Combining Self-Efficacy and Employee Friendly Workplace to Generate Innovative Work Behavior: Evidence from Telecommunication Industry

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Abstract: In this current knowledge-intensive economy, especially for technology based companies, it is very important to understand what determines employee creativity since it is a primary source for corporate innovation. Innovation is a key word in the telecommunications industry, where technology development can change market demand and change the habits of telecommunication service users. We focus on innovation work behavior as an antecedent of job satisfaction. Based on personal/ individual factor and environmental factor, we propose two determinants of innovative work behavior that help us to understand how self-efficacy and employee friendly workplace can evolve to facilitate job satisfaction outcomes. We propose that self-efficacy and employee friendly workplace positively affect job satisfaction by creating an innovative work behavior. A 245-employee sample is used to analyze the theoretical model variables' relationship to innovative work behavior that can change its values to create job satisfaction. The results support the theoretical model, and lead to some implications for the management practice.

Index Terms: Employee Friendly Workplace, Human Resource Management, Innovative Work Behavior, Self-Efficacy, Strategic Management.

I. INTRODUCTION

"Innovation is the only way to win" – Steve Jobs, CEO of Apple Inc. (1976 – 2011)

Innovation is an important factor to achieve competitive advantage. Accordingly, the number of scholarly works dealing with innovation has increased tremendously over the last decades (Adhikari, Choi & Sah, 2016; Cefis & Marsili, 2006; Chen, Leung & Evans, 2016; Marvel & Lumpkin, 2007; Minh, Badir, Ngoc & Afsar, 2016; Spanuth & Wald, 2017). Companies must always innovate to remain competitive and survive in the long run (Cefis & Marsili, 2006; Smith & Tushman, 2005).

In the telecommunications industry, where technology always changes the market and competition, innovation is the keyword. The competition in today's market and the emerging threats of new competitors from the results of new technology require continuous differentiation and innovation

from the organization. There are revenue shifting from revenue sms service (short message service) and voice call to data driven service. Increasing competition in an industry based on intensive knowledge, especially for technology companies makes innovation as a key to survive. Accordingly, innovation and creativity of employees who are the main source of corporate innovation are important factors of concern (Chen, Chang & Chang, 2015). The rapid technological change, social context and cognition of personnel have challenged the conventional design of optimal working conditions in technology-intense organizations (Castro, Delgado-verde, Navas-lópez & Cruz-gonzález, 2013; Shirahada & Hamazaki, 2013).

Creativity is generally described as a generation of new and useful ideas (Amabile, 1983; 1996; Amabile, Conti, Coon, Lazenby & Herron, 1996). Creativity is defined as the production of new and useful ideas about products, services, processes, procedures, and solutions to business problems (Amabile, 1996; Oldham & Cummings, 1996; Zhou & Shalley, 2003). Creativity, which usually indicate itself in corporate strategy as a whole and is a source of competitive advantage, is related to the efficiency and performance of individual employees (Amabile, Schatzel, Moneta & Kramer, 2004; Gong, Huang & Farh, 2009; Hon, 2012; Shirahada & Hamazaki, 2013). The importance of employee creativity has been known by many scientists and practitioners across industry sectors (Borovskaia & Dedova, 2014; Kattara & El-Said, 2014; Lin & Wong, 2014; Wong & Ladkin, 2008).

According to some practitioners and scientists, the innovations generated by the company are closely linked to innovations made by individuals (De Jong & Den Hartog, 2007; Janssen, 2000). A worker can innovate well because it is part of their job description or by expressing innovative work behavior voluntarily. Katz (1964, p.132) argues that an organization that relies only on the blueprint of the prescribed behavior is a very fragile social system and that the organization depends on voluntary innovative and spontaneous behavior (actions not determined by a role or position), which facilitates the fulfillment of organizational goals. Innovative work behavior refers to behaviors that include either the

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generation or the introduction of new ideas (either by someone or adopted from others) and the realization or application of new ideas in the workplace (Yuan & Woodman, 2010). However, not only employee related factors are considered an important aspect of generating innovation, but also the surrounding work environment.

