

## Conference Paper

# Eco-entrepreneurship Study in Improving Competitive Human Resources: A Survey in Students in Jakarta, Semarang, and Malang

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## Abstract

This research aims to examine the entrepreneurial behavior of students and to investigate whether the level of innovation moderates the relationship of environmental concern and entrepreneur behavior of students. The samples are the students from Jakarta, Semarang, and Malang totaling 742 data. The findings show that the level of entrepreneur behavior is still in low level. Students are also less concerned about environmental issues and have low level of innovation. The model could not find the moderation effect of level of innovation variables.

**Keywords:** entrepreneurship, eco-entrepreneurship, level of innovation

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## 1. Introduction

The role of entrepreneurship is crucial in developing the country. In the 1st Indonesian Conference on Innovation, Entrepreneurship and Small Business (ICIES) in Bandung on July 23, 2009, it was mentioned that entrepreneurship is not only about business, but also creative and innovative mindset and ability to solve the problem. Then, Indonesia has to focus on entrepreneurship to strengthen economy growth. In addition, students as the driving agents of change in this country who will hold the leadership in the future must play an active role to be a pioneer in the formation of a strong national economy. Therefore, the students need to obtain the knowledge as well as the skill in entrepreneurship from the school.

Moreover, regarding the sustainability development students as prospective entrepreneurs need to understand and realize the importance of protecting the environment. It will need a long time to change the human attitudes and behaviors related to the environment. Thus, the activities in enhancing the awareness of environment concerns need to applies to the students in the school.

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In this study, we raised the issue of eco-entrepreneurship for students. Eco-entrepreneurship can simply be interpreted as entrepreneurship that cares for the environment. Eco-entrepreneurship can be analyzed at individual and corporate levels. In this study, we analyze eco-entrepreneurship at the level of individuals, especially students as agents (who are expected to be) the drivers of entrepreneurship. Eco-entrepreneurship continues to be a hot topic in recent years (see Schaltegger 2002; Cohen and Winn 2007; Dean and McMullen 2007; Schaltegger and Wagner 2008; Wagner 2009). Eco-entrepreneurship topics include innovation, environmental care, and entrepreneurship. Up to now, studies on eco-entrepreneurship are mostly related to case studies; very little to do with empirical studies. In this study, we tried to do an empirical study to expand the previous literature on eco-entrepreneurship. In this study, we try to bridge the gap between theory and empirical evidence. Also, we try to get a better understanding of the value of the conceptual model of eco-entrepreneurship that can revitalize student entrepreneurship that is sustainable.

## 2. Literature Review

Entrepreneurship first appeared in the 18th century beginning with the discoveries of steam engines and spinning machines. Their main goal is the growth and expansion of the organization through innovation and creativity. Profits and wealth are still significant but not the primary goals. Entrepreneurs are people who are brave enough to take risks to open businesses on various occasions. Having the courage to take risks means being mentally independent and brave to start a business, without being overwhelmed by fear or anxiety even in uncertain conditions (Kasmir 2007).

Aburdene (2005) predicts that there are several phenomena that will become megatrend, including the rise of capitalist social awareness, and the explosion of investment in businesses that are responsible for the environment. Lately, there is a tendency for environmental awareness among developed countries. In developing countries, the enthusiasm and action of business people toward environmental concerns seems to be far from the maximum. We certainly still remember media coverage a few years ago where some Indonesian firms refused to implement corporate social responsibility (CSR) programs. Their reason is that the program is seen as a high cost activity and counter efficiency. Because business people are an integral part of the environment, and business is very dependent on consumers/clients who are actually starting to have environmental awareness, then he must begin to embrace the philosophy of sustainable development which

states that development is an integral function of economic, social and environmental conditions (Seelos and Mair 2004).

A lot of evidence shows that some companies that care about the environment are more able to develop. Jhonson & Jhonson proved the power of the Credo of Environmental Care as one of the company's strengths in business competition which was very tight. Environmental care has also brought The BodyShop to a rapid development throughout the world. Environmental care also does not bankrupt the Intel processor maker after Gordon Moore; Intel boss poured millions of dollars into environmental care programs.

