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Core Self-Evaluations and Innovative Behavior Among Micro-Entrepreneurs: The Mediating Effect of Proactive Personality

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Abstract
Given the key role that entrepreneurs play in a country's economic growth, there is a need to study how entrepreneurs innovate for their firm's survival. This study aims to investigate the mediating effect of proactive personality on the relationship between core self-evaluations (CSE) and innovative behaviors among micro-entrepreneurs in urban areas. The data were obtained from a survey administered to 307 micro-entrepreneurs in Jakarta, Indonesia and its surrounding cities. Data were tested using Hayes' PROCESS macro in SPSS. The results showed that CSE was related positively to innovative behavior, and that proactive personality was also related to innovative behavior. Results also showed that proactive personality mediated the relationship between CSE and innovative behavior, whereby CSE led to proactive personality, which in turn influenced innovative behavior. Theoretical and practical implications of the findings are further discussed.

Keywords
Core-self-evaluation, proactive personality, innovative behavior, micro-entrepreneurs

Indonesia, as one of the MINT countries (an acronym of Mexico, Indonesia, Nigeria, and Turkey), is lagging behind other neighboring countries with respect to the proportion of self-employed people in society. Julianto (2016) reported that Indonesia has 1.6% self-employed people—much lower than in other South East Asian countries (e.g., Singapore seven percent, Malaysia 5%, and Thailand 3%). Among self-employed Indonesians, 99% employ fewer than four other people, making them a part of the micro business segment. The Indonesian Ministry of Cooperatives, Small- and Medium-Sized Enterprises indicated that, in 2012, 90.12% of Indonesian employment was in the micro enterprise segment, implying the importance of micro-entrepreneurs for the country's economy. The vital role of micro-entrepreneurs for a country's economic growth has been widely accepted (Chandy & Narasimhan, 2011). One reason is that micro-entrepreneurs provide employment opportunities for people in their communities especially in urban areas. Despite their contributions to the economy, these entrepreneurs are still not receiving adequate support for their businesses, especially not in developing countries.

Although some micro-entrepreneurs do not pursue business growth because they are busy trying to make ends meet, many of them especially in urban areas pursue business growth as the primary aim of their enterprise. One major problem faced by growth-focus entrepreneurs in

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emerging economies is lack of financial support even in urban areas with concentrated financial institutions providing wider range of opportunities compared to rural areas. Additionally, these micro-entrepreneurs face challenges from the development of internet and information technologies that increase the speed and lower the cost of introducing new products and services into the market (Laforet, 2013), thus leading to a higher level of competition in this segment. Under such competitive conditions, it is necessary for micro enterprises to engage in innovation. In fact, past studies have indicated that small and medium enterprises (SMEs) are considered to be at the forefront of introducing innovation in the market (Gray, 2006), as they tend to be more confident in performing innovative tasks (Chen, Greene & Crick, 1998). Thus, behaving innovatively is necessary for entrepreneurs to make their business grow and stay competitive (Freel, 2000; Omri, 2015). Indeed, business performance relies heavily on innovation (Chapman & Hyland, 2004), with product, process and market innovations being positively linked to a firm's growth (Varis & Littunen, 2010). Hence, it is essential to understand entrepreneurs' innovative behavior and the factors affecting this behavior.

Past studies on innovative behavior have been conducted particularly in the context of large firms. For instance, it has been found that top management's personality has a major influence on firms' performance and willingness to innovate (e.g., Miller & Toulouse, 1986; Chatterjee & Hambrick, 2007). However, any single personality factor has a relatively low impact on behavior (Hammond et al., 2011). Thus, there is an implied need to consider personality in a more integrative manner (Simsek, Heavey & Veiga, 2010). One widely-used global personality measure in the organizational setting is core self-evaluations (CSE). CSE has become a popular integrative construct for personality traits of self-esteem, generalized self-efficacy, locus of control, and neuroticism (see Luthans & Youssef, 2007; Judge et al., 2002). CSE has often been used to explain work-related performance and satisfaction (Chang et al., 2012), but has not been considered in entrepreneurial settings. Thus, we propose the use of CSE as an integrative personality construct to explain micro-entrepreneurs' innovative behavior.