The current paradigm of innovation can be all forms, products, services, processes, and methods of work, organization, commercial and strategy that are the result of human thought and creativity. Therefore, innovation and all its derivatives are not only related to the part that performs technological or scientific work, but innovation can be done by all parts of the company, such as finance, human resources, corporate strategy. Existing research has indicated that innovation cannot be defined by only high-level factors, such as strategy, and organizational culture, but closer to low-level factors such as employee affective behavior (personal motivation, commitment) and performance (one's cognitive skills, task ability) as well important (Anderson, de Dreu & Nijstad, 2004; Bunce & West, 1995; Mumford, Scott, Gaddis & Strange, 2002; Scott & Bruce; 1994; Yuan & Woodman, 2010). In addition to individual factors employees, work environment factors also become an important aspect in creating innovation within organization. In this research, we investigate two relationships, first relationship between the employee's self-efficacy and employee innovative work behavior, this relationship represents the individual factor from employee. Second, relationship between perceived employee friendly workplace and employee innovative work behavior, this relationship represents environment factor that may be supported innovation behavior.

II. LITERATURE REVIEW

A. Innovative Work Behavior (IWB)

The terminology of innovative work behavior describes a person's abilities in a role, group or whole organization to generate, promote and realize ideas, products and services (De Jong & Den Hartog, 2010; Janssen, 2000). Innovative work behaviors exceed normal work expectations and roles (Seibert, Kraimer & Crant, 2001), this is often associated with so-called extra-role behavioral groups (Katz, 1964; Katz & Kahn, 1978). From the literatures, we can find several other concepts that are closely related to innovative work behaviors (Abstein, Heidenreich & Spieth, 2014) such as employee innovation (Huhtala & Parzefall, 2007; West, 2002) innovative work performance (Hammond, Neff, Farr, Schwall & Zhao, 2011; Janssen, 2001) and innovation on the job (Dorenbosch, van Engen & Verhagen, 2005, Same et al., 2018).

The basis of innovation is the idea and is the employee who develops, brings, reacts to, modifies and implements ideas (Janssen, 2000). The organizational environment in knowledge-based industries, for example, telecommunications, is a very dynamic environment (Shih & Susanto, 2011) where work activities tend to involve complex non-standard and non-routine tasks (Slusher, Dyke

& Rose, 1972; Zhang & Bartol, 2010). Organizational routines may not respond quickly to rapid technological changes, or often experience technical problems that require quick and creative solutions at work. Therefore, employees in these industries need to develop, support, and implement new methods, approaches or procedures (Shih & Susanto, 2011) to address challenges in their work environment in day to day operation. They should be able to perform tasks that beyond routines that have been established for teams, groups, or organizations. They may look for new technology, suggest new ways to achieve goals, execute new work methods, and investigate and secure resources for implementing new ideas (Yuan & Woodman, 2010). These activities are defined to as innovative work behaviors that are defined as the introduction or application of new ideas, products, processes and procedures from employees, work units or organizations, to gain performance roles from groups, or organizations (Janssen, 2000; De Jong & Den Hartog, 2010; Yuan & Woodman, 2010). Research held by Carmeli, Palmon, and Ziv (2010) determined that an employee's innovative behavior is the foundation of a high-performing organization.

In this study, employee's innovative work behavior is defined as a complex process that combines creativity and application of ideas (Janssen, 2000; 2004). This innovative work attitude consists of four dimensions: exploration of ideas, generation ideas, fighting for ideas, and implementation of ideas (De Jong & Den Hartog, 2010). Exploration of ideas involves finding new ways to improve existing products, services or processes or trying to find better alternatives. Idea generation may relate to new products, services or processes, enter new markets, improvements in current work processes, or generally is solutions to identified problems. Striving an idea is defined as an individual who appears to take creative ideas (ideas can come from self or ideas that come from others) and raise the idea back in work discourse (Howell & Higgins, 1990). The ideas need to be promoted because they do not match what has been used in their work groups or organizations. This process includes mobilizing resources, persuading, influencing, encouraging, negotiating, challenging the status quo and taking risks (Kleysen & Street, 2001). Finally, in the last process, the idea needs to be implemented. This process is a considerable effort and is a results-oriented attitude needed to make ideas into products, processes or services. Implementation of ideas also includes innovative changes from regular work processes and behaviors, such as developing new products or work processes, and testing and modifying them (De Jong & Den Hartog, 2010; Kanter, 1988; Kleysen & Street, 2001).

