Self-Efficacy and green entrepreneurship

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Abstract. The objective of this study is to investigate empirically the extent to which self-efficacy contributes to the development of green entrepreneurial intention. The measurement constructs of self-efficacy were classified into market opportunities, innovative environment, initiating relationships, defining purpose, coping with challenges, and developing human resources. The study comprises 252 usable convenient samples through structured questionnaires. The coefficient of determination $R^2$ shows that the variance of intention to entrepreneurship is explained by the variance of the independent variables. It was also found that the model is fit for prediction.

1. Introduction
Entrepreneurship has been defined in various ways. One of the most cited definition is “the creation of new enterprise” [1]. Green entrepreneurship refers to enterprise that involves processes, activities or products that promote eco-friendly environment. There has been a growing awareness these days on the importance of these green enterprises in an economic development process. This growing awareness has led many public administrations from all political ideologies and all administrative levels to establish agencies to stimulate and to favor the creation of green enterprises.

Various antecedents to entrepreneurship such as personal traits and characteristics have been investigated but they have not found to be reliable predictors of entrepreneurial behavior [2]. There are some other factors which might possibly and significantly influence the intention to entrepreneurship. One of these factors identify by [3] is self-efficacy. This study attempts to look at how self-efficacy affects the intentionality of green entrepreneurship.

2. Literature Review
Entrepreneurial intention is a state of mind that influences the cognitive thinking of the entrepreneur towards the forming of an entrepreneurial activity. It is a process that focuses on a complex relationship among entrepreneurial ideas and theirs resulting outcome. [4] posit that entrepreneurial intentions predict entrepreneurial behavior and attitudes successfully influence intentions.

Self-efficacy is defined as a person’s belief in his or her capability to carry out a task [5] and has a significant influence on the process of development of entrepreneurial intention. [6] found a significant weighted average correlation between self-efficacy and new ventures. [3] found that self-efficacy helps in bolstering positive thoughts and controlling negative thoughts that are relevant to business start-ups.

[7] conducted a study of entrepreneurial self-efficacy (ESE) by developing constructs such as marketing, innovation, management, risk-taking, and financial control skills. One of the most significant findings was that innovation and risk-taking appeared to be important cognitive capabilities in the ESE study. [8] found that individuals with high self-efficacy are more willing to make an effort to overcome obstacles in business ventures. Similarly, [9] found that self-efficacy is a significant contributing factor to start one’s business. [10] found that abilities such as recognizing opportunities and driving the business venture are critical in the entrepreneurial process. These entrepreneurial skills have been used to create an expanded measure of ESE developed by [11]. He contended that self-efficacy to undertake new venture
initiatives will positively influence entrepreneurial intentions. He further developed and classified a self-efficacy measurement constructs into market opportunities, innovative environment, initiating relationships, defining purpose, coping with challenges, and developing human resources.

To empirically analyze the impact of entrepreneurial self-efficacy constructs on entrepreneurial intentions among university students, the following hypotheses were formulated for the study.

H1: There is a significant relationship between the awareness of market opportunity and green entrepreneurial intention.

H2: There is a significant relationship between the awareness of innovative environment and green entrepreneurial intention.

H3: There is a significant relationship between the awareness of initiating relationship and green entrepreneurial intention.

H4: There is a significant relationship between the awareness of defining purpose and green entrepreneurial intention.

H5: There is a significant relationship between the awareness of challenges and green entrepreneurial intention.

H6: There is a significant relationship between the awareness of developing human resources and green entrepreneurial intention.

3. Methodology

3.1 Research Design

The samples were collected at various strategic locations in Universiti Tenaga Nasional, Putrajaya Campus. Structured questionnaires which consist of demographic characteristics and six measurement constructs were then administered to the final year and graduate student respondents who were conveniently selected. A total of 252 usable sample subjects were obtained.

3.2 The Model

\[ Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \varepsilon_t \]  

where Y is the Entrepreneurial Intention as dependent variable and the independent variables are \( X_1 = \) Opportunity, \( X_2 = \) Environment, \( X_3 = \) Relationship, \( X_4 = \) Purpose, \( X_5 = \) Challenges, \( X_6 = \) Human Resources. \( \beta_0 \) is the constant term of the model. \( \beta_i \), i=1 to 6 as coefficients of the respective variables for the model and \( \varepsilon_t \) is the error term.

