**Core Self-Evaluations and Innovative Behavior Among Microentrepreneurs: 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 microentrepreneurs. Data was obtained from a survey administered to 307 micro entrepreneurs in Jakarta, Indonesia and its surrounding cities. Data was tested using Hayes’ PROCESS macro on SPSS. Results showed that proactive personality mediated the relationship between CSE and innovative behavior, whereby CSE leads to proactive personality, which in turn influences innovative behavior. Theoretical and practical implications of the findings are further discussed.

**Keywords:** core-self-evaluation, proactive personality, innovative behaviour, micro entrepreneurs.

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***Introduction***

Indonesia, as one of the MINT countries (an acronym of Mexico, Indonesia, Nigeria, and Turkey), is lagging behind other neighbouring countries in terms of the proportion of self-employed people in the society. Data from Indonesian Central Bureau of Statistics (Biro Pusat Statistik – BPS) shows that Indonesia has 1.6 percent self-employed people, much lower than those other South East Asian countries (for examples: Singapore seven percent, Malaysia five percent, and Thailand three percent). Among those self-employed people in Indonesia, 99 percent of them employ less than four people, making them a part of the micro business. Indonesian Ministry of Cooperatives, Small and Medium Enterprises indicated that, in 2012, 90.12 percent of the employment in Indonesia is in the micro enterprise segment, suggesting the significance of microentrepreneurs to the country’s economy. Indeed, the vital role of microentrepreneurs on 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 community. Despite their contributions to the economy, these entrepreneurs are still not receiving adequate support for their business, especially those in the developing countries.

Although some microentrepreneurs do not consider their business growth more important than stability of their business, many pursue business growth as their primary aim in doing business. One major problem faced by growth-focus entrepreneurs in emerging economies is the lack of financial support. Additionally, these microentrepreneurs face the challenge that comes from the development of internet and information technology 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. In 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) have been considered to be at the forefront of introducing innovation into 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 grow their business 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 done particularly in the context of large firms. For instance, it has been known that top management’s personality has a major influence on the firms’ performance and willingness to innovate (e.g., Miller & Toulouse, 1986; Chatterjee & Hambrick, 2007). However, a single personality factor has a relatively lower impact on behaviors (Hammond et al., 2011); thus, suggesting the need to consider personalities in a more integrative manner (Simsek, Heavey, & Veiga, 2010). One widely-used global personality measure in the organizational setting is the 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 (compare with Luthans & Youssef 2007; Judge et al., 2002). CSE has oftentimes been used to explain work-related performance and satisfaction (Ferris et al. 2012), but has not been considered in entrepreneurial settings. Hence, 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 approach-avoidance framework (Elliot & Thrash, 2002), since people who have positive self-evaluations tend to use approach motivation in taking action and anticipating future outcomes (read: taking initiative). This fits well with individuals with a proactive personality –an individual’s disposition to be self-initiated toward effecting constructive changes (Bateman & Crant, 1993) and who will go beyond one’s duties to overcome the current situation. It has also been known that proactivity in work settings is influenced by the individual’s personality (Bjørkelo, Einarsen, & Matthiesen, 2010), thus suggesting the relationship between personality measures (CSE) and proactivity. Overall, we argue for the mediating relationship between CSE and proactive personality on innovative behavior. This investigation will provide novel understanding on factors affecting innovative behavior which is central in the discussion on entrepreneurs’ competitiveness (compare with Cooper, Peake, & Watson, 2016).

# Literature Review

## Innovative Behavior

Microentrepreneurs need to perform innovative behavior for the effective functioning of the firm in order to achieve 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 comprising 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 were emphasized on employees rather than entrepreneurs. Hammond et al. (2011), in their meta-analytical study, found four categories that have influenced innovative behavior among employees: individual differences, intrinsic motivation, job characteristics, and contextual influences. Of these four categories, they found that job characteristics, in terms of complexity and job autonomy, have the most consistent and strongest positive relationship with creativity and innovative behavior. Meanwhile, personality factors have a significant relationship with innovative behavior although the relationship is not as strong as job characteristics or motivation. On this note, Hammond et al. (2011) suggested that this finding on personality factor and innovative behavior might partly be due to the fact that past studies did not consider the compound nature of personality traits. Studies on innovative behavior and personality were typically captive to a single personality factor, such as self-efficacy, despite indication that compound personality factors are more valid predictors (Ones et al., 2007). Furthermore, investigation of a more complex relationship 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, it is our goal to not only extend the application of innovative behavior towards an entrepreneurial context, but also, taking the suggestion from Hammond et al. (2011), to engage in the discussion on the role of compound personality traits and more complex relationships among variables. Hence, we propose the use of compound personality trait of CSE and proactive personality as predictors for micro entrepreneurs’ innovative behavior.