The term sustainable development was introduced in the World Conservation Strategy published by the United Nations Environment Program (UNEP), the International Union for Conservation of Nature and Natural Resources (IUCN), and the World Wide Fund for Nature (WWF) in 1980. 1982, UNEP held a special session to commemorate the 10th anniversary of the world environmental movement (1972-1982) in Nairobi, Kenya, as a reaction to the dissatisfaction with which the environment has been handled. In this special session, it was agreed that the establishment of the United Nations World Commission on Environment and Development (WCED) elected Norwegian Prime Minister Harlem Brundtland and former Sudanese Foreign Minister Mansyur Khaled, respectively, WCED Chair and Deputy Chairmen. The concept of Sustainable Development was popularized through the WCED report entitled 'Our Common Future' which was published in 1987. The report defines Sustainable Development as a development that meets the needs of current generations without reducing the ability of future generations to meet their needs own. The concept contained two important ideas. First, the idea of needs, especially essential needs, the poor of the world must be given top priority. Secondly, the notion of limitations, which originates from the conditions of technology and social organizations toward the ability of the environment to meet current and future needs. So, the goals of economic and social development must be expressed in the idea of sustainability in all countries, both developed and developing countries.

Some definitions have emerged about eco-entrepreneurship. Some authors propose typologies about eco-entrepreneurship. For example, Isaak (1999) distinguishes incumbent companies that have great concern for the environment with new companies that from the beginning produce environment in a friendly way through environment friendly processes. Similarly, Schaltegger and Petersen (2001) and Schaltegger (2002) distinguish eco-entrepreneurship from other forms of corporate environmental management activities and summarize this with a positioning matrix. Recent efforts link

eco-entrepreneurship with market imperfections and provide a more systematic categorization of entrepreneurial opportunities that simultaneously contribute to environmental improvement, which in essence says that specific market failures are the causes underlying the emergence of insightful entrepreneurial activities environment (Cohen and Winn 2007; Dean and McMullen 2007; Cohen et al. 2008).

According to Keogh and Polonsky (1998), the basic things that differentiate between traditional entrepreneurs and eco-entrepreneurs are in the vision they have, namely the fundamental elements in entrepreneurial behavior. It is this vision that gives positive power to everyone who works in it and generates full commitment. The eco-entrepreneur's way of looking at and assessing the potential resources and business opportunities available is through the lens of his commitment to the environment. Even many researchers (Schaltegger and Petersen 2000; Petersen and Schaltegger 2002a; Petersen and Schaltegger 2002b; Volery 2002; Azzone and Noci 1998; Isaak and Keck 1997; Isaak 1999, Lober 1998, Pastakia 1998, Farrow et al. 2000, Larson 2000, Welsh 1998) finding eco-entrepreneurship as an essential problem in strategy, namely eco-entrepreneurship activity provides a competitive advantage. Then the study will examine the impact of environment concerns on eco-preneurship activities. It also will examine the moderating role of level innovation on the relationship between environment concerns on eco-preneurship activities.

### 3. Research Methodology

The respondents of this study are bachelor degree students from Jakarta (Capital city of Indonesia), Semarang (Central Java), and Malang (East Java). We consider about the biggest proportion of population in Indonesia stay in Java Island. The total data obtained are 742 students which 285 students are from Jakarta, 169 students are from Semarang, and 288 students are from Malang.

Furthermore, the data used in this study is primary data. Data obtained from questionnaires distributed directly to students during July – August 2013. The dependent variable of this study is entrepreneurial behavior. The independent variables of this study are environmental concerns (X1) and level of innovativeness (X2). While the dependent variable of this study is entrepreneurial behavior (Y). In this study also used control variables such as gender (X3), marital status (X4), age (X5), race (X6), educational background (7), work experience (X8), and self-employed parents (X9) is considered a dummy variable with codes 0 and 1. For the first time, we design 13 questions regarding the entrepreneurial behavior (Y), 9 questions regarding the environmental concerns (X1),

and 8 questions regarding the level of innovativeness (X2). After we conduct validity and reliability test, there are only 8 questions regarding the entrepreneurial behavior (Y), 5 questions regarding the environmental concerns (X1), and 5 questions regarding the level of innovativeness (X2) pass the test. Then, we conduct the normality test, multicollinearity test, and heteroscedasticity test. All the models build are free from those condition

### 4. Results and Discussion

The findings of the study are shown in Table 1

TABLE 1: The findings of the study.

