The Role of Employee Self Efficacy and Perceived Leader’s Proficiency to Innovative Work Behavior in Telecommunication Industry

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Innovation is known as crucial in telecommunications industry. However, it was quite difficult to find research related to innovative work behavior in telecommunication industry in Indonesia. The focus of this research is to investigate the relationship between employee self-efficacy and perceived leader’s proficiency into innovative work behavior. After conducting a survey to 264 employees in telco companies in Indonesia, we found that employee innovative work behavior is strongly related with their self-efficacy and how they perceive their leader’s proficiency. These results support prior studies conducted in other countries. Furthermore, we propose some theoretical and managerial implications for future research.

Keywords: Self Efficacy, Innovative Work Behavior, Perceived Leader’s Proficiency, Telecommunication Industry, Strategic Management

1. Introduction

The current condition of the telecommunication industry in Indonesia has reached the stage of saturation, with indicators are declining sales growth, price competition among players which then led to a decrease in profits. From the market side, the growth rate of new customer penetration tends to decrease, because the penetration rate of the number of customers compared with the population of Indonesia has reached 100%. Innovation is a key word in the telecommunications industry, where technology development can change market demand and change the habits of telecommunication service users. Technological developments have forced the players in the telecommunications industry to continue to innovate. The fierce competition in today’s market and the emerging threats of new competitors from the results of technological development require continuous differentiation and innovation. As the presence of various chat and social media applications, continue to suppress the company's revenue from SMS service (short message service).

Companies must always innovate to remain competitive and survive in the long run. According to some practitioners and scientists, the innovations generated by the company are closely linked to innovations made by individuals. A worker may innovate as it is part of their job description or a voluntary innovative behavior. Katz 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 spontaneous and innovative behavior (that actions are not determined by a specific role or position), which facilitates the fulfillment of organizational objectives. Innovative work behavior includes either generating or introducing new ideas (either by someone or adopted from others) and realizing or implementing new ideas in the workplace. However, not only employee-related factors are considered an important aspect of generating innovation, but also the surrounding work environment.

Telecommunication industry is knowledge-intensive based; therefore, innovative employees have an essential part in shaping a firm’s competitiveness and performance. In this research, we investigate the relationship between the employee’s self-efficacy and employee innovative work behavior, this relationship represents the individual factor from the employee.
Leaders in this industry have a technical or engineering education background. The way these leaders impact their subordinates’ innovative behavior is also essential to ensure the companies become competitive. Then from the surrounding work environment aspect, we investigate the connection between perceived leader’s capability and employee innovative work behavior.

2. Literature Review and Hypothesis Development

2.1. Employee’s self-efficacy and employee innovative work behavior (IWB)

Based on social cognitive perspective, academics have emphasized the crucial role of self-efficacy in relation to innovation context. 9,10 In particular, taking into account Farr and Ford10 argument that individual who does not possess a reasonable amount of self-efficacy may face considerable obstacle, as a result of possible resistance from those who were affected by the change. Especially change and innovation may also involve uncertainties of future outcomes.

There are two types of self-efficacy, which is general self-efficacy and task-specific self-efficacy. 11 General self-efficacy describes the belief of generalized competency in different situations12, while task-specific self-efficacy relates with consideration of one’s ability to perform certain task-specific behavior11. Therefore, research should tailor this task-specific self-efficacy to the correlated domain under study. 13, 14

Even though many have underlined the importance of self-efficacy for innovation, there’s no sufficient understanding of how self-efficacy in specific affects innovative work behavior. Prior researches have not provided a comprehensive examination of innovation, which is specific self-efficacy effects. It rather focused on creativity-related self-efficacy 15,16,17,18,19 or examined the correlation between general self-efficacy and suggestion making or its application. 20 Although the study of Axtell at al. 20 indicates that self-efficacy is correlated with innovation-related behaviors, yet although the author able to point the relationship between self-efficacy and suggestion making, they have lacked in showing the proposed relationship between self-efficacy and suggestion application. It is possible that the authors have only relied on the concept of general self-efficacy instead of brought it to the context of certain innovation.

