

MEASURING THE ENTREPRENEURIAL INDEX (EN-I) OF UNDERGRADUATE STUDENTS: A CASE OF HIGHER SCHOOL OF BUSINESS IN INDERAGIRI, RENGAT-INDONESIA

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Abstract

This study measures the entrepreneurial index (En-i) of undergraduate students in Rengat Higher School of Business, Riau Province, Indonesia. It looks at potential and non potential students dealing with the achievement of aspect fulfilling their status during the first four year in undergraduate degree. The students' tests score is measures through fulfilling questionnaire self tests, involving 25% of students of various years entering the undergraduate education. This study also investigates the differences in each indicator that used in measuring the En-I. The results shows that the En-I scores is 3.68. There are two indicators that stand out with high scores; "self esteem" and "willingness to accept criticism", and the lowest score is "action that have been taken".

Keywords: Entrepreneurial Index, Commerce Students, Learning

1. BACKGROUND

The creation of new businesses by the young and dynamic citizen is key elements in the dynamism of modern economies. New firms attract resources to new activities, and when they prosper and are able to grow rapidly, they would generate significant numbers of new jobs. These points to the importance of entrepreneurial mentality by the citizens of a country are especially the young.

In recent years, Indonesian government and education institutions are very eager to promote entrepreneurships to students. In particular, students in university learn not only how to acquire skills that needed in job markets, but also how to create jobs on their own. This trend is founded on facts that Indonesia is rich with natural resources waiting to be processed, and highly populated. Indonesia is the third most populated country in the world that makes it government finds difficulty to generate enough jobs. Therefore the job creation by its own people as Small Medium Enterprise's (SMEs) is a significant help for economic growth.

The entrepreneurial attitude by Indonesian people is not only helpful when creating new jobs and helping the economics activities. When we talk about Indonesian SME's, it means the wide coverage of economic activities that consist of 98% of Indonesia's overall economies (Indonesia's Central Statistics Bureau, 2010).

Indonesia SMEs is also having proven stronger and more immune to global crisis that hits big corporations. At the commencement of the global economic crisis in 2008, the SMEs were indeed able to endure, and also to move in to fill the activities left behind. They were even followed by the increasing

activities of the creation of small business by new entrepreneurs originating from the formal sector due to the termination of employment.

By this point, Indonesian government and universities sees the prominence of entrepreneurial activities by it's citizens. Not only for creating new jobs for itself and recruiting other people, but also as a stronger economics basis for the country.

Soetrisno (2001) described the position of the entrepreneurs in Indonesia can be seen as from: a) Their position as a main role player in the economic activities of several factors; b) Their large participation at providing job opportunities; c) Being the main player in the development of the local economy and people emancipation; d) Being the creator of new markets and new innovation and e) Their input towards the balance of payments through their contributions towards exports.

Based on background that was presented above, this paper is aimed to measure the entrepreneurial index of the students in Rengat Higher School of Business (RHSB), in Riau Provinces - Indonesia. RHSB is an education institution in Indonesia that equals to undergraduate education such as universities or institute. In RHSB, the students is provided with entrepreneurial curriculum such as entrepreneurship, introduction to business, creative industries, business communications, etc.

This study measures the entrepreneurial index (En-i) of undergraduate students in the school of business. It looks at potential and non-potential students dealing with the achievement of aspect fulfilling their status during the first four year in undergraduate degree.

2. ENTREPRENEURSHIP AND ENTREPRENEURIAL INDEX

The concept of entrepreneurship has a wide range of meaning. It has been debated among scholars, educators, researchers and policy makers since early 1700s when it was established. It is very difficult to give unanimous definition of entrepreneurship. It is an elusive concept (McQuaid, 2002). As the expectations of different stakeholders are different, their views regarding enterprise, entrepreneurship and small business are also different.

Therefore, there is no clear-cut definition of these terms. Rosa (1992) argued that the vagueness of enterprise has been to the advantage of both government and academics in the 1990s in their attempts in the UK to change the national culture. Katz (1991b) commented over this debate that small business is subset of entrepreneurship, while others argue that small business commencement is an integral part of entrepreneurship. Kearney (1996) defined that enterprise is the capacity and willingness to initiate and manage creative action in response to opportunities or changes, wherever, they appear, in an attempt to achieve outcomes of added value. These outcomes can be personal, social and cultural. Typically enterprise involves facing degrees of difficulty or uncertainty. The associated risks are not necessarily financial but may be physical, intellectual or emotional.

Innovation is a characteristic of any entrepreneur. Austrian Economist, Schumpeter (1949) defined entrepreneurship focusing on innovation in four different areas such as new products, new production methods, new markets, and new forms of organization. Anyone combines inputs in an innovative manner to generate value to the society that results in the creating of wealth. According to Schumpeter, the carrying out of new combinations call enterprise and the individuals whose function is to carry them out call entrepreneurs (Cited in Carton, Hofer, & Meeks, 1998).

