The nexus between financial literacy and entrepreneurship ability among university students in emerging markets

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Abstract. This study investigates the level of financial literacy and entrepreneurship ability among university students in emerging markets while examining the relationship between university student’s financial literacy level and their entrepreneurial abilities. Data was collected by distributing 90 questionnaires to students of Yogyakarta State University, Indonesia covering cross educational majors. Out of the sample, a total of 84 returned completed questionnaires were used for analysis. The findings from this study revealed that 45% of the respondents were able to answer one of The Big 3 financial literacy questions correctly, 21.4% answered two questions correctly while none answered all three questions correctly. This implies that the level of financial literacy Yogyakarta State University is low and corroborates findings of similar studies done in Indonesia. However, the respondents reported a high level of entrepreneurial ability as almost 80% of the respondents reported having satisfactory levels of entrepreneurial abilities, 7% had an outstanding entrepreneurial ability while the remaining 13% had a considerable level of entrepreneurial ability. Using Pearson correlation analysis, the study revealed that although financial literacy and entrepreneurial ability are positive related, the relationship is however not statistically significant at alpha 5%.

1. Introduction
Financial education and financial literacy are fast becoming subjects of interest for regulatory authorities, financial institutions, education institutions and other entities both at the international and national levels with the aim to better prepare individuals for a life of financial and economic prosperity. Many individuals from diverse background around the world today are faced with the challenges posed by lack of financial literacy, one which became evident during and after the global financial crisis, highlighting the invaluable lessons about the important of financial literacy as a much needed life skill for financial and economic prosperity. Today, more individuals are responsible for their personal finances, hence the need for financial education and literacy [1].

Financial literacy equips individuals with the knowledge and skill they need to attain financial stability through self sufficiency. They should be able to answer inquires or make informed financial decisions bothering on their needs and acquisitions with respect to their income or available resources. It centers on the attitude of an individual in making financial decisions, tackling daily financial issues and developing skills to handle growing resources. The quality of financial decision and choices made by individuals can be linked to the level of their financial literacy, as economic well being across all levels is said to be a function of the choices of decision makers [2]. In this era of financialization where individuals are exposed to a plethora of complex financial products and services, financial education is vital for making economic or financial decisions, as there are evidence that suggest that
the lack of financial literacy likely contributed directly to the onset of the 2007 – 2009 financial crisis and to its harshness [3].

Unfortunately, recent finding from the FLAT World project conducted across 15 different countries and markets found that financial literacy is at a crisis level [1]. The world has indeed failed to learn from the lessons of the past global financial crisis. Another issue of concern is youth unemployment, which is expected to remain constant over the next few years. In 2018, the global unemployment rate was estimated to stand at 5% but it was recorded at 5.4% and is expected to remain essentially unchanged or worsen over the next few years given the uncertainties around the unemployment rate forecasts, which has to do with economic, financial and geo-political risks [4]. The unemployment rate is an important measure of the state of any given economy. Given the increase in the availability of sophisticated financial products and services that are available to university students, it is vital to analyze how financial savvy these students are in order to ascertain that they can make the best financial decisions that maximize their financial and economical well being, while also developing their entrepreneurial potentials.

This paper focuses on three objectives. Firstly; to investigate the level of financial literacy among university students in Yogyakarta State University. Secondly; to determine the level entrepreneurial abilities among university students in Yogyakarta State university and lastly; to analyze the relationship between financial literacy and entrepreneurial ability of university students.

This study was motivated by the increasing rate of graduate unemployment recorded in emerging markets and around the globe. Financial discipline cuts across all aspect of human lives and individuals make several financial choices and decisions which affects their lives in more ways than one on a daily basis.

The main contributions of this study are:
- This research contributes empirical evidence to the body of literature on financial literacy and entrepreneurial ability in emerging markets.
- The findings would enable university students be aware of their limitations on financial matters and strive to improve on them, with a view to making better financial choices and decisions.
- The findings would aid policy makers, industry leaders, educational institutions, financial institutions and other interested entities both in emerging markets and developed markets develop financial education and entrepreneurial programs, projects and curriculum that will improve the financial levels of university students, as they strive to actualize their full potential.

2. Method

This study was administered at Yogyakarta State University, Indonesia. Yogyakarta city is home to several public and private educational institutions and is adjudged the educational city of Indonesia. The respondents comprise of undergraduates and graduate students across the business and non-business oriented faculties of Yogyakarta State University. A total of 90 comprehensive questionnaires were distributed randomly to respondent at central locations around the university. All questionnaires were retrieved and a total of 84 were used for this study as 3 of them were incomplete and the other 3 were from non-students.

The design of the questionnaire integrates both The “Big Three” financial literacy questions (Lusardi & Mitchell, 2014) and the Entrepreneurial Self-Assessment survey developed by Women's Initiative for Self Employment. The questionnaire was redesigned specifically for the Indonesian context and was translated into Basaha Indonesian to maximally capture the best responses from the respondents.