When considering the relationship between CSE and innovative behavior, we posit that this relationship is mediated by proactive personality. The use of CSE has been linked with an approach-avoidance framework (Elliot & Thrash, 2002), since people who have positive self-evaluations tend to view themselves positively, such as capable, worthy and in control. Thus, they tend to use approach motivation, such as taking action and anticipating future outcomes (read: "taking initiatives"). This fits well with proactive personality—an individual's disposition to be self-initiative toward effecting constructive changes (Bateman & Crant, 1993) and to go beyond one's normal duties to overcome an inconvenient situation. Even though CSE and proactive personality both are personality variables, they do not overlap (Judge et al., 1997); CSE is related to emotional stability, and proactive personality is related to openness and to experience. Hence, we argue for a mediating relationship between CSE and proactive personality on innovative behavior. This investigation should provide new understanding how factors affecting innovative behavior must be central in the discussion of entrepreneurial competitiveness (see Cooper, Peake & Watson, 2016).

Innovative Behavior

Micro-entrepreneurs need to perform innovative behavior for the functioning of the firm to achieve business growth (Stenholm, 2011). Innovative behavior is defined as the intentional creation, introduction, and application of new ideas to benefit a firm (Janssen, 2000). Innovative behavior is a complex behavior comprised of three stages: idea generation, idea promotion, and idea realization. Idea generation refers to the production of novel and useful ideas in any domain; idea promotion is a stage in which entrepreneurs gather social support to increase the likelihood of innovation; and idea realization refers to the stage of producing an applicable model of innovative products or services for the benefit of the firm (Janssen, 2000).

Past studies on innovative behavior focused on employees rather than entrepreneurs. Hammond, et al. (2011), in their meta-analytical study, found four categories that influence innovative behavior among employees: individual differences,

intrinsic motivation, job characteristics, and contextual influences. Of these four categories, they found that job characteristics, pertaining to complexity and job autonomy, have the most consistent and strongly positive relationship with creativity and innovative behavior. In addition, personality factors have a significant relationship with innovative behavior, although the relationships are not as strong as for job characteristics or motivation. Hammond, et al. (2011) suggested that this finding about personality factors and innovative behavior might partly be novel since past studies did not consider the compound nature of personality traits. Studies on innovative behavior and personality were typically directed at a single personality factor, such as self-efficacy, despite the indication that compound personality factors are more valid predictors (Ones et al., 2007). Furthermore, investigation of more complex relationships among factors affecting innovative behavior is needed as few studies have considered mediation models in this domain (Rhee, Park & Lee, 2010). In the present study, the goal is not only to extend the application of innovative behavior to an entrepreneurial context, but also—taking the suggestion from Hammond, et al. (2011)—to examine the role of compound personality traits and more complex relationships among different variables. Therefore, the use of compound personality traits of CSE and proactive personality are proposed as predictors for micro-entrepreneurs' innovative behavior.

Core Self-Evaluations (CSE)

CSE is defined as the fundamental premises individuals hold about themselves and their functioning in the world (Judge, Locke & Durham, 1997). CSE is a global and fundamental construct of four personality traits: self-esteem, generalized self-efficacy, locus of control, and neuroticism. Before the use of CSE, these four traits were investigated as separate traits, despite the fact that past findings suggested a strong correlation between them (Judge, Erez & Bono, 1998). The four traits of CSE have been widely investigated in the past. Self-esteem, the overall value one places on oneself as a person, is considered a central aspect of CSE as it pertains to people's evaluation of themselves (Bono & Judge, 2003). Generalized self-efficacy refers to individuals' judgment about their fundamental ability to successfully perform tasks in a variety of situations (Gist & Mitchell, 1992). It is different from specific self-efficacy, which only relates to a particular situation. Locus of control refers to individuals belief about their control over events that happen in their lives (Rotter, 1966). Individuals with internal locus of control typically believe that they are in command of the situation. The fourth trait, neuroticism is the continuous tendency to experience negative emotional states and exhibit poor emotional adjustment (Bono & Judge, 2003). Neurotic individuals tend to have negative self-perception.