Risk taking is the prime factor for the success of an entrepreneur. When an entrepreneur initiates a business venture, he or she has to take risk and face uncertainty. In the 18th century, the French term 'entrepreneur' was first used by Cantillon (1755) to describe a 'go-between' or a 'between-taker' whereby they bought goods at certain prices but sold at uncertain prices (as when they purchased the goods at a given price they could not be sure what price they would sell them for). So, he or she bore the risk and uncertainty of a venture but kept the surplus after the contractual payments had been made (As cited in Ahmed and McQuaid, 2005).

Drucker (1971) also emphasized on risk taking capability as an important characteristic of an entrepreneur. Ahmed (1981) identified entrepreneur as a risk taker as he or she invests money, and he or she is involved in making decisions, the success of which brings rewards; and the failure of which could lead to the loss of the rewards, as well as, even the loss of the principal (i.e., invested money). Therefore, it is very logical to place risk taking at the focal point of entrepreneurship. Anybody doing business is not an entrepreneur. The person who takes risk for establishing new venture or who has the capability of taking moderate risk is an entrepreneur (Ahmed 1982; Ahmed 1987).

A person is entrepreneurial when he or she has very strong eagerness to achieve, which was emphasized by McClelland (1961). He found achievement motivation as an important foundation characteristic of a successful entrepreneur. The person who likes to reach at the top of the success ladder by taking moderate risk is achievement motivation oriented. An entrepreneur not only initiates new business

venture but also runs the business efficiently. In this regard, Jean-Baptiste Say identified few dimensions of entrepreneurship with the idea given by Cantillon such as, planning, supervising, organizing, and even owning the factors of production. These activities are primarily related to the managing and running the business.

Opportunity seeking is another characteristic of an entrepreneur. In this regard, Stevenson (2000) explained that entrepreneurship is an approach to management that can be defined as the pursuit of opportunity without regard to resources currently controlled. In this approach, he examined six critical dimensions of business practices such as, strategic orientation, commitment to opportunity, commitment and control of resources, management structure, and reward philosophy, which are related to entrepreneurship development.

Entrepreneurship is the pursuit of a discontinuous opportunity involving in the creation of an organization with the expectation of value creation to the participants. The entrepreneur is the individual (or team) that identifies the opportunity, gathers the necessary resources, creates and is ultimately responsible for the performance of the organization. As a catalyst agent, an entrepreneur creates the forces of change and utilizes the same in accelerating the socioeconomic value-addition of a country through resource utilization, employment generation, capital accumulation and industrialization (Rahman 1979; Rahman 1996). Self-employment is the result of the development of entrepreneurship. Entrepreneurs create employment for him and for others to work with innovative and economic projects. People who are self-employed and have the ownership of the business are called entrepreneurs (Chowdhury 2002). They are the owners of the business enterprises. In this regard, women entrepreneurs are defined as conventional or traditional entrepreneurs, innovators, radical proprietors, domestic traders and dynamic groups (Begum 2003).

In conclusion, it is evident that some definitions of entrepreneurship are concerned with business development aspects, while some are related to behavioral aspects of entrepreneur (Ahmed and McQuaid 2005). Business development aspects could be defined by opportunity seeking, initiative taking for establishing new business venture, creating wealth etc. While, behavioral aspects are related to achievement motivation, risk taking propensity, inner urge to do something for him and for the society as well.

Essentially, entrepreneurship is the dynamic process of creating incremental wealth, which is created by the individuals by adopting risks in terms of equity, time, career commitment etc. It is the process of creating something new value by devoting the necessary time and effort, assuming the accompanying financial, psychic, and social risks, and receiving the resulting rewards of monetary and personal satisfaction and independence.

The Entrepreneurial Index, while by no means the definitive answer, seeks to provide answer for the entrepreneurial mentality and attitudes among individuals. The index sheds lights on the tendency of an individual, on this case the students of RHSB, to become an entrepreneur in the future.

For a long time, the level of entrepreneurship has been evaluated by some quantitative output measure, such as self-employment rate, business ownership rate, or business start-ups, but it's rarely focusing on the individual's mentality or attitudes.

3. METHODS

The samples of this research are 302 students in Rengat Higher School of Business, Riau province of Indonesia (RHSB) that have taken the entrepreneurship curriculum. The students' tests score is measured through fulfilling questionnaire self tests that consist of 60 questions that related to attitude and mentality, and 24 questions that related to their entrepreneurial actions.

We develop the Entrepreneurial Index (En-I) by using mathematics equations that measure the entrepreneurial tendencies among individuals. There are eight indicators that was used to measure En-I with weighted score:

Table 1. Entrepreneurial Index Indicators and Weighted Scores

No	Indicators	Weighted Scores
1.	Self esteem	15
2.	Willingness to take risk	15
3.	Responsibility towards a task	10
4.	Willingness to delay gratification	10
5.	Desire for accomplishments	10
6.	Willingness to accept criticism	10
7.	Actions that have been taken	30
	TOTAL	100

Each indicators is represented by four questions in the questionnaires, with the scores of 1-5, by means the higher the score represents higher entrepreneurial mentality. The first data analysis will be on each indicator by using a simple formula:

$$IS = \frac{\sum \left(\frac{q_1 + q_2 + q_3 + q_4}{4} \right)}{n}$$

IS= Indicator's Score

q_n = Score on question n

n = Sample

And then, we measure the En-I measurements by using a formula:

$$OIS = I_1W_1 + I_2W_2 + I_3W_3 + \dots + I_7W_7$$

OIS= Overall Indicator's Score

And proceed to dividing it by 100:

$$En-I = OIS/100$$

The En-I is a measure of statistical dispersion intended to represent the entrepreneurial mentality in one's individual. A En-I of 0 (zero) expresses the condition of perfect zero entrepreneurial mentality, where the individuals have absolutely no entrepreneurial mentality. A En-I of 1 (one) expresses maximal entrepreneurial mentality/ spirit.