## Core Self-Evaluations

Core self-evaluations (CSE) are defined as fundamental premises that 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 of self-esteem, generalized self-efficacy, locus of control, and neuroticism. Prior to the use of CSE, these four traits have been investigated as separate traits despite the fact that past findings suggested strong correlation between them (Judge, Erez, & Bono, 1998). The four traits of CSE have been widely researched 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 on themselves (Bono & Judge, 2003). Next, 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. Meanwhile, locus of control refers to the individual’s 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 will 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 Ferris et al., 2012). Beyond organizational settings, CSE have 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, and Veiga (2010) indicate that CEO’s CSE influence 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’ behaviors. Thus, we propose that CSE will influence self-employed individuals’ 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 variability across studies on the strength of the relationship between CSE and performance (Grant & Wrzesniewski, 2010), suggesting that the effect of CSE on behavior is not direct. We argue that this indirect relationship is also present when considering the link between CSE and innovative behavior via 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 the basic personalities, the research on these relationships is still relatively in its infancy. Bono and Judge (2003), in their review of CSE, found that the relationship between CSE and job performance was relatively small (*r =* .23) as compared to its relationship with job satisfaction (*r =* .43), indicating additional mechanism is needed to explain the link between CSE and job performance. Therefore, we propose that proactive personality serves as a mediating variable between the relationship between CSE and behaviors. Aligning with our contention, Ferris et al. (2012) suggested integrating CSE within approach avoidance framework as a parsimonious theory to understand the relationship between CSE and other variables. Approach avoidance theory suggests that an individual’s experience can be classified in terms of one’s 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 (Ferris et al., 2012). Thus, employing approach avoidance framework (Elliot & Thrash, 2002), high CSE individuals - people who view himself or herself as capable, worthy and in control - are expected to have strong approach motivation to adopt approach goal by taking actions and anticipating future outcomes, thus enabling them to actually perform innovatively. We concur with this framework as we suggest that proactive personality is in line with strong approach motivation. Thus, 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 approached 500 micro entrepreneurs in Jakarta, Indonesia, and its surroundings. Out of 500 participants we approached, 346 agreed to participate in the survey, a response rate of 69 percent (212 males, 134 females, *Mage* = 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 originally in English, translated into Indonesian language and back translated into English by organizational psychologists using procedures suggested by Brislin (1986).

*Innovative behavior.*We adapted Janssen’s (2000) 9-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 12-item scale developed and validated by Judge et al. (2002). The scale measures positive feelings about the self in terms of 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.’s (1999) 10-item scale, which was the short version of Bateman and Crant’s (1993) proactive personality scale. The scale measures 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 the 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-report) using the same method. First, we used a 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 majority of the variance, as the highest factor only accounted for 17.25 percent of the variance. Second, we used the latent variable approach to control for the effects of an unmeasured latent method 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. Of the 31 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 appeared in Table 1. We tested Hypothesis 1-3 using Hayes’ PROCESS macro of regression procedures on SPSS 21.

## Descriptive analysis

As shown in Table 1, innovative behavior had a significant positive correlation with CSE (*r* = .314*, p* < .01) and proactive personality *(r* = .314*, p* < .01*)*. No significant correlations were found between innovative behavior with our control variables, age (*r* = .058, *p* >.100), education (*r* = .038, *p* >.100), and previous business experience (*r* = .071, *p* >.100). We also found significant positive correlation between CSE and proactive personality (*r* = .366*, p* < .01). Moreover, proactive personality had significant positive correlation with business experience (*r* = .133*, p* < .05) and age (*r* = .125*, p* < .05). Meanwhile, CSE was positively related with age (*r* = .221*, p* < .01) and previous business experience (*r* = .132*, p* < .05) and negatively related with education (*r* = -.243*, p* < .01).

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## Hypothesis testing

To test our hypotheses, which posited that there was a positive total effect of CSE on innovative behavior (H1), positive effect of proactive personality on innovative behavior (H2), and 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 = .54, *SE* = .10, *t =* 5.56, 95% *CI* [.35, .73]). We also found the significant positive effect of proactive personality on innovative behavior, in support for our Hypothesis 2 (effect = .38, *SE* = .10, *t =* 3.69, 95% *CI* [.18, .58]). Finally, the indirect effect of CSE on innovative behavior via the mediation effect of proactive personality was significant in support for our Hypothesis 3 (indirect effect = .12, *SE* = .04, 95% *CI* [.06, .21]). However, we found the direct effect of CSE on innovative behavior remained significant (direct effect = .42, *SE* = .10, *t =* 4.18, 95% *CI* [.22, .61]) after proactive personality was included as a mediator, indicating a partial mediation by proactive personality.