Respondent	Jakarta	Semarang	Malang	Total
Constant	26.022 (2.775)***	23.399 (1.752)*	35.311 (3.214)***	27.216 (4.421)***
Environmental Concerns (X1)	0.147 (0.370)	0.572 (1.003)	-0.277 (-0.562)	0.129 (0.467)
Level of Innovativeness (X2)	-0.137 (-0.256)	0.624 (0.847)	<b>-1.116</b> <b>(-1.728)*</b>	-0.282 (-0.773)
X1 * X2	0.009 (0.370)	-0.018 (-0.516)	<b>0.053</b> <b>(1.757)*</b>	0.017 (1.011)
Gender (X3)	-0.691 (-0.938)	-0.126 (-0.124)	0.441 (1.064)	0.332 (1.216)
Marital Status (X4)	0.213 (0.118)	-2.614 (-1.109)	1.883 (1.161)	0.943 (0.848)
Age (X5)	-0.026 (-0.181)	<b>-0.419</b> <b>(-2.052)**</b>	-0.051 (-0.486)	<b>-0.112</b> <b>(-1.905)*</b>
Race (X6)	1.567 (0.574)	3.319 (1.501)	-0.110 (-0.066)	-0.546 (-0.222)
Educational Background (X7)	0.695 (0.327)	1.085 (0.928)	<b>1.313</b> <b>(2.417)**</b>	<b>1.315</b> <b>(3.131)***</b>
Work Experience (X8)	0.098 (0.033)	<b>-1.909</b> <b>(-2.043)**</b>	<b>0.790</b> <b>(1.769)*</b>	0.291 (1.166)
Self-employed parent (X9)	-0.335 (-0.110)	<b>-2.023</b> <b>(-2.835)***</b>	-0.646 (-1.625)	<b>-0.929</b> <b>(-3.351)***</b>
N	285	169	288	742
R <sup>2</sup>	0.060	0.178	0.240	0.147
F test	2.803***	3.429***	8.758***	12.584***

Sources: Analyzed data; level of significance: \*\*\* = 1%; \*\* = 5%; \* = 10%.

The findings show that the environmental concerns (X1) does not have impact on the entrepreneur behavior. In addition, the results also indicate that the level of innovativeness (x2) does not have robust impact on the entrepreneur behavior. Even, the results show the negative relation between level of innovativeness and entrepreneur

activities. It seems the level of innovativeness of Indonesian students actually is still in lower level. As a result, we could not argue that the collaboration of innovation and environment concerns in Malang will enhance the level of entrepreneurship as it is show on the Table 1. Only in some control variable, we could found the findings that is perhaps in line with the theory. The first is the age. It seems younger students is more likely to be an entrepreneur. The second, the more educated students, the more activities regarding the entrepreneur. The last one is self-employed parent (X9). The result noted that the student will have more entrepreneur activities whether the parents are not self-employed person. However, this finding should be confirmed in the next study as it could be the majority of the respondents have the employee parents.

## 5. Conclusion and Suggestion

The results of this study indicate that students in Jakarta, Semarang and Malang have lower level on entrepreneurial behavior. The results of the study also show that students in Jakarta, Semarang and Malang were less concerned about the environment and they have lack of level in innovation. Thus the level of innovation does not moderate the relationship of environmental concern to entrepreneurial behavior

The suggestions emerge regarding the result of the study, there are a lot of thing to do in building sustainable entrepreneurship. We have to develop the way to enhance the skill, the knowledge, and also the awareness of eco-entrepreneurship among the students in Indonesia. Moreover, it is also need further research to make a confirmation regarding the results of this study especially regarding the model. For example: Perhaps the environment concern variable is not the determinant of the entrepreneur activities. Or, the level of innovativeness is caused by the level of entrepreneurship activities.

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