able to reflect the long-term effect of change (Jha et al., 2013; Kwon & Rupp, 2013). Fifth, in measuring financial performance, this study employed subjective measurement. Although Dess and Robinson (1984); Chandler and Hanks (1993) have mentioned that subjective and objective performance measurements are highly correlated, objective measurements will offer a superior result.

From some limitations above, this study suggests four recommendations with regards to a future study. First, this study was conducted in a developing country which has a different culture in contrast to developed countries. Accordingly, the cultural factor may

influence employee's self-efficacy and organisational performance (Gong et al., 2012; Hirak et al., 2012; Noort et al., 2016; Zhong et al., 2016). This study failed to address the cultural context as an influencing factor of self-efficacy and organisational performance and also employee creativity, as the consequence of self-efficacy. Hence, a future study may include the cultural context as an influencing factor of self-efficacy and organisational performance and employee creativity as the consequence of creative self-efficacy. Moreover, a future study may also address other factors, such as workplace resilience, which relates to self-efficacy and may have an impact on employee well-being (Avey et al., 2009; Youssef-Morgan & Luthans, 2015; King et al., 2016). Second, this study may be expanded to multiple countries, such as South-East Asian countries. Consequently, results from this expanded study will offer more generalisability than a study conducted in one developing country (Wang et al., 2014).

Third, target respondents may address employees and managers. For example, to measure a company's image, financial performance and employee well-being can be measured from the manager's perspective, which arguably will sort out the common method bias problem (Elias et al., 2013). Fourth, the future study might use a longitudinal study which describes phenomena over a longer period. Therefore, it might be able to portray the association between psychological safety, self-efficacy and organisational performance at different times and will also be able to perceive the relationship's consistency or validity. In addition, a longitudinal study may lead practitioners and academics to understand the causal relationship between psychological safety, self-efficacy and organisational performance (Schepers et al., 2011). Finally, objective measurements, for instance ROA and ROI can be applied in measuring financial performance in future research.

7.5 Summary

This study has contributed to theoretical implications, whilst it has also revealed employment equity psychological safety as a new dimension of psychological safety, neglected in previous studies. Furthermore, this study has ascertained several new significant relationships between psychological safety, self-efficacy and organisational performance. Hence, the researcher argues that the findings can be a valuable input for managers and policy makers alike, so as to address employee's psychological safety, self-efficacy and organisational performance. However, this study is not free from a number of limitations; thus, the researcher suggests that these limitations should be addressed in any future research.

REFERENCES

Agresti, A., & Finlay, B. (2009). *Statistical Methods for The Social Sciences* (Vol. 4th). Upper Saddle River, N.J: Pearson Prentice Hall.

Ahearne, M., Mathieu, J., & Rapp, A. (2005). To empower or not to empower your sales force? An empirical examination of the influence of leadership empowerment behavior on customer satisfaction and performance. *Journal of Applied Psychology, 90*(5), 945-955. doi:10.1037/0021-9010.90.5.945

Akamavi, R. K., Mohamed, E., Pellmann, K., & Xu, Y. (2015). Key determinants of passenger loyalty in the low-cost airline business. *Tourism Management, 46*(0), 528-545. doi:http://dx.doi.org/10.1016/j.tourman.2014.07.010

Al-Refaie, A. (2013). Factors affect companies' safety performance in Jordan using structural equation modeling. *Safety Science, 57*(0), 169-178. doi:http://dx.doi.org/10.1016/j.ssci.2013.02.010

Allen, D. G., Peltokorpi, V., & Rubenstein, A. L. (2016). When "embedded" means "stuck": Moderating effects of job embeddedness in adverse work environments. *Journal of Applied Psychology, 101*(12), 1670-1686. doi:http://dx.doi.org/10.1037/apl0000134

Almudena, C. (2013). Implementing innovative hrm: Trade-off effects on employee well-being. *Management Decision, 51*(3), 643-660.

Alpkan, L., Yilmaz, C., & Kaya, N. (2007). Market orientation and planning flexibility in smes: Performance implications and an empirical investigation. *International Small Business Journal, 25*(2), 152-172. doi:10.1177/0266242607074518

Amabile, T. M., & Conti, R. (1999). Changes in the work environment for creativity during downsizing. *The Academy of Management Journal, 42*(6), 630-640.

Amabile, T. M., Conti, R., Coon, H., Lazenby, J., & Herron, M. (1996). Assessing the work environment for creativity. *Academy of Management Journal, 39*(5), 1154-1184. doi:10.2307/256995

Ameer, R., & Othman, R. (2012). Sustainability practices and corporate financial performance: a study based on the top global corporations. *Journal of Business Ethics, 108*(1), 61-79.

Amponsah-Tawiah, K., Jain, A., Leka, S., Hollis, D., & Cox, T. (2013). Examining psychosocial and physical hazards in the Ghanaian mining industry and their implications for employees' safety experience. *Journal of Safety Research, 45*(0), 75-84. doi:10.1016/j.jsr.2013.01.003

Aragón-Correa, J. A., García-Morales, V. J., & Cordón-Pozo, E. (2007). Leadership and organizational learning's role on innovation and performance: Lessons from Spain. *Industrial Marketing Management, 36*(3), 349-359. doi:http://dx.doi.org/10.1016/j.indmarman.2005.09.006

Arendt, S., & Brettel, M. (2010). Understanding the influence of corporate social responsibility on corporate identity, image, and firm performance. *Management Decision, 48*(10), 1469-1492. doi:http://dx.doi.org/10.1108/00251741011090289

Avery, D. R., McKay, P. F., & Volpone, S. D. (2016). Blaming the building: How venue quality influences consumer bias against stigmatized leaders. *Journal of Applied Psychology, 101*(8), 1111-1121. doi:http://dx.doi.org/10.1037/apl0000117

Avey, J. B., Luthans, F., & Jensen, S. M. (2009). Psychological capital: A positive resource for combating employee stress and turnover. *Human Resource Management, 48*(5), 677-693. doi:10.1002/hrm.20294

Babin, B. J., & Boles, J. S. (1996). The effects of perceived co-worker involvement and supervisor support on service provider role stress, performance and job satisfaction. *Journal of Retailing, 72*(1), 57-75. doi:10.1016/S0022-4359(96)90005-6

Baer, M., & Frese, M. (2003). Innovation is not enough: climates for initiative and psychological safety, process innovations, and firm performance. *Journal of Organizational Behavior, 24*(1), 45-68. doi:10.1002/job.179

Baer, M., & Oldham, G. R. (2006). The curvilinear relation between experienced creative time pressure and creativity: Moderating effects of openness to experience and support for creativity. *Journal of Applied Psychology, 91*(4), 963-970. doi:10.1037/0021-9010.91.4.963

Baer, M., Oldham, G. R., Jacobsohn, G. C., & Hollingshead, A. B. (2008). The personality composition of teams and creativity: The moderating role of team creative confidence. *The Journal of Creative Behavior, 42*(4), 255-282. doi:10.1002/j.2162-6057.2008.tb01299.x

Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist, 37*(2), 122-147. doi:10.1037/0003-066X.37.2.122

Bandura, A. (1991). Social cognitive theory of self-regulation. *Organizational behavior and human decision processes, 50*(2), 248-287. doi:http://dx.doi.org/10.1016/0749-5978(91)90022-L

Bandura, A. (1997). *Self-efficacy: the exercise of control*. New York: W.H. Freeman.

Bandura, A. (2000). Exercise of human agency through collective efficacy. *Current Directions in Psychological Science, 9*(3), 75-78. doi:10.1111/1467-8721.00064

Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology, 52*(1), 1.

Bandura, A. (2002). Social cognitive theory in cultural context. *Applied Psychology: An International Review, 51*(2), 269.

Bandura, A. (2012). On the functional properties of perceived self-efficacy revisited. *Journal of Management, 38*(1), 9-44.

Baptiste, N. R. (2008). Tightening the link between employee wellbeing at work and performance. *Management Decision, 46*(2), 284-309. doi:http://dx.doi.org/10.1108/00251740810854168

Baron, R. A., & Markman, G. D. (2003). Beyond social capital: the role of entrepreneurs' social competence in their financial success. *Journal of Business Venturing, 18*(1), 41-60. doi:10.1016/S0883-9026(00)00069-0

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of personality and social psychology, 51*(6), 1173-1182. doi:10.1037/0022-3514.51.6.1173

Barrick, M. R., Thurgood, G. R., Smith, T. A., & Courtright, S. H. (2015). Collective Organizational Engagement: Linking Motivational Antecedents, Strategic Implementation, and Firm Performance. *Academy of Management Journal, 58*(1), 111-135. doi:10.5465/amj.2013.0227

Barringer, B. R., & Bluedorn, A. C. (1999). The relationship between corporate entrepreneurship and strategic management. *Strategic Management Journal, 20*(5), 421-444.

Bartholomew, K. J., Ntoumanis, N., Ryan, R. M., Bosch, J. A., & Thøgersen-Ntoumani, C. (2011). Self-determination theory and diminished functioning: The role of interpersonal control and psychological need thwarting. *Personality and Social Psychology Bulletin, 37*(11), 1459-1473. doi:10.1177/0146167211413125

Baruch, Y., & Holtom, B. C. (2008). Survey response rate levels and trends in organizational research. *Human Relations, 61*(8), 1139-1160. doi:10.1177/0018726708094863

Bauer, T. N., Maertz, C. P., Jr., Dolen, M. R., & Campion, M. A. (1998). Longitudinal assessment of applicant reactions to employment testing and test outcome feedback. *Journal of Applied Psychology, 83*(6), 892-903. doi:http://dx.doi.org/10.1037/0021-9010.83.6.892

Baumann-pauly, D., Scherer, A. G., & Palazzo, G. (2016). Managing Institutional Complexity: A Longitudinal Study of Legitimacy Strategies at a Sportswear Brand Company. *Journal of Business Ethics, 137*(1), 31-51. doi:http://dx.doi.org/10.1007/s10551-014-2532-x

Beeftink, F., Van Eerde, W., Rutte, C. G., & Bertrand, J. W. M. (2012). Being successful in a creative profession: The role of innovative cognitive style, self-regulation, and self-efficacy. *Journal of business and psychology, 27*(1), 71-81.

Bell, M. P., Berry, D. P., Marquardt, D. J., & Tiffany Galvin, G. (2013). Introducing discriminatory job loss: antecedents, consequences, and complexities. *Journal of Managerial Psychology, 28*(6), 584-605. doi:http://dx.doi.org/10.1108/JMP-10-2012-0319

Bennington, L., & Habir, A. D. (2003). Human resource management in Indonesia. *Human Resource Management Review, 13*(3), 373-392. doi:http://dx.doi.org/10.1016/S1053-4822(03)00041-X

Bentler, P. M., & Bonett, D. G. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological bulletin, 88*(3), 588-606. doi:10.1037/0033-2909.88.3.588

Beus, J. M., Payne, S. C., Bergman, M. E., & Arthur, W. (2010). Safety climate and injuries: An examination of theoretical and empirical relationships. *Journal of Applied Psychology, 95*(4), 713-727. doi:10.1037/a0019164

Biemann, T., Kearney, E., & Marggraf, K. (2015). Empowering leadership and managers' career perceptions: Examining effects at both the individual and the team level. *The Leadership Quarterly, 26*(5), 775-789. doi:http://dx.doi.org/10.1016/j.leaqua.2015.03.003

Bluyssen, P. M., Janssen, S., van den Brink, L. H., & de Kluizenaar, Y. (2011). Assessment of wellbeing in an indoor office environment. *Building and Environment, 46*(12), 2632-2640. doi:http://dx.doi.org/10.1016/j.buildenv.2011.06.026

Boehm, S. A., Dwertmann, D. J. G., Bruch, H., & Shamir, B. (2015). The missing link? Investigating organizational identity strength and transformational leadership climate as mechanisms that connect CEO charisma with firm performance. *The Leadership Quarterly, 26*(2), 156-171. doi:http://dx.doi.org/10.1016/j.leaqua.2014.07.012

Bollen, K. A., & Stine, R. A. (1992). Bootstrapping goodness-of-fit measures in structural equation models. *Sociological Methods & Research, 21*(2), 205-229. doi:10.1177/0049124192021002004

Bosak, J., Coetsee, W. J., & Cullinane, S.-J. (2013). Safety climate dimensions as predictors for risk behavior. *Accident Analysis & Prevention, 55*(0), 256-264. doi:http://dx.doi.org/10.1016/j.aap.2013.02.022

Bowman, C., & Ambrosini, V. (1997). Using single respondents in strategy research. *British Journal of Management, 8*(2), 119-131. doi:10.1111/1467-8551.0045

BPS. (2016, 16/09/2016). Statistik ketenagakerjaan. Retrieved from https://www.bps.go.id/linkTabelStatis/view/id/984

Bradley, B. H., Postlethwaite, B. E., Klotz, A. C., Hamdani, M. R., & Brown, K. G. (2012). Reaping the benefits of task conflict in teams: the critical role of team psychological safety climate. *The Journal of applied psychology, 97*(1), 151-158.