This study then compares and observe how the Entrepreneurial Index improvements of the students during the first four year in the RHSB undergraduate education. And the looking at variation according to the number of subjects they were already taken.

4. RESULTS

As outlined in the methodology, the analysis of the data was conducted in two steps.

First, the data from by self test questionnaires that was obtained from the students of RHBS is analyzed individually on each indicators. The result for each indicators is shown on Table 2.

Table 2. Entrepreneurial Sub Index Results on Each Indicator

No	Indicators	Indicator's Score
1.	Self esteem	4.20
2.	Willingness to take risk	3.74
3.	Responsibility towards a task	3.49
4.	Willingness to delay gratification	3.75
5.	Desire for accomplishments	3.97
6.	Willingness to accept criticism	4.06
7.	Actions that have been taken	3.22

The Entrepreneurial sub index results on each indicators shows that the RHSB students is very high on two indicators; "self esteem" and "willingness to accept criticism". But the scores on "actions that have been taken" is very low which means, the students already have entrepreneurial mindset, but still lacking in practice as an entrepreneur.

The second data analysis that measures total score of overall indicator with each weighted score is shown on table 3.

Tabel 3. Total Score of Overall Indicators

No	Indicators	Indicator's Score	Weighted Score	Total Score
1.	Self esteem	4.20	15	63
2.	Willingness to take risk	3.74	15	56.1
3.	Responsibility towards a task	3.49	10	34.9
4.	Willingness to delay gratification	3.75	10	37.5
5.	Desire for accomplishments	3.97	10	39.7
6.	Willingness to accept criticism	4.06	10	40.6
7.	Actions that have been taken	3.22	30	96.6
TOTAL				368.4

As explained before, Entrepreneurial Index can be measured by dividing total score of overall indicators with 100, therefore the En-I for RHBS students is 3.68. This reflects that potential entrepreneurial index of business students already recorded in this study.

Although the score of each indicator used differences, our data indicates that “actions that have been taken” indicator included as a lower score. This means that introduction of business education for students need not only improve their knowledge on related business subject, but rather how to translate business knowledge into reality. Our study is still preliminary study, we need to extend how the scores differ according to the duration of the study, socioeconomic status of students. Which is need to be investigated in the future study.

5. CONCLUSIONS

This research measures the Entrepreneurial Index of undergraduate students of Rengat Higher School of Business in Inderagiri, Indonesia. To begin with, the entrepreneurial mentality and mindset is an important aspect for Indonesia where the majority of its economic activities relies on Small and Medium Enterprises which was initiated by the entrepreneurs. This posed a question, how entrepreneurial mentality is adopted by the youth, primarily the undergraduate students in Business Schools, as they are the ones who will joins the workforce in the future.

This study found that the undergraduate students of RHBS’s Entrepreneurial Index is 3.68, which means they have a high entrepreneurial mentalities. This mentality is especially noticeable on two indicators; “self esteem” and “willingness to accept criticism”.

However, the undergraduate students have low scores on “actions that have been taken” that reflect the students action as an entrepreneurs. This means that the entrepreneurial mindset and mentality is quite strong in the students of RHBS. But they still need more push by the RHSB lecturers and government so they can act and start their own businesses.

REFERENCE LIST

Central Statistical Bureau. 2010. Indonesia

Cantillon, R. 1755/1931. **Essai sur la Nature du Commerce en Général**. London, UK: MacMillan

Katz, J.A. 1991. **Endowed Positions: Entrepreneurship and Related Fields**. Entrepreneurship Theory and Practice Vol. 15 (3). Spring, 53067

Kearney, P. 1996. **The Relationship Between Developing of the Key Competencies in Students and Developing of the Enterprising Student**. Paper commissioned by the Department of Employment, Education, Training and Youth Affairs, Canberra, Australia

McQuaid, R.W. 2002. **Entrepreneurship and ICT Industries: Support from Regional and Local Policies**. Regional Studies No. 36 Vol. 8.

Rosa, P. 1992. **Entrepreneurial Training in the UK: Past Confusion and Future Promise**. Scottish Enterprise Foundation Conference Paper Series, No. 81-92. Sterling University, Scotland

Schumpeter, J.A. 1949. **Economics Theory and Entrepreneurial History, Change and the Entrepreneur: Postulates and Patterns for Entrepreneurial History**. Harvard University Press, Cambridge, MA