

# The Role of Supportive Leader, Work Engagement, and Self-Efficacy in Employees' Innovative Behavior: Empirical Study on a National Independent Company

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Global competitions of the business world today not only make employers think about the advances in technology and additional capital. The quality of human resources was also the focus of study to prepare human resources to compete. One important aspect of this competition is innovation, which is in the individual level known as innovative behavior. The topic of this study is the effect of supportive leader and self-efficacy to employee innovative behavior with work engagement as mediator. Participants/respondents ( $N = 99$ ) were employees of a national private company. Data analysis was conducted based on the stages of mediation assumption testing of Baron and Kenny (1986) with regression analysis (both simple and multiple regressions). Result showed that work engagement significantly functioned as mediator variable on effect of self-efficacy to innovative behavior. But work engagement is not significant as a mediator variable on effect of supportive leader to innovative behavior.

*Keywords:* innovative behavior, work engagement, supportive leader, self-efficacy

Persaingan global dunia usaha saat ini tidak hanya membuat para pengusaha berpikir tentang kemajuan teknologi dan penambahan modal usaha. Kualitas sumber daya manusia (SDM) juga menjadi focus kajian untuk menyiapkan SDM yang dapat berkompetisi. Salah satu aspek yang penting dalam kompetisi ini adalah inovasi, yang dalam level individual dikenal dengan perilaku inovatif. Penelitian ini mengaji pengaruh *supportive leader* dan *self-efficacy* terhadap perilaku inovatif karyawan dengan dimediasi oleh *work engagement*. Penelitian ini dilakukan terhadap 99 responden yaitu karyawan perusahaan swasta nasional di kota X. Penelitian ini dianalisis dengan menggunakan tahapan pengujian asumsi mediasi dari Baron dan Kenny (1986) yang melibatkan teknik analisis regresi (baik sederhana maupun multi-regresi). Hasil penelitian menyebutkan bahwa *work engagement* terbukti mampu berperan sebagai mediator pada pengaruh *self-efficacy* terhadap perilaku inovatif karyawan, namun tidak berfungsi sebagai mediator pada pengaruh *supportive leader* terhadap perilaku inovatif karyawan.

*Kata kunci:* perilaku inovatif, *work engagement*, *supportive leader*, keyakinan diri

The success of a company or an organization is not just depending on the aspect of capital (building, financial, and product), but is also related to the existence of human capital in the company or organization. In the competitive environment, organizations race to create and develop ideas into a significant breakthrough in order to keep the quality of the products (Van de Ven, 1986). Competition in the business world is not only related to tangible assets, but also with intangible assets such as human resources (Gardner, 2005). Companies or organizations compete in achieving good performance,

needing employees that are not stuck in the old habits and working style, but employees that have innovative behavior (Weisberg, 2006).

Employees' innovative behavior is a good performance base for organizations. Discussing innovative on the individual level is not unrelated to discussing innovative that is related to individual characteristics, traits, behavior, and products. Hurt (cited in Kleysen & Street, 2001) explained that individual innovativeness in general is related to the will to promote change and the will to change. Meanwhile, according to Scott and Bruce (1994), it is not uncommon for practitioners to use or interchange the terms innovative behavior with creativity. Based on the statement of Scott and

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Bruce, there is the need to discuss about the difference of innovative behavior and creativity.

Several researches state that creativity is often defined as a group of new and useful ideas (Amabile, 1983; Mumford & Gusrafson, 1988). Using the basis of the definition of creativity stated by those researchers, Woodman, Sawyer, & Griffin (1993) stated that creativity refers to something that is done on the first stage. While innovative behavior is a process that is more complex and related to the activities with the goal of developing, reacting, and modifying those ideas (Janssen, 2004; Van de Ven, 1986). In the same vein with the statement, several researches stated that innovative behavior is not just related with creating new ideas, but is also related to every behavior with the goal to improve the organization's performance (Janssen; Kanter, 1988; West & Farr, 1989; Scott & Bruce, 1994).

Innovative behavior in the world of organizations is a process of change that creates something in the form of product, process, or procedure that is new in the organization (Zaltn, Duncan, & Holbek, cited in Ahmad, 2009). Meanwhile, Damanpour (as cited in Ahmad, 2009) defines innovative behavior as the formation, development, or implementation of new ideas or behavior in the form of new product or service, new production process, new structure or administration system, and new working program for the members of the organization. According to Wess and Farr (cited in De Jong & Kemp, 2003), innovative behavior is every behavior of the individual that is directed for creating, introducing, and implementing 'new' things that is useful in many levels of the organization.