Braeken, J., Niven, K., & Wood, S. (2013). Discrimination and Well-being: Testing the differential source and Organizational Justice theories of workplace aggression. *Journal of Business Ethics, 115*, 617-634.

Brown, K. W., & Ryan, R. M. (2003). The benefits of being present: mindfulness and its role in psychological well-being. *J Pers Soc Psychol, 84*(4), 822-848.

Brown, S. P., Ganesan, S., & Challagalla, G. (2001). Self-efficacy as a moderator of information-seeking effectiveness. *Journal of Applied Psychology, 86*(5), 1043-1051. doi:0022-3514/89/$00.75 http://dx.doi.org/10.1037/0021-9010.86.5.1043

Brown, S. P., & Leigh, T. W. (1996). A new look at psychological climate and its relationship to job involvement, effort, and performance. *Journal of Applied Psychology, 81*(4), 358-368.

Brueller, D., & Carmeli, A. (2011). Linking capacities of high-quality relationships to team learning and performance in service organizations. *Human Resource Management, 50*(4), 455-477. doi:10.1002/hrm.20435

Bryman, A. (2016). *Social research methods* (Vol. Fifth). Oxford: Oxford University Press.

Bryman, A., & Bell, E. (2011). *Business research methods*: Oxford University Press.

Burke, C. S., Stagl, K. C., Salas, E., Pierce, L., & Kendall, D. (2006). Understanding team adaptation: A conceptual analysis and model. *Journal of Applied Psychology, 91*(6), 1189-1207. doi:10.1037/0021-9010.91.6.1189

Burt, C. D. B., Sepie, B., & McFadden, G. (2008). The development of a considerate and responsible safety attitude in work teams. *Safety Science, 46*(1), 79-91. doi:http://dx.doi.org/10.1016/j.ssci.2006.10.005

Byrne, B. M. (2010). *Structural Equation Modeling With AMOS: Basic concepts, applications, and programming, second edition*. GB: Routledge Ltd.

Cannon, M. D., & Edmondson, A. C. (2001). Confronting failure: antecedents and consequences of shared beliefs about failure in organizational work groups. *Journal of Organizational Behavior, 22*(2), 161-177. doi:10.1002/job.85

Carmeli, A. (2007). Social capital, psychological safety and learning behaviours from failure in organisations. *Long Range Planning, 40*(1), 30-44. doi:10.1016/j.lrp.2006.12.002

Carmeli, A., Brueller, D., & Dutton, J. E. (2009). Learning behaviours in the workplace: The role of high-quality interpersonal relationships and psychological safety. *Systems Research And Behavioral Science, 26*(1), 81-98. doi:10.1002/sres.932

Carmeli, A., & Gittell, J. H. (2009). High-quality relationships, psychological safety, and learning from failures in work organizations. *Journal of Organizational Behavior, 30*(6), 709-729. doi:10.1002/job.565

Carmeli, A., & Schaubroeck, J. (2007). The influence of leaders' and other referents' normative expectations on individual involvement in creative work. *The Leadership Quarterly, 18*(1), 35-48. doi:http://dx.doi.org/10.1016/j.leaqua.2006.11.001

Carmeli, A., & Tishler, A. (2004). The relationships between intangible organizational elements and organizational performance. *Strategic Management Journal, 25*(13), 1257-1278.

Chandler, G. N., & Hanks, S. H. (1993). Measuring the performance of emerging businesses: A validation study. *Journal of Business Venturing, 8*(5), 391-408. doi:http://dx.doi.org/10.1016/0883-9026(93)90021-V

Chen, A. S.-Y., & Hou, Y.-H. (2016). The effects of ethical leadership, voice behavior and climates for innovation on creativity: A moderated mediation examination. *The Leadership Quarterly, 27*(1), 1-13. doi:http://dx.doi.org/10.1016/j.leaqua.2015.10.007

Chen, C.-F., & Chen, S.-C. (2014). Measuring the effects of Safety Management System practices, morality leadership and self-efficacy on pilots' safety behaviors: Safety motivation as a mediator. *Safety Science, 62*(0), 376-385. doi:10.1016/j.ssci.2013.09.013

Chen, C. H., & Kao, R. H. (2011). A multilevel study on the relationships between work characteristics, self-efficacy, collective efficacy, and organizational citizenship behavior:

the case of Taiwanese police duty-executing organizations. *Journal of Psychology, 145*(4), 361-390. doi:10.1080/00223980.2011.574168

Chen, G., Eden, D., & Gully, S. M. (2001). Validation of a new general self-efficacy scale. *Organizational Research Methods, 4*(1), 62-83.

Chen, G., & Tjosvold, D. (2012). Shared rewards and goal interdependence for psychological safety among departments in China. *Asia Pacific Journal of Management, 29*(2), 433-452. doi:10.1007/s10490-010-9201-0

Cheng, H.-H., & Yang, H.-L. (2014). The antecedents of collective creative efficacy for information system development teams. *Journal of Engineering and Technology Management, 33*(0), 1-17. doi:http://dx.doi.org/10.1016/j.jengtecman.2013.12.001

Chi Kin, Y., Kimmy Wa, C., & Lam, S. S. K. (2012). Do customers and employees enjoy service participation? Synergistic effects of self- and other-efficacy. *Journal of Marketing, 76*(6), 121-140.

Choi, J. N., & Chang, J. Y. (2009). Innovation implementation in the public sector: An integration of institutional and collective dynamics. *Journal of Applied Psychology, 94*(1), 245-253.

Christian, M. S., Bradley, J. C., Wallace, J. C., & Burke, M. J. (2009). Workplace safety: A meta-analysis of the roles of person and situation factors. *Journal of Applied Psychology, 94*(5), 1103-1127. doi:http://dx.doi.org/10.1037/a0016172

Cigularov, K. P., Adams, S., Gittleman, J. L., Haile, E., & Chen, P. Y. (2013). Measurement equivalence and mean comparisons of a safety climate measure across construction trades. *Accident Analysis & Prevention, 51*(0), 68-77. doi:http://dx.doi.org/10.1016/j.aap.2012.11.004

Cilliers, F., & Flotman, A.-P. (2016). The psychological well-being manifesting among master's students in Industrial and Organisational Psychology. *SA Journal of Industrial Psychology, 42*(1), 1-11. doi:http://dx.doi.org/10.4102/sajip.v42i1.1323

Cornelius, N., Wallace, J., & Tassabehji, R. (2007). An Analysis of Corporate Social Responsibility, Corporate Identity and Ethics Teaching in Business Schools. *Journal of Business Ethics, 76*(1), 117-135. doi:http://dx.doi.org/10.1007/s10551-006-9271-6

Craig, C. S., & Douglas, S. P. (2000). *International marketing research* (Vol. 2nd). Chichester: Wiley.

Crossan, F. (2003). Reasearch Philosophy: Toward un Understanding. *Nurse Researcher, 11*(1), 46-55.

Daniels, K., Wimalasiri, V., Beesley, N., & Cheyne, A. (2012). Affective well-being and within-day beliefs about job demands' influence on work performance: An experience sampling study. *Journal of Occupational & Organizational Psychology, 85*(4), 666-674. doi:10.1111/j.2044-8325.2012.02062.x

Danna, K., & Griffin, R. W. (1999). Health and Well-Being in the Workplace: A Review and Synthesis of the Literature. *Journal of Management, 25*(3), 357-384. doi:10.1177/014920639902500305

De Clercq, D., Dimov, D., & Thongpapanl, N. (2010). The moderating impact of internal social exchange processes on the entrepreneurial orientation–performance relationship. *Journal of Business Venturing, 25*(1), 87-103.

De Clercq, D., & Sapienza, H. J. (2006). Effects of relational capital and commitment on venture capitalists' perception of portfolio company performance. *Journal of Business Venturing, 21*(3), 326-347. doi:http://dx.doi.org/10.1016/j.jbusvent.2005.04.007

De Vaus, D. A. (2014). *Surveys in Social Research* (Vol. 6th). London: Routledge.

DeCarlo, L. T. (1997). On the meaning and use of kurtosis. *Psychological Methods, 2*(3), 292-307. doi:http://dx.doi.org/10.1037/1082-989X.2.3.292

del Carmen Triana, M., Kim, K., & García, M. F. (2011). To Help or Not to Help? Personal Value for Diversity Moderates the Relationship Between Discrimination Against Minorities and Citizenship Behavior Toward Minorities. *Journal of Business Ethics, 102*(2), 333-342. doi:10.1007/s10551-011-0817-x

Demerouti, E., Mostert, K., & Bakker, A. B. (2010). Burnout and work engagement: A thorough investigation of the independency of both constructs. *Journal of Occupational Health Psychology, 15*(3), 209-222. doi:10.1007/s12529-011-9173-6.

http://dx.doi.org/10.1037/a0019408

Dess, G. G., & Robinson, R. B., Jr. (1984). Measuring Organizational Performance in the Absence of Objective Measures: The Case of the Privately-held Firm and Conglomerate Business Unit. *Strategic Management Journal (pre-1986), 5*(3), 265.

Diener, E. (2000). Subjective well-being: The science of happiness and a proposal for a national index. *American Psychologist, 55*(1), 34-43. doi:10.1037/0003-066X.55.1.34

Diener, E., Suh, E. M., Lucas, R. E., & Smith, H. L. (1999). Subjective well-being: Three decades of progress. *Psychological bulletin, 125*(2), 276-302. doi:10.1037/0033-2909.125.2.276

Dittrich, R., Francis, B., Hatzinger, R., & Katzenbeisser, W. (2007). A paired comparison approach for the analysis of sets of Likert-scale responses. *Statistical Modelling, 7*(1), 3-28. doi:10.1177/1471082X0600700102

Dollard, M. F., & Bakker, A. B. (2010). Psychosocial safety climate as a precursor to conducive work environments, psychological health problems, and employee engagement. *Journal of Occupational and Organizational Psychology, 83*(3), 579.

Dossi, A., & Patelli, L. (2010). You Learn From What You Measure: Financial and Non-financial Performance Measures in Multinational Companies. *Long Range Planning, 43*(4), 498-526. doi:10.1016/j.lrp.2010.01.002

Dwertmann, D. J. G., Nishii, L. H., & van Knippenberg, D. (2016). Disentangling the Fairness & Discrimination and Synergy Perspectives on Diversity Climate: Moving the Field Forward. *Journal of Management, 42*(5), 1136-1168. doi:10.1177/0149206316630380

Dysvik, A., & Kuvaas, B. (2012). Perceived supervisor support climate, perceived investment in employee development climate, and business-unit performance. *Human Resource Management, 51*(5), 651-664. doi:10.1002/hrm.21494

Easterby-Smith, M., Thorpe, R., & Jackson, P. (2012a). *Management research*. Los Angeles, [Calif.]: SAGE.

Easterby-Smith, M., Thorpe, R., & Jackson, P. (2012b). *Management research: Mark Easterby-Smith, Richard Thorpe and Paul Jackson*. Los Angeles, [Calif.]: SAGE.

Eatough, E. M., Meier, L. L., Igic, I., Elfering, A., Spector, P. E., & Semmer, N. K. (2016). You want me to do what? Two daily diary studies of illegitimate tasks and employee well-being. *Journal of Organizational Behavior, 37*(1), 108-127. doi:10.1002/job.2032

Eccles, R. G. (1991). The performance measurement manifesto. *Harvard Business Review, January-February*, 131-138.

Eden, D., Ganzach, Y., Flumin-Granat, R., & Zigman, T. (2010). Augmenting Means Efficacy to Boost Performance: Two Field Experiments. *Journal of Management, 36*(3), 687-713. doi:10.1177/0149206308321553

Edmondson, A. (1999). Psychological safety and learning behavior in work teams. *Administrative Science Quarterly, 44*(2), 350-383.

Edmondson, D. R., Edwards, Y. D., & Boyer, S. L. (2012). Likert scales: a marketing perspective. *International Journal of Business, Marketing, and Decision Sciences (IJBMDS), 5*(2), 73.

Eisenbeiss, S. A., van Knippenberg, D., & Fahrbach, C. M. (2015). Doing Well by Doing Good? Analyzing the Relationship Between CEO Ethical Leadership and Firm Performance.