Initially, CSE has been developed in organizational settings to explain work-related factors', such as job-related stress (Brunborg, 2008), job burnout (Peng et al., 2016), work engagement (Lee, 2015), and organizational commitment (for review, see also Chang et al., 2012). Beyond organizational settings, CSE has been known to influence life satisfaction (Jiang & Jiang, 2015). Despite the overwhelming support for the use of CSE as a predictor variable for work-related factors, past studies have not linked CSE with innovative behavior. Simsek, Heavey & Veiga (2010) indicate that CEO's CSE influences a firm's entrepreneurial orientation. CEOs are typically the ultimate decision-makers in the company, given the limited involvement of shareholders. In SMEs, micro-entrepreneurs will typically take the role of the decision-makers in their company. Hence, the firm's entrepreneurial orientation and innovativeness will depend on the micro-entrepreneurs' behavior. Thus, we propose that CSE will influence micro-entrepreneurs' innovative behavior. We predict that micro-entrepreneurs who have high core self-evaluations (positive self-evaluations) will be more confident, optimistic, in control, and able to regulate themselves. These tendencies enable them to be more willing to take risks and to innovate in their business. Thus, we hypothesize the following:

Hypothesis 1: Core-self evaluations will have a positive effect on innovative behavior.

The Mediating Effect of Proactive Personality

There is substantial variation across studies regarding the strength of the relationship between CSE and performance (Grant & Wrzesniewski,

2010), suggesting that the effect of CSE on performance is not direct. We argue that an indirect relationship is also present between CSE and innovative behavior via having a proactive personality. Proactive personality is defined as the individual tendency to effect constructive changes (Bateman & Crant, 1993) by anticipating future outcomes and taking actions to accumulate resources (Gong et al., 2012). Judge, et al. (1997) contended that CSE and proactive personality did not share the same basic personality; CSE is more strongly related to emotional stability and *factor alpha* (getting along), and proactive personality is more strongly related to openness to experience and *factor beta* (getting ahead) (Fuller & Marler, 2009).

While there is undoubtedly a relationship between personality variables, research into these relationships is still relatively in its infancy. Bono & Judge (2003), in their review of CSE, found that the relationship between CSE and job performance was relatively small (r = 0.23) as compared to its relationship with job satisfaction (r = 0.43), indicating that an additional mechanism is needed to explain the link between CSE and job performance. Therefore, we proposed that proactive personality serves as a mediating variable between the relationship between CSE and such behavior. In line with our contention, Chang et al. (2012) suggested integrating CSE within an approach-avoidance framework as a parsimonious theory that facilitates understanding the relationship between CSE and other variables. Approach-avoidance theory suggests that an individual's experience can be classified in terms of his sensitivity to positive or negative information, and the relationship between personality traits (such as CSE) and their outcomes is thought to be driven by the differences in sensitivities to positive (approach) and negative (avoidance) information (Chang et al., 2012). Thus, employing an approach avoidance framework (Elliot & Thrash, 2002), high CSE individuals—people who view themselves as capable, worthy and in control—are expected to have an approach motivation and adopt approach goals by taking actions and anticipating future outcomes, thus enabling them to perform innovatively. We concur with this framework as we suggest that proactive personality is in line with a strong approach motivation. Therefore, we hypothesize the following:

Hypothesis 2: Proactive personality will have a positive effect on innovative behavior.

Hypothesis 3: Proactive personality will mediate the relationship between core-self evaluations and innovative behavior.

Method

Participants and Procedure. We sent assistant researchers to survey 500 micro-entrepreneurs in Jakarta, Indonesia, and its surrounding area. We used a convenient sampling method by approaching micro-entrepreneurs who employed less than ten employees and asked them to participate in the survey. Out of 500 participants approached, 346 agreed to participate, with a response rate of 69 percent (212 males, 134 females, M_{age} = 37.66, SD = 11.25). Two hundred and sixteen participants (62.4 percent) were high school graduates, 36 participants (10.4 percent) were college graduates, and 94 participants (27.2 percent) were university graduates. As a token of appreciation, we invited those who agreed to fill out the questionnaire to attend our research seminar at the end of the survey.

Measures. All measures were in English, translated into the Indonesian language and back-translated into English by organizational psychologists using procedures suggested by Brislin (1986).