Descriptive Analysis was used to answer the first and second research objectives while Pearson Correlation Analysis was used to answer the third research objective. The Entrepreneurship Assessment survey had 20 questions aimed at measuring various characteristics of entrepreneurs however after factor analysis; question 15 was extracted in order to get the Cronbach Alpha to 0.714 from the initial 0.667. This was also in line as there were three questions that measured the same characteristics of self confidence (Question 10, 15 & 18) in the survey instrument. Hence, the
The instrument is reported to have passed the reliability test. The data also passed the Kolomgorov-Smirnov test having a P value of 0.738 at alpha 0.05 showing that it is a normally distributed.

### Table 1. Demographic information of study respondents.

| Parameter                  | Frequency | Percentage |
|----------------------------|-----------|------------|
| Total Respondent           | 84        | 100.00     |
| Educational Level          |           |            |
| Bachelors                  | 75        | 89.29      |
| Masters                    | 9         | 10.71      |
| Study Program              |           |            |
| Business oriented          | 23        | 27.38      |
| Non-Business oriented      | 61        | 72.62      |
| Gender                     |           |            |
| Male                       | 28        | 33.33      |
| Female                     | 56        | 66.67      |
| Age                        |           |            |
| Below 18                   | 2         | 2.38       |
| 18 - 20                    | 59        | 70.24      |
| 21 - 22                    | 8         | 9.52       |
| 23 - 25                    | 7         | 8.33       |
| Above 25                   | 8         | 9.52       |
| Marital Status             |           |            |
| Single                     | 82        | 97.62      |
| Married                    | 2         | 2.38       |
| Religion                   |           |            |
| Muslim                     | 78        | 92.86      |
| Christian                  | 6         | 7.14       |

Data is presented as figure and percentage. Mean Age is 20, SD of 3

In order to investigate the level of financial literacy of respondents, the “Big Three” financial literacy questions was used and students were classified into three groups based on their responses; high financial literacy group consisting of those that answered all 3 questions correctly, medium financial literacy group consisting of those that answered only 2 questions correctly and low financial literacy group consisting of those that answered only 1 question.

To investigate the level of entrepreneurial ability of respondents, the entrepreneurial self-assessment survey was used and students were classified bases on their total score into four categories. Category 1; Respondents with outstanding ability to be an entrepreneur scoring between 80 – 100, Category 2; Respondents with satisfactory ability to be an entrepreneur scoring between 60 – 79, Category 3; Respondents with considerable ability to be an entrepreneur scoring between 40 – 59, and Category 4; Respondents undesirable ability to be an entrepreneur scoring between 0 – 39.

In order to test for a statistical significant relationship between financial literacy and entrepreneurial ability among university students in emerging markets, a Pearson Correlation analysis was carried on the respondent’s scores for both The “Big Three” financial literacy questions and their entrepreneurial ability scores.

### 3. Results and Analysis

The results from this research show that the level of financial literacy among respondents is low; whereby 45% of the respondent’s answered correctly one question and 21.4% answered two questions correctly while none of the respondents answered all three questions correctly. See Table 2 for breakdown.
Table 2. Financial literacy level of respondents using 'the big 3 questions'.

| Interest rate Q | Inflation Q | Risk Divers. Q | All 3 Correct | At least 1 don’t know | N   |
|-----------------|-------------|----------------|---------------|----------------------|-----|
| Correct (%)     | DK (%)      | Correct (%)    | DK (%)        | Correct (%)          | DK (%)|     |
| 51.2            | 31.0        | 33.3           | 51.2          | 3.6                  | 67.9 | 0.0  |
| By Gender       |             |                |               |                      |     | 78.6 | 84  |
| Male            |             |                |               |                      |     |      |     |
| 15.5            | 8.3         | 14.3           | 15.5          | 3.6                  | 22.6 | 0.0  |
| Female          |             |                |               |                      |     | 53.6 | 56  |
| 35.7            | 22.6        | 19.0           | 35.7          | 0.0                  | 45.2 | 0.0  |
| By Study Program|             |                |               |                      |     |      |     |
| Business Oriented|           |                |               |                      |     |      |     |
| 11.9            | 4.8         | 7.1            | 14.3          | 2.4                  | 19.0 | 0.0  |
| Non-Business Oriented| |                |               |                      |     |      |     |
| 39.3            | 26.2        | 26.2           | 36.9          | 2.4                  | 48.8 | 0.0  |
| By Age          |             |                |               |                      |     |      |     |
| Below 18        |             |                |               |                      |     |      |     |
| 1.2             | 1.2         | 0.0            | 1.2           | 0.0                  | 0.0  | 0.0  |
| 18 - 20         |             |                |               |                      |     |      |     |
| 25.0            | 29.8        | 19.0           | 42.9          | 2.4                  | 48.8 | 0.0  |
| 21 - 22         |             |                |               |                      |     |      |     |
| 8.3             | 0.0         | 1.2            | 4.8           | 0.0                  | 4.8  | 0.0  |
| 23 - 25         |             |                |               |                      |     |      |     |
| 7.2             | 0.0         | 8.3            | 0.0           | 1.2                  | 6.0  | 0.0  |
| Above 25        |             |                |               |                      |     |      |     |
| 9.5             | 0.0         | 4.8            | 2.4           | 0.0                  | 8.3  | 0.0  |