Journal of Business Ethics, 128(3), 635-651. doi:http://dx.doi.org/10.1007/s10551-014-2124-9

Elias, S. M., Barney, C. E., & Bishop, J. W. (2013). The treatment of self-efficacy among psychology and management scholars. *Journal of Applied Social Psychology, 43*(4), 811-822. doi:10.1111/jasp.12007

Erhemjamts, O., Li, Q., & Venkateswaran, A. (2013). Corporate Social Responsibility and Its Impact on Firms' Investment Policy, Organizational Structure, and Performance. *Journal of Business Ethics, 118*(2), 395-412. doi:http://dx.doi.org/10.1007/s10551-012-1594-x

Erkutlu, H., & Chafra, J. (2016). Benevolent leadership and psychological well-being: The moderating effects of psychological safety and psychological contract breach. *Leadership and Organization Development Journal, 37*(3), 369-386. doi:10.1108/LODJ-07-2014-0129

Faraj, S., & Aimin, Y. (2009). Boundary work in knowledge teams. *Journal of Applied Psychology, 94*(3), 604-617.

Farmer, S. M., & Tierney, P. (2004). The pygmalion process and employee creativity. *Journal of Management, 30*(3), 413-432.

Feild, H. S., & Holley, W. H. (1982). The Relationship of Performance Appraisal System Characteristics to Verdicts in Selected Employment Discrimination Cases. *Academy of Management Journal, 25*(2), 392-406. doi:10.2307/255999

Fernandez-Ballesteros, R., Diez-Nicolas, J., Caprara, G. V., Barbaranelli, C., & Bandura, A. (2002). Determinants and structural relation of personal efficacy to collective efficacy. *Applied Psychology An International Review, 51*(1), 107-107.

Fernández-Muñiz, B., Montes-Peón, J. M., & Vázquez-Ordás, C. J. (2009). Relation between occupational safety management and firm performance. *Safety Science, 47*(7), 980-991.

Filer, R. K., & Golbe, D. L. (2003). Debt, operating margin, and investment in workplace safety. *The Journal of Industrial Economics, 51*(3), 359-381. doi:10.2307/3569715

Flin, R., Mearns, K., O'Connor, P., & Bryden, R. (2000). Measuring safety climate: identifying the common features. *Safety Science, 34*(1), 177-192.

Ford, M. T., & Tetrick, L. E. (2011). Relations among occupational hazards, attitudes, and safety performance. *Journal of Occupational Health Psychology, 16*(1), 48-66. doi:http://dx.doi.org/10.1037/a0021296

Fu, F. Q., Richards, K. A., Hughes, D. E., & Jones, E. (2010). Motivating salespeople to sell new products: The relative influence of attitudes, subjective norms, and self-efficacy. *Journal of Marketing, 74*(6), 61-76. doi:10.1509/jmkg.74.6.61

Fuentes-garcía, F. J., Núñez-tabales, J. M., & Veroz-herradón, R. (2008). Applicability of Corporate Social Responsibility to Human Resources Management: Perspective from Spain. *Journal of Business Ethics, 82*(1), 27-44. doi:http://dx.doi.org/10.1007/s10551-007-9560-8

Garbarino, E., & Johnson, M. S. (1999). The different roles of satisfaction, trust, and commitment in customer relationships. *The Journal of Marketing, 63*(2), 70-87.

Ghauri, P. N., & Grŋhaug, K. (2010). *Research methods in business studies*. Harlow: Financial Times Prentice Hall.

Ghumman, S., Ryan, A. M., Barclay, L. A., & Markel, K. S. (2013). Religious Discrimination in the Workplace: A Review and Examination of Current and Future Trends. *Journal of business and psychology, 28*(4), 439-454. doi:10.1007/s10869-013-9290-0

Ghumman, S., Ryan, A. M., & Park, J. S. (2016). Religious harassment in the workplace: An examination of observer intervention. *Journal of Organizational Behavior, 37*(2), 279-306. doi:10.1002/job.2044

Gibson, C. B. (1999). Do they do what they believe they can? Group efficacy and group effectiveness across tasks and cultures. *Academy of Management Journal, 42*(2), 138-152. doi:10.2307/257089

Gibson, C. B., & Gibbs, J. L. (2006). Unpacking the concept of virtuality: The effects of geographic dispersion, electronic dependence, dynamic structure, and national diversity on team innovation. *Administrative Science Quarterly, 51*(3), 451-495.

Gibson, C. B., Porath, C. L., Benson, G. S., & Lawler, E. E., III. (2007). What results when firms implement practices: The differential relationship between specific practices, firm financial performance, customer service, and quality. *Journal of Applied Psychology, 92*(6), 1467-1480. doi:http://dx.doi.org/10.1037/0021-9010.92.6.1467

Gilson, L. L., & Shalley, C. E. (2004). A little creativity goes a long way: An examination of teams' engagement in creative processes. *Journal of Management, 30*(4), 453-470. doi:10.1016/j.jm.2003.07.001

Gist, M. E., & Mitchell, T. B. (1992). Self-efficacy: A theoretical analysis of its determinants and malleability. *Academy of Management Review, 17*(2), 183-211. doi:10.5465/AMR.1992.4279530

Glejser, H. (1969). A new test for heteroskedasticity. *Journal of the American Statistical Association, 64*(325), 316-323.

Goddard, R. D., Hoy, W. K., & Hoy, A. W. (2004). Collective efficacy beliefs: Theoretical developments, empirical evidence, and future directions. *Educational Researcher, 33*(3), 3-13. doi:10.2307/3700071

Goncalo, J. A., Polman, E., & Maslach, C. (2010). Can confidence come too soon? Collective efficacy, conflict and group performance over time. *Organizational behavior and human decision processes, 113*(1), 13-24.

Gong, Y., Cheung, S.-Y., Wang, M., & Huang, J.-C. (2012). Unfolding the proactive process for creativity: Integration of the employee proactivity, information exchange, and psychological safety perspectives. *Journal of Management, 38*(5), 1611-1633. doi:10.1177/0149206310380250

Gong, Y., Huang, J.-C., & Farh, J.-L. (2009). Employee learning orientation, transformational leadership, and employee creativity: The mediating role of employee creative self-efficacy. *Academy of Management Journal, 52*(4), 765-778. doi:10.5465/AMJ.2009.43670890

González-Benito, J., & Suárez-González, I. (2010). A study of the role played by manufacturing strategic objectives and capabilities in understanding the relationship between porter's generic strategies and business performance. *British Journal of Management, 21*(4), 1027-1043. doi:10.1111/j.1467-8551.2008.00626.x

Good, D. J., Lyddy, C. J., Glomb, T. M., Bono, J. E., Brown, K. W., Duffy, M. K., . . . Lazar, S. W. (2016). Contemplating Mindfulness at Work: An Integrative Review. *Journal of Management, 42*(1), 114-142. doi:10.1177/0149206315617003

Grevenstein, D., Aguilar-Raab, C., Schweitzer, J., & Bluemke, M. (2016). Through the tunnel, to the light: Why sense of coherence covers and exceeds resilience, optimism, and self-compassion. *Personality and Individual Differences, 98*, 208-217. doi:10.1016/j.paid.2016.04.001

Guest, D. E. (1997). Human resource management and performance: a review and research agenda. *The International Journal of Human Resource Management, 8*(3), 263-276. doi:10.1080/095851997341630

Gully, S. M., Joshi, A., Incalcaterra, K. A., & Beaubien, J. M. (2002). A meta-analysis of team-efficacy, potency, and performance: Interdependence and level of analysis as moderators of observed relationships. *Journal of Applied Psychology, 87*(5), 819-832. doi:10.1037//0021.9010.87.5.819

Gupta, N., Ganster, D. C., & Kepes, S. (2013). Assessing the validity of sales self-efficacy: A cautionary tale. *Journal of Applied Psychology, 98*(4), 690-700. doi:http://dx.doi.org/10.1037/a0032232

Hair, J. F. (2011). *Essentials of business research methods*. Armonk, N.Y; London: M.E. Sharpe.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis*. New Jersey: Prentice Hall.

Hair, J. F., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2013). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*: SAGE Publications.

Hair , J. F. J., Sarstedt, M., Hopkins, L., & G. Kuppelwieser, V. (2014). Partial least squares structural equation modeling (PLS-SEM). *European Business Review, 26*(2), 106-121. doi:doi:10.1108/EBR-10-2013-0128

Hajmohammad, S., & Vachon, S. (2013). Safety Culture: A Catalyst for Sustainable Development. *Journal of Business Ethics*, 1-19. doi:10.1007/s10551-013-1813-0

Halbesleben, J. R. B., Leroy, H., Dierynck, B., Simons, T., Savage, G. T., & McCaughey, D. (2013). Living up to safety values in health care: The effect of leader behavioral integrity on occupational safety. *Journal of Occupational Health Psychology, 18*(4), 395-405. doi:10.1037/a0034086

Hammer, L. B., Johnson, R. C., Crain, T. L., Bodner, T., Kossek, E. E., Davis, K. D., . . . Berkman, L. (2016). Intervention effects on safety compliance and citizenship behaviors: Evidence from the work, family, and health study. *Journal of Applied Psychology, 101*(2), 190-208. doi:http://dx.doi.org/10.1037/apl0000047

Hammond, S. A., & Slocum, J. W., Jr. (1996). The impact of prior firm financial performance on subsequent corporate reputation. *Journal of Business Ethics, 15*(2), 159.

Han, J. K., Kim, N., & Srivastava, R. K. (1998). Market orientation and organizational performance: Is innovation a missing link? *The Journal of Marketing, 62*(4), 30-45.

Hannah, S. T., Schaubroeck, J. M., & Peng, A. C. (2016). Transforming followers' value internalization and role self-efficacy: Dual processes promoting performance and peer norm-enforcement. *Journal of Applied Psychology, 101*(2), 252-266. doi:http://dx.doi.org/10.1037/apl0000038

Harrison, A. W., Rainer, J. R. K., Hochwarter, W. A., & Thompson, K. R. (1997). Testing the self-efficacy-performance linkage of social-cognitive theory. *The Journal of Social Psychology, 137*(1), 79-87.

Hart, S. M. (2010). Self-regulation, Corporate Social Responsibility, and the Business Case: Do they Work in Achieving Workplace Equality and Safety? *Journal of Business Ethics, 92*(4), 585-600. doi:http://dx.doi.org/10.1007/s10551-009-0174-1

Hartnell, C. A., Kinicki, A. J., Lambert, L. S., Fugate, M., & Doyle Corner, P. (2016). Do similarities or differences between CEO leadership and organizational culture have a more positive effect on firm performance? A test of competing predictions. *Journal of Applied Psychology, 101*(6), 846-861. doi:http://dx.doi.org/10.1037/apl0000083

Hasan, I., Kobeissi, N., Liu, L., & Wang, H. (2016). Corporate social responsibility and firm financial performance: The mediating role of productivity. *Journal of Business Ethics*. doi:http://dx.doi.org/10.1007/s10551-016-3066-1

Haslam, C., O'Hara, J., Kazi, A., Twumasi, R., & Haslam, R. (2015). Proactive occupational safety and health management: Promoting good health and good business. *Safety Science*. doi:http://dx.doi.org/10.1016/j.ssci.2015.06.010

Hastings, S. E., & Finegan, J. E. (2011). The Role of Ethical Ideology in Reactions to Injustice. *Journal of Business Ethics, 100*(4), 689-703. doi:http://dx.doi.org/10.1007/s10551-010-0704-x

Hay, C. (2002). *Political analysis*: Palgrave.

Hayashi, M. (2002). The role of subcontracting in SME development in Indonesia:: Micro-level evidence from the metalworking and machinery industry. *Journal of Asian Economics, 13*(1), 1-26. doi:http://dx.doi.org/10.1016/S1049-0078(01)00110-5

Hayes, B. E., Perander, J., Smecko, T., & Trask, J. (1998). Measuring perceptions of workplace safety: Development and validation of the work safety scale. *Journal of Safety Research, 29*(3), 145-161. doi:http://dx.doi.org/10.1016/S0022-4375(98)00011-5

He, H., Zhu, W., & Zheng, X. (2014). Procedural Justice and Employee Engagement: Roles of Organizational Identification and Moral Identity Centrality. *Journal of Business Ethics, 122*(4), 681-695. doi:10.1007/s10551-013-1774-3

Hecht, T. D., & Allen, N. J. (2005). Exploring links between polychronicity and well-being from the perspective of person–job fit: Does it matter if you prefer to do only one thing at a time? *Organizational behavior and human decision processes, 98*(2), 155-178. doi:http://dx.doi.org/10.1016/j.obhdp.2005.07.004

Hendriani, S., Efni, Y., & Siswanto, N. (2014). Contribution of motivation and competence to the change of organization effectiveness. *Journal of Applied Sciences, 14*(22), 2994-3000. doi:10.3923/jas.2014.2994.3000

Hernandez, M., & Guarana, C. L. (2016). An Examination of the Temporal Intricacies of Job Engagement. *Journal of Management*. doi:10.1177/0149206315622573

Hershcovis, M. S., & Barling, J. (2010). Towards a multi-foci approach to workplace aggression: A meta-analytic review of outcomes from different perpetrators. *Journal of Organizational Behavior, 31*(1), 24-44.