According to Bateman and Crant (1993), innovative behavior is a behavior that directly and intentionally changes something by creating a different condition with the condition that is currently active. Bateman and Crant added that the construct in innovative behavior is considered to be an important element in the life of an organization, because it leads to the implementation of new ways and new revenue for the organization.

Scott and Bruce (1994) explains that innovative behavior in the working world consists of three processes, which are (1) the individual realizing the existing problem and then creating a new idea or solution; (2) the individual searching for ways to promote the created idea or solution and building trust and support from both inside and outside the organization; (3) the individual realizing the idea or solution by creating a model of the innovation to be tested, implemented, and used in the areas of work, group, or organization in general.

Based on the information and the earlier researches related to innovative behavior, the author concludes

that research and study regarding innovative behavior is an important task. Especially in the increasingly competitive business environment, organizations or companies need extra information from the latest researches regarding innovative behavior. The conclusion of the author is supported by the statement of Scott and Bruce (1994).

Related to the development of employees in organization, it cannot be denied that there is a need for a leader that cares about employees' development. Based on this matter, this research also discusses about one of the variables of organization climate which is the supportive leader. Aside from the role of external factors, the researcher also tries to discuss the aspect of employees' internal factors in developing innovative behavior, which are work engagement and self-efficacy. Each research variable that is deemed to have a role in the development of innovative behavior will be explained shortly.

Researchers and concepts regarding leadership is usually related to someone's role in leading a group or organization and is also related to his relationship with his subordinates. Usually the concept of leadership reflects the top-down relationship between the one that leads and the one that is being lead. In this relationship, usually subordinates are controlled and influenced by their superiors. This research uses other leadership approach that does not prioritize the role of the leader as a controller or influencer, but more to the leader's role as a coach that gives support and encouragement to the subordinates.

Supportive leader is first introduced by House and Mitchell (1974) and then developed into a concept with similar meaning. Supportive leader is defined as the attitude, communication, behavior, and actions of managers and supervisors that is capable of making the subordinates feel that they are supported to work effectively, productively, and with quality (Muller, MacLean, & Biggs, 2009). Raferty & Griffin (2004) explained that supportive leader is a leader that shows his behavior as a form of expression of a leader's care towards the needs of the subordinates.

Supportive leader is identified as one of the aspects that can create a positive organization climate (Head, 2000). Supportive leader is also one of the important (Newton & Maierhofer, 2005). Newton and Maierhofer also explains in their research that supportive leader supports the wellbeing of employees, which can be seen in the high level of work satisfaction, low level of intention to leave, and the high level of commitment to the organization. By understanding the results of the earlier research, it can be understood that the existence of a supportive leader can create a conducive working

climate for the employees. With a conducive work climate, it is hoped that employees are able to show positive work behavior, one of it being innovative behavior.

The existence of a leader is not the only matter that is able to push employees to show positive work behavior such as innovative behavior. The feelings of employees towards their work and the meaning of work to employees also have a role in forming positive work behavior. One of the concepts that explains how employees view their work is the concept of work engagement.

Work engagement is one of the discussions in the positive psychological point of view that is implemented in the organization life. Positive psychology in the concept of organization is known as the Positive Organizational Behavior (POB). POB approach is an approach with a positive orientation on the work of human resources and the measurable psychological capacity, developed and managed effectively for performance improvement in the work place (Schaufeli & Bakker, 2003). One of the positive aspects that is developed in positive organizational psychology is work engagement, assumed to be the antipole of burnout. Schaufeli and Bakker, and Schaufeli, Salanova, and Bakker (2006) explained work engagement as a work of attachment that reflects positive, sincere, and logical work attitude. Work engagement has the characteristics of vigor, dedication, and absorption.

Several researches explain that work engagement does not just appear as an individual phenomenon, but also in working groups. This can be explained with the phenomenon of someone at times feeling attached to a particular working group or organization compared to other working group or organization (Salanova, Agut, & Piero, 2003). Schaufeli and Bakker (2003) found the role of work engagement in forming positive work attitude (work satisfaction) into work behavior (performance). In other words, the existence of work engagement is able to strengthen the effects of motivational work attitude on positive work behavior such as performance.

Another individual aspect that also has an important role in the development of productive behavior like innovative behavior is self-efficacy. The discussion of self-efficacy affects individual behavior because self-efficacy is one of the variables that explains that there is a control center in human life. The individual's motivation level, affection life, and behavior or attitude is more based on what the individual believes rather than the objectivity of the case experienced (Bandura, 1997). Bandura (cited in Pajares, 2002) explains that self-efficacy is an individual's belief in the actions he does in his tasks. Several researches' results explain that self-

efficacy correlates with performance in the work place and even in academic environments (Nindyati, 2004; Naomi & Nindyati, 2011).