4. Output Analysis

4.1 Demographic Profiling

From the respondents’ profile, it shows that male respondents contributed a larger percentage which is 72.4 percent as compared with female respondents (27.8%). In terms of ethnicity group, Malays constituted 52.4 percent, followed by 15.9 of Indian respondents. Chinese respondents stood at 9.9 percent. There are 71.8 percent respondents who were aged between 21 to 25 years old. Respondents aged between 16-20 constituted 4.42 percent. The respondents with ages above 26 was 13.9 percent. Also from the table, most (74.6 percent) respondents were from the undergraduate program, followed by 25.4 percent of graduate respondents.

4.2 Reliability Test

| Table 1. Reliability of scales |
|-------------------------------|
| Dimension | No. of Items | Cronbach Alpha |
|-----------|--------------|----------------|
| Intention | 6            | 0.943          |
| Opportunity | 7             | 0.934          |
| Environment | 4              | 0.913          |
Table 1 shows the reliability coefficients of the main variables were higher than 0.7 and they all indicated that the reliability among items was consistent [12]. Such a result is consistent with the study conducted by [11] which found internal consistency with reliability coefficients for the measurement constructs were higher than the cut-off point of 0.7. It therefore serves as a reliable foundation for further testing and subsequent analysis.

4.3 Regression Result

Table 2. Standardized (simultaneous) regression between entrepreneurial intention and the measurement variables

| Independent variables | β   | t    | Sig. | VIF  |
|-----------------------|-----|------|------|------|
| Opportunities         | 0.325*** | 3.470 | 0.001 | 2.917 |
| Environment           | 0.303**  | 1.895 | 0.039 | 3.458 |
| Relationships         | 0.098    | 0.489 | 0.625 | 2.700 |
| Purpose               | 0.141*   | 0.615 | 0.053 | 3.340 |
| Challenges            | 0.445**  | 2.343 | 0.020 | 2.895 |
| Human Resources       | 0.201    | 0.952 | 0.342 | 3.184 |

Notes: The regression coefficients shown in the table are standardized regression coefficients (beta coefficients), *** and * indicates that the estimated coefficient is significantly different from zero at 1 percent, 5 and 10 percent respectively. R = 0.591, R² = 0.35, F-Value = 26.145 (P<0.01)

The general results for the linear multiple regression analysis of entrepreneurial intention arising from market opportunities, innovative environment, initiating relationships, defining purpose, coping with challenges, and developing human resources are reported in Table 2. Multicollinearity test of the six independent variables has been done. Using a cut-off value of VIF less than 5, no multicollinearity among the variables is found. The coefficient of determination R² shows that 35 percent of the variance of entrepreneurial intention is explained by the variance of the independent variables. And the F-value is statistically significant at the 1 percent level implying that the regression model is reliable for prediction.

The estimated coefficient of correlation (R = 0.591) shows a relatively strong linear correlation between the independent and dependent variables. The regression result shows that ‘market opportunities’ has a positive effect on entrepreneurial intention as the estimated coefficient is 0.325 with the confidence level of 99 percent. The ‘initiating environment’ also has positive association with the entrepreneurial intention as the estimated coefficient is 0.303 and is significant at 5 percent level. Variable ‘challenge’ has also shown significant with 95 percent confidence and it is positively related to entrepreneurial intention with the estimated coefficient 0.445. Another variable that has association with the entrepreneurial intention is defining purpose. It is positively and statistically significant with entrepreneurial intention at 90 percent confidence level as the estimated coefficient is 0.141.

5. Conclusion

The general linear regression result indicates that the dimensions ‘market opportunity’, ‘initiating environment’ and ‘challenge’ were by far the strongest and positive predictors of entrepreneurial intentionality. The variable ‘defining purpose’ has also shown statistically significant. Based on this regression result, H1, H2, H4, H5 are well supported. These findings are consistent with that of De [11]. Variables such as ‘initiating relationship’ and ‘developing human resources’ are not significant could possibly be due to respondents recognizing such variables as more likely to be relevant only after the business start-up. The fact that the intentionality examined here is depended only on self-efficacy may simplify the phenomenon excessively. There is likely that other factors that exist apart from self-efficacy
could be deemed as significant. A second limitation in this study is that it only involves one particular sample from UNITEN campus and the generalizability of the findings is limited. Future research needs to include a wider and more representative spectrum of respondents including existing green entrepreneurs for greater representation.

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