Innovative behavior. We adapted Janssen's (2000) nine-item innovative work behavior scale. A sample item is, "In your current business, how often do you create new ideas?" (*1=never*, *6=always*; α =.84).

Core self-evaluation. We measured core self-evaluations with the twelve-item scale developed and validated by Judge, et al. (2002). It measures individual positive feelings regarding self-esteem, generalized self-efficacy, emotional stability, and locus of control. A sample item is "I am confident I get the success I deserve in life" (*1=strongly disagree*, 5=*strongly agree;* α =.68).

Proactive personality. We measured proactive personality with Seibert, et al. (1999)'s ten-item scale, which was the short version of Bateman & Crant (1993)'s proactive personality scale. The

scale measures an individual's natural disposition toward promoting constructive changes. A sample item is "I am constantly on the lookout for new ways to improve my life" (*1=strongly disagree*, 5=*strongly agree;* α =.67).

Control variables. In the present study, we controlled for age, education, and business experience. In previous research, age was found to be negatively related to entrepreneurial behavior (Levesque & Minniti, 2006). Educational level and previous business experience were found to be positively related to innovative behavior (Hammond et al., 2011; Scott & Bruce, 1994).

Test of Common Method Variance. We performed two statistical tests to address the possible issue of common method variance given that all variables in this study were collected from the same source (self-reported) using the same method. First, we used Harman's single-factor test (Podsakoff & Organ, 1986) by performing an exploratory factor analysis on all items. We found there was no one single factor to account for the largest part of the variance, as the highest factor only accounted for 17% of the variance. Second, we used the latent variable approach to control for the effects of an unmeasured latent factor (Podsakoff et al., 2003). Employing confirmatory factor analyses, we added a first-order factor with all indicators of our study variables. We further compared the standardized regression weights of the factor structures with and without the latent method factor. For the thirty-one items in the analysis, there were only three significant differences found in factor loadings (above the threshold level of 0.20; Podsakoff et al., 2003). The small number of items above the threshold level indicated that our findings were unlikely to be caused by common method variance.

Results

Means, standard deviations, and correlations among study variables are summarized in Table 1. We tested Hypotheses 1, 2 and 3 using Hayes' PROCESS macro of regression procedures in SPSS 21.

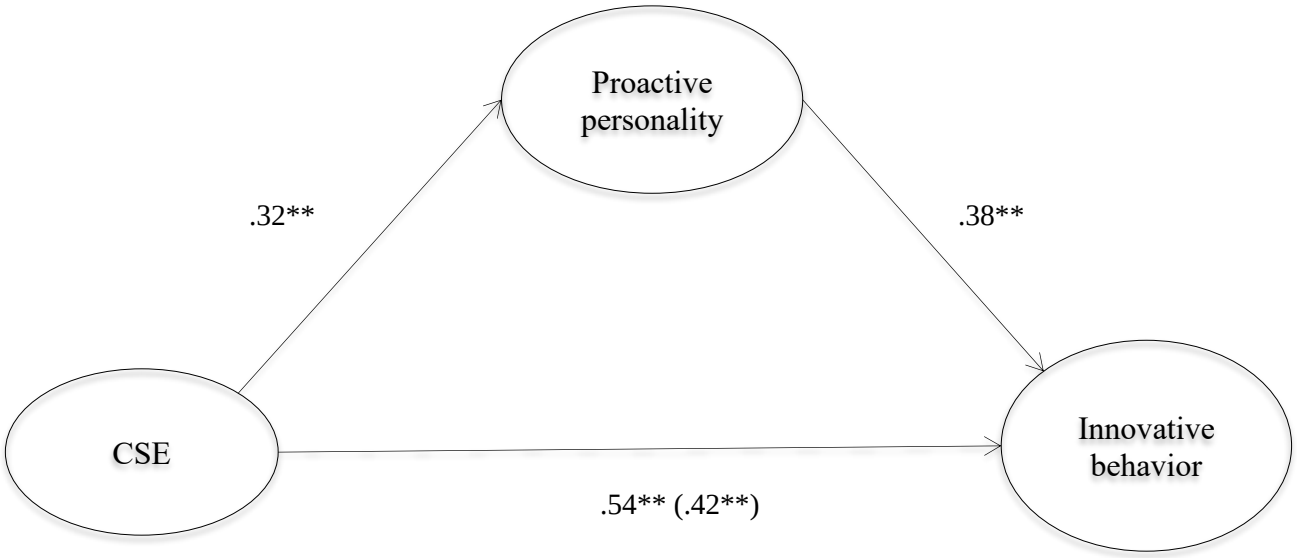
Table 1. Means, Standard Deviations, and Correlations among Study Variables