Human behavior is highly dependent of individual factors namely ability and willingness; and also, environmental factors (Mete, Sokmen & Biyik, 2016). Therefore, in this study, the antecedent factor of innovative working behavior is the individual factor is the core self-confidence; and environmental factors are represented perceived employee friendly workplace

(organizational factors). Innovation by employees uses their knowledge and skills in a creative way for resources for the benefit of the companies involved (Lusch & Nambisan, 2015). Performance of work performed under the control of individuals and contributions to organizational goals (Rotundo & Sackett 2002). Because employee performance has wide meaning and there are many kinds of behavior that can contribute to organizational purpose, hence in this research which is meant by employee performance is job satisfaction on contribution of organization purpose. Therefore, our model is shown in Fig. 1.
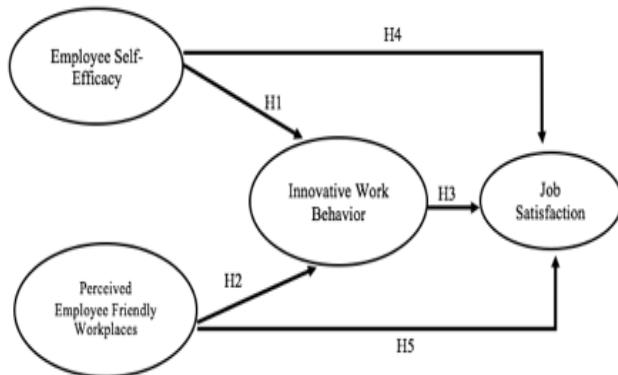

Fig. 1: Research Model

B. Employee Self-Efficacy and Innovative Work Behavior (IWB)

Self-efficacy refers to the construct of properties embedded in four characters: self-esteem, general self-efficacy, emotional adjustment, and locus of control (Chang, Ferris, Johnson, Rosen & Tan, 2012; Judge, Erez, Bono & Thoresen, 2003; Judge, Locke & Durham, 1997). First, self-esteem refers to an evaluation made by the individual and is traditionally related to himself (Coopersmith, 1967), since self-esteem is the total value one has as a person (Harter, 1990). Judge, Erez, and Bono (1998) assume it as the most basic inner evaluation of the self. Second, the general self-efficacy, as mentioned earlier, shown the general competence beliefs of various situations (Chen, Gully & Eden, 2004). This is a core self-evaluation because it describes one's perception of one's pleasing ability to overcome life problems (Judge, Erez & Bono, 1998). Third, emotional adjustment describes a tendency to feel calm and secure and shows less reactivity to everyday events. Individuals who experience emotions tend to pay less attention and remember negative information and experience negative emotions (Johnson, Rosen & Levy, 2008). Fourth, the control locus represents the rate at which a person believes that he or she controls the events in his life (locus of control internally) or believes that the environment or destiny controls the event (locus of external control) (Rotter, 1966).