By paying attention to the theoretical descriptions and the results of earlier researches, it is clear that innovative behavior does not appear out of nowhere. Innovative behavior needs the support of the work environment, in this case the leadership that is felt by the employees from the behavior of their leaders and the work environment that is able to increase engagement to their work (work engagement). Innovative behavior is also related to the employees' internal condition like self-efficacy that is the supporting aspect from the inside of the employees. Therefore there is a need for a research that explores the scientific basis of the assumptions of the author, related to the variables that have a role in the forming of innovative behavior, so it is possible to give the correct intervention to the employees.

This research uses positive psychology as the main base to explore positive behavior in the work place and environment. The positive behavior that is explored in this research is the innovative behavior. Innovative behavior becomes an interesting topic because it is closely related to the answer for the competitive global world that has a high frequency of change, needing employees that are capable of showing innovative behavior. Innovative behavior is not just related to the creation of a new product or the reinvention of a certain product. Innovative behavior can also be seen in the development or empowerment of work behavior and the methods of solving the tasks given to the employees. This activity explains that innovative behavior has a high probability of appearing on employees that is not related to the process of product creation or creativity. Even employees that work on administration need to develop innovative behavior.

Employees' innovative behavior can help the organization or company to answer the pressure of change as the result of the globally developing world. Because of this, the numbers of scientific researches that explores innovative behavior is increasing in number, helping the players in organizations to create the correct and accurate intervention in order to increase employees' innovative behavior. The author understands that the development of individual competence is not unrelated to the personal aspect of the individual and the external aspect as well. The personal aspect of the individual is related to the trait or personality. One of the personal aspects related to behavior building that is already widely researched is self-efficacy. With self-efficacy, individuals can arrange the tasks and problems at hand with their belief of their abilities. Employees that believe

in their own abilities are not hesitant in developing and improving their work styles. Employees with high self-efficacy show behavior that is not stuck on their habits. They experience no difficulty in showing their innovation in dealing with their problems, because they are able to see their own abilities, able to arrange their tasks according to their abilities. Individuals such as this tend to be more attached to their tasks as well because of their abilities. The higher the self-efficacy level in an employee, the more vigor and dedication the employee has in finishing their work, the two being parts of the indication of work engagement.

Work engagement is an aspect that is thought to determine how employees are able to show innovation in handling their tasks. With dedication and vigor, employees will not stop at simply finishing their task or reaching the goal. Employees will also think about how to finish their tasks with methods that are not just efficient and effective, but also with methods that help them achieve better results.

The external aspect that cannot be forgotten regarding employees' work behavior is the leadership pattern that is implemented in an organization or work unit. Leaders are the figure of adoration of the subordinates, and usually their every action is observed, giving different effects to each subordinate. Supportive leaders that prioritize the needs of their subordinates are obviously leaders that can make their subordinates feel comfort. This comfort can have benefits, such as lessening the stress and pressure on the subordinates because of their work or tasks given by the leaders. Leaders that support and prioritize their subordinates' needs are using the supportive leadership style and are known as the supportive leaders.

By using several arguments related to the four variables, it can be concluded that the supportive leader, self-efficacy, and work engagement variables can be categorized as the variables that can affect employees' behavior including innovative behavior, though which model is the most effective in forming innovative behavior related to the three other variables is still in need of discussion. In this research, the research offers a model that is able to reflect how the employees' innovative behavior is formed by supportive leader and self-efficacy, with work engagement as the mediator.

The author believes that supportive leader and self-efficacy are exogenic variables that work employees' work engagement, making it easier for them to show innovative behavior. The research hypotheses being tested are as follows:

Ha 1: Supportive leader can have an effect on innovative behavior with work engagement as the mediating variable

Ha 2: Self-efficacy can have an effect on innovative behavior with work engagement as the mediating variable

In order to understand the model used in this research, Figure 1 show the flow of thought of the research.

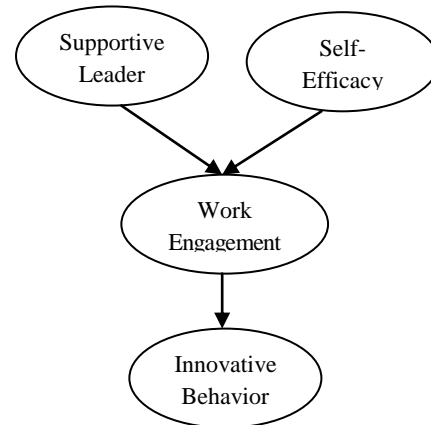


Figure 1. The used model (hypothetical model).