	Mean	S.D.	1	2	3	4	5	6
1. Age	37.66	11.25	-					
2. Education	1.65	0.89	-0.24**	-				
3. Business experience	0.49	0.5	−0.01	−0.08	-			
4. Core self-evaluation	3.64	0.45	0.22**	−0.24**	0.13*	-		
5. Proactive personality	3.91	0.43	0.12*	−0.06	0.13*	0.37**	-	
6. Innovative behavior	4.32	0.73	0.06	0.04	0.07	0.31**	0.31**	-

Note. N = 346. Age was measured in years; Education was dummy coded (1 = high school, 2 = academy, 3 = university). Business experience was dummy coded (0 = never had businesses previously, 1 = had one or more businesses previously) All others scales were measured on a 5-point scale.
* p <.05, ** p <.01

As shown in Table 1, innovative behavior had a significant positive correlation with CSE (r = 0.314, p < 0.01) and proactive personality (r = 0.314, p < 0.01). No significant correlations were found between innovative behavior and our control variables, age (r = 0.058, p > 0.10), education (r = 0.038, p > 0.10), and previous business experience (r = 0.071, p > 0.10). We found a significant positive correlation between CSE and proactive personality (r = 0.366, p < 0.01). Moreover, proactive personality had a significant positive correlation with business experience (r =.133, p < 0.05) and age (r = 0.125, p < 0.05). In addition, CSE was positively related to age (r = 0.221, p < 0.01) and previous business experience (r = 0.132, p < 0.05), and negatively related to education (r = −0.243, p < 0.01).

Figure 1. The Mediating Role of Proactive Personality on CSE and Innovative Behavior among Micro-entrepreneurs.



*N = 346. The number of bootstrap samples for bias corrected bootstrap confidence intervals was n = 5000 (confidence level 95%). The direct coefficient is shown in parentheses. * p <.05, ** p <.01*

Hypothesis testing

To test our hypotheses, which posited that there was a positive effect of CSE on innovative behavior (H1), a positive effect of proactive personality on innovative behavior (H2), and that proactive personality mediated the CSE—innovative behavior relationship (H3), we used Hayes' PROCESS macro for SPSS, which is considered to be a powerful technique in identifying indirect effects. Our confidence intervals were based on the bias-corrected method with 5,000 bootstrap samples. We controlled for age, education, and previous business experience before conducting the hypotheses tests. Hypothesis 1 was supported, as shown by the significant positive total effect of CSE on innovative behavior (effect = 0.54, *SE* = 0.10, *t* = 5.56, 95% *CI* [0.35, 0.73]). We also found a significant positive effect of proactive personality on innovative behavior, in support of our Hypothesis 2 (effect = 0.38, *SE* = 0.10, *t* = 3.69, 95% *CI* [0.18, 0.58]). Finally, the indirect effect of CSE on innovative behavior via the mediation effect of proactive personality significantly supported Hypothesis 3 (indirect effect = 0.12, *SE* = 0.04, 95% *CI* [0.06, 0.21]). However, we found that the direct effect of CSE on innovative behavior remained significant (direct effect = 0.42, *SE* = 0.10, *t* = 4.18, 95% *CI* [0.22, 0.61]) after proactive personality was included as a mediator, indicating a partial mediation by proactive personality.

Discussion

This paper aimed to test the mediating effect of proactive personality on the relationship between CSE and innovative behavior among micro-entrepreneurs. We found support for our argument that CSE influenced innovative behavior (H1) via the mediating effect of proactive behavior (H2 and H3). However, we observed that proactive personality partially mediated the relationship as the direct effect of CSE remained significant after the mediating effect of proactive personality was accounted for.