In line with research conducted by Chang, Ferris, Johnson, Rosen and Tan (2012); Chiang, Hsu and Hung (2013); Elliot and Thrash, 2002 argue that individual with high self-efficacy is sensitive to positive stimuli and tend to adopt goal targets to achieve positive outcomes (Judge, Bono, Erez & Locke, 2005). Because scientists have found that self-efficacy is associated with better work performance beyond a motivational orientation approach, which refers to

one's regulatory goals to actively pursue positive outcomes in the workplace (Ferris, Witt & Hochwarter, 2001), employee with high self-efficacy is more active and autonomous work in pursuit of positive results. In addition, the self-efficacy component includes general self-efficacy, one's estimate of their own ability to perform and cope successfully with situations (Chen, Gully & Eden, 2001). The findings indicate that employee with high self-efficacy feel more satisfied in their work. Therefore, the first hypothesis tested:

Hypothesis 1. Employee's self-efficacy is positively and significantly related with employee innovative work behavior (IWB).

C. Perceived Employee Friendly Workplace and Innovative Work Behavior (IWB)

In an organization, employees play an important role in the innovation process. The idea that treatment to employees and employee satisfaction is very important because it reflects the company's future, has received the attention of practitioners and academics. Several studies investigate the relationship between employee satisfaction and corporate innovation. Research conducted by Chen, Chen, Hsu, and Podolski (2016) used a combined measure for employee care and found that companies that treat their employees well have better innovative success. Other studies conducted by Mao and Weathers (2015) provide information on the relationship between employee treatment and success in innovation projects related to the company's core business. Mayer, Warr, and Zhao (2015) combine the treatment of employees and the culture of corporate diversity (the treatment of women and minorities) and study their relationship with innovative efficiency. They found that improved employee care and diversity policies improved the efficiency of innovation. Thus, certain non-pecuniary incentives can improve the employee's innovative ability. One of the benefits can be a corporate environment that fosters hospitality between the company and its employees.

This study uses the Research and Analytics database of KLD SOCRATES to build Employee Friendly Index. The SOCRATES KLD database provides a company rating based on how companies treat their employees. The Employee Secrecy Index reflects various aspects of human resource practices within the company including: employee involvement in the company, union relationships, cash benefit sharing, and employment / life benefits and pensions. As explained by Ertugrul (2013), KLD SOCRATES uses five dimensions that reflect an Employee Friendliness Index (EFI) friendly workplace: First, union relationship: has the company taken extraordinary measures to treat unions fairly. Second, cash share: whether the company has a new cash distribution program distributed to most of its workforce. Third, employee Engagement: Strengthen the company well to address issues and / or share ownership through options available to most of its employees; gain sharing, share ownership, share financial information, or participate in management decision making. Fourth, benefits of retirement: does the company have a very

strong pension plan. Fifth, benefits of work or life: Does the company have employee benefits or other programs aimed at work / family problems (child care, parental care, or leisure). Therefore, the second hypothesis to test:

Hypothesis 2: Perceived Employee Friendly Workplace is positively and significantly related with Innovative Work Behavior

D. Innovative Work Behavior (IWB) and Job Satisfaction

Innovation is driven by employees using their knowledge and skills in a creative way to integrate resources for the benefit of the companies involved (Lusch & Nambisan, 2015). Job performance refers to actions and behaviors that are under the control of individuals and contribute to organizational goals (Rotundo & Sackett 2002). Because employee performance has wide meaning and there are many kinds of behavior that can contribute to organizational goals, hence in this research is meant by employee performance is job satisfaction on contribution to organizational goals.

Innovative work behavior results in improved task performance, such as increased productivity and work quality, reduced error rates, and increased ability to achieve organizational goals and objectives (Lusch & Nambisan, 2015). The result is work satisfaction after making a contribution to the organization's achievement. On another side, there are different opinions based on the idea that innovative work behavior is something new and different work activities that change the status quo. Innovative work behaviors can include introduction, application of new technologies, and new work methods that are inconsistent with existing routines (Yuan & Woodman, 2010). So, there is controversy that innovative work behavior is not in line with work routine, causing resistance to change and stress reactions of employees (Janssen 2003; Janssen 2004), ultimately not achieving a job satisfaction from the innovative work behavior. Therefore, the third hypothesis to test:

Hypothesis 3: Innovative Work Behavior is positively and significantly related with Job Satisfaction