## Methods

The respondents of this research are full-time employees with the minimum work experience of one year. According to Nitsemto (1996) the employees' percentage to be able to get a satisfying work results depend on their abilities, skills, and creativity. Based on Nitsemto's statement, the author chose employees with at least one year of work experience as the respondents because it is deemed that one year is enough time for them to be able to feel attachment to the company and form a certain attitude towards the company. Respondents are in the productive years of age (22-44 years of age). Weiten, Lloyd, and Hammer (2008) state that 25-44 years of age is the establishment stage where employees tend to feel confusion as to whether they will stay on their current work or leave to find a new work. If the employees are satisfied with their current work, then they will tend to have a strong commitment towards the company or organization.

The author uses the convenience non-random sampling technique in this research, used in order to ensure that the employees that will be the research subjects are willing subjects. Creswell (2005) explains that the convenience non-random sampling is a sampling technique that is done by not giving every member in the population the same chance to be the sample in the research. Individuals that were chosen to be the sam-

ples were individuals that met the author during the data collection process, specifically those that stated that they were willing to be the sample of the research. The total amount of respondents of this research is 99 employees from a national private company in X city.

After the sample collecting phase is finished, the measuring of the research variable was done using questionnaires. There are four questionnaires used in the research. First is the questionnaire to measure innovative behavior. This questionnaire was developed based on the construct stated by Kleysen and Street (2001), consisting of five dimensions:

1. Opportunity Exploration, is the effort of the individual to explore the existence of chances to empower or repair the situation. The four basic behaviors that reflect this dimension are paying attention to sources of chance, looking for the chance to innovate, realizing that there is a chance to innovate, and collecting information regarding the existing opportunity.
2. Generativity, is the effort in building and guiding the next generation in the organization, by widening the ideas that has the orientation of giving benefit to the company, employees, product, production process, and other systems. The three basic behaviors that reflect this dimension are raising the idea and solution in every opportunity, raising the picture and category regarding the opportunity, and raising the relation and combination of the ideas and information collected.
3. Formative Investigation, is related to forming ideas, solutions, and opinions that will be tested by doing researches. The three behaviors that reflect this dimension are forming numerous ideas and solution, doing researches about the formed ideas and solutions, and evaluating the results of the researches regarding the formed ideas and solutions.

4. Championing, is explained as the creative individual that appeared and implemented the ideas in daily lives. Championing consists of socio-politic behavior that is related to the innovation process. The four behaviors that reflect this dimension are moving the resources, being able to influence and guide other people, being able to push and negotiate with other people, and liking challenges with the willingness to take risks.
5. Application, is the last dimension that makes innovation a regular part in the company's daily life, being the main part that must be done by any company. The three basic behaviors that reflect this dimension are implementing, modifying, and routinizing.

Based on the five dimensions, the inventory that is going to be used can be calculated. The inventory will have 14 items that reflects how often innovative behavior is shown. The bases of the items are five aspects of the innovative behavior: opportunity exploration, generativity, formative investigation, championing, and application. The nature of the items is categorized into two: favorable items (reflecting innovative behavior) and unfavorable items (not reflecting innovative behavior). Items are started with the sentence "in your current work, how often do you...." The answer options given are based on the Likert scale, having the score width of 1-5 with the answer options of never (N), almost never (AN), sometimes (S), often (S), and always (A). The blueprint of the innovative behavior inventory is shown on Table 1.

The next variable in the research is work engagement. The work engagement inventory adopted the inventory developed by Schaufelli and Bakker (2003). The dimensions of work engagement, as explained by Schaufelli and Bakker, are as follows:

Table 1  
*Innovative Behavior Inventory Blueprint*

Dimension	Item Number	Item Example	Item Total
Opportunity Exploration	1, 6, 11	Searching for opportunities to repair the current working procedures	3
Generativity	2, 7, 12	Being able to create ideas to solve problems	3
Formative Investigation	3, 8, 13	Testing the formed ideas	3
Championing	4, 9	Convincing work partners about the importance of the formed new ideas	2
Application	5, 10, 14 <sup>r</sup>	Implementing the new repairs that benefit work	3

Note. <sup>r</sup> = Unfavorable Item

Vigor. A characteristic that is represented by high energy level and mental toughness during work, the willingness to improve in work, and the ability to stand their ground even when faced with difficulties.

1. Dedication. Related to the high level of involvement when working, experience the feelings of significance, enthusiasm, inspiration, pride, and challenge.
2. Absorption. The individual characteristic of working with full concentration and feeling joy and satisfaction in working, often resulting in not realizing

the consumed time.