Heslin, P. A., Bell, M. P., & Fletcher, P. O. (2012). The devil without and within: A conceptual model of social cognitive processes whereby discrimination leads stigmatized minorities to become discouraged workers. *Journal of Organizational Behavior, 33*(6), 840-862. doi:10.1002/job.1795

Hirak, R., Peng, A. C., Carmeli, A., & Schaubroeck, J. M. (2012). Linking leader inclusiveness to work unit performance: The importance of psychological safety and learning from failures. *Leadership Quarterly, 23*(1), 107-117. doi:10.1016/j.leaqua.2011.11.009

Ho, R. (2006). *Handbook of univariate and multivariate data analysis and interpretation with SPSS*. Boca Raton: CRC Press.

Holden, M. T., & Lynch, P. (2004). Choosing the Appropriate Methodology: Understanding Research Philosophy. *The Marketing Review, 4*, 397-409.

Hornsey, M. J., Blackwood, L., Louis, W., Fielding, K., Mavor, K., Morton, T., . . . White, K. M. (2006). Why do people engage in collective action? Revisiting the role of perceived effectiveness. *Journal of Applied Social Psychology, 36*(7), 1701-1722. doi:10.1111/j.0021-9029.2006.00077.x

Howorth, C., Smith, S. M., & Parkinson, C. (2012). Social learning and social entrepreneurship education. *Academy of Management Learning & Education, 11*(3), 371-389.

Huang, C. C., Chu, C. Y., & Jiang, P. C. (2008). *An empirical study of psychological safety and performance in technology r&d teams*. New York: Ieee.

Huang, L., Krasikova, D. V., & Liu, D. (2016). I can do it, so can you: The role of leader creative self-efficacy in facilitating follower creativity. *Organizational behavior and human decision processes, 132*, 49-62. doi:10.1016/j.obhdp.2015.12.002

Huang, Y.-h., Zohar, D., Robertson, M. M., Garabet, A., Lee, J., & Murphy, L. A. (2013). Development and validation of safety climate scales for lone workers using truck drivers as exemplar. *Transportation Research Part F: Traffic Psychology and Behaviour, 17*(0), 5-19. doi:http://dx.doi.org/10.1016/j.trf.2012.08.011

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. doi:http://dx.doi.org/10.1016/j.ssci.2011.06.005

Idris, M. A., Dollard, M. F., & Tuckey, M. R. (2015). Psychosocial safety climate as a management tool for employee engagement and performance: A multilevel analysis. *International Journal of Stress Management, 22*(2), 183-206. doi:10.1037/a0038986

IDX. (2015). *IDX Statistics 2015*. Retrieved from Jakarta:

Illia, L., Bonaiuto, M., Pugliese, E., & van Rekom, J. (2011). Managing membership threats through collective efficacy. *Journal of business research, 64*(6), 631-639.

Im, S., Montoya, M. M., & Workman, J. P. (2013). Antecedents and consequences of creativity in product innovation teams antecedents and consequences of creativity in product innovation teams. *Journal of Product Innovation Management, 30*(1), 170-185. doi:10.1111/j.1540-5885.2012.00887.x

Ivancevich, J. M., Matteson, M. T., & Preston, C. (1982). Occupational Stress, Type a Behavior, and Physical Well Being. *The Academy of Management Journal, 25*(2), 373-391.

Jamsostek. (2013). *Annual Report 2013*. Retrieved from Jakarta: http://www.bpjsketenagakerjaan.go.id/assets/uploads/tiny_mce/Annual%20Report/2603 2015_133805_ARA%20BPJS%20Ketenagakerjaan%202013.pdf

Jha, S., Deitz, G. D., Babakus, E., & Yavas, U. (2013). The Role of Corporate Image for Quality in the Formation of Attitudinal Service Loyalty. *Journal of Service Research, 16*(2), 155-170. doi:10.1177/1094670512466441

Jo, H., Kim, H., & Park, K. (2015). Corporate environmental responsibility and firm performance in the financial services sector. *Journal of Business Ethics, 131*(2), 257-284. doi:http://dx.doi.org/10.1007/s10551-014-2276-7

Jones, G. R. (1986). Socialization tactics, self-efficacy, and newcomers' adjustments to organizations. *Academy of Management Journal, 29*(2), 262-279. doi:10.2307/256188

Jones, K. P., Peddie, C. I., Gilrane, V. L., King, E. B., & Gray, A. L. (2016). Not So Subtle: A Meta-Analytic Investigation of the Correlates of Subtle and Overt Discrimination. *Journal of Management, 42*(6), 1588-1613. doi:10.1177/0149206313506466

Joni, B. T. (2016, 18 October 2016). 5 Karyawan tersiram aira panas mesin pabrik kelapa sawit. *SINDO*. Retrieved from http://daerah.sindonews.com/read/1148046/192/5-karyawan-tersiram-air-panas-mesin-pabrik-kelapa-sawit-1476761805

Judge, T. A., & Bono, J. E. (2001). Relationship of core self-evaluations traits—self-esteem, generalized self-efficacy, locus of control, and emotional stability—with job satisfaction and job performance: A meta-analysis. *Journal of Applied Psychology, 86*(1), 80-92. doi:10.1037//0021-9010.86.1.80

Jung Young, L., Swink, M., & Pandejpong, T. (2011). The Roles of Worker Expertise, Information Sharing Quality, and Psychological Safety in Manufacturing Process Innovation: An Intellectual Capital Perspective. *Production & Operations Management, 20*(4), 556-570. doi:10.1111/j.1937-5956.2010.01172.x

Junni, P., Sarala, R. M., Taras, V. A. S., & Tarba, S. Y. (2013). Organizational Ambidexterity and Performance: A Meta-Analysis. *Academy of Management Perspectives, 27*(4), 299-312. doi:10.5465/amp.2012.0015

Kahn, W. A. (1990). Psychological conditions of personal engagement and disengagement at work. *The Academy of Management Journal, 33*(4), 692-724.

Kaplan, R. S., & Norton, D. P. (2007). Using the balanced scorecard as a strategic management system (Vol. 85, pp. 150-161): Harvard Business School Publ. Corp.

Karademas, E. C. (2006). Self-efficacy, social support and well-being. *Personality and Individual Differences, 40*(6), 1281-1290. doi:10.1016/j.paid.2005.10.019

Karatepe, O. M., Uludag, O., Menevis, I., Hadzimehmedagic, L., & Baddar, L. (2006). The effects of selected individual characteristics on frontline employee performance and job satisfaction. *Tourism Management, 27*(4), 547-560. doi:10.1016/j.tourman.2005.02.009

Kark, R., & Carmeli, A. (2009). Alive and creating: the mediating role of vitality and aliveness in the relationship between psychological safety and creative work involvement. *Journal of Organizational Behavior, 30*(6), 785-804. doi:10.1002/job.571

Kath, L. M., Magley, V. J., & Marmet, M. (2010). The role of organizational trust in safety climate's influence on organizational outcomes. *Accident Analysis and Prevention, 42*(5), 1488-1497. doi:10.1016/j.aap.2009.11.010

Kessel, M., Kratzer, J., & Schultz, C. (2012). Psychological safety, knowledge sharing, and creative performance in healthcare teams. *Creativity and Innovation Management, 21*(2), 147-157. doi:10.1111/j.1467-8691.2012.00635.x

Ketenagakerjaan, B. (2015). *Laporan Pengelolaan Program (Audited) 2015*. Retrieved from Jakarta:
http://www.bpjsketenagakerjaan.go.id/assets/uploads/tiny_mce/Annual%20Report/2206
2016_105942_Resume_LPP_BPJS_Ketenagakerjaan.pdf

Kim, H.-S., & Kim, Y.-G. (2009). A CRM performance measurement framework: Its development process and application. *Industrial Marketing Management, 38*(4), 477-489. doi:http://dx.doi.org/10.1016/j.indmarman.2008.04.008

Kim, K. H., Jeon, B. J., Jung, H. S., Lu, W., & Jones, J. (2012). Effective employment brand equity through sustainable competitive advantage, marketing strategy, and corporate image. *Journal of business research, 65*(11), 1612-1617. doi:10.1016/j.jbusres.2011.02.047

King, D. D., Newman, A., & Luthans, F. (2016). Not if, but when we need resilience in the workplace. *Journal of Organizational Behavior, 37*(5), 782-786. doi:10.1002/job.2063

Kirk-Brown, A., & Van Dijk, P. (2016). An examination of the role of psychological safety in the relationship between job resources, affective commitment and turnover intentions of Australian employees with chronic illness. *The International Journal of Human Resource Management, 27*(14), 1626-1641. doi:10.1080/09585192.2015.1053964

Kirkman, B. L., Cordery, J. L., Mathieu, J., Rosen, B., & Kukenberger, M. (2013). Global organizational communities of practice: The effects of nationality diversity, psychological safety, and media richness on community performance. *Human Relations, 66*(3), 333-362. doi:10.1177/0018726712464076

Kline, R. B. (2011). *Principles and practice of structural equation modeling*. New York: Guilford Press.

Kohan, A., & O'Connor, B. P. (2002). Police officer job satisfaction in relation to mood, well-being, and alcohol consumption. *The Journal of psychology, 136*(3), 307-318. doi:10.1080/00223980209604158

Koopmann, J., Lanaj, K., Wang, M., Zhou, L., & Shi, J. (2016). Nonlinear effects of team tenure on team psychological safety climate and climate strength: Implications for average team member performance. *Journal of Applied Psychology, 101*(7), 940-957. doi:http://dx.doi.org/10.1037/apl0000097

Kortum, E., Leka, S., & Cox, T. (2010). Psychosocial risks and work-related stress in developing countries: health impact, priorities, barriers and solutions. *International Journal of Occupational Medicine and Environmental Health, 23*(3), 225-238. doi:10.2478/v10001-010-0024-5

Kouabenan, D. R., Ngueutsa, R., & Mbaye, S. (2015). Safety climate, perceived risk, and involvement in safety management. *Safety Science, 77*, 72-79. doi:http://dx.doi.org/10.1016/j.ssci.2015.03.009

Kunze, F., de Jong, S. B., & Bruch, H. (2016). Consequences of Collective-Focused Leadership and Differentiated Individual-Focused Leadership: Development and Testing of an Organizational-Level Model. *Journal of Management, 42*(4), 886-914. doi:10.1177/0149206313498903

Kwon, K., & Rupp, D. E. (2013). High-performer turnover and firm performance: The moderating role of human capital investment and firm reputation. *Journal of Organizational Behavior, 34*(1), 129-150. doi:10.1002/job.1804

Laaksonen, M., Pitkäniemi, J., Rahkonen, O., & Lahelma, E. (2010). Work arrangements, physical working conditions, and psychosocial working conditions as risk factors for sickness absence: Bayesian analysis of prospective data. *Annals of Epidemiology, 20*(5), 332-338. doi:http://dx.doi.org/10.1016/j.annepidem.2010.02.004

Law, R., Dollard, M. F., Tuckey, M. R., & Dormann, C. (2011). Psychosocial safety climate as a lead indicator of workplace bullying and harassment, job resources, psychological health and employee engagement. *Accident Analysis & Prevention, 43*(5), 1782-1793. doi:http://dx.doi.org/10.1016/j.aap.2011.04.010

Lee, J. Y., Swink, M., & Pandejpong, T. (2011). The roles of worker expertise, information sharing quality, and psychological safety in manufacturing process innovation: An intellectual capital perspective. *Production and Operations Management, 20*(4), 556-570. doi:10.1111/j.1937-5956.2010.01172.x

Lent, R. W., Schmidt, J., & Schmidt, L. (2006). Collective efficacy beliefs in student work teams: Relation to self-efficacy, cohesion, and performance. *Journal of Vocational Behavior, 68*(1), 73-84. doi:http://dx.doi.org/10.1016/j.jvb.2005.04.001

Leroy, H., Anseel, F., Halbesleben, J. R. B., Savage, G. T., Dierynck, B., Simons, T., . . . Sels, L. (2012). Behavioral integrity for safety, priority of safety, psychological safety, and patient safety: A team-level study. *Journal of Applied Psychology, 97*(6), 1273-1281. doi:10.1037/a0030076

Lewis, T. (2011). Assessing social identity and collective efficacy as theories of group motivation at work. *International Journal of Human Resource Management, 22*(4), 963-980. doi:10.1080/09585192.2011.555136

Liang, J., C. Farh, C. I., & Farh, J.-L. (2012). Psychological antecedents of promotive and prohibitive voice: A two-wave examination. *Academy of Management Journal, 55*(1), 71-73. doi:10.5465/amj.2010.0176

Liao, H. U. I., Liu, D., & Loi, R. (2010). Looking at both sides of the social exchange coin: A social cognitive perspective on the joint effects of relationship quality and differentiation on creativity. *Academy of Management Journal, 53*(5), 1090-1109. doi:10.5465/AMJ.2010.54533207

Lin, C.-P., Baruch, Y., & Shih, W.-C. (2012). Corporate social responsibility and team performance: The mediating role of team efficacy and team self-esteem. *Journal of Business Ethics, 108*(2), 167-180.