E. Employee Self-Efficacy and Job Satisfaction

The four core self-evaluations (CSEs) that Judge, Locke, and Durham (1997) suggest occupy central roles in constructing the following case-based general theory of individual and contextual influences on Judge, Locke, and Durham (1997) suggest the following four CSEs as guide of a higher order construct, the positive self-concept: self-esteem, generalized self-efficacy, locus of control, and emotional stability (low neuroticism). Job satisfaction can be explained as a pleasurable or positive emotional state resulting from an appraisal of one's job (Locke, 1969). This construct has a long-standing tradition in organizational study. Peng and Mao (2015) pointed that job satisfaction is of major concern whenever outcome variables such as work engagement or positive emotional experience at the workplace are considered.

Hypothesis 4: Employee Self-Efficacy is positively and significantly related with Job Satisfaction

F. Perceived Employee Friendly Workplace and Job Satisfaction

Improving workplace standards has become increasingly important to operating in current competitive environment because firms are under greater pressure to innovate for which talented employees are a key driving force for innovation (Zingales, 2000). Futhermore, studies have examined the influence of employee welfare on stock returns (Edmans, 2011; Edmans, Li & Zhang, 2014), leverage (Bae, Kang & Wang, 2011; Verwijmeren and Derwall, 2010) and cash holdings (Ghaly, Dang & Stathopoulos, 2015), relatively little attention has been paid to whether and how employee working friendly maintain innovation. Investigating this question provides crucial implications for the firm's workplace practices and policies concerning employee relations and for their contribution to the firm's broader strategy and innovation in particular.

Unpredictability of outcomes and the high probability of failure are the main challengers for firms in managing innovation activities (Holmström, 1989). By creating employee working friendly, firms are able to increase employee job satisfaction, strengthen their relationships with employees, and enhance employee trust in management, thereby offsetting the negative influence of high-risk innovative activities on employees. Accordingly, an employee working friendly possible promotes greater tolerance for failure and encourages employee engagement in experimentation and innovation. (Chen, Leuang & Evans, 2016). Existing research asserts the important role of psychological capital for achieving job satisfaction (Fredrickson, 2004; Luthans & Jensen, 2002; Luthans, Vogelgesang & Lester, 2006; Luthans & Youssef, 2007; Youssef & Luthans, 2007). Therefore, the fifth hypothesis to test:

Hypothesis 5: Perceived Employee Friendly Workplace is positively and significantly related with Job Satisfaction

III. METHODOLOGY/ MATERIALS

A. Sample and Data Collection

We took data from 245 employees of top three telecommunication companies in Indonesia. These employees worked in various areas, including sales and marketing, IT and network, corporate strategy, finance, human resource, legal, risk management compliance, and corporate strategy. These employees operate tasks involving the development of new ideas, approaches, and solutions to attract and retain customers. Every unit has their customer, and the internal process will impact to the output of companies.

We used a questionnaire that was initially written in English and translated to Indonesian language. Then, the translated version was back-translated into the source language by a different translator to check for meaning compatibility. This technique continued until the translated version became representative of the originating questionnaire. The

questionnaire consisted of two main parts: Part one was designed with four closed-ended multiple-choice questions about employees' demographic information; Part two was used to obtain employees' ratings on the measuring items of the study's variables. Participants were informed of the study objectives and the preservation of confidentiality of individual responses to protect the confidentiality of participants. We also emphasized that the company would not have access to their responses or any identifiable information.

B. Measurement

We used six-point Likert scales ranging from 1 = ''strongly disagree'' to 6 = ''strongly agree'' to measure the study variables.

1) Employee self-efficacy

For employee's self-efficacy, we used the measurement based on Judge, Erez, Bono, and Thoresen (2003). Examples of items included in the scale are: "I am confident I get the success I deserve in life", "I am capable of coping with most of my problems", and "I do not feel in control of my success in my career (R)".