Data is presented as figure and percentage. *DK stands for 'I do not know' and Q for 'Question'.*

In analyzing the level of entrepreneurship abilities of the respondents, the results shows that 7.1% of the population has an outstanding ability to be an entrepreneur, 79.76% of the population has a satisfactory level of ability to be an entrepreneur and 13% had considerable levels of entrepreneurial ability. See Table 3 for breakdown.

Table 3. Entrepreneurship ability of respondents.

| Score   | Category      | N   | Gender | Study Program |
|---------|---------------|-----|--------|---------------|
|         |               |     | Male   | Female        | Biz Ortd.   | Non-Biz Ortd.   |
|         |               |     | Freq.  | Freq.         | Freq.       | Freq.           |
| 80 - 100| Outstanding   | 6   | 2      | 7 1           | 4           | 7 1             | 2          | 8.7     | 4        | 6.6     |
| 60 - 79 | Satisfactory  | 67  | 20     | 71.4         | 45          | 80.4           | 14         | 60.9    | 53       | 86.9    |
| 40 - 59 | Considerable  | 11  | 6      | 21.4         | 5           | 8.9            | 7          | 30.4    | 4        | 6.6     |
| 0 - 39  | Undesirable   | 0   | 0      | 0            | 0           | 0              | 0          | 0       | 0        | 0.0     |
|         | Number of Respondents | 84 | 28     | 56           | 23          | 61             |

Data is presented as figure and percentage.

In testing for a statistically significant relationship between financial literacy and entrepreneurship abilities, the result from the Pearson correlation analysis shows that there is a positive relationship between financial literacy and entrepreneurship abilities however this relationship is not statistically significant.

4. Discussion

The need to understand the level of financial literacy among university student in emerging markets cannot be over emphasized as this will continue to aid educational institutions and policy makers develop better financial and entrepreneurial educational curriculum that will improve the financial literacy level of university students and the global youth population at large. Financial education and development is an integral part of the overall economic growth, development and prosperity. The finding from this study shows that the level of financial literacy is low among students of Yogyakarta state University and this collaborates the findings other studies done on financial literacy among students in emerging markets [6],[7]. Also findings from studies done on children in emerging markets, shows low levels of financial literacy among the younger generation in emerging markets and that indeed improved financial literacy curriculum in schools can lead to improved financial knowledge in students [8].
Entrepreneurship is much needed now more than ever before given the high rates of youth unemployment being recorded globally[4]. The entrepreneurship abilities of university students need to be adequately nurtured with a view to making them economically well off, not just by becoming entrepreneurs but also with the ability to make brilliant financial decisions. The result from this study shows that almost 80% of respondents possess satisfactory levels of entrepreneurial abilities. It is pertinent therefore, that the relationship between financial literacy and entrepreneurial ability be analyzed as doing so will aid the creation of better economic empowerment programs and educational curriculum that will enable students become better versions of themselves both financially and economically. The findings from this research show that there is a positive relationship between financial literacy and entrepreneurship ability however this relationship is not statistically significant at alpha (0.05). This results gives more credence to the finding by [9] who found the relationship between financial literacy and entrepreneurship success to be at 9.3%.

5. Conclusion
The literature on financial literacy and entrepreneurial ability are both at the developing stages in emerging markets and this research set out to contribute in this regards by providing answers to the three set out research objectives;

• Finding out the level of financial literacy level among university students in emerging markets.
• Finding out the level of entrepreneurship abilities among university students in emerging markets.
• Testing for a statistically significant relationship between financial literacy and entrepreneurial ability.

The study found that the financial literacy level is low among university students in emerging market with most having difficulty answering the question on diversification. Conversely, it was revealed that these students however possess a high level of entrepreneurial abilities with most having a satisfactory ability of an entrepreneur. This study also found out that although there is a positive relationship between financial literacy and entrepreneurship ability among university students in emerging markets however this relationship is not statistically significant.

The result of this study will aid the relevant educational institutions, policy makers and industry leaders in making relevant changes needed to improve the financial literacy levels of university students either by building better financial education curriculum or conducting financial training programs that is tailored to meet financial needs in this current era of financialization. Also, current entrepreneurial programs should be better tailed to nurture the entrepreneurial abilities of student by integrating or improving practical aspects of current entrepreneurial programs.

The study also demonstrates that financial education should not be equated to entrepreneurship education as both are different although they share some attributes, possessing high levels of financial literacy does not equate to high entrepreneurship abilities or skills.

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