Lindsley, D. H., Brass, D. J., & Thomas, J. B. (1995). Efficacy-performance spirals: A multilevel perspective. *The Academy of Management Review, 20*(3), 645-678.

Liu, D., Jiang, K., Shalley, C. E., Keem, S., & Zhou, J. (2016). Motivational mechanisms of employee creativity: A meta-analytic examination and theoretical extension of the creativity literature. *Organizational behavior and human decision processes, 137*, 236-263. doi:10.1016/j.obhdp.2016.08.001

Liu, S.-m., Liao, J.-q., & Wei, H. (2015). Authentic Leadership and Whistleblowing: Mediating Roles of Psychological Safety and Personal Identification. *Journal of Business Ethics, 131*(1), 107-119. doi:10.1007/s10551-014-2271-z

Liu, S., Hu, J., Li, Y., Wang, Z., & Lin, X. (2014). Examining the cross-level relationship between shared leadership and learning in teams: Evidence from China. *The Leadership Quarterly, 25*(2), 282-295. doi:http://dx.doi.org/10.1016/j.leaqua.2013.08.006

Liu, S., Wang, M., Liao, H., & Shi, J. (2014). Self-regulation during job search: The opposing effects of employment self-efficacy and job search behavior self-efficacy. *Journal of Applied Psychology, 99*(6), 1159-1172. doi:http://dx.doi.org/10.1037/a0036692

Liu, W., Zhang, P., Liao, J., Hao, P., & Mao, J. (2016). Abusive supervision and employee creativity: The mediating role of psychological safety and organizational identification. *Management Decision, 54*(1), 130-147. doi:doi:10.1108/MD-09-2013-0443

Lopez, C., Gotsi, M., & Andriopoulos, C. (2011). Conceptualising the influence of corporate image on country image. *European Journal of Marketing, 45*(11/12), 1601-1641. doi:http://dx.doi.org/10.1108/03090561111167315

Lu, C.-S., & Tsai, C.-L. (2008). The effects of safety climate on vessel accidents in the container shipping context. *Accident Analysis & Prevention, 40*(2), 594-601. doi:http://dx.doi.org/10.1016/j.aap.2007.08.015

Luciano, M. M., DeChurch, L. A., & Mathieu, J. E. (2015). Multiteam Systems: A Structural Framework and Meso-Theory of System Functioning. *Journal of Management*. doi:10.1177/0149206315601184

Luthans, F., Youssef, C. M., Sweetman, D. S., & Harms, P. D. (2013). Meeting the Leadership Challenge of Employee Well-Being Through Relationship PsyCap and Health PsyCap. *Journal of Leadership & Organizational Studies, 20*(1), 118.

Luthans, F., Zhu, W., & Avolio, B. J. (2006). The impact of efficacy on work attitudes across cultures. *Journal of world business, 41*(2), 121-132.

Mainemelis, C. (2010). Stealing fire: Creative deviance in the evolution of new ideas. *Academy of Management Review, 35*(4), 558-578.

Mäkikangas, A., Kinnunen, U., Feldt, T., & Schaufeli, W. (2016). The longitudinal development of employee well-being: a systematic review. *Work and Stress*, 1-25. doi:10.1080/02678373.2015.1126870

Makin, A. M., & Winder, C. (2008). A new conceptual framework to improve the application of occupational health and safety management systems. *Safety Science, 46*(6), 935-948.

Maltin, E. R., & Meyer, J. P. (2010). Employee commitment and well-being: a critical review, theoretical framework and research agenda. *Journal of Vocational Behavior, 77*(2), 323-337.

Mardia, K. V. (1974). Applications of some measures of multivariate skewness and kurtosis in testing normality and robustness studies. *Sankhyā: The Indian Journal of Statistics, Series B (1960-2002), 36*(2), 115-128.

Martini, L., Tjakraatmadja, J. H., Anggoro, Y., Pritasari, A., & Hutapea, L. (2012). Triple helix collaboration to develop economic corridors as knowledge hub in indonesia. *Procedia - Social and Behavioral Sciences, 52*(0), 130-139. doi:http://dx.doi.org/10.1016/j.sbspro.2012.09.449

Mason, J. (2002). *Qualitative researching*. London: SAGE.

Mathew, J., Ogbonna, E., & Harris, L. C. (2012). Culture, employee work outcomes and performance: An empirical analysis of Indian software firms. *Journal of world business, 47*(2), 194-203. doi:http://dx.doi.org/10.1016/j.jwb.2011.04.006

Mathisen, G. E. (2011). Organizational antecedents of creative self-efficacy. *Creativity and Innovation Management, 20*(3), 185-195. doi:10.1111/j.1467-8691.2011.00606.x

Maurer, T. J. (2001). Career-relevant learning and development, worker age, and beliefs about self-efficacy for development. *Journal of Management, 27*(2), 123.

May, D. R., Gilson, R. L., & Harter, L. M. (2004). The psychological conditions of meaningfulness, safety and availability and the engagement of the human spirit at work. *Journal of Occupational and Organizational Psychology, 77*, 11-37.

McDonald, T., & Siegall, M. (1992). The effects of technological self-efficacy and job focus on job performance, attitudes, and withdrawal behaviors. *Journal of Psychology, 126*(5), 465.

Meglio, O., & Risberg, A. (2011). The (mis)measurement of M&A performance -- A systematic narrative literature review. *Scandinavian Journal of Management, 27*(4), 418.

Milkman, K. L., Akinola, M., & Chugh, D. (2015). What happens before? A field experiment exploring how pay and representation differentially shape bias on the pathway into organizations. *Journal of Applied Psychology, 100*(6), 1678-1712. doi:http://dx.doi.org/10.1037/apl0000022

Minkiewicz, J., Evans, J., Bridson, K., & Mavondo, F. (2011). Corporate image in the leisure services sector. *Journal of Services Marketing, 25*(3), 190-201. doi:10.1108/08876041111129173

Molina-Azorín, J. F., Claver-Cortés, E., López-Gamero, M. D., & Tarí, J. J. (2009). Green management and financial performance: a literature review. *Management Decision, 47*(7), 1080-1100. doi:http://dx.doi.org/10.1108/00251740910978313

Monnot, M. J., & Beehr, T. A. (2014). Subjective well-being at work: Disentangling source effects of stress and support on enthusiasm, contentment, and meaningfulness. *Journal of Vocational Behavior, 85*(2), 204-218. doi:http://dx.doi.org/10.1016/j.jvb.2014.07.005

Morgan, W. B., Walker, S. S., Hebl, M. R., & King, E. B. (2013). A field experiment: Reducing interpersonal discrimination toward pregnant job applicants. *Journal of Applied Psychology, 98*(5), 799-809. doi:http://dx.doi.org/10.1037/a0034040

Morrow, S. L., McGonagle, A. K., Dove-Steinkamp, M. L., Walker Jr, C. T., Marmet, M., & Barnes-Farrell, J. L. (2010). Relationships between psychological safety climate facets and safety behavior in the rail industry: A dominance analysis. *Accident Analysis & Prevention, 42*(5), 1460-1467. doi:http://dx.doi.org/10.1016/j.aap.2009.08.011

Neal, A., & Griffin, M. A. (2006). A study of the lagged relationships among safety climate, safety motivation, safety behavior, and accidents at the individual and group levels. *Journal of Applied Psychology, 91*(4), 946-953.

Neely, A. (1999). The performance measurement revolution: why now and what next? *International Journal of Operations & Production Management, 19*(2), 205-228. doi:10.1108/01443579910247437

Neely, A. (2005). The evolution of performance measurement research. *International Journal of Operations & Production Management, 25*(12), 1264-1277.

Nembhard, I. M., & Edmondson, A. C. (2006). Making it safe: the effects of leader inclusiveness and professional status on psychological safety and improvement efforts in health care teams. *Journal of Organizational Behavior, 27*(7), 941-966. doi:10.1002/job.413

Ng, T. W., & Feldman, D. C. (2012). A comparison of self-ratings and non-self-report measures of employee creativity. *Human Relations, 65*(8), 1021-1047. doi:10.1177/0018726712446015

Ng, T. W. H., & Feldman, D. C. (2012). The effects of organizational and community embeddedness on work-to-family and family-to-work conflict. *Journal of Applied Psychology, 97*(6), 1233-1251. doi:10.1037/a0018804

http://dx.doi.org/10.1037/a0029089

Ng, T. W. H., & Lucianetti, L. (2016). Within-individual increases in innovative behavior and creative, persuasion, and change self-efficacy over time: A social–cognitive theory

perspective. *Journal of Applied Psychology, 101*(1), 14-34. doi:http://dx.doi.org/10.1037/apl0000029

Nguyen, H., Groth, M., & Johnson, A. (2016). When the Going Gets Tough, the Tough Keep Working: Impact of Emotional Labor on Absenteeism. *Journal of Management, 42*(3), 615-643. doi:10.1177/0149206313490026

Nielsen, K., Yarker, J., Randall, R., & Munir, F. (2009). The mediating effects of team and self-efficacy on the relationship between transformational leadership, and job satisfaction and psychological well-being in healthcare professionals: A cross-sectional questionnaire survey. *International Journal of Nursing Studies, 46*(9), 1236-1244. doi:http://dx.doi.org/10.1016/j.ijnurstu.2009.03.001

Noort, M. C., Reader, T. W., Shorrock, S., & Kirwan, B. (2016). The relationship between national culture and safety culture: Implications for international safety culture assessments. *Journal of Occupational and Organizational Psychology, 89*(3), 515-538. doi:10.1111/joop.12139

OECD. (2014). *OECD Employment Outlook 2014*: OECD Publishing.

OECD. (2015). *Economic Outlook for Southeast Asia, China and India 2015 - Strengthening Institutional Capacity*: OECD Publishing ; OECD Development Centre.

OECD. (2016). *OECD Economic Outlook*. Retrieved from http://www.oecd-ilibrary.org/economics/oecd-economic-outlook-volume-2016-issue-1/indonesia_eco_outlook-v2016-1-24-en

Ogbonna, E., & Mathew, J. (2012). Culture, employee work outcomes and performance: an empirical analysis of Indian software firms. *Journal of world business, 47*(2), 194-203. doi:10.1016/j.jwb.2011.04.006

Oh, I.-S., Kim, S., & Van Iddekinge, C. H. (2015). Taking it to another level: Do personality-based human capital resources matter to firm performance? *Journal of Applied Psychology, 100*(3), 935-947. doi:http://dx.doi.org/10.1037/a0039052

Oldham, G. R., & Cummings, A. (1996). Employee creativity: Personal and contextual factors at work. *The Academy of Management Journal, 39*(3), 607-634.

Olsen, J. E., & Martins, L. L. (2016). Racioethnicity, community makeup, and potential employees' reactions to organizational diversity management approaches. *Journal of Applied Psychology, 101*(5), 657-672. doi:http://dx.doi.org/10.1037/apl0000080

Oppenheim, A. N. (2000). *Questionnaire design, interviewing and attitude measurement* (Vol. New). London: Continuum.

Owens, B. P., Baker, W. E., Sumpter, D. M., & Cameron, K. S. (2016). Relational energy at work: Implications for job engagement and job performance. *Journal of Applied Psychology, 101*(1), 35-49. doi:http://dx.doi.org/10.1037/apl0000032

Pallant, J. (2013). *SPSS survival manual: a step by step guide to data analysis using IBM SPSS*. Maidenhead: McGraw-Hill.