Based on the three dimensions, Schaufelli and Bakker formulates 17 items that consist of six items related to vigor, five items related to dedication, and six items related to absorption. In this research, the inventory is adapted by adding two unfavorable items. The dimensions of vigor and absorption have eight items and the dimension of dedication having seven items, resulting in the total of 23 items. The blueprint of the work engagement inventory is shown in Table 2.

**Table 2**  
*Work Engagement Inventory Blueprint*

Dimension	Item Number	Item Example	Item Total
Vigor	1, 4, 7, 11, 15, 17, 19r, 22r	I feel that I am filled with energy at my work place	8
Dedication	2, 5, 8, 10,13, 18r, 21r	I am able to find the meaning and goal in my work	7
Absorption	3, 6, 9, 12,14, 16, 20r, 23r	I feel that time flies when I work	8

Note. r = Unfavorable Item

**Table 3**  
*Supportive Leader Inventory Blueprint*

Dimension	Item Number	Item Example	Item Total
Encouraging: The leader that encourages employees to speak up their ideas and advices	1, 5, 9, 13r, 18r, 22r	My superior encourages me when I start working.	6
Listening: The leader that listens to the advices and opinions of the subordinates.	2, 6, 10, 14, 17r, 19r, 23	My superior responds positively towards my advices.	7
Asking: The leader that asks subordinates about their evaluation of their work.	3, 7, 11, 15r, 20r, 24r	My superior evaluates my work results.	6
Explaining: The leader that explains and helps subordinates to better know what they need to do.	4, 8, 12,16r, 21r, 25	My superior explains the way to solve a problem that I experience during work.	6

Note. r = Unfavorable Item

**Table 4**  
*Self-efficacy Inventory Blueprint*

Dimension	Item Number	Item Example	Item Total
Magnitude (task difficulty level)	1, 4, 7r, 10, 14	I start working on my task by doing the easy tasks first.	5
Generality (behavior width)	2, 5, 8r, 11, 16	I finish working on my task without help from my work partners.	5
Strength (belief level)	3, 6, 9, 12r, 13, 15, 17	I'm able to finish tasks with my own methods.	7

Note. r = Unfavorable Item

**Table 5**  
*Research Variables Descriptive Analysis Results*

Research Variables	Mean (M)	SD	Quartile1 (Q1)	Quartile3 (Q3)	∑N < Q1	∑N > Q3	∑N < M	∑N > M
Innovative Behavior	51.15	7.41	47	57	21	12	49	50
Work engagement								
Self-efficacy	42.42	5.28	39	46	23	24	46	53
Supportive leader	63.45	8.01	59	70	22	23	49	50
	57.71	7.993	52	65	22	21	53	46

The third variable in this study is supportive leader. In order to measure the supportive leader variable, the construct stated by Hersey and Blanchard (cited in Robbins, 2008) and developed by Mamma and Nindyati (2011) is used. Hersey and Blanchard explains that in supportive leader there are four keywords related to the leader’s behavior in giving support to his/her subordinates, which are encouraging, listening, asking, and explaining. These four activities are the base in making the inventory that reflects supportive leader. The blueprint for the supportive leader inventory is on Table 3.

The fourth variable is self-efficacy. The blueprint for the self-efficacy inventory is on Table 4. The measurement of self-efficacy is done by forming an inventory based on the construct stated by Bandura (1997) which consisted of three dimensions:

1. Magnitude (difficulty level stage dimension), related to the level of difficulty of a task when the individual believes that he is able to finish it. If the individual is faced with a task that is formed based on difficulty levels, then the individual’s self-efficacy will may be limited to the easy, medium, or hard tasks, depending to the individual’s perception of his ability level needed to finish the demands given on each level.
2. Generality (behavior width), related to the width of the behavior the individual believes that he is capable of. Individuals can believe on their abilities can be limited to certain activities and situations or an array of varying activities and situations.
3. Strength (power dimension), related to the power of belief and hope that an individual has about his abilities. Weak belief will be easily crushed by unsupportive experiences, while strong belief will encourage individuals to continue giving effort on their work, despite the existence of unsupportive experience.

