

Is the Relationship Between Creative Self-Efficacy and Innovative Behavior Mediated by Optimism?

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ABSTRACT

Innovative behavior is very important for companies engaged in the creative industry. Innovative behavior can be caused by optimism, and optimism occurs because of creative self-efficacy. The purpose of this study was to examine the mediating function of optimism on the relationship between creative self-efficacy and innovative behavior. This study used an ex-post facto design. The research subjects were 101 employees of the creative industry who were taken through incidental sampling techniques. The instruments used were innovative work behavior, creative self-efficacy, and Life Orientation Test-Revised (LOT-R). The data were analyzed using the Mediated Regression Analysis (MRA) technique. The results showed that there was a positive influence between creative self-efficacy on innovative behavior, but the relationship was not mediated by optimism. It can be concluded that creative self-efficacy has a direct effect on innovative behavior and not through optimism.

Keywords: *Creative Self-efficacy, Innovative Behavior, Mediation, Optimism*

Every organization has a goal for success. Skilled, capable, and creative human resources are important factors for organizational success (Koednok S and Sungsanit M, 2016; Kim JY et al., 2018). This description of human resources is the characteristic of individuals who have innovative behavior. Innovative behavior is work behavior characterized by an initiative to try to do something new (De Jong JP and Den Hartog DN, 2008; Amar AD and Juneja JA, 2008).

Innovative behavior makes a positive contribution to organizational development. Innovative behavior can increase growth, productivity, competitiveness, competence (Vinarski-Peretz H and Carmeli A, 2011; Hammond MM et al, 2011), profitability, organizational effectiveness and efficiency, team performance and cohesiveness (Rosyiana, I, 2019), sales, customer satisfaction (Momeni M et al., 2014), innovative product and service development (Schermuly CC et al., 2013). Innovative behavior contributes to competitive advantage organization (Supriatna MD, 2019).

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Received: August 16, 2021; Revision Received: December 20, 2021; Accepted: December 28, 2021

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Innovative behavior also has a positive impact on individuals, such as career development, welfare, productivity (Sharifirad MS, 2013), individuals become more loyal to the organization (Rosyiana, I, 2019) and committed to change (Battistelli A et al., 2014). In addition, individuals will also receive awards (Spiegelaere SD et al., 2016), trust, job satisfaction (Mansour S and Tremblay DG, 2018), have opportunities to grow, learn and experience increased performance (Vinarski-Peretz H and Carmeli A, 2011), and increased interpersonal communication (Spiegelaere SD et al., 2016).

Based on previous research, internal and external factors cause innovative behavior. Internal factors consist of mindfulness (Montani F et al., 2016), perfectionists (Chang HT et al., 2016), eustress and intrinsic motivation (Ren F and Zhang J, 2015), problem-solving skills (Kim JY et al., 2018), commitment to change and creative self-efficacy (Battistelli A et al., 2014), proactive personalities, openness to experience and optimism.

While external factors include the climate of organizational innovation (Ren F and Zhang J, 2017), visions, innovation missions and organizational commitment ((Rosyiana, I, 2019), learning behaviors in teams (Widmann A et al., 2018), managerial and participatory leadership (Odoardi C et al., 2015), salary or rewards (Spiegelaere SD et al., 2016), group attachment, dynamic work (Chang HT et al., 2016), work experiences (Hanif A et al., 2015), and job demands (Shalley CE et al., 2004).

Previous research on innovative behavior has focused more on external factors, that is organizational level. Whereas innovative behavior is closer to internal factors, which are related to how individuals generate creative ideas in the organization. 80% of innovative ideas arise from within individuals and the rest come from organizational initiatives (Getz I and Robinson AG, 2003).