Parker, L. E. (1994). Working together: Perceived self- and collective-efficacy at the workplace. *Journal of Applied Social Psychology, 24*(1), 43-59. doi:10.1111/j.1559-1816.1994.tb00552.x

Pearsall, M. J., & Ellis, A. P. J. (2011). Thick as thieves: The effects of ethical orientation and psychological safety on unethical team behavior. *Journal of Applied Psychology, 96*(2), 401-411. doi:10.1037/a0021503

Perry-Smith, J. E., & Shalley, C. E. (2003). The social side of creativity: A static and dynamic social network perspective. *The Academy of Management Review, 28*(1), 89-106.

Petkova, A. P., Wadhwa, A. N. U., Xin, Y. A. O., & Jain, S. (2014). Reputation And Decision Making Under Ambiguity: A Study Of U.S. Venture Capital Firms' Investments In The

Emerging Clean Energy Sector. *Academy of Management Journal, 57*(2), 422-448. doi:10.5465/amj.2011.0651

Phillips, L. W. (1981). Assessing measurement error in key informant reports: A methodological note on organizational analysis in marketing. *Journal of Marketing Research, 18*(4), 395-415.

Pillemer, J., Graham, E. R., & Burke, D. M. (2014). The face says it all: CEOs, gender, and predicting corporate performance. *The Leadership Quarterly, 25*(5), 855-864. doi:http://dx.doi.org/10.1016/j.leaqua.2014.07.002

Plaud, C., & Guillemot, S. (2015). Service interactions and subjective well-being in later life. *Journal of Services Marketing, 29*(4), 245-254. doi:10.1108/JSM-05-2014-0154

Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*(5), 879-903. doi:10.1037/0021-9010.88.5.879

Poon, J. M. L., Ainuddin, R. A., & Junit, S. O. H. (2006). Effects of self-concept traits and entrepreneurial orientation on firm performance. *International Small Business Journal, 24*(1), 61-82. doi:10.1177/0266242606059779

Pope, S., & Wæraas, A. (2016). CSR-Washing is Rare: A Conceptual Framework, Literature Review, and Critique. *Journal of Business Ethics, 137*(1), 173-193. doi:http://dx.doi.org/10.1007/s10551-015-2546-z

Probst, T. M. (2015). Organizational safety climate and supervisor safety enforcement: Multilevel explorations of the causes of accident underreporting. *Journal of Applied Psychology, 100*(6), 1899-1907. doi:http://dx.doi.org/10.1037/a0039195

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. doi:http://dx.doi.org/10.1016/j.aap.2009.06.027

Prottas, D. (2013). Relationships among employee perception of their manager's behavioral integrity, moral distress, and employee attitudes and well-being. *Journal of Business Ethics, 113*(1), 51-60. doi:10.1007/s10551-012-1280-z

Pugh, S. D., Groth, M., & Hennig-Thurau, T. (2011). Willing and able to fake emotions: A closer examination of the link between emotional dissonance and employee well-being. *Journal of Applied Psychology, 96*(2), 377-390. doi:10.1037/10318-005 http://dx.doi.org/10.1037/a0021395

Qibthiyyah, R., & Utomo, A. J. (2016). Family Matters: Demographic Change and Social Spending in Indonesia. *Bulletin of Indonesian Economic Studies, 52*(2), 133-159. doi:10.1080/00074918.2016.1211077

Quinlan, C. (2011). *Business research methods*. Andover: South-Western Cengage Learning.

Rahimnia, F., & Sharifirad, M. S. (2015). Authentic Leadership and Employee Well-Being: The Mediating Role of Attachment Insecurity. *Journal of Business Ethics, 132*(2), 363-377. doi:10.1007/s10551-014-2318-1

Raub, S., & Liao, H. (2012). Doing the right thing without being told: joint effects of initiative climate and general self-efficacy on employee proactive customer service performance. *The Journal of applied psychology, 97*(3), 651-667. doi:10.1037/a0026736

Rego, A., Sousa, F., Marques, C., & Cunha, M. P. E. (2012). Retail employees' self-efficacy and hope predicting their positive affect and creativity. *European Journal of Work and Organizational Psychology, 21*(6), 923-945.

Repetti, R. L. (1987). Individual and common components of the social environment at work and psychological well-being. *J Pers Soc Psychol, 52*(4), 710-720.

Riggs, M. L., & Knight, P. A. (1994). The impact of perceived group success -- failure on motivational beliefs and attitudes: A causal model. *Journal of Applied Psychology, 79*(5), 755-766.

Ritter, K.-J., Matthews, R. A., Ford, M. T., & Henderson, A. A. (2016). Understanding role stressors and job satisfaction over time using adaptation theory. *Journal of Applied Psychology, 101*(12), 1655-1669. doi:http://dx.doi.org/10.1037/apl0000152

Ritter, T., & Gemünden, H. G. (2003). Network competence: Its impact on innovation success and its antecedents. *Journal of business research, 56*(9), 745-755. doi:http://dx.doi.org/10.1016/S0148-2963(01)00259-4

Rose, J., Jo, R., & Brahm, N. (2014). Collective commitment and collective efficacy: a theoretical model for understanding the motivational dynamics of dilemma resolution in inter-professional work. *Cambridge journal of education, 44*(1), 59.

Rosenbusch, N., Brinckmann, J., & Bausch, A. (2011). Is innovation always beneficial? A meta-analysis of the relationship between innovation and performance in SMEs. *Journal of Business Venturing, 26*(4), 441-457. doi:http://dx.doi.org/10.1016/j.jbusvent.2009.12.002

Roussin, C. J., MacLean, T. L., & Rudolph, J. W. (2016). The Safety in Unsafe Teams: A Multilevel Approach to Team Psychological Safety. *Journal of Management, 42*(6), 1409-1433. doi:10.1177/0149206314525204

Ruiz Jiménez, M. C., Vallejo Martos, M. C., & Martínez Jiménez, R. (2015). Organisational Harmony as a Value in Family Businesses and Its Influence on Performance. *Journal of Business Ethics, 126*(2), 259-272. doi:http://dx.doi.org/10.1007/s10551-013-1941-6

Ryan, R. M., Bernstein, J. H., & Brown, K. W. (2010). Weekends, work, and well-being: Psychological need satisfactions and day of the week effects on mood, vitality, and physical symptoms. *Journal of Social & Clinical Psychology, 29*(1), 95-122.

Ryan, R. M., & Frederick, C. (1997). On energy, personality, and health: subjective vitality as a dynamic reflection of well-being. *Journal of Personality, 65*(3), 529-565. doi:10.1111/j.1467-6494.1997.tb00326.x

Salanova, M., Rodríguez-Sánchez, A. M., Schaufeli, W. B., & Cifre, E. (2014). Flowing together: a longitudinal study of collective efficacy and collective flow among workgroups. *The Journal of psychology, 148*(4), 435. doi:10.1080/00223980.2013.806290

Saunders, M., Lewis, P., & Thornhill, A. (2012). *Research methods for business students*: Pearson.

Schaubroeck, J., Lam, S. S. K., & Peng, A. C. (2011). Cognition-based and affect-based trust as mediators of leader behavior influences on team performance. *The Journal of applied psychology, 96*(4), 863-871. doi:10.1037/a0022625

Schaubroeck, J., Lam, S. S. K., & Xie, J. L. (2000). Collective efficacy versus self-efficacy in coping responses to stressors and control: A cross-cultural study. *Journal of Applied Psychology, 85*(4), 512-525. doi:10.1037/0021-9010.85.4.512

Schepers, J. J. L., Ruyter, d. J. C., Jong, d. A., & Wetzels, M. G. M. (2011). Fields of gold : perceived efficacy in virtual teams of field service employees. *Journal of Service Research, 14*(3), 372-389.

Schulte, M., Cohen, N. A., & Klein, K. J. (2010). The coevolution of network ties and perceptions of team psychological safety. *Organization Science, 23*(2), 564-581. doi:10.1287/orsc.1100.0582

Scott, S. G., & Bruce, R. A. (1994). Determinants of Innovative Behavior: A Path Model of Individual Innovation in the Workplace. *The Academy of Management Journal, 37*(3), 580-607.

Sekaran, U., & Bougie, R. (2013). *Research methods for business: a skill-building approach.* Chichester; Hoboken, N.J: Wiley.

Sherer, M., Maddux, J. E., Mercandante, B., Prentice-Dunn, S., Jacobs, B., & Rogers, R. W. (1982). The self-efficacy scale: Construction and validation. *Psychological Reports, 51*(2), 663-671.

Shin, Y., Sung, S. Y., Choi, J. N., & Kim, M. S. (2015). Top Management Ethical Leadership and Firm Performance: Mediating Role of Ethical and Procedural Justice Climate. *Journal of Business Ethics, 129*(1), 43-57. doi:http://dx.doi.org/10.1007/s10551-014-2144-5

Silva, S. l., Lima, M. L. s., & Baptista, C. (2004). OSCI: an organisational and safety climate inventory. *Safety Science, 42*(3), 205-220. doi:http://dx.doi.org/10.1016/S0925-7535(03)00043-2

Simonet, D. V., Narayan, A., & Nelson, C. A. (2015). A Social-Cognitive Moderated Mediated Model of Psychological Safety and Empowerment. *The Journal of psychology, 149*(8), 818-845. doi:10.1080/00223980.2014.981496

Singh, B., Winkel, D. E., & Selvarajan, T. T. (2013). Managing diversity at work: Does psychological safety hold the key to racial differences in employee performance? *Journal of Occupational and Organizational Psychology, 86*(2), 242-263. doi:10.1111/joop.12015

Smallman, C., & John, G. (2001). British directors perspectives on the impact of health and safety on corporate performance. *Safety Science, 38*(3), 227-239.

Smith, I. H., & Woodworth, W. P. (2012). Developing social entrepreneurs and social innovators: A social identity and self-efficacy approach. *11*, 390-407.

Snow, C. C., & Hrebiniak, L. G. (1980). Strategy, Distinctive Competence, and Organizational Performance. *Administrative Science Quarterly, 25*(2), 317-336.

Sonnentag, S., Binnewies, C., & Mojza, E. J. (2010). Staying well and engaged when demands are high: The role of psychological detachment. *Journal of Applied Psychology, 95*(5), 965-976. doi:http://dx.doi.org/10.1037/a0020032

Spanjol, J., Tam, L., & Tam, V. (2015). Employer–Employee Congruence in Environmental Values: An Exploration of Effects on Job Satisfaction and Creativity. *Journal of Business Ethics, 130*(1), 117-130. doi:10.1007/s10551-014-2208-6

Sparks, K., Faragher, B., & Cooper, C. L. (2001). Well-being and occupational health in the 21st century workplace. *Journal of Occupational & Organizational Psychology, 74*(4), 489.

Stajkovic, A. D., & Fred, L. (1998). Social cognitive theory and self-efficacy: Going beyond traditional motivational and behavioral approaches. *Organizational Dynamics, 26*(4), 62.

Stajkovic, A. D., Lee, D., & Nyberg, A. J. (2009). Collective efficacy, group potency, and group performance: Meta-analyses of their relationships, and test of a mediation model. *Journal of Applied Psychology, 94*(3), 814-828. doi:http://dx.doi.org/10.1037/a0015659

Stam, W., Arzlanian, S., & Elfring, T. (2013). Social capital of entrepreneurs and small firm performance: A meta-analysis of contextual and methodological moderators. *Journal of Business Venturing*(0). doi:http://dx.doi.org/10.1016/j.jbusvent.2013.01.002

Stetz, T. A., Stetz, M. C., & Bliese, P. D. (2006). The importance of self-efficacy in the moderating effects of social support on stressor–strain relationships. *Work & Stress, 20*(1), 49-59. doi:10.1080/02678370600624039

Stevens, C. K., Bavetta, A. G., & Gist, M. E. (1993). Gender differences in the acquisition of salary negotiation skills: The role of goals, self-efficacy, and perceived control. *Journal of Applied Psychology, 78*(5), 723-735. doi:0022-3514/89/$00.75

http://dx.doi.org/10.1037/0021-9010.78.5.723

Stiglbauer, B., Selenko, E., Batinic, B., & Jodlbauer, S. (2012). On the link between job insecurity and turnover intentions: Moderated mediation by work involvement and well-being. *Journal of Occupational Health Psychology, 17*(3), 354-364. doi:10.1037/a0028565

Su, L., Swanson, S. R., & Chen, X. (2016). The effects of perceived service quality on repurchase intentions and subjective well-being of Chinese tourists: The mediating role of relationship quality. *Tourism Management, 52*, 82-95. doi:http://dx.doi.org/10.1016/j.tourman.2015.06.012

Sue-Chan, C., & Ong, M. (2002). Goal assignment and performance: Assessing the mediating roles of goal commitment and self-efficacy and the moderating role of power distance. *Organizational behavior and human decision processes, 89*(2), 1140-1161. doi:10.1016/S0749-5978(02)00017-1

Sue, V. M., & Ritter, L. A. (2012). *Conducting online surveys* (Vol. 2nd). Los Angeles, [Calif.];London;: SAGE.