Theoretical Implications

First, we found the total effect of CSE on innovative behavior among micro-entrepreneurs to be positive and significant. This implies that the use of the CSE construct in understanding micro-entrepreneurs' innovative behavior is relevant. In this respect, this study again asserted the role of an entrepreneur's personality in conducting their business (Chen, Greene & Crick, 1998). This study extends the idea of CSE playing a role in work settings for employees (Song & Chathoth, 2013) and CEOs (Simsek et al., 2010) to the realm of micro-entrepreneurs in SME settings. This is

especially important since the ability to act innovatively will determine the competitiveness and survival of micro enterprises. Therefore, we contribute toward increasing the understanding of personality to the success of micro-entrepreneurs, particularly when considering their innovative behavior. In this respect, we also contribute toward the support for using compound personality construct to explain behavior (compare with Hammond et al., 2011; Ones et al., 2007)

Next, our study which examines the mediating effect of proactive personality on the relationship between CSE and innovative behavior is among the first to consider the role of CSE in innovative behavior among micro-entrepreneurs. In this respect, we contribute toward the interplay between "factor alpha" and factor beta, which are getting along and getting ahead respectively, on furthering innovation. In fact, our results suggested that despite the inherent difference among these personality dimensions, CSE and proactive personality play a combined role in determining behavior. This suggests the need to carefully consider a combination of personality factors to explain behavior. It will also be beneficial for researchers who consider CSE to also include proactive personality, especially when looking at behaviors that are linked to entrepreneurship or innovation.

Practical Implications

For practical implications, our results provide information to differentiate among entrepreneurs in terms of their innovative behavior. Extant research suggests that there is a relationship between an entrepreneur's personality and performance (e.g., Marcati, Guido & Peluso, 2008). Therefore, the government should take interest in how entrepreneurs' self-evaluations will determine their willingness to engage in innovative activities. Those with positive self-evaluations tend to be more proactive, which leads to them being willing to innovate. Given that governments typically engage in helping entrepreneurs to grow their businesses, they should also take into account personality aspects of the entrepreneurs, in order to increase their performance. Specifically, those who are involved with small businesses may need to design interventions that are intended to increase an entrepreneur's CSE. Previous studies on CSE provided evidence that high CSE leads to a better coping strategy among individuals (Kammeyer-Mueller, Judge & Scott, 2009) and this strategy is important for entrepreneurial risk taking and innovation. The need to have entrepreneurs that are constantly engaging in innovation is undoubtedly important for the success of SMEs in highly competitive markets.

Limitations and Future Research

There are opportunities for future research that follow from this study. First, in our study, we followed the suggestion of using the direct method of measuring CSE (Judge et al., 2002) as compared to the indirect method. The indirect method of measuring CSE typically involves calculating each of the four personality constructs of CSE. Chang et al. (2012) indicated that the use of an indirect method using item- or trait-level data enables researchers to examine the effects of each of the traits on outcome variables. The direct method combines all four constructs into one total construct. Our choice for the direct approach is due to the advantage of the direct method for the length of the measures, which is important given that our respondents were entrepreneurs. However, this means that we were not able to rule out that the relationship was driven only by a single personality factor rather by the total CSE. Future studies might consider using indirect methods of measuring CSE, when practical, to gain a better understanding.

Second, our data were gathered in urban areas in Indonesia with highly concentrated population and more modern culture compared to rural areas. This means that our findings may be bound by cultural influences. It might be interesting to test this study in rural areas with traditional culture and less competitiveness to see whether the same results will be found. Indeed, past research (Luthans, Zhu & Avolio, 2006) found that in studying personality and its impact on attitudes and behavior, the cultural aspect had some significant effects on the results. Therefore, our study contributes to the generalizability of existing research on CSE. We suggest that future research should test whether the results of this study will be replicable in rural areas.

Finally, as we employed a self-reported cross-sectional design, our study may suffer from

common method bias. Our tests of common method bias indicated that common method variance was not a pervasive problem in the study. Moreover, social desirability, a frequent source of bias in self-ratings might not be much of an issue for business owners as participants. However, we suggest that future studies consider a multi-source rating approach, such as self-ratings in combination with a family member's ratings, or to employ an experimental design.

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Declaration of Conflicting Interests

The author(s) declared that there were no conflicts of interest with respect to the authorship or the publication of this article.

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