Research on creativity which is specific on self-efficacy has found support for the correlation between creative self-efficacy and employee creativity. 15,16,17,18,19 With this indication, it is worth to explore how innovative self-efficacy may influence innovative work behavior. Therefore, it is proposed:

**Hypothesis 1.** Employee’s self-efficacy is positively related to employee innovative work behavior (IWB)

2.2. Perceived leader’s proficiency and employee innovative work behavior (IWB)

Support from leaders plays an important role in improving employee learning and innovation at work environment. Majority of the current literature highlights leadership styles and managerial skills, while only limited research focuses on how leaders’ technical competence impact to the learning process and innovation of their subordinates.

There are two different perspectives regarding leadership area. The first perspective is a one-way vertical direction aiming to understand the behavioral consequences and characteristics of leaders on the performance of individuals, teams, and organizations. 21, 22 The second is a two-way direction that describes the relationship quality between leaders and their subordinates, which is illustrated by the leader-exchange-member theory (LMX). 23, 24 This research adopts one-way direction perspective, and focuses on vertical relationships between leaders and their subordinates,
in particular, how leaders’ technical competence impact to the learning and innovation of their subordinates.

The leadership research shows that leaders have an important role in shaping employee behaviors. Leaders represent organizations and therefore facilitates employee learning and innovation, creating the frame where the employee would operate, learn and innovate. Leaders know about individual work and have influence on the context in which employee creativity and innovation occur. The leadership literature has recognized the impact of leader style and behavior and leadership competence on subordinate innovation activities.

There is no consensus on how to define one's competence. Boyatzis defines it as an ability. Schoorman et al. call it individual capabilities, or how reliable and competent an individual can do his work. Spencer and Specer argue that competence is a characteristic of individuals who can predict behavior or appearance that is effective or superior in work situations. Others define competence as a fundamental characteristic associated with the effectiveness and performance of individuals on the job. N. V. Minh et al. defines the competence of leaders as the ability of leaders to perform their job, their technical skills, their knowledge, and their experience. Technical competency of a leader is shown when he/she has (i) the updated technical knowledge and capability to do technical tasks; (ii) understanding of the technology involved, and (iii) proficiency in answering technical questions, suggesting technical solutions, and applying them to solve problems. In line with research by N. V. Minh et al., the definition of leader competence is adopted because the focus of his research is on the technical aspects of leader competence in intensive technology industries, especially telecommunications. Other competencies, were not considered in this study.

**Hypothesis 2.** Perceived leader’s proficiency is positively related to employee innovative work behavior (IWB)

### 3. Methods

#### 3.1. Sample and data collection

Telecommunications industry was selected for this research as it is one which experiences a fastest change of technology and tough competition among the players. Hence, employee learning and innovation is considered play important roles for the survival and success of the companies. Moreover, leaders of telecommunication companies have technical educational background. By selecting one industry which is telecommunication industry, we understand that it has a limitation on how to generalize this study. These variables and result may differ from one industry to another. This will be covered in the next discussion section. Moreover, we aimed to assure the adequate homogeneity of sample.

We took data from 264 employees of top three telecommunication companies in Indonesia. These samples of 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 ideation of approach, and solutions to customers acquisition and loyalty. Every unit has their customer, and the internal process will impact to the output of companies.

We used a questionnaire using Indonesian language after translated from its formerly written in English. The translated version was reversed-translated into the source language by a different translator to check for meaning compatibility. This technique is repeated until the translated version became a representative. Participants were briefed of the research objectives and
confidentiality of individual responses and identity is preserved. We also emphasized that the company would not have access to their responses or any identifiable information.

3.2 Measures

We used six-point Likert scales ranging from 1 = “strongly disagree” to 6 = “strongly agree” to measure the study variables. Employee’s self-efficacy, we used the measurement based on Judge et al. Examples of items included in the scale are: “I am confident I get the success I deserve in life”. In order to assess leader’s technical competence, we refer to Chien who specified the knowledge and skills needed by telecommunication managers. Examples of items included in the scale are: “My manager is aware/knowledgeable of most possible technical problems that team members may face”. For Employee innovative work behavior (IWB), De Jong and Hartog developed a measure for IWB with ten items that included four dimensions (idea exploration; idea generation; idea championing; and idea implementation). There are ten questions were used. Examples of items included in the scale are: “I often convinced colleagues and supervisors about my ideas”.