Tabachnick, B. G., & Fidell, L. S. (2013). *Using multivariate statistics*. Boston: Pearson.

Tadjoeddin, M. Z. (2016). Productivity, wages and employment: evidence from the Indonesia's manufacturing sector. *Journal of the Asia Pacific Economy, 21*(4), 489-512. doi:10.1080/13547860.2016.1153227

Tangirala, S., Kamdar, D., Venkataramani, V., & Parke, M. R. (2013). Doing right versus getting ahead: The effects of duty and achievement orientations on employees' voice. *Journal of Applied Psychology, 98*(6), 1040-1050. doi:http://dx.doi.org/10.1037/a0033855

Tasa, K., & Sears, G. J. (2011). Personality and teamwork behavior in context: the cross-level moderating role of collective efficacy. *Journal of Organizational Behavior, 32*(1), 65-85.

Tasa, K., Taggar, S., & Seijts, G. H. (2007). The development of collective efficacy in teams: A multilevel and longitudinal perspective. *Journal of Applied Psychology, 92*(1), 17-27. doi:0022-3514/89/$00.75 http://dx.doi.org/10.1037/0021-9010.92.1.17

Tierney, P., & Farmer, S. M. (2002). Creative self-efficacy: Its potential antecedents and relationship to creative performance. *The Academy of Management Journal, 45*(6), 1137-1148.

Tomas, J. M., Melia, J. L., & Oliver, A. (1999). A cross-validation of a structural equation model of accidents: organizational and psychological variables as predictors of work safety. *Work & Stress, 13*(1), 49-58. doi:10.1080/026783799296183

Törner, M. (2011). The "social-physiology" of safety. An integrative approach to understanding organisational psychological mechanisms behind safety performance. *Safety Science, 49*(8–9), 1262-1269. doi:http://dx.doi.org/10.1016/j.ssci.2011.04.013

Truss, C., Shantz, A., Soane, E., Alfes, K., & Delbridge, R. (2013). Employee engagement, organisational performance and individual well-being: exploring the evidence, developing the theory. *The International Journal of Human Resource Management, 24*(14), 2657-2669.

Tsai, K.-h., & Hsieh, M.-h. (2011). External technology acquisition and product innovativeness: the moderating roles of R&D investment and configurational context. *Journal of Engineering and Technology Management, 28*(3), 184-200. doi:10.1016/j.jengtecman.2011.03.005

Tu, Y., & Lu, X. (2016). Do Ethical Leaders Give Followers the Confidence to Go the Extra Mile? The Moderating Role of Intrinsic Motivation. *Journal of Business Ethics, 135*(1), 129-144. doi:http://dx.doi.org/10.1007/s10551-014-2463-6

Tucker, A. L., Nembhard, I. M., & Edmondson, A. C. (2007). Implementing new practices: An empirical study of organizational learning in hospital intensive care units. *Management Science, 53*(6), 894-907.

Tynan, R. (2005). The effects of threat sensitivity and face giving on dyadic psychological safety and upward communication1. *Journal of Applied Social Psychology, 35*(2), 223-247. doi:10.1111/j.1559-1816.2005.tb02119.x

Uthayakumar, R., Schimmack, U., Hartung, P. J., & Rogers, J. R. (2010). Career decidedness as a predictor of subjective well-being. *Journal of Vocational Behavior, 77*(2), 196-204. doi:http://dx.doi.org/10.1016/j.jvb.2010.07.002

Van de Ven, A. H., Rogers, R. W., Bechara, J. P., & Kangyong, S. (2008). Organizational diversity, integration and performance. *Journal of Organizational Behavior, 29*(3), 335-354. doi:10.1002/job.511

Van De Voorde, K., Paauwe, J., & Van Veldhoven, M. (2012). Employee well-being and the hrm–organizational performance relationship: A review of quantitative studies. *International Journal of Management Reviews, 14*(4), 391-407. doi:10.1111/j.1468-2370.2011.00322.x

Van den Broeck, A., Ferris, D. L., Chang, C.-H., & Rosen, C. C. (2016). A Review of Self-Determination Theory's Basic Psychological Needs at Work. *Journal of Management, 42*(5), 1195-1229. doi:10.1177/0149206316632058

van Ginkel, W. P., & van Knippenberg, D. (2008). Group information elaboration and group decision making: The role of shared task representations. *Organizational behavior and human decision processes, 105*(1), 82-97. doi:10.1016/j.obhdp.2007.08.005

Venkatraman, N., & Ramanujam, V. (1986). Measurement of business performance in strategy research: A comparison of approaches. *Academy of Management Review, 11*(4), 801-814. doi:10.5465/amr.1986.4283976

Wachter, J. K., & Yorio, P. L. (2013). A system of safety management practices and worker engagement for reducing and preventing accidents: An empirical and theoretical investigation. *Accident Analysis & Prevention*(0). doi:http://dx.doi.org/10.1016/j.aap.2013.07.029

Walker, A., & Hutton, D. M. (2006). The application of the psychological contract to workplace safety. *Journal of Safety Research, 37*(5), 433-441. doi:http://dx.doi.org/10.1016/j.jsr.2006.06.001

Wallace, J. C., & Chen, G. (2005). Development and validation of a work-specific measure of cognitive failure: Implications for occupational safety. *Journal of Occupational and Organizational Psychology, 78*(4), 615-632.

Walumbwa, F. O., Mayer, D. M., Wang, H., Wang, P., Workman, K., & Christensen, A. L. (2011). Linking ethical leadership to employee performance: The roles of leader–member exchange, self-efficacy, and organizational identification. *Organizational behavior and human decision processes, 115*(2), 204-213. doi:10.1016/j.obhdp.2010.11.002

Walumbwa, F. O., & Schaubroeck, J. (2009). Leader personality traits and employee voice behavior: Mediating roles of ethical leadership and work group psychological safety. *Journal of Applied Psychology, 94*(5), 1275-1286.

Wang, C.-J., Tsai, H.-T., & Tsai, M.-T. (2014). Linking transformational leadership and employee creativity in the hospitality industry: The influences of creative role identity, creative self-efficacy, and job complexity. *Tourism Management, 40*, 79-89. doi:10.1016/j.tourman.2013.05.008

Wang, C. L., Senaratne, C., & Rafiq, M. (2015). Success Traps, Dynamic Capabilities and Firm Performance. *British Journal of Management, 26*(1), 26-44. doi:10.1111/1467-8551.12066

Wang, R.-t. (2013). Modeling Corporate Social Performance and Job Pursuit Intention: Mediating Mechanisms of Corporate Reputation and Job Advancement Prospects. *Journal of Business Ethics, 117*(3), 569-582. doi:http://dx.doi.org/10.1007/s10551-012-1538-5

Wang, R.-t., & Lin, C.-p. (2012). Understanding innovation performance and its antecedents: a socio-cognitive model. *Journal of Engineering and Technology Management, 29*(2), 210-225.

Wang, Y., & Berens, G. (2015). The Impact of Four Types of Corporate Social Performance on Reputation and Financial Performance. *Journal of Business Ethics, 131*(2), 337-359. doi:http://dx.doi.org/10.1007/s10551-014-2280-y

Wei, Y., Samiee, S., & Lee, R. P. (2014). The influence of organic organizational cultures, market responsiveness, and product strategy on firm performance in an emerging market. *Academy of Marketing Science. Journal, 42*(1), 49-70. doi:http://dx.doi.org/10.1007/s11747-013-0337-6

Weichbrodt, J. (2015). Safety rules as instruments for organizational control, coordination and knowledge: Implications for rules management. *Safety Science, 80*, 221-232. doi:http://dx.doi.org/10.1016/j.ssci.2015.07.031

Williamson, A. M., Feyer, A.-M., Cairns, D., & Biancotti, D. (1997). The development of a measure of safety climate: The role of safety perceptions and attitudes. *Safety Science, 25*(1), 15-27.

Witte, H. D. (1999). Job insecurity and psychological well-being: Review of the literature and exploration of some unresolved issues. *European Journal of Work and Organizational Psychology, 8*(2), 155-177. doi:10.1080/135943299398302

Wong, C. Y., Boon-itt, S., & Wong, C. W. Y. (2011). The contingency effects of environmental uncertainty on the relationship between supply chain integration and operational performance. *Journal of Operations Management, 29*(6), 604-615. doi:10.1016/j.jom.2011.01.003

Wood, R., & Bandura, A. (1989). Social cognitive theory of organizational management. *Academy of Management Review, 14*(3), 361-384. doi:10.5465/AMR.1989.4279067

Wood, S., Braeken, J., & Niven, K. (2013). Discrimination and Well-Being in Organizations: Testing the Differential Power and Organizational Justice Theories of Workplace Aggression. *Journal of Business Ethics, 115*(3), 617-634. doi:10.1007/s10551-012-1404-5

Worcester, R. (2009). Reflections on corporate reputations. *Management Decision, 47*(4), 573-589. doi:http://dx.doi.org/10.1108/00251740910959422

Wright, T. A., & Huang, C. C. (2012). The many benefits of employee well-being in organizational research. *Journal of Organizational Behavior, 33*(8), 1188-1192.

Wu, I.-L., & Chang, C.-H. (2012). Using the balanced scorecard in assessing the performance of e-SCM diffusion: A multi-stage perspective. *Decision Support Systems, 52*(2), 474-485. doi:http://dx.doi.org/10.1016/j.dss.2011.10.008

Wu, J. B., Tsui, A. S., & Kinicki, A. J. (2010). Consequences of differentiated leadership in groups. *Academy of Management Journal, 53*(1), 90-106.

Wu, T.-C., Chen, C.-H., & Li, C.-C. (2008). A correlation among safety leadership, safety climate and safety performance. *Journal of Loss Prevention in the Process Industries, 21*(3), 307-318.

Xu, A. J., Loi, R., & Ngo, H.-y. (2016). Ethical Leadership Behavior and Employee Justice Perceptions: The Mediating Role of Trust in Organization. *Journal of Business Ethics, 134*(3), 493-504. doi:http://dx.doi.org/10.1007/s10551-014-2457-4

Yan, Y., Davison, R. M., & Mo, C. (2013). Employee creativity formation: The roles of knowledge seeking, knowledge contributing and flow experience in Web 2.0 virtual communities. *Computers in Human Behavior, 29*(5), 1923-1932. doi:10.1016/j.chb.2013.03.007

Yang, S., & Kang, H.-H. (2008). Is synergy always good? Clarifying the effect of innovation capital and customer capital on firm performance in two contexts. *Technovation, 28*(10), 667-678. doi:http://dx.doi.org/10.1016/j.technovation.2008.01.004

Yoon, J., & Christopher Kayes, D. (2016). Employees' self-efficacy and perception of individual learning in teams: The cross-level moderating role of team-learning behavior. *Journal of Organizational Behavior*, n/a-n/a. doi:10.1002/job.2092

Youssef-Morgan, C. M., & Luthans, F. (2015). Psychological capital and well-being. *Stress and Health, 31*(3), 180-188. doi:10.1002/smi.2623

Zanko, M., & Dawson, P. (2012). Occupational health and safety management in organizations: A review. *International Journal of Management Reviews, 14*(3), 328-344. doi:10.1111/j.1468-2370.2011.00319.x

Zhang, X., & Bartol, K. M. (2010). Linking empowering leadership and employee creativity: the influence of psychological empowerment, intrinsic motivation, and creative process engagement. *Academy of Management Journal, 53*(1), 107-128.

Zhang, Y., Fang, Y., Wei, K.-K., & Chen, H. (2010). Exploring the role of psychological safety in promoting the intention to continue sharing knowledge in virtual communities. *International Journal of Information Management, 30*(5), 425-436.

Zheng, X., Zhu, W., Zhao, H., & Zhang, C. (2015). Employee well-being in organizations: Theoretical model, scale development, and cross-cultural validation. *Journal of Organizational Behavior, 36*(5), 621-644. doi:10.1002/job.1990

Zhong, L., Wayne, S. J., & Liden, R. C. (2016). Job engagement, perceived organizational support, high-performance human resource practices, and cultural value orientations: A cross-level investigation. *Journal of Organizational Behavior, 37*(6), 823-844. doi:10.1002/job.2076

Zhou, J., & George, J. M. (2001). When job dissatisfaction leads to creativity: Encouraging the expression of voice. *The Academy of Management Journal, 44*(4), 682-696.