# Discussion

The aim of this paper was 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 the mediation relationship is partial given that the direct effect of CSE remained significant upon addition of proactive personality as mediator.

Although our proposed model was statistically supported, we tested a moderating model as an alternative to explore whether our proposed hypothesized model was indeed more informative. Specifically, we tested whether proactive personality moderated the relationship between CSE and innovative behavior. The result showed that the interaction effect between CSE and innovative behavior was not significant (*Estimate* = -.28, *SE =* .20, *t =* -1.39, *p =* .165). This non-significant result provided an indication that a moderating model was not as informative as our proposed model. Therefore, our mediated model was more superior in explaining the relationship among the variables under consideration. Thus, we believe our study has several contributions to the theory and practice of innovative behavior among self-employed people.

## Theoretical Implications

First, we found the total effect of CSE on innovative behavior among micro entrepreneurs. This implies that the use of the CSE construct in understanding micro entrepreneurs’ innovative potential is important. In this respect, this study again asserts the important role of an entrepreneur’s personality in conducting their business (Chen, Greene, & Crick, 1998). This study extends the idea of CSE playing an important 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 towards increasing the understanding of personality to the success of micro enterprises, particularly when considering innovative behavior. In this respect, we also contribute towards the support for using compound personality construct to explain behavior (compare with Hammond et al., 2011; Ones et al., 2007)

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

## Practical Implications

For practice, the significant mediational relationship between CSE, proactive personality and innovative behavior presents the opportunity to differentiate among different entrepreneurs on their innovative behavior. Extant research has suggested that there is a relationship between an entrepreneur’s personality on the way an entrepreneur performs (for example: Marcati, Guido, & Peluso, 2008). Therefore, government and policy makers should take interest on 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 their willingness to innovate. Given that governments are typically engaged in helping entrepreneurs to grow their business, they should not only consider the environmental conditions or the performance of the firms but also the personality of the entrepreneurs. Specifically, those who are involved with small businesses may need to design interventions that are intended to increase 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 entrepreneurs to take the risk and be innovative. The need to have entrepreneurs that are constantly engaging in innovation becomes undoubtedly important for the success of SMEs in highly competitive markets.

## Limitations and Future Research

There are outlets for future research that we identify from this study.

First, in our study, we followed the suggestions 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 compiling measurement items from all of the four personality constructs of CSE. Ferris et al. (2012) indicated that the use of indirect method using item- or trait-level data enables researchers to examine the effects of each of the traits. Our choice to consider the direct approach is due to the advantage of the direct method regarding the length of the measures, which is important given our respondents are entrepreneurs. However, this means that we were not able to reconfirm whether the relationship is indeed not driven only by a single personality factor but rather by CSE. Nevertheless, our significant finding suggested that indeed CSE is important. However, future studies might consider using indirect method of measuring CSE, when practical, to have better understanding on the issue.

Second, our data was gathered in Indonesia. This means that our findings are bound by cultural impact. It might be interesting to test this study in other cultures to investigate whether the same results will be found. Indeed, past research (Luthans, Zhu, & Avolio, 2006) has 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 towards existing research on CSE in regard to its generalizability. However, as our respondents only come from a single country, it will be up to future research to test whether this mediated relationship among CSE, proactive personality and innovative behavior will hold in other cultures.

Moreover, our research focuses on innovative behavior among microentrepreneurs. Future research can extend to different contexts, as different contexts, as different contexts might have different characteristics and different demands for innovativeness. Autio et al. (2014) distinguish six different contextual levels, which include: industry and technological, organizational, institutional, social, temporal and spatial contexts. As our interest lies in the mediation role of proactive personality and the role of CSE in determining micro entrepreneurs’ behaviors, we are more interested in the general effect of these constructs as compared to a context-bounded effect. Yet, such an investigation will be promising for future exploration given that past research has suggested the need to also consider context (or environment) on behavior (Autio, Pathak, & Wennberg, 2013)

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 bias might not be much of an issue for business owners as participants. However, we suggest future studies to consider a multi-source rating approach, such as self-rating in combination with family member’s rating, or to employ an experimental study.

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**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 | | | | | | | | |

**Figure 1**

**The Mediating Role of Proactive Personality on CSE and Innovative Behavior among Micro Entrepreneurs.**

.38\*\*

.54\*\* (.42\*\*)

.32\*\*

*N = 346. Number of bootstrap samples for bias corrected bootstrap confidence intervals: 5000 (confidence level 95 percent). Direct coefficient is shown between parentheses. \* p < .05, \*\* p < .01*