Organizational contributions only facilitate the implementation of innovative tasks, while individuals are important actors who are behind innovative ideas in the organization. The main driving force for innovative behavior lies in the individual's belief that he is capable of producing creative ideas (Newman A. et al., 2018). Self-efficacy theory states that individuals will behave following their beliefs about their abilities (Bandura A, 1999). Creative self-efficacy reflects the belief that individuals can generate ideas and something new to the organization. Individuals who have high creative self-efficacy tend to show innovative behavior, are more willing to be involved in the innovation process (Yuan F and Woodman RW, 2010), and feel more confident in making innovations (Hsu ML et al., 2011).

In other studies, it is stated that creative self-efficacy has contributed to innovation, effectiveness, organizational continuity, and increased creative problem-solving strategies (Supriatna MD, 2019). Thus, creative self-efficacy is a prerequisite for the emergence of innovative behavior.

Creative self-efficacy can also form optimism (Valentino R and Himam F, 2014). When individuals have the belief that they can think and work creatively, it will lead to optimism, which is a positive feeling that the individual will succeed in achieving the desired goals. Optimism makes individuals feel better prepared to deal with challenges and uncertainties (Richter AW et al., 2012; Seligman ME and Csikszentmihalyi M, 2000). Individuals who have optimism tend to think positively and are more motivated to work hard towards their

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goals, have enthusiasm, keep trying, and struggle to overcome the problems they face to achieve the desired results (Kluemper DH et al., 2009).

Optimism has a positive influence on innovative behavior (Sameer YM, 2018). Optimistic individuals are better able to design, develop, and acquire innovative ideas (Ziyae B, 2015). Optimism is an important factor for jobs that involve high mental effort (Hobfoll SE, 2006). Thus, optimism is needed when individuals are faced with situations and tasks that require innovation, are unpredictable, risky, consume a lot of energy and time, and often lead to frustration (Hsu MLA and Chen FH, 2017).

Individuals who have high optimism rarely experience stress and frustration (Rego A et al., 2012; Sweetman D et al., 2011), do not give up easily in doing innovative tasks (Rego A et al., 2012), can survive when faced with difficulties, and have positive problem-solving strategies so they tend to be successful in making innovations. Brennan (2017) found that individuals who have optimism tend to be involved in the work process.

Based on theoretical descriptions and previous research findings, the authors suspect that optimism acts as a mediator in the relationship between creative self-efficacy and innovative behavior. Thus, that individuals who have the belief that they are capable of working creatively will create a sense of optimism which then encourages innovative behavior in the workplace.

The purpose of this study was to determine the mediating role of optimism in the relationship between creative self-efficacy and innovative behavior. The focus of this research is at the individual level in the work environment. Theoretically, this research is expected to provide input related to research in the field of innovative behavior by linking positive psychological variables that can be measured, developed, and managed as a trigger for innovation in organizations, and can be used as library material on related topics. In practical terms, this research is expected to be able to provide input to organizations that are innovating, especially in the creative industry by considering individual aspects such as creative self-efficacy and optimism to be applied effectively to improve individual performance.

MATERIAL AND METHODS

Participants

This study used an ex-post facto design. The research subjects were 101 employees in large-scale creative industries consisting of 39 (38.6%) male employees and 62 (61.4%) female employees. The age ranges of study subjects were 75 (74.3%) people aged 17-30 years and 26 (25.7%) people aged 31-56 years. Research targets are companies that have a vision and mission of innovation or are making innovations. The selection of companies is done by looking for information through the website and peer information, then researchers trace either directly to the company or by telephone. The priority inclusion criteria are organizations engaged in creative industries such as architecture, publishing and printing, newspaper media, film and photography, fashion, television and radio, tourism, culinary, production, and sales, and/or industries that are currently developing or make product innovations or service innovations. See Table 1 for a description of subject characteristics.