Zhu, H., Wang, P., & Bart, C. (2016). Board Processes, Board Strategic Involvement, and Organizational Performance in For-profit and Non-profit Organizations. *Journal of Business Ethics, 136*(2), 311-328. doi:http://dx.doi.org/10.1007/s10551-014-2512-1

Zhu, Y.-Q., Gardner, D. G., & Chen, H.-G. (2016). Relationships Between Work Team Climate, Individual Motivation, and Creativity. *Journal of Management*. doi:10.1177/0149206316638161

Zoghbi-manrique-de-lara, P., & Suárez-acosta, M. A. (2014). Employees' Reactions to Peers' Unfair Treatment by Supervisors: The Role of Ethical Leadership. *Journal of Business Ethics, 122*(4), 537-549. doi:http://dx.doi.org/10.1007/s10551-013-1778-z

APPENDIX 1 Questionnaire

Confidential Questionnaire

1 June, 2014

I am Abror, a PhD student of University of Hull UK. For my PhD dissertation, I am conducting a research which is related to the employee's working environment and organization's performance in Indonesia. This research explores employees' safety conditions, employees' self-confident and their impact on the organization's performance. Research on this relationship is neglected especially in the Indonesia's business context. Thus, this study will help our understanding of the above issues and will provide insights to managers and policy makers for business development and support.

Please complete this online questionnaire at your earliest convenience. This study cannot be completed without your assistance and support in this survey. If you are personally unable to complete some parts of the questionnaire (e.g. financial performance such as company's sales revenue, etc) would you please to ask a colleague with relevant knowledge? Your company has been randomly selected. I ensure that all answers are confidential and anonymous. Indeed, your name will not be revealed at any stage of this research.

If you are interested in receiving a summary finding report of this research and if you have any concerns please email me at abror094@gmail.com , A.Abror@2012.hull.ac.uk or contact me at +447449825941, +628153501640.

Thank you in advance. I deeply appreciate your cooperation and valuable contributions.

Yours Sincerely,

Abror,

PhD candidate at Business School
University of Hull, Cottingham Rd, Hull, HU6 7RX UK
abror094@gmail.com , A.Abror@2012.hull.ac.uk or contact me at +447449825941, +628153501640.

Please indicate your agreement or disagreement level with each of the following statements. Circle a number from 1 to 5 to indicate the extent to which you disagree or agree with the statement *where 1 = Strongly Disagree and 5 = Strongly Agree*

ITEM	Strongly Disagree				Strongly Agree
I keep my working area clean during my working hours	1	2	3	4	5
I keep my working area tidy during my working hours	1	2	3	4	5
My company provides safety audits regularly	1	2	3	4	5
My company takes actions for unsafe working behaviours of his/her employees	1	2	3	4	5
I get a formal safety training from my company before starting my job	1	2	3	4	5
My company has work safety procedures to be followed by its employees	1	2	3	4	5
My company never forces me to do overtime job	1	2	3	4	5
I never get pressure to put production before safety	1	2	3	4	5
I employ correct safety procedures for carrying out my job	1	2	3	4	5
My company provides good health care programmes for the employees	1	2	3	4	5
My company provides a comfortable room for working	1	2	3	4	5
My company provides good air circulation and lighting in my working area	1	2	3	4	5

ITEM	Strongly Disagree				Strongly Agree
I am confident to be myself at work	1	2	3	4	5
I am confident to give some opinions about the job to my co-workers	1	2	3	4	5
I am confident to give some opinions about the job to my line manager	1	2	3	4	5
I feel safe from physical hazards at my job site	1	2	3	4	5
I believe that my company will respect my abilities	1	2	3	4	5
I believe that my company reacts quickly to my concerns regarding safety	1	2	3	4	5
I am confident with my ability in controlling my emotion at work (e.g., angry, sad, etc.)	1	2	3	4	5
I am confident that I have good health conditions to perform my job	1	2	3	4	5
I feel that I can express myself and add value to projects.	1	2	3	4	5

Please indicate your agreement or disagreement level with each of the following statements. Circle a number from 1 to 5 to indicate the extent to which you disagree or agree with the statement *where 1 = Strongly Disagree and 5 = Strongly Agree*

ITEM	Strongly Disagree				Strongly Agree
My company helps me to solve my personal conflict with other team members	1	2	3	4	5
My company tends to talk down to me and other employees	1	2	3	4	5
My company praises my safety work behaviours	1	2	3	4	5
My company encourages me to develop new skills	1	2	3	4	5
My company encourages me and other employees to participate in making important decisions	1	2	3	4	5
My company gives more attentions on employee's safety than productivity	1	2	3	4	5
My supervisor serves as a good work model for me	1	2	3	4	5
My co-workers help me to solve my work problems	1	2	3	4	5
I can communicate freely/openly with my co-workers	1	2	3	4	5
My co-workers value my inputs	1	2	3	4	5
My co-workers encourage me to improve my skills	1	2	3	4	5
I feel a real kinship with my co-workers	1	2	3	4	5
My company never treat me differently because of my gender.	1	2	3	4	5
My company never treat me differently because of my religion	1	2	3	4	5
My company never treat me differently because of my ethnicity.	1	2	3	4	5
My company supports me to create new ideas	1	2	3	4	5
My company gives me reward when I found an innovative way	1	2	3	4	5

ITEM	Strongly Disagree				Strongly Agree
My team members has never blamed me when I make a mistake at work	1	2	3	4	5
My team members are able to solve the job related problems	1	2	3	4	5
I will not be rejected by my team when being different	1	2	3	4	5
My team members support my decision that is related to my job.	1	2	3	4	5
My team members support each other	1	2	3	4	5
I have not received any threatening behaviour from my team members	1	2	3	4	5
My team members appreciate every unique skills and talents	1	2	3	4	5

Please indicate your agreement or disagreement level with each of the following statements. Circle a number from 1 to 5 to indicate the extent to which you disagree or agree with the statement *where 1 = Strongly Disagree and 5 = Strongly Agree*

ITEM	Strongly Disagree				Strongly Agree
My team has a better ability in executing a job than other teams	1	2	3	4	5
My team members have good skills to complete our projects successfully	1	2	3	4	5
My team members are committed to get punishment when make a mistake in doing our job	1	2	3	4	5
My team always meets the deadlines of the job	1	2	3	4	5
All my team members do our job effectively	1	2	3	4	5
My team is capable to solve more challenging problems in our project	1	2	3	4	5
My team is able to allocate and integrate available resources (e.g., skills and networks) to perform the tasks well	1	2	3	4	5
My team can resolve crises without having negative after effects.	1	2	3	4	5
The overall goals are more important for my team than our personal ones.	1	2	3	4	5
My team generated better ideas than I could have on my own	1	2	3	4	5
People in my team are particularly good at realizing ideas.	1	2	3	4	5

ITEM	Strongly Disagree				Strongly Agree
My job abilities are similar to my job requirements	1	2	3	4	5
I always try to learn new things in my job even though they look seem to be difficult for me	1	2	3	4	5
I am confident with my skills and abilities compare to my colleagues'	1	2	3	4	5
I can handle all of my job effectively	1	2	3	4	5
I am capable of handling more challenging job than my current job	1	2	3	4	5
I am able to mobilize available resources so I can perform my individual tasks well	1	2	3	4	5
I remain calm when dealing with difficulties	1	2	3	4	5
I can overcome many challenges successfully	1	2	3	4	5
I feel very energetic during my working hours	1	2	3	4	5
I have energy and spirit to work hard	1	2	3	4	5
I always find new and interesting aspects in my job.	1	2	3	4	5
I am happy when I work intensely	1	2	3	4	5

Please indicate your agreement or disagreement level with each of the following statements. Circle a number from 1 to 5 to indicate the extent to which you disagree or agree with the statement *where 1 = Strongly Disagree and 5 = Strongly Agree*

ITEM	Strongly Disagree				Strongly Agree
I am confident with my creative abilities to perform my job successfully	1	2	3	4	5
I am capable of handling more challenging job creatively	1	2	3	4	5
I am confident to solve my problems creatively.	1	2	3	4	5
I try to find an innovative way to perform my job	1	2	3	4	5
I am easy to adapt new ideas	1	2	3	4	5
Compared to other people, I can do most tasks very creatively	1	2	3	4	5
I demonstrate new way in my job	1	2	3	4	5
I develop adequate plans and schedules to implement new ideas.	1	2	3	4	5
I suggest innovative ideas to my manager	1	2	3	4	5
I get excited by new ideas	1	2	3	4	5
I spend considerable time in generating new ideas	1	2	3	4	5
I have fresh perspectives on old problems	1	2	3	4	5
I improve methods for solving a problem when an answer is not apparent	1	2	3	4	5
My company has got high sales revenue in the last year	1	2	3	4	5
My company achieved a high net income in the last year	1	2	3	4	5
My company has got high market share in the last year	1	2	3	4	5
Overall efficiency of operations in my company is better than competitors'	1	2	3	4	5

Please indicate your agreement or disagreement level with each of the following statements. Circle a number from 1 to 5 to indicate the extent to which you disagree or agree with the statement *where 1 = Strongly Disagree and 5 = Strongly Agree*

ITEM	Strongly Disagree				Strongly Agree
My company has got high customer satisfaction in the last year	1	2	3	4	5
My company has got lower customer complaint rate in last year's	1	2	3	4	5
My company has got good corporate image	1	2	3	4	5
My company's reputation is better than the competitors'	1	2	3	4	5
My company is more adaptive to new market threats than the competitors	1	2	3	4	5
My company tries out new ideas and approaches to problems	1	2	3	4	5
This year, my company's labour turnover is lower than last year's	1	2	3	4	5
This year, my productivity is better than last year's	1	2	3	4	5
This year, my absenteeism rate is lower than last year's	1	2	3	4	5
This year, the total company's work accidents is lower than last year's	1	2	3	4	5
This year, the total of company's medical cost is lower than last year's	1	2	3	4	5
I am satisfied with my financial conditions	1	2	3	4	5
I never feel stressed to do my job in this company	1	2	3	4	5
I try out new ideas and approaches to solve my work problems	1	2	3	4	5
I will not quit from this company	1	2	3	4	5
I am not frustrated with my job in this company	1	2	3	4	5
Overall, I am satisfied with my job	1	2	3	4	5

This section asks about general information. Please tick suitable option in the blank box.

1. Sex: Male   Female

☐   ☐

2. Position at the company:

Manager   Employee

☐   ☐

3. Level of Education that you have completed:

High School   Bachelor Degree   Master Degree   PhD

☐   ☐   ☐   ☐

4. Working experiences:

2-5 Years   6-10 Years   More than10 Years

☐   ☐   ☐

5. Your Age

Less than20 Years   20-40 Years   41-55 Years   More than 56 Years

☐   ☐   ☐   ☐

6. Monthly personal income (in Rupiah)

Less than 5 million   5-15 million   15.1 – 30 million   More than
30 million

☐   ☐   ☐   ☐

7. Company Age

5-10 Years   11-15 Years   More than 15 Years

☐   ☐   ☐

8. Industry's Classification based on JASICA (Jakarta Stock Exchange Industrial Classification)

Primary Industry	Manufacture Industry	Service Industry
(Agriculture & Mining)		
☐	☐	☐

Thank you for your participation. If you are interested in receiving a summary finding report of this research and if you have any concerns please email me at abror094@gmail.com , A.Abror@2012.hull.ac.uk or contact me at +447449825941, +628153501640

APPENDIX 2 Measurement Model Indices

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	138	570.970	390	.000	1.464
Saturated model	528	.000	0		
Independence model	32	5075.476	496	.000	10.233

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.034	.864	.816	.639
Saturated model	.000	1.000		
Independence model	.210	.223	.173	.209

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.888	.857	.961	.950	.960
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.046	.037	.054	.801
Independence model	.204	.199	.210	.000

APPENDIX 3 Structural Model Indices

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	40	31.310	26	.217	1.204
Saturated model	66	.000	0		
Independence model	11	703.289	55	.000	12.787

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.022	.975	.936	.384
Saturated model	.000	1.000		
Independence model	.158	.469	.363	.391

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.955	.906	.992	.983	.992
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.473	.452	.469
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Default model	5.310	.000	23.594
Saturated model	.000	.000	.000
Independence model	648.289	566.450	737.565

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	.142	.024	.000	.107
Saturated model	.000	.000	.000	.000
Independence model	3.182	2.933	2.563	3.337

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.030	.000	.064	.803
Independence model	.231	.216	.246	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	111.310	115.903	247.417	287.417
Saturated model	132.000	139.579	356.577	422.577
Independence model	725.289	726.552	762.718	773.718

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	.504	.480	.586	.524
Saturated model	.597	.597	.597	.632
Independence model	3.282	2.912	3.686	3.288

HOELTER

Model	HOELTER .05	HOELTER .01
Default model	275	323
Independence model	24	26