4. Results

The respondents of this study consisted of 165 males and 99 females, whose average age was between 32.3 years and 94% had a minimum undergraduate background. Respondents in the study have average core self-efficacy of 4.23 with a standard deviation of 0.437, perceived leader proficiency 4.78 with a standard deviation of 0.672, and innovative work behavior of 4.89 with a standard deviation of 0.754. This research model proved fit as shown in Table 1. All hypotheses of this study proved significant, as shown in Figure 1, the values of t generated using SEM Lisrel. Then based on output t values can be seen that:

• The CSEF variable gives significant influence to the INWORBV variable with t = 10.12> 1.96 so it has a positive and significant effect.

• The LPRF variable gives significant influence to the visible INWORBV variable with t = 4.78> 1.96 so it has a positive and significant effect.

5. Discussion

This study has developed and tested a conceptual model that investigated the correlation between employee’s self-efficacy (as an individual factor) also perceived leaders’ proficiency (as environment factor) and employees’ innovative work behavior. From the leadership literature, perceived leaders’ proficiency is still a scare topic. The findings from this study are these two factors: employee’s self-efficacy and perceived leaders’ proficiency are influencing employees’ innovative work behavior. Specifically, for leader’s proficiency, we found that in high technology industry like telecommunication, leaders’ technical competence plays an important role. This finding supports the previous research that conducted by N. V. Minh et al.

5.1. Theoretical implications

Our study extends innovative work behavior research in several ways. It adds to the body of research examining the role of perceived leaders’ proficiency in triggering employees’ innovative work behavior, in this case, the employee is their subordinates. The leaders with high proficiency are defined as technical knowledge and technology up-to-date, apply the knowledge to a problem solving for their subordinate and also have the ability to perform the technical duties. The subordinates make these leaders as their role model, it simulates the innovative spirit to
perform at work. The existing literature on the innovative work behavior has mostly focused on exploring how leader behavior and styles, or management skills impact may affect to employee (subordinate) innovative work behavior. 43,44,45

This study extends upon the limited research that exists on leader technical competence, such as the work of Hysong 37 and Grant et al. 35 who explored the impact of the leader’s technical skills (proficiency) on managerial implementation and also the adoption of managerial assignment.

5.2. Practical implications
The results of this study suggest that to make innovative work behavior from the employee in high tech organization, must prepare the self-efficacy from the individual employee. It can be started from recruitment process, training and seminar that can create self-efficacy from the individual employee. Leaders as the environment factor also play an important factor, we suggest that leaders should update their knowledge, especially in the technology update, so they can inspire and help to solve the subordinates work-related problem. The leaders with high technical proficiency may indeed increase the subordinates’ developmental readiness through the frequent direct discussion with their subordinates, and give a new idea to create the innovative or improvement activities at work due to their deep technical knowledge. The results of this study are consistent with the findings of N.V. Minh et.al. 34, who examined the relationship between leaders’ technical skill (proficiency) and employees’ innovative work behavior.

5.3. Limitations and directions for future research
This research also suffers from several inevitable limitations. First, this research concentrates on relationships between perceived leaders’ proficiency and innovative work behavior within telecommunication industry. Although telecommunication industry cannot be generalized to represent all industries for example low technology industries, however, it may reflect the high-tech industries which generally have a similar attribute, including the complexity in terms of up-to-date and rapid technology development, dynamic technologies changes and environment movement, and also high competition in the market. 46 The high-tech industries generally require vast technical knowledge, learning, and innovation from their employees, compare to the low-tech industries. 47,48 This is in line with that of previous academics, Phelps 38; Bae and Gargiulo 49 who studied telecommunication industry and generalized their study results, extended to other high-technology industries. Second, this research only covered the proficiency of leaders from their technical competency aspect. We do not consider the other potential variables such as managerial skills.

6. References
Figure and Table captions

Figure 1. Research model

Table 1. Goodness of fit

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<th>Indicators</th>
<th>Value</th>
<th>Remarks</th>
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<td>$\chi^2$/df</td>
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<tr>
<td>RMR</td>
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