2) Perceived Employee Friendly Workplaces

We use KLD SOCRATES Research and Analytics database to construct perceived employee friendly workplaces. Perceived employee friendly workplaces reflect different facets of human resource practices within the firm including: union relation, cash profit sharing, employee involvement in the firm, retirement benefits, and work/life benefits. We translated these five points into the question to get employee's perceived about this. Examples of items included in the scale are: "The organization really cares about my well-being", "The organization feels there is little to be gained by employing me for the rest of my career" (R), and "If given the opportunity, the organization would take advantage of me (R)".

3) Innovative Work Behavior

De Jong and Hartog (2010) developed a measure for IWB with ten items that included four dimensions (idea exploration; idea generation; idea championing; and idea implementation). There are ten original questions were used. Examples of items included in the scale are: "I often paid attention to issues that were not part of my daily work", "I often found new approaches to execute tasks", "I often convinced colleagues and supervisors about my ideas", and "I often systematically introduced innovative ideas into work practices".

4) Job Satisfaction

We use Job Satisfaction Survey by Spector (1994). We picked 5 of 9 facets that suitable for telecommunication industry. This is the five facets: Pay, Promotion, Supervision, Coworkers, and Nature of Work. There are ten original questions were used. Examples of items included in the scale are: "When I do a good job, I receive the recognition for it that I should receive", "The benefit package we have is equitable", "My job is enjoyable" and "I enjoy my coworkers".

IV. RESULTS AND FINDINGS

The respondents of this study consisted of 157 males and 88 females, whose average age was between 32.3 years and 98% had a minimum undergraduate background. Respondents in the study have average core self-efficacy of 4.46 with standard deviation of 0.417; perceived employee friendly workplaces 4.57 with standard deviation of 0.533; innovative working behavior of 4.73 with a standard deviation of 0.673; and job satisfaction of 4.23 with a standard deviation of 0.576.
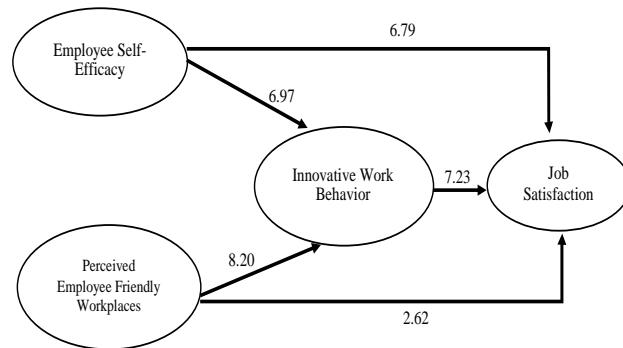

Fig. 2: The finalized structural model (t value)

From the value of t in fig. 2 can be explained as follows: Innovative work behavior is positive and significant correlation with JS with t value = 7.23 ($p < 0.05$). Employee self-efficacy and perceived employee friendly workplace are strongly related with innovative work behavior. Employee self-efficacy proved to be positive and significant both with innovative work behavior and with job satisfaction, because the value of $t > 1.96$ ($p < 0.05$). However, the relationship between employee self-efficacy with innovative work behavior is stronger (t value = 6.97), compare with the relationship between employee self-efficacy with job satisfaction (t value = 6.79). Thus, the innovative work behavior variable can be said to mediate partially the relationship between employee self-efficacy and job satisfaction. Furthermore, perceived employee friendly workplace variable also proved to have positive and significant relation both with innovative work behavior and job satisfaction, with t value respectively 8.20 and 2.62. Thus, it can be concluded that innovative work behavior variable role mediates partial relationship between perceived employee friendly workplace with job satisfaction.

V. CONCLUSION

Innovation is one of the key aspects for the growth of modern corporate firms to sustain. Recent studies have indicated that employee related issues can impact corporate innovation. Our study is in similar way. This research has developed and tested a conceptual model that investigated the relationship between employee's self-efficacy (as personal/ individual factor), perceived employee friendly workplaces (as environmental factor) and employees' innovative work behavior. The

findings from this research is these two factors: employee's self-efficacy and perceived employee friendly workplaces are related with innovative work behavior.