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Table 1. Subject Characteristics (N = 101)

No	Subject Characteristics	n	Percentage
1	Gender:		
	Men	39	38.6%
	Women	62	61.4%
2	Age:		
	17-30 year	75	74.3%
	31-56 year	26	25.7%
3	Years of service:		
	5 month - 5 year	78	77.2%
	6-13 year	17	16.8%
	14-34 year	6	5.9%
4	Last education:		
	High School	27	26.7%
	Diploma	7	6.9%
	Graduate	61	60.4%
	Post- Graduate	6	5.9%

Ethics approval and informed consent

This study was approved by the research ethics board at the University of Muhammadiyah Malang, East Java, Indonesia. All procedures in this study involving human participants were following the ethical standards of institutional research committees and by the 1964 Declaration of Helsinki and its amendments thereafter. Written informed consent was obtained from all participants included in this study.

Measures of constructs

Innovative behavior is individuals who try to work in innovative ways ranging from identifying problems, looking for creative solutions, introducing ideas, seeking support, and realizing their ideas in the form of new programs, new methods, new products, and new services that are different from before. For the measurement of innovative behavior, the innovative work behavior scale was used which was introduced by Janssen (2000), then the researchers adopted those that have been adapted by Etikariena and Muluk (2014) in the Indonesian version. The innovative work behavior scale consists of 3 aspects: idea generation, idea promotion, and idea realization. The scale of innovative work behavior is 9. This scale is displayed on a Likert scale where 1 means never and 6 means always. This scale is unidimensional so that one total score will be obtained. The reliability of the scale is $\alpha = 0.80$.

Creative self-efficacy is an individual's belief that he is capable of working creatively. Measuring creative self-efficacy uses the creative self-efficacy scale developed by Karwowski (2011) with a total of 6 items. This scale is displayed on a Likert scale where 1 means strongly disagree and 5 means strongly agree. The reliability of the scale is $\alpha = 0.80$. Optimism is an individual's positive disposition in expecting good things to happen in the future according to his wishes. The measurement of optimism is measured by the Life Orientation Test-Revised (LOT-R) scale developed by Scheier, Carver, and Bridges (1994). The Life Orientation Test-Revised (LOT-R) scale consists of 2 aspects, namely optimism,

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and pessimism. This scale is used to rate general optimism by a total of 10 items. This scale is unidimensional. Respondents were asked to indicate their level of agreement on each item on a Likert scale ranging from 5 meaning strongly agree to 1 meaning strongly disagree. The reliability of the scale is $\alpha = 0.78$.

Data analysis

The data were analyzed using the Mediated Multiple Regression (MRA) technique. This analysis aims to examine the mediating role of optimism in the relationship between creative self-efficacy and innovative behavior.

RESULTS

Based on Table 2, it can be seen that the mean of innovative behavior, $M = 4.331$; $SD = 1.1904$, this result shows the individual has high innovative behavior. Mean creative self-efficacy variable, $M = 4.112$; $SD = 0.7060$, this result shows the individual mean in the high category creative self-efficacy. The mean of optimism variable $M = 3.305$; $SD = 0.7075$, this result shows a medium level of optimism.

Table 2. Mean, variable standard deviation (N=101)

Variable	Mean	Std. Deviation
Innovative behavior	4,331	1,1904
<i>Creative Self-Efficacy</i>	4,112	,7060
Optimism	3,305	,7075

Based on Table 3, creative self-efficacy has a positive and very significant effect on innovative behavior with a value of $\beta = 0.681$; $p < 0.05$. The amount of influence of creative self-efficacy on innovative behavior is 42.2%, the remaining 57.8% is influenced by other factors. From the results of this analysis, it can be seen that the higher the creative self-efficacy, the higher the individual's innovative behavior. Thus, hypothesis 1 is accepted.