Every inventory used in this study has been reliability tested by using the alpha Cronbach coefficient. Innovative behavior variable scored .860, work engagement variable scored .756, supportive leader variable

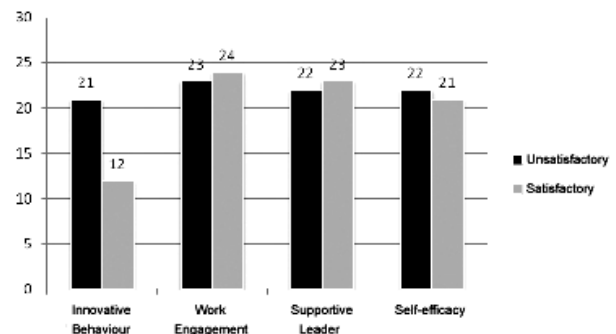
scored .865, and self-efficacy variable scored .855. Based on the alpha Cronbach coefficient, it can be concluded that all inventories used in this study have good reliability score ( .60 - .80) and very good reliability score (.81–1.00), as stated by Guilford (1956).

## Results

### Descriptive Analysis

The results of this study is related with the process of testing the starting hypothesis, while adding the descriptive statistical analysis in order to give innovative behavior, work engagement, self-efficacy, and supportive leader variables from the respondents’ descriptive data. The results of the descriptive analysis are shown in Table 5.

Based on the standard deviation score in Table 5, it can be seen that the data variation on the self-efficacy variable is the highest, while work engagement variable has the lowest data variation. Based on the data, it can be stated that self-efficacy data is more heterogenic compared to the data of work engagement. Based on the mean scores, the number of employees with the innovative score, work engagement, and self-efficacy score above average is higher than the employees with



*Figure 2.* Number of respondents in the good and lacking categories in every research variable.

below average score. Meanwhile, the supportive leader variable has more employees with the below average score than the employees with above average score.

Table 5 also shows the information regarding the score of Quartile 1 and 3 that functions as the norm to put 25% of the respondents on the good category and 25% of the respondents on the lacking category. Based on the data, it can be reflected how research respondents show differences in the respondents' numbers based on the status (good and lacking) on each research variable. The picture of the respondents' status can be seen on Figure 2. The number of respondents in the good category innovative behavior is less than the number of respondents in the lacking category innovative behavior, the same can be seen on the respondents' self-efficacy. Meanwhile for the work engagement and supportive leader variable, the number of respondents in the good category is higher than those in the lacking category.

**Hypothesis Test**

In order to test the research hypothesis, simple regression analysis and multi-regression analysis was done so it can be explored whether supportive leader and self-efficacy have an effect on innovative behavior with work engagement as the mediating variable. By following the plot of mediating test stated by Baron and Kenny (1986), the author tested the hypothesis and hypothetical model of the study. Baron and Kenny offered a way to test the assumption regarding whether the mediating function is existent or not through these four phases.

Based on Figure 3, it can be explained that in order to proof the assumption about the mediating function of the mediating variable, there is a need to use the four phases by Baron and Kenny, as shown in Table 6.

Based on Table 6, it can be explained that the goal of phase 1-3 is to determine the zero-order relationship between existing research variables. If one or more relation is non-significant, then the study concludes that there is no mediation (Baron & Kenny, 1986), but

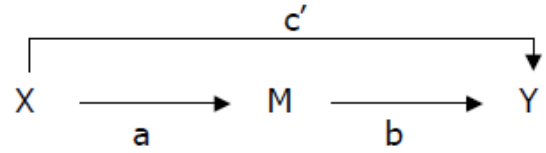


Figure 3. Diagram of direct and indirect effects.

MacKinnon (2008) stated that this is not always true. Baron and Kenny, with MacKinnon, stated that by assuming that the relation result in phase 1-3 is significant, and then it continues to phase 4. In phase 4, it can be stated that partial mediation is supportive if X is significant (generally both the X and M variable can significantly predict Y) despite M is already controlled. Full mediation happens if X becomes non-significant when M is being controlled.

In order to test the hypothesis of the study, the author did four steps of the assumption test plot regarding mediation based on Baron and Kenny. In this study, the free variable (X) is supportive leader and self-efficacy. The mediating variable (M) is work engagement and the tied variable (Y) is innovative behavior. The results of the simple and multi-regression analysis can be seen in Table 7.