The individual factor which is self-efficacy, and employee friendly workplace as the environmental factor are playing important role in innovative work behavior, and job satisfaction. The innovative work behavior mediates partial relationship between self-efficacy, employee friendly workplace and job satisfaction. This study argues that employee friendly workplace promotes employees who are hopeful, meaning they are more competent and capable of finding positive meaning in adversity and creating redeeming value in failure, and resilient, being able to recover from failure in ways that strengthen effectiveness. By set up these psychological strengths of hope and resilience in employees, firms with employee friendly workplace are likely to be more tolerant of failure and more adequate of overcoming hardship in pursuing innovation. Furthermore, the satisfied employees are more likely to contribute the firm's innovation objectives, which strengthens their motivation to overcome difficulty and failure during the innovation process.

Accordingly, improving workplace standards has become increasingly important to operating in current competitive environment because firms are under greater pressure to innovate for which talented employees are a key driving force (Zingales, 2000). Although studies have investigated the influence of employee welfare on stock returns (Edmans, 2011; Edmans, Li & Zhang, 2014), leverage (Bae, Kang & Wang, 2011; Verwijmeren & Derwall, 2010) and cash holdings (Ghaly, Dang & Stathopoulos, 2015), relatively little attention has been paid to whether and how employee friendly workplaces nurture innovation. Investigating this question provides crucial implications for the firm's workplace practices and policies about employee relations and for their contribution to the firm's broader strategy and innovation in particular.

The main challenges for firms in pursuing and managing innovation activities are the unpredictability of outcomes and the high possibility of failure (Holmström, 1989). By implementing employee friendly policies, firms are able to upgrade employee job satisfaction, strengthen their relationships with their employees, and increase employee trust in management, therewith offsetting the negative influence of high risk innovative activities on employees. Accordingly, an employee friendly workplace likely promotes greater tolerance for failure and promote employee engagement in experimentation and innovation. Current researches confirm the important role of psychological capital for achieving effective job performance (Fredrickson, 2004; Luthans and Jensen, 2002; Luthans, Vogelgesang & Lester, 2006; Luthans & Youssef, 2007; Youssef and Luthans, 2007). These studies discuss that a positive, employee friendly workplace helps develop employees who are hopeful, meaning they are more capable of finding positive meaning in adversity and creating redeeming value in failure, and resilient, being able to restore from failure in ways that strengthen effectiveness. By invest these

psychological strengths of hope and resilience in employees, firms with employee-friendly workplaces are likely to be more tolerant of failure and more capable of overcoming difficulty in pursuing innovation. In addition, the employees with high job satisfaction are more likely to contribute the firm's innovation objectives, which strengthens their motivation to overcome difficulties and failure during the innovation process. Based on the current researches, there is an insight that tolerance for failure is a key driver of innovation (Azoulay, Graff Zivin & Manso, 2011; Tian & Wang, 2014). Furthermore, we also found that employees with high innovative work behavior have high job satisfaction. This finding is in line with the finding of Nguyen and Borteyrou, 2016.

In summary, we believe that employees play an important part in the process of innovation and therefore firms must make continued efforts for creating and maintaining a friendly work environment which increases employee satisfaction. The satisfied employees have high innovative work behavior. Our results suggest that firms need to consistently create and maintain an employee friendly workplace if they want to make their employees more innovative. We also suggest that organization should consider the employee friendly workplace in human resource management, in order to create innovation their sustainable competitive advantage.

This research has some limitations. First, this research focuses in telecommunications industry, which is this industry is service organization and high technology oriented, then it cannot be generalized to represent all industries (i.e., low- tech industries, manufacture industry). Second, there are some environmental factors that may affect to innovative work behavior, such as organization culture, the leadership style. These factors have potential to be explored in the future research, in order to get more complete picture about innovative work behavior. Finally, we suggest to do comparison between cross industries, service and manufacture industry, high technology and low technology industry, to define is there any similarity and difference between these cross industries.

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