Table 3. Mediation regression test results

Model	β	p	R^2	
Notes				
Model without a mediator:				
X-Y (c)	0.624	0.000	0.389	Positive & Significant
Model with a mediator:				
X-Y (c')	0.681	0.000	0.424	Positive & Significant
X-M (a)	0.290	0.003	0.084	Positive & Significant
M-Y (b)	-0.194	0.017	0.009	Negative & Significant
<i>Indirect effect (a*b)</i>	-0.094	0.067	-0.034	Negative & Not Significant

Notes: a. X (*creative self-efficacy*), M (optimism), Y (innovative behavior)

b. Significance value $p < 0.05$

The results of the analysis show that creative self-efficacy has a positive and significant effect on optimism with a value of $\beta = 0.290$; $p < 0.05$. The amount of influence between creative self-efficacy on optimism is 8.4%, the remaining 91.6% is influenced by other factors. From the results of this analysis, it can be seen that the higher the creative self-efficacy, the higher the individual's optimism. Thus, hypothesis 2 is accepted.

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The results of the analysis show that optimism has a negative and significant effect on innovative behavior ($\beta = -0.194$; $p < 0.05$). The amount of influence between optimism on innovative behavior is 0.9% and the remaining 99.1% is influenced by other factors. These results indicate that the higher the optimism possessed individual, the lower the innovative behavior. This result is not by the hypothesis proposed. The research hypothesis states that the relationship between the two variables has a positive direction. Thus, hypothesis 3 is rejected.

The results of the mediation analysis found that the value of $\beta = -0.098$; $p > 0.05$. This suggests that the mediating role of optimism in the relationship between creative self-efficacy and innovative behavior does not occur. The direction of the mediation is also negative even though the hypothesis is thought to be positive. It can also be said that the relationship between creative self-efficacy and innovative behavior is more direct, which does not require intermediate variables. Thus hypothesis 4 which states the relationship between creative self-efficacy and innovative behavior mediated by optimism is rejected. Look at Figures 1 and Figure 2 to get an overview of the direct and indirect effects.

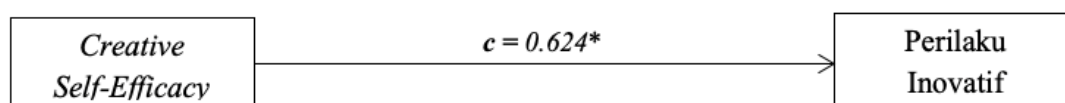
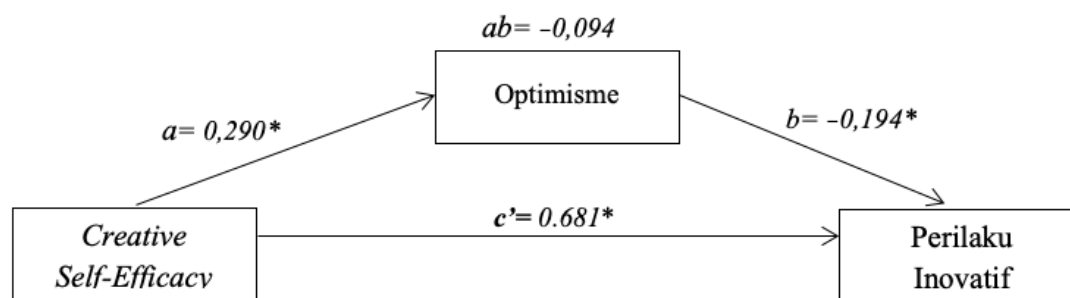


Figure 1. Total Effect Creative self-efficacy to innovative behavior



Keterangan: * $p < 0.05$

Figure 2. Direct Effect and Indirect effect creative self-efficacy to innovative behavior through Optimism

DISCUSSION

Based on the results of data analysis, it was found that creative self-efficacy affects innovative behavior in individuals. The results of this study indicate that individuals who have high confidence that they are capable of working creatively, tend to be innovative in their work behavior. However, when individuals are not sure that they are capable of working creatively, their work behavior is also not innovative.