Table 7 shows that not all hypotheses can be accepted. The first hypothesis regarding supportive leader having an effect towards innovative behavior with work engagement as the mediator cannot be accepted. This is caused by the direct effect of supportive leader on innovative behavior (c path or first phase) is not significant ( $r = .014 / R^2 = .000$  with  $p > .05$ ). While the regression results on the next phases show significant results, it still cannot proof that the assumption regarding work engagement as the mediator on the effect that supportive leader has on innovative behavior. There are other information from the regression analysis: supportive leader affects work engagement significantly ( $r = .202 / R^2 = .041$  with  $p < .05$ ), work engagement affects innovative behavior significantly ( $r = .497 / R^2 = .247$  with  $p < .000$ ), supportive leader and work engagement both having significant effects on innovative behavior ( $r = .505 / R^2 = .255$

Table 6

*The Phases of Testing the Assumption Regarding Mediating Function*

No	Analysis	Visualization
1	Doing simple regression analysis to predict Y based on X, as shown on the c path, resulting in the regression formula of $Y = B0 + B1X$	
2	Doing simple regression analysis to predict M based on X, as shown on the a path, resulting in the regression formula of $M = B0 + B1X$	
3	Doing simple regression analysis to predict Y based on M, as shown on the b path, resulting in the regression formula of $Y = B0 + B1M$	
4	Doing multi regression analysis by predicting Y based on X and M, resulting in the regression formula of $Y = B0 + B1X + B2M$	



Table 7  
Results of the Simple and Multi Regression Analysis

Path	r/R <sup>2</sup>	Sig	$\beta$ /sig	Regression Formula
X <sub>1</sub> ---> Y (path c <sub>1</sub> )	.014/.000	.893	$\beta = .014/.893$	$Y = 51.686 + .013X_1$
X <sub>2</sub> ---> Y (path c <sub>2</sub> )	.414/.171	.000**	$\beta = .414/.000**$	$Y = 27.078 + .400X_2$
X <sub>1</sub> ---> M (path a <sub>1</sub> )	.202/.041	.045*	$\beta = .202/.045**$	$M = 34.691 + .131X_1$
X <sub>2</sub> ---> M (path a <sub>2</sub> )	.525/.276	.000**	$\beta = .525/.000**$	$M = 20.443 + .346X_2$
M ---> Y (path b)	.497/.247	.000**	$\beta = .497/.000**$	$Y = 21.557 + .728M$
X <sub>1</sub> M ---> Y (path c' <sub>1</sub> )	.505/.255	.000**	$\beta_{x1} = -.090/.317$ $\beta_m = .515/.000**$	$Y = 25.492 - .085X_1 + .755M$
X <sub>2</sub> M ---> Y (path c' <sub>2</sub> )	.529/.279	.000**	$\beta_{x2} = .211/.041*$ $\beta_m = .386/.000**$	$Y = 15.509 + .211X_2 + .386M$

Note. X<sub>1</sub> = supportive leader; X<sub>2</sub> = self-efficacy; M = work engagement; Y = innovative behavior; \*\*  $p < .01$ ; \*  $p < .05$

with  $p < .000$ ). If focused on the regression coefficient, the regression coefficient of supportive leader is not significant, meaning that the effect towards innovative behavior is mainly from the work engagement variable if tested together.

The second hypothesis regarding self-efficacy having an effect on innovative behavior with work engagement as the mediator can be accepted. This is because the results of the regression analysis on all four phases show significant results, meaning that all four phases stated by Baron and Kenny can be fulfilled. Regression analysis results show that self-efficacy can directly affect innovative behavior significantly (path c,  $r = .414 / R^2 = .171$  with  $p < .000$ ), self-efficacy affects work engagement significantly ( $r = .525 / R^2 = .276$  with  $p < .000$ ), self efficacy and work engagement both affect innovative behavior significantly ( $r = .529 / R^2 = .269$  with  $p < .000$ ). If focused on the regression coefficient from the multi regression analysis, it can be seen that the regression coefficient for the self-efficacy variable decreases after the work engagement variable is calculated regarding the effects on innovative behavior. The regression coefficient of self-efficacy towards innovative behavior is .400 originally, and when work engagement is put into the calculation, the score decreases into .211. This is as stated by Baron and Kenny (1986), making the study results considered to fall into the category of partial mediation because self-efficacy and work engagement's effect on innovative behavior is significant, but the effect is different if the self-efficacy variable has an direct effect on innovative behavior.

## Discussion

Efforts to explore the factors that can create or strengthen individuals' behavior are not just done by

discussing the direct and linear effects of one or several variables towards certain behavior. Nowadays researches that explore the direct and indirect effects of one or several variables towards another variable are starting to develop. One of them is the assumption testing about the involvement of a mediating variable that will bridge the effect of one variable on the other. By using the mediating analysis phase stated by Baron and Kenny (1986), this study explains that work engagement can function as the mediator on the effect of self-efficacy towards innovative behavior.

Employees' innovative behavior that appears because of the employees' belief towards their own abilities is not to be denied. This is in line with the earlier studies done by Bandura (2000) that state that employees' self-efficacy does not just help form personal effectiveness in finishing tasks, but also help in forming the organization's effectiveness in achievement their goals. Judge, Jackson, Shaw, Scott, and Rich (2007) in their research also state that self-efficacy shows its role on employees' behavior when they are doing their tasks. Judge at all also explains that self-efficacy shows its role optimally towards the finishing of employees' work limited on tasks with easy to medium difficulty level.

The results of Judge et all's research explain why in this study, self-efficacy shows its role on innovative behavior more optimally compared when work engagement is involved, compared to when self-efficacy is directly affecting innovative behavior. Employees with strong beliefs in their abilities and involvement to their tasks will be able to solve the difficulties faced in their tasks. If employees only have high self-efficacy, it will not be as optional in solving task difficulties compared to employees with both high self-efficacy and attachment or involvement in their tasks.

Innovative behavior is not always identical with creating new breakthroughs in finishing tasks, but is

also related to the effort of improving the current work methods into something more efficient. In order to do so, employees do not just need abilities to develop innovative behavior. Employees are also demanded to be swift and precise in trying to formulate their new breakthroughs. Employees with no work engagement are surely not tough enough to defend their new ideas, resulting in difficulties in the process of developing new breakthroughs in dealing with the tasks they are faced with. This is further emphasized when the employees with weak work engagement are questioned by their co-workers or their superiors, they will tend to be less optimal in answering those challenges.

The study conducted by Newton and Maierhofer (2005) explains that a supportive leader (for example: caring about the employees' needs) is one of the important leadership concepts in the process of leader-member exchange. The results of Newton and Maierhofer's study stated that employees that have leaders that show their support towards them are identified to have higher well-being level. This study resulted differently, because in this study supportive leader's effect is explored towards innovative behavior that is more oriented to the real form of the employees' actions in finishing their tasks. The earlier study is more related to the affective aspect or the employees' affective life.

Results of this study explain that one of the hypothesis cannot be accepted, thus work engagement is not proven as the mediator on the effect of supportive leader towards innovative behavior. Based on the mediating assumption testing stated by Baron and Kenny (1986), there is a phase that is not fulfilled in the hypothesis test, which is the phase of testing the effect of supportive leader towards innovative behavior or path c (Table 6). Data analysis that was done explains that the supportive leader's effect on innovative behavior was not proven. Because the direct effect of the free variable towards the tied variable was unproven, then it can be concluded that the existence of the other variable, in this case the work engagement variable, cannot be assumed to have a mediating function. Work engagement was proven to effect innovative behavior as a free variable.

The author understands that employees with innovative behavior are able to use every information and opportunity around them to optimize their work methods in finishing their tasks. This can be seen on the maximum effort given to explore the resources of the employees, until they are able to find breakthroughs, ideas related to finishing their tasks, which is not just compatible with the creators of the idea, but also with their co-workers. Employees with innovative behavior are able to explore their abilities and opportunities regardless

of the existence of superiors who support them or not. If related to the concept of social facilitation, the existence of another person (for example: their superior) will strengthen their productive behavior (Spector, 2009). Employees with innovative behavior did not experience social facilitation.

The study by Carmeli, Meitar, and Weisberg (2006) states that shared leadership oriented on company improvement is more needed in organizations with innovative behavior as the top priority. Meanwhile, Yukl (1998) explains that supportive leaders do not show effect on employees' performance consistently. Yukl explains further that leaders that give support may give an indirect effect towards their subordinates' performance, related to other variables. The supportive activity will only contribute on high performance if it increase the subordinates' confidence, reduce work stress, increase the collaboration with managers, and produce referent power that can be used as a benchmark in achieving goals.

Considering that the characteristic of employees with innovative behavior is being able to use the available opportunities and encourage their co-workers to do the same, it can be seen that the independency of employees with innovative behavior is considered to be strong. In order to develop it further, there is the need for leaders that can give good support in the form of reward (incentive) or other awards, but also able to give challenge, authorization, and acknowledgement towards the employees' work results. There is the need for a more comprehensive research in order to explore the role of leadership that inspires innovative behavior on employees. The aspects of innovative behavior also need to be explored, especially regarding which aspect is the most dominant and most frequent, so with the identification it will be easy to perform interventions to grow and strengthen innovative behavior. There is also the need for empirical proofing that is related to innovative behavior and social facilitation in the work place.

## Conclusion

The results of this study inform that the personal aspects (self-efficacy and work engagement) in employees show a big role both directly and indirectly on innovative behavior, compared to the external factor which is supportive leader. The existence of supportive leader does not show its role in forming innovative behavior because the support given by leaders will have a different effect before reaching the behavior level, such as the employees' confidence, belief on the leaders'

abilities, and the lessening of work pressure or work demands.

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