Based on the results of previous research, it was found that individuals who believe themselves to be creative tend to work innovatively in helping organizations solve problems, make new products, services that can increase added value in the organization (Zhang X, 2010; Teng CC et al., 2019; Abdullah NH et al., 2019). This is in line with the results of this study. These results are supported by the theory of creativity which states that innovation includes ideas that are applied. Therefore, a creative individual tends to apply his ideas to

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the work process. Creative thinking is a cognitive process that has an important role in shaping individual behavior (Supriatna MD, 2019; Bandura A, 1999) Therefore, innovative behavior cannot be separated from individual creative thinking.

The next finding is that there is a positive influence between creative self-efficacy on optimism in individuals. This shows that the higher the individual's belief that he can work creatively, the higher the level of optimism. This result is supported by a positive psychological perspective by Seligman (2006) that creative-thinking individuals tend to be imaginative which can also trigger positive emotions because they are happy with their ideas. The positive psychological theory says that emotions follow cognition in goal-directed thinking processes (Seligman MEP, 2006; Peterson C, Seligman ME, 2004). Therefore, an individual who believes himself to be able to work creatively will also have a positive view of the success of his ideas, this is what makes the individual more optimistic. This result is in line with research that found that self-efficacy has a positive and significant effect on increasing optimism (Moegni N and Sulistiawan J, 2012).

Then, the results showed that there was a negative influence between optimism on individual innovative behavior. This shows that individuals who have optimism do not always have innovative behavior, even this result shows that individuals who have optimism decrease their innovative behavior. One of the factors causing his innovative behavior to decline is due to bureaucratic factors that are considered to have very strict rules and procedures which make individuals less flexible (Bysted R and Hansen JR, 2015; Pucetaite RNA and Laura M, 2014; Eva N et al., 2017). On the other hand, the presence of bureaucracy makes individuals cynical and also causes silence in the organization. This makes individuals indifferent and less involved in the innovation process. Thus, even though individuals have high optimism, without the support of the organization, individuals will not be able to apply innovative behavior in work roles (Moegni N and Sulistiawan J, 2012).

This study also found that optimism did not mediate the relationship between creative self-efficacy and innovative behavior. This means that even though he has high creative self-efficacy accompanied by high optimism, it does not mean that he will show innovative behavior. This can be caused by several factors such as cognitive and affective factors. Cognitive factors, the individual experiences overconfidence, and an optimism bias occur (Dunlosky J and Rawson KA, 2012). The cause of overconfidence is that the individual judges himself too positively and feels capable of doing it, resulting in an optimism bias or cognitive bias (Dubra J, 2004). If there is an optimism bias, the individual is more likely to underestimate the situation, assuming everything will happen the way he wants, over-interpreting success without predicting the risk of failure and thus leading to wrong estimates (Schneider S, 2001).

The occurrence of optimism bias makes individuals less prepared, preventive, and good planning for the situation to be faced so that it can reduce individual initiative to innovate (James N and Gudmundsson A, 2012). According to Schneider (2001) individuals like this are not accurate in anticipating situations that will occur (Schneider S, 2001). This is like what was experienced by the Nokia company which was once known as the king of smartphones and as the most dominant technology organization in the world. Based on the research results, it was found that the cause of Nokia's failure was a cognitive bias that made Nokia less innovative (Madany H, 2016). In addition, Nokia is too optimistic about its superior organizational technology capabilities, assuming its organization will always be

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successful, so it is less prepared to develop innovations for long-term investment length (Vuori TO and Huy QN, 2016).

Individuals who have optimism always look for comfortable and pleasant conditions, keep away from negative events, change negative feelings into positive ones (Rasmussen H et al., 2007). However, further research has found that individuals who have negative effects are more likely to have full attention and awareness regarding events that will be experienced compared to individuals who have a positive effect. This is due to the negative effect function, which is to signal to individuals that the current situation is problematic and that individuals will experience greater anxiety and vigilance because they perceive it as a threat so that it requires further efforts to resolve it. Negative affect can increase noradrenaline levels which can mobilize the brain and body to act (Montani F et al., 2016). Thus, these individuals will tend to react by making creative and innovative efforts (Baumeister RF et al., 2007). These results are also supported by research that found that pessimistic individuals can produce more creative performance because pessimistic individuals are always prepared and alert to the risks that will be faced (Demirtas Z et al., 2016). Therefore, in doing innovation, not only a positive attitude is needed but also awareness of the situation to be faced, and make preparations and plans to overcome it.

Based on theoretical studies and the findings of this study, creative self-efficacy is consistently proven to influence optimism and innovative behavior. However, optimism is not able to mediate innovative behavior. Therefore, further studies are needed to reveal the factors that hinder the effect of optimism on innovative behavior. In addition, it can develop a more specific measure of optimism related to innovation and also consider cultural factors that can affect individual optimism.

This study only focuses on the factors that trigger innovative behavior. Therefore, further research is quite interesting when researching the factors inhibiting the occurrence of innovative behavior. In addition, further research will be very interesting if you select respondents that are more specific to an organization and are directly involved in observing individual behavior in innovating. Weaknesses in this study could be taken into consideration for further research.

CONCLUSION

The results of the study found that significantly creative self-efficacy can increase an individual's innovative behavior, so it can be concluded that individuals who believe that they can work creatively tend to have innovative behavior. Then creative self-efficacy and innovative behavior are in the high category, it is concluded that the average individual has the belief that he can work creatively, can create new ideas, and can perform certain tasks in the innovation process. In addition, it was found that creative self-efficacy could significantly increase individual optimism. However, optimism is not significant as a mediator between creative self-efficacy and innovative behavior, so it is concluded that although individuals who have high creative self-efficacy also have high optimism, it does not necessarily affect innovative behavior. This is because other factors hinder individuals from innovating, such as bureaucracy and optimism bias.

Theoretically, the concepts used in this study provide evidence that social cognitive theory can explain that the influence of power in individuals can form an innovative behavior which at the same time can give changes to their environment. This suggests that individual

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psychological capacities such as creative self-efficacy can encourage innovative behavior which also has an impact on organizational development and organizational productivity. However, individual optimism can be hampered by external factors, namely when the organization has a tight bureaucracy. Therefore, it is recommended that organizations be involved in building a flexible positive climate by providing opportunities for optimistic individuals to be involved in the innovation process. It is hoped that these concepts can be formulated into a curriculum in human resource development, organizational development, and a training curriculum based on positive psychology.

Practically from this research is to provide practical insights for organizations that want to improve the innovative behavior of their employees. One of the beneficial implications for organizations is combining easy-to-manage psychometric tests to identify employee innovative behavior so that it can be further considered to develop programs that can increase employee creative self-efficacy and innovative behavior, such as through a series of training or self-development activities focus on improving employee skills and motivation to innovate. On the other hand, this study provides insight into company management to build a positive work environment such as giving appreciation, increasing employee morale, and providing mutual support, to increase employee optimism to be more enthusiastic about engaging in innovative tasks. This research also helps employees to recognize their potential, helps employees to build positive mental habits, positive emotions to be used in the work process to achieve innovative performance.

Suggestions for further research do not need to include creative self-efficacy variables because it has been shown to have a very strong effect on innovative behavior. Therefore, it is recommended to include variables that have not been involved in this study, especially to review the factors that influence optimism for innovative behavior, such as organizational climate, organizational support, leadership, and job readiness.

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Acknowledgement

The author would like to thank the Psychology Study Program, University of Muhammadiyah Malang, and the Postgraduate Program, the University of Muhammadiyah Malang for their support so that this research can be completed on time.

Conflict of Interest

The author(s) declared no conflict of interest.

How to cite this article: Winarsunu T., Moh. Sarifudin & Djudiyah (2021). Is the Relationship Between Creative Self-Efficacy and Innovative Behavior Mediated by Optimism? *International Journal of Indian Psychology*, 9(4), 1879-1891. DIP:18.01.179.20210904, DOI:10